

RFI/CS Report

for the Anniston,
Alabama Facility

October 2002

SOLUTIA Solutions for a Better Life

Solutia Inc.
702 Clydesdale Avenue
Anniston, Alabama 36201-5328
Tel 256-231-8400

October 28, 2002

SENT VIA FEDERAL EXPRESS

Mr. Stephen A. Cobb, Chief
Alabama Department of Environmental Management
Hazardous Waste Branch, Land Division
1400 Coliseum Blvd.
Montgomery, Alabama 36110-2059

RE: RFI/CS REPORT
SOLUTIA INC. ANNISTON, ALABAMA FACILITY
EPA ID NO. ALD 004 019 048

Dear Mr. Cobb:

Solutia Inc. (Solutia) is pleased to submit three copies of the Resource Conservation and Recovery Act (RCRA) Facility Investigation/Confirmation Sampling (RFI/CS) Report for the Solutia site in Anniston, Alabama. The report describes the investigations and sampling carried out at the site and satisfies the requirements of the RFI/CS Work Plan, which was approved by Alabama Department of Environmental Management (ADEM) on April 21, 1998. A copy of this report has also been sent to United States Environmental Protection Agency (USEPA) in Atlanta.

This report was initially submitted as a draft report to ADEM on January 14, 1999. Between that date and this, Solutia responded to three Notices of Deficiency (NODs). This final report incorporates Solutia's responses to the NODs.

To the extent possible, Solutia has made changes in the RFI/CS Report to reflect the responses to the NODs only. Consequently, the document has been written using the same information that was available at the time of the January 14, 1999 draft report (except as specifically requested to address a particular NOD comment). New information concerning the site has been developed and will continue to be developed as further investigation and sampling is conducted. Solutia will use all relevant and updated information as it pertains to specific study areas on site in the preparation of Addenda to the RFI/CS Report, as well as for the Corrective Measures Study, as appropriate.

Solutia's responses to the NODs also prompted the preparation of supplemental investigatory plans. In all, three supplemental investigatory plans were prepared, a SWMU-12 soil sampling plan, an Interim Measures Plan (for the OLBSI Recovery

System and OW-21), and a Supplemental RFI Work Plan (for certain soil sampling and groundwater investigations). Solutia will conduct the work associated with these plans after receiving approval from ADEM. Results of this work will be presented in an RFI/CS Report Addendum.

To facilitate the department's review, a separate copy of the text, which highlights all of the changes between the January 1999 draft version of the report and the present version of the report is enclosed.

We trust that this RFI/CS Report will meet with your approval. If you have any questions concerning this matter, please call me at 256-231-8404.

Sincerely,

Craig Branchfield
Manager, Remedial Projects
Solutia Inc.

enclosures

cc: Mr. Russ McLean – USEPA Region IV

EXECUTIVE SUMMARY

Solutia Inc. (Solutia) retained Golder Associates Inc. (Golder) and other consultants to implement the Resource Conservation Recovery Act (RCRA) Facility Investigation and Confirmatory Sampling (RFI/CS) in accordance with the RFI/CS Work Plan approved on April 21, 1998, for the Solutia facility (Facility) located in Anniston, Alabama. This report presents the findings and conclusions of the on-site RFI/CS program and was completed in accordance with the reporting requirements set forth in Conditions III.D.4 and III.E.3.b of the Facility's RCRA Post-Closure Permit No. ALD000401048 (Permit) issued on January 7, 1997, by the Alabama Department of Environmental Management (ADEM).

OBJECTIVES

The objectives of the RFI/CS investigations, as defined in Appendix B II of the Permit, have been met by sufficiently accomplishing the following:

1. characterizing the Facility's environmental setting;
2. defining the source of releases to the environment;
3. defining the degree and extent of releases to the environment;
4. identifying actual or potential receptors; and
5. supporting the development and evaluation of any necessary corrective action plan.

The technical approach to the RFI/CS, as defined in the RFI/CS Work Plan, has focused on treating the Facility as a single potential release source.

BACKGROUND

The Facility is located on Highway 202, in the western part of the city of Anniston, in Calhoun County, Alabama. Calhoun County is located in the east-central part of the state. The manufacturing portion of the Facility occupies approximately 70 acres. Topography in the area is characterized by flat to gently rolling, northeastward trending valleys that are paralleled by ridges and mountains. The highest point at the Facility, approximately 940 feet above mean sea level (msl), is near the southern property line. The ground surface at the Facility generally slopes from south to north. In the immediate area around the Facility, drainage is through ditches leading

towards Snow Creek. Snow Creek eventually drains into Choccolocco Creek, which empties into Lake Logan Martin on the Coosa River.

In 1917, the Southern Manganese Corporation, owned and operated by Theodore Swann, began operations at the site, initially manufacturing ferro-manganese, ferro-silicon and ferro-phosphorus compounds and, later, phosphoric acid. In 1927, the production of organic chemicals commenced with the introduction of biphenyl, which remains a major product of the Facility. In 1930, Southern Manganese Corporation became Swann Chemical Company with headquarters in Anniston. In May 1935, Swann Chemical Company was purchased by Monsanto Company. Solutia was formed in 1997 when Monsanto Company elected to separate its chemical businesses.

A variety of organic and inorganic chemicals have been produced at the Facility during its history, including polychlorinated biphenyls (PCBs), parathion, and phosphorus pentasulfide. The Facility currently manufactures 4-nitrophenol, which is used in the manufacture of acetaminophen, a non-aspirin pain reliever, and polyphenyl compounds, which are used in a variety of heat transfer fluid, plasticiser and lubricant applications. These products have been produced for many years using the same raw materials and intermediates.

From the time manufacturing operations began in 1917 until 1989, the Facility employed solid waste management practices which primarily relied upon the use of on-site landfills. Individual landfill cells were typically associated with specific production units. Thus, the types of wastes landfilled are well defined. Releases have been addressed as they have been discovered.

Over the past 17 years, extensive efforts have been devoted to evaluating the potential constituent transport pathways. Based on these evaluations, a number of Interim Measures have been implemented to preclude the migration of constituents of potential concern (COPCs) along these various pathways. These have included:

- Removal of the Santotar® Pit, the former lagoon, the south Phosphoric Acid Basin, the former Parathion production area, the new Limestone Bed, and various above and below ground product storage tanks;

- Decommissioning of several above ground structures;
- Capping and improving drainage control over the South Landfill and the West End Landfill;
- Installation and operation of three Groundwater Corrective Action Systems;
- Covering several former operations areas with clay, gravel or asphalt; and
- Improvement of storm water controls, and removal of sediment from Snow Creek.

Each of these Interim Measures will be evaluated as final Corrective Measures in the Corrective Measures Study (CMS).

There are 11 storm-water outfalls currently regulated at the Facility under a National Pollution Discharge Elimination System (NPDES) Permit and one non-storm-water-discharge point from the Facility wastewater treatment facility (WWTF) to the City of Anniston Publicly Owned Treatment Works (POTW). Although the storm-water outfalls were permitted for the discharge of non-contact cooling water and condensate, all process-related water has been diverted to the WWTF.

Investigations previously conducted at the Facility, and confirmed during the RFI investigation, have determined that the near-surface site geology consists of two water-bearing zones; the residuum and the Shady Dolomite. The residuum consists of low permeability silts and clays that are the products of weathering. Locally, the residuum extends to a depth of over 100 feet and acts as a semi-confining unit to the underlying Shady Dolomite. Water levels in the residuum reflect recent and seasonal variations in precipitation. The quality of groundwater in the residuum is highly variable and reflects surface and near-surface conditions.

A geologic discontinuity is present just north of the railroad tracks, which are along the north side of the Facility. The presence of this feature is based on two borings for wells DOP-1 and DOB-2 installed north of the Facility. Well DOP-1 was advanced to approximately 300 feet below ground surface (ft bgs) and did not encounter bedrock. Well DOB-2 was advanced to a total depth of 540 ft bgs, and did not encounter bedrock. Other wells in the area south of the above-mentioned

wells encountered competent limestone bedrock at depths ranging from 80 ft bgs to 120 ft bgs. In addition, this area is mapped as being the contact between the Rome Formation (comprised of sandstones and shales) and the Shady Dolomite Formation (comprised of karstic, dolomotized limestone), further indicating the potential for the presence of a discontinuity.

Water level data indicate that groundwater within the residuum flows generally from the south-southeast to the northwest, north and northeast with minor localized variations resulting from the active groundwater recovery systems on site. The groundwater within the bedrock generally flows from the southeast to the northwest across the Facility.

The conceptual model of the site recognizes that industrial activities have been occurring for many years, and that substantial efforts have taken place over the last 17 years to understand and remediate impacts from chemicals that have migrated to the subsurface. Details of the understanding of the chemical migration patterns and potential receptors have been refined during the performance of this RFI/CS. The basic goal of protecting off-site receptors by mitigation of off-site impacts remains the same. The site conceptual model includes four primary elements: identification and characterization of former source areas; preliminary identification of COPCs; definition of primary transport mechanisms; and identification of potential receptors and exposure points.

WORK PERFORMED FOR THIS RFI/CS

An extensive database of subsurface information has been collected at the site over the last 17 years, from which individual source areas and solid waste management units (SWMUs) have been identified. Additional data collection efforts have concentrated on augmenting the existing data at the perimeter of the Facility to establish that effective containment is being achieved. Emphasis has been placed on evaluation of potential off-site migration of constituents to assess perimeter control, and the effectiveness of the existing Corrective Action Systems. Confirmatory sampling was conducted at those SWMUs and areas of concern (AOCs) identified in the Permit.

Review of the groundwater monitoring well network revealed that silting was often occurring with several wells typically being dry. Existing wells were assessed for suitability for water level measurement and for water quality sampling. In the RFI/CS field program, both filtering (for

PCBs and metals) and low-flow purging techniques were used to provide groundwater quality data that is considered representative of aquifer conditions.

Twenty-eight COPCs for the Facility were identified by review of previous and current manufacturing processes, review of existing database of sampling data, and consideration of possible breakdown products of the chemicals identified. Eighteen additional wells and piezometers were installed, and a Facility-wide groundwater sampling program was conducted to provide supplemental information on groundwater quality. Wells were sampled for COPCs to determine if they were migrating across the perimeter or downward. The effect of the Groundwater Corrective Action Systems on groundwater quality was reviewed. Groundwater flow patterns across the Facility were re-assessed using the updated well network.

Variable head tests were performed in all new monitoring wells and piezometers to assess the variation in hydraulic conductivity in residual soils at the Facility. Pumping tests were performed on the Groundwater Corrective Action Systems to obtain aquifer parameter values that would aid in evaluating the effectiveness of each of these systems.

Twenty-two surface and near-surface soil samples were analyzed to evaluate the potential for off-site migration of selected constituents from individual SWMUs, and to provide quantitative estimates of exposure point concentrations for use in the site-specific human health and environmental assessment (HEA). Analytical results from these samples were also used to confirm the effectiveness of existing corrective measures and to investigate areas of observed residual staining. Two surface water samples were analyzed to assess possible migration routes from the Facility production areas.

A HEA was performed to assess potential receptors and exposure pathways. The results of the HEA were used to provide corrective action recommendations for soil and groundwater at the Facility, including specific recommendations for the existing Corrective Action Systems.

RECOMMENDATIONS FOR SOIL CORRECTIVE ACTION

Sixteen COPCs were reported in on-site soils; five of which (PCBs, arsenic, chromium, nickel, and methylene chloride) exceeded the Tier 1 values for surface soils. Following a reevaluation of

the site conceptual model, Tier 2 Site-Specific Target Levels (SSTLs) for PCBs and arsenic were developed based on consideration of Facility-specific factors used to develop appropriate receptor characteristics. Four site-specific receptors were identified: 1) the production worker, exposed to surface soil in high contact areas; 2) the inspector/supervisor, exposed to surface soil in low and high contact areas; 3) the construction worker exposed to surface and subsurface soils throughout the facility; and 4) the 7 to 16 year old trespasser exposed to surface soils throughout the Facility. Risk-based Tier 2 SSTLs for surface soil in the high and low contact areas of the facility and for subsurface soil were calculated. For PCBs, the surface soil SSTLs for high contact areas (HCAs) and low contact areas (LCAs) were approximately 34 mg/kg and 329 mg/kg, respectively. The subsurface soil PCB SSTL was calculated to be 464 mg/kg. For arsenic, the SSTLs for the HCAs and LCAs were 66 mg/kg and 444 mg/kg, respectively, and for subsurface soil was calculated to be 652 mg/kg. The trespasser scenario SSTLs were calculated as 872 mg/kg and 1,360 mg/kg for PCBs and arsenic, respectively. A comparison of these values to soil sample data collected during the RFI/CS reveals that only one surficial soil sample from SWMU 44 exceeded the high contact PCB SSTL. Consequently, a proposed corrective action that would prevent direct contact and address the potential risks for this SWMU is as follows:

> SWMU 44 is located within an active portion of the facility. To address this area, it is recommended that it be covered with an asphalt pavement, thus preventing direct contact and providing an appropriate Corrective Action. The effectiveness of this Corrective Measure will be evaluated as part of the CMS.

SURFACE WATER

Surface water outfalls DSN 006 and DSN 012 have been sampled quarterly in accordance with the Facility NPDES Permit. PCBs have not been reported in DSN 006 since September 1997, while samples from DSN 012 have exhibited a steady decrease in PCB concentrations over recent sampling events. These results were supplemented during the RFI/CS with COPCs analyses of samples collected from outfalls DSN 004 and DSN 005. PCBs were not detected in these samples. Several interim measures have recently been completed to prevent transport of affected soils to off-site locations, and their success is reflected in the decrease in reported sample concentrations. This trend is expected to continue as the improvements provided by the corrective measures become established.

POTENTIAL FACILITY-WIDE GROUNDWATER HEALTH RISKS

Eighteen different COPCs were detected in groundwater above concentration limits established in the Permit, although many of these detections were the result of silt being present in the samples. Eleven of these constituents were found to be present at concentrations greater than the HEA Tier 1 screening levels.

As part of the process of deriving Tier 2 human health risk values for groundwater at the Facility, the site classification, site conceptual model and the exposure pathway completeness analysis were revised and updated. Groundwater beneath the Facility property has been characterized, and various interim remedial measures have been in place for many years to contain and recover those constituents found in the groundwater. Despite the presence of eleven of these constituents at concentrations above the Tier 1 screening level, none are leaving the site at concentrations in excess of human health or ecological concerns. Furthermore, municipal water is available to all residents in the area. The site groundwater is not used presently, nor will it be used in the future, as a source of production or non-contact cooling water.

The results of the revised exposure pathway completeness analysis demonstrate that the potential exposure pathway via groundwater to on-site workers is not complete. Therefore, exposures via dermal contact, incidental ingestion or inhalation due to constituent volatilization from groundwater will not occur.

For the groundwater release to surface water exposure pathway, undiluted concentrations of 7 COPCs detected in the perimeter wells exceeded Tier 1 criteria. Following modifications of the predicted surface water concentration based on dilution by Snow Creek, none of these constituent concentrations exceeded the ecologically based screening concentration. Consequently, there is no potential risk and, therefore, no need for additional Corrective Action for the on-site groundwater.

RECOMMENDATIONS FOR EXISTING CORRECTIVE ACTION SYSTEMS

South Landfill Groundwater Corrective Action System

As part of the RFI/CS, natural attenuation has been assessed at the South Landfill to determine its potential viability as a remediation technology. The assessment indicates that there is a natural

attenuation environment at the Facility and that it is due to the combined effects of dispersion, dilution, adsorption, abiotic transformation (e.g., hydrolysis), volatilization, and biological degradation. Abiotic transformation and biodegradation are important "destructive" attenuation mechanisms as they typically transform the constituent to less toxic compounds, and can ultimately result in the complete degradation of a compound to benign end products. The assessment indicates that with the effects of natural attenuation, parathion concentrations will stabilize at a maximum distance of approximately 300 feet from the source area with no pumping from the existing system. This distance is well within the Facility boundary. Thus, it appears that the abandonment of the South Landfill Groundwater Corrective Action pumping system should be evaluated with a monitored natural attenuation system implemented in its place as an effective and appropriate Groundwater Corrective Action System. Further evaluation and recommendations concerning this approach will be addressed in the CMS.

Plant Site Groundwater Extraction System

The Plant Site Groundwater Extraction System (Plant Site System) may also be a candidate for abandonment followed by monitored natural attenuation**.** Interceptor well IW-15 has already been shut off as per the Facility Permit. The interceptor wells of this system appear to receive the majority of their annual collected water volume from surface recharge, especially during rain events, and do not effectively extract groundwater. Analytical sample results from interceptor wells and two observation wells upgradient of the interceptor wells indicate either no detection or only sporadic detection of COPCs. The extraction system location is within the plant area, well upgradient of the Facility boundary, and there is no indication of COPCs in groundwater at the downgradient Facility boundary. The Plant Site System will be evaluated as to its necessity and its effectiveness during the CMS. The system may be abandoned or may be optimized, with the repair and/or reinstallation of the interceptor wells (with possible reinstallation at adjusted locations).

OLBSI Groundwater Corrective Action System

Six residuum groundwater interceptor wells and one deep extraction well comprise the Old Limestone Bed Surface Impoundment Groundwater Corrective Action System (OLBSI System), which was installed and began operating in 1988. The effectiveness of the OLBSI System has been evaluated using potentiometric data, pumping test data, and groundwater quality data from

the interceptor wells and observation wells. Based on these data, the OLBSI System has been effective at removing parathion and 4-nitrophenol from the groundwater and mitigating the downgradient migration of these constituents from the WMA II and OLBSI areas.

Based on potentiometric data, it appears that the existing OLBSI interceptor wells provide capture across the affected area. However, data from recorded discharge rates, field observations and pumping tests indicate that the OLBSI System is pumping more water than required to maintain an effective capture zone, primarily because it is also pumping surface water that leaks into the wells.

Historical groundwater quality data from the interceptor wells indicate a general decreasing trend in parathion and 4-nitrophenol concentrations in most of the wells, but the compounds are present in the groundwater above the Permit Concentration Limit within parts of the system. Residuum wells upgradient and downgradient of the system have also exhibited a general decrease in constituent concentrations since the system has been in operation. Groundwater quality data from shallow and deep residuum wells located downgradient of the recovery system indicate that no COPCs are migrating off-site in this area of the Facility.

Based on the RFI/CS results and evaluation, it is recommended that the OLBSI interceptor well system be enhanced to increase its efficiency. Potential options for augmenting and optimizing the system will be addressed in an Interim Measures Plan.

Following completion of the upgraded OLBSI system, an effectiveness evaluation will be performed. Based on the results of the effectiveness evaluation, an updated Facility groundwater monitoring program will be proposed, including selection of appropriate wells, parameters, and action levels for further assessment.

TABLE OF CONTENTS

Executive Summary ES-1

Table of Contents i

SECTION **PAGE**

1.0 INTRODUCTION 1
1.1 General 1
1.2 Objectives 1
1.3 Technical Approach 2
1.4 Report Organization 3

2.0 BACKGROUND 5
2.1 Site Environmental Setting 5
2.1.1 Site Location 5
2.1.2 Climate 5
2.1.3 Physiography and Topography 5
2.1.4 Drainage 6
2.1.5 Hydrogeology 6
2.1.5.1 Regional Hydrogeology 6
2.1.5.2 Coldwater Spring 8
2.1.5.2.1 Location and Topography 8
2.1.5.2.2 Discharge and Usage 8
2.1.5.2.3 Geology and Structure 8
2.1.5.2.4 Hydrogeology of Coldwater Spring 10
2.1.5.2.5 Relationship of Coldwater Spring with Aquifer(s) Underneath the Facility 10
2.1.5.3 Site Hydrogeology 11
2.2 Operational History 14
2.2.1 4-Nitrophenol Production (1965 to Present) 15
2.2.2 Polyphenyl Production (1927 to Present) 15
2.2.3 Therminol 59® Production (1983 to Present) 15
2.2.4 Parathion and Methyl Parathion Production (1957 to 1986) 15
2.2.5 Phosphorus Pentasulfide Production (1967 to 1988) 16
2.2.6 PCB Production (late 1929 to 1971) 16
2.2.7 Facility Laboratory 16
2.3 Regulatory History 16
2.4 Previous Remedial/Corrective Measures 17
2.4.1 Landfills 17
2.4.2 Former Production Areas 19
2.4.3 On-Site Storm-Water Drainage Management 21
2.4.4 Interim Remedial Measures in AOC B 21

2.5 Groundwater Monitoring Program 23
2.5.1 Detection Monitoring Program 23
2.5.2 Corrective Action Effectiveness Monitoring Program 23
2.5.2.1 Solid Waste Management Unit I 23
2.5.2.2 Waste Management Area II 24
2.6 Site Conceptual Model 25
2.6.1 Identification and Characterization of Former Source Areas 25
2.6.2 Preliminary Identification of Constituents of Potential Concern 28
2.6.3 Transport Pathways 30
2.6.3.1 Surface Water 30
2.6.3.2 Groundwater 30
2.6.3.3 Sediments 30
2.6.3.4 Air 32
2.6.3.5 Soil Gas 33
2.6.3.6 Soil 33
2.6.4 Potential Receptors and Exposure Points 33
2.7 Additional Data Requirements 34

3.0 RFI/CS INVESTIGATIVE PROCEDURES 35

3.1 Project Description 35
3.2 Observation Well/Piezometer Installation 36
3.2.1 Soil Borings 36
3.2.2 Well Installation 38
3.2.3 Well Development 39
3.3 Well Inspections and Water Levels 40
3.4 Groundwater Sampling 41
3.4.1 General 41
3.4.2 Groundwater Purging, Sampling, and Analysis 41
3.4.3 QA/QC 44
3.5 Surface Water Sampling 46
3.5.1 Objective 46
3.5.2 Surface Water Sampling Procedures and Analysis 46
3.5.3 QA/QC 46
3.6 Aquifer Testing 46
3.6.1 Variable Head Tests 46
3.6.1.1 Testing Procedures 47
3.6.1.2 Method of Analysis 47
3.6.2 Aquifer Pumping Tests 48
3.6.2.1 Objectives 48
3.6.2.2 Testing Procedures 48
3.6.2.3 Method of Analysis 49
3.7 Soil Sampling 55
3.7.1 Surface Soil 55
3.7.2 Subsurface Soil 56
3.7.3 QA/QC 57

4.0 RFI/CS RESULTS 59
4.1 Well Inspections 59
4.2 Soil Boring and Geotechnical Laboratory Test Results 62
4.3 Groundwater Chemistry Results 63
4.3.1 COPCs 63
4.3.2 Inorganic Indicator Parameters 67
4.4 Surface Water Chemistry Results 69
4.5 Soil Chemistry Results 70
4.6 Aquifer Test Results 76
4.6.1 Variable Head Test Results 76
4.6.2 Aquifer Pumping Tests 77
4.6.2.1 General 77
4.6.2.2 IW-6 Pumping Test 77
4.6.2.3 IW-10 Pumping Test 79
4.6.2.4 IW-11 Pumping Test 80
4.6.2.5 IW-14 Pumping Test 81
4.6.2.6 IW-15 Pumping Test 82
4.6.2.7 OLBSI Pumping Tests 83
4.6.2.8 Summary 84
5.0 NATURE AND EXTENT OF CHEMICALS ON-SITE 86
5.1 General 86
5.2 Surface Soil 86
5.3 Surface Water 89
5.4 Groundwater 90
5.4.1 Site Conceptual Groundwater Flow Model 90
5.4.2 Nature and Extent of Constituents in Groundwater 96
6.0 HEALTH AND ENVIRONMENTAL ASSESSMENT 105
6.1 Introduction 105
6.2 Tier 1 Evaluation 107
6.2.1 Constituents of Potential Concern 107
6.2.2 Risk-Based Screening Levels (RBSLs) for Tier 1 Evaluation 107
6.2.3 Exposure Point Concentration 109
6.2.4 Comparison of the Maximum Detected Value to RBSLs for Soil and Groundwater at the Solutia, Anniston Facility 111
6.3 Tier 2 Evaluation 111
6.3.1 Tier 2 Evaluation for Groundwater 112
6.3.2 Tier 2 Evaluation for Soil 113
6.3.2.1 Description of Receptors 114
6.3.2.2 Site Specific Modifications to Tier 1 Values 115
6.3.2.2.1 Exposed Skin Surface Area 115
6.3.2.2.2 Dermal Absorption Factor 116
6.3.2.2.3 Soil Adherence Factor 117
6.3.2.2.4 Intestinal Absorption Factor 118
6.3.2.2.5 Soil Ingestion Rate 120

6.3.2.2.6 Exposure Frequency 121
6.3.2.2.7 Target Risk Level 123
6.3.2.3 Calculation of the Tier 2 SSTL 124
6.4 Summary 125
6.5 Uncertainty 128

7.0 EFFECTIVENESS OF CORRECTIVE ACTION SYSTEMS 130
7.1 On-Site Interim Remedial Measures 130
7.1.1 Landfill Remedial Measures 130
7.1.2 Former Production Areas 132
7.1.3 Miscellaneous SWMUs 134
7.1.4 Storm Sewer Upgrades 136
7.2 South Landfill Groundwater Corrective Action Systems 137
7.2.1 Hydraulic Capture 137
7.2.2 Groundwater Quality 139
7.2.3 Conclusions 144
7.3 Plant Site Groundwater Extraction System 144
7.3.1 Hydraulic Capture 144
7.3.2 Groundwater Quality 145
7.3.3 Conclusions 148
7.4 OLBSI Groundwater Corrective Action System 149
7.4.1 Hydraulic Capture 149
7.4.2 Groundwater Quality 150
7.4.3 Conclusions 154

8.0 NATURAL ATTENUATION 156
8.1 South Landfill Corrective Action System 156
8.2 Plant Corrective Action System 162
8.3 OLBSI Corrective Action System 163

9.0 CONCLUSIONS AND RECOMMENDATIONS FOR CORRECTIVE ACTION 164
9.1 On-Site Interim Remedial Measures 164
9.2 Soil 164
9.3 Potential Facility-Wide Groundwater Health Risks 165
9.4 Existing Corrective Action Systems 166
9.4.1 South Landfill Groundwater Corrective Action System 166
9.4.2 Plant Site Groundwater Extraction System 167
9.4.3 OLBSI Groundwater Corrective Action System 168

10.0 REFERENCES 170

In Order
Following
Page 177

TABLES

1. SWMUs and AOCs Where RFI Was Performed
2. SWMUs and AOCs Where Confirmatory Sampling Was Performed
3. Outfall Discharge Descriptions
4. Summary of Completed Facility Corrective Measures
5. New Monitoring Well and Piezometer Construction
6. Summary of Soil Sample Locations and Analyses
7. List of Constituents of Potential Concern
8. Inorganic and Biological Indicators
9. Groundwater Sampling Results
10. Outfall Sampling Results
11. Soil Sampling Results
12. Boring Sampling Results
13. Variable Head Hydraulic Conductivity Test Results
14. Pumping Test Hydraulic Conductivity Results
15. Tier 1 Comparison of Maximum Detected Values of Constituents of Potential Concern in Groundwater to Risk-Based Screening Levels
16. Tier 1 Comparison of Maximum Detected Values of Constituents of Potential Concern in Northeast Perimeter Groundwater to Surface Water Risk-Based Screening Levels
17. Tier 1 Comparison of Maximum Detected Values of Constituents of Potential Concern in Surficial Soil to Risk-Based Screening Levels
18. Constituents of Potential Concern in Groundwater that Exceeded Tier 1 Human Health and Ecological Screening Levels
19. Constituents of Potential Concern in Surficial Soil that Exceeded Tier 1 Screening Levels
20. Tier 1 Comparison of Modeled Concentrations in Surface Water to Applicable Risk-Based Screening Levels
21. Site-Specific Variables that Were Used to Replace Default Values in the Calculation of Site-Specific Target Levels (SSTLs)
22. Toxicity Values Used in the Derivation of Tier 1 Screening Criteria

FIGURES

1. Site Location
2. SWMUs, AOCs, WMAs and Corrective Action Systems
3. Existing Surface Types
4. Storm Water Outfalls
5. Location of Jacksonville Fault Line
6. Excerpt from Geologic Map of Calhoun County with Regional Geologic Cross-Section Location
7. Geologic Cross Section
8. Discontinuity Location
9. Hydrogeologic Cross-Sections A-A' and B-B'
10. Hydrogeologic Cross-Section A-A'
11. Hydrogeologic Cross-Section B-B'
12. Interim Measures
13. Sewer System and On-Site Storm Water Management System
14. Parathion Isoconcentration in South Landfill and Plant Site

15. p-Nitrophenol Isoconcentration in South Landfill and Plant Site
16. Parathion Isoconcentration in OLBSI
17. p-Nitrophenol Isoconcentration in OLBSI
18. On-Site Area for RFI
19. RFI Well Locations
20. Soil Sampling Locations
21. Volatile Organic Compound Concentrations in Groundwater
22. Semi-Volatile Organic Compound Concentrations in Groundwater
23. Organophonsphorous Pesticide Concentrations in Groundwater
24. Total PCB Concentrations in Groundwater
25. Mercury Concentrations in Groundwater
26. Cobalt Concentrations in Groundwater
27. Total PCB Concentrations in Soil
28. Metal Concentrations in Soil
29. PCBs in Soil and Sediment
30. South Landfill and Plant Site Pumping Test Wells and Piezometers
31. OLBSI Pumping Test Wells and Piezometers
32. Shallow Residuum Potentiometric Surface for August 1998
33. Shallow Residuum Potentiometric Surface for September 1998
34. Ethyl Parathion Concentrations in Groundwater Samples Since 1997
35. 4-Nitrophenol Concentrations in Groundwater Samples Since 1997
36. Total PCB Concentrations in Groundwater Samples Since 1997
37. Mercury Concentrations in Groundwater Samples Since 1997
38. Cobalt Concentration in Groundwater Samples Since 1997
39. Preliminary Site Exposure Model
40. Revised and Updated Site Exposure Model
41. High and Low Contact Areas
42. OLBSI Groundwater Corrective Action System Potentiometric Surface for December, 1997
43. OLBSI Groundwater Corrective Action System Effectiveness Ethyl Parathion Concentrations
44. OLBSI Groundwater Corrective Action System Effectiveness 4-Nitrophenol Concentrations

APPENDICES

A. Borehole/Monitoring Well Logs and Air Monitoring Forms
B. Well Development Forms
C. Well Inspection and Water Level Data
D. Groundwater Purging and Sample Collection Forms
E. Pumping Test Data and Calculations
F. Geotechnical Laboratory Data
G. Analytical Laboratory Reports
   G-1 RFI Analytical Laboratory Reports
   G-2 Background Soil Information
H. Data Validation
I. Variable Head Test Data and Calculations
J. Risk Analysis for HEA
   J-1 Standard Equations and Exposure Values to Calculate PRGs
   J-2 Toxicological Profiles

J-3 Deed Restrictions
J-4 Derivation of Groundwater to Surface Water Dilution Factor
J-5 Dermal Absorption of PCBs
J-6 Site Specific Values used to Calculate SSTLs
K. Parathion and 4-nitrophenol Data Plots - Concentrations vs. Time
L. Historical Chemistry Data
M. Natural Attenuation Analysis

1.0 INTRODUCTION

1.1 General

Solutia Inc. (Solutia) has retained Golder Associates Inc. (Golder) and others to implement the Resource Conservation Recovery Act (RCRA) Facility Investigation and Confirmatory Sampling (RFI/CS) in accordance with the RFI/CS Work Plan approved on April 21, 1998, for the Solutia facility (Facility) located in Anniston, Alabama. A site location map is presented on Figure 1. This report presents the findings and conclusions of the on-site RFI/CS program, which was completed in accordance with the reporting requirements, set forth in Conditions III.D.4 and III.E.3.b of the Facility's RCRA Post-Closure Permit No. ALD000401048 (Permit) issued on January 7, 1997, by the Alabama Department of Environmental Management (ADEM). This introduction includes discussions of the objectives and the technical approach for the on-site RFI/CS investigation, and outlines the organization for the remainder of this report.

The Draft RFI/CS Report was submitted to ADEM on January 14, 1999. ADEM provided comments to Solutia concerning the Draft RFI/CS Report in the form of three letters documenting Notices of Deficiencies (NODs). Solutia responded to each of these NODs by letters dated September 1, 1999, August 7, 2001, and July 30, 2002, respectively. During a meeting on July 26, 2002, discussing the third NOD, ADEM directed Solutia to submit a revised RFI/CS Report incorporating the changes proposed by all three NOD responses. This document is the RFI/CS Report prepared to address the three NOD responses.

As part of responding to NODs, Solutia also prepared three additional plans. Among other things, the plans included additional soil and groundwater sampling, well replacement and new well installation, hydrogeologic investigation, private well survey, and upgrades and evaluation of the OLBSI Corrective Action System. These plans will be implemented after approval by ADEM. Reporting for these activities will take the form of RFI/CS Report Addenda.

1.2 Objectives

The Permit requires that an RFI be conducted for four specific Solid Waste Management Units (SWMUs) (SWMUs 1, 2, 8 and 9) and one Area of Concern (AOC) (AOC B). It also requires that a CS process be conducted for fifteen SWMUs (SWMUs 6, 7, 12, 17, 25, 27, 31, 34, 37a, 41,

42, 43, 44, 46, and 47) and two AOCs (AOC A and AOC C). A site plan showing locations of select SWMUs, AOCs, Waste Management Areas (WMAs), and Groundwater Corrective Action Systems is provided on Figure 2. Tables 1 and 2 provide lists of areas for which RFI and CS activities were performed.

The objectives of these investigations are defined in Appendix B II of the Permit, which requires that the RFI/CS program be sufficient to accomplish the following:

1. characterize the Facility's environmental setting;
2. define the source of releases to the environment;
3. define the degree and extent of releases to the environment;
4. identify actual or potential receptors; and
5. support the development and evaluation of any necessary corrective action plan.

1.3 Technical Approach

The technical approach applied to the RFI/CS, as defined in the RFI/CS Work Plan, focused on treating the Facility as a single potential release source. An extensive database of subsurface information collected at the site over the last 17 years has been developed, from which individual source areas and SWMUs have been identified. Where appropriate, corrective measures have been implemented to mitigate future releases at the Facility. Confirmatory sampling was conducted at those SWMUs and AOCs identified in the Permit. Additional data collection efforts concentrated on augmenting the existing data at the perimeter of the Facility to establish that effective containment is being achieved. Emphasis was placed on evaluation of potential off-site migration of constituents to assess perimeter control and to evaluate the effectiveness of the existing Corrective Action Systems. A site-specific human health and environmental assessment (HEA) was performed to assess potential receptors and exposure pathways. This information was used to evaluate the need for any additional investigations or corrective measures at the Facility.

The specific activities completed in this RFI/CS investigation included the following tasks:

1. evaluating the historic database;

2. verifying and refining the Site Conceptual Model (SCM);
3. identifying and collecting additional data;
4. evaluating the effectiveness of the existing Corrective Action Systems;
5. completing a semi-quantitative site-specific human health and environmental assessment; and
6. evaluating the need for, and scope of, any additional investigations or corrective measures to be implemented at the Facility.

1.4 Report Organization

The remainder of this RFI/CS Report includes background information and descriptions of procedures, methods, and results of RFI/CS investigations. The following sections of this report are organized as follow:

Section 2, Background, includes a brief description of the environmental setting, operational history, results of previous investigations, and a summary of remedial measures implemented at the Facility. This section also presents an overview of the SCM;

Section 3, RFI/CS Investigative Procedures, provides an overall description of the RFI/CS field program and presents the procedures and methods used to collect the required data;

Section 4, RFI/CS Results, presents the results of the field investigations described in Section 3;

Section 5, Nature and Extent of Contamination, discusses the origin, migration, extent, and rate of movement of constituents in soil, surface water and groundwater at the Facility. This section includes a detailed description of the groundwater flow system at the Facility;

Section 6, Health and Environmental Assessment, provides a description of the HEA conducted at the Facility to evaluate environmental risks associated with on-site media;

Section 7, Effectiveness of Corrective Action Systems, presents results of an evaluation of existing Corrective Action Systems at the Facility, including interim corrective measures (i.e., caps and covers, etc.) and groundwater extraction systems;

Section 8, Natural Attenuation, discusses the effects of natural attenuation processes on constituents in groundwater at the Facility; and

Section 9, Conclusions and Recommendations for Corrective Action, summarizes the results of the RFI/CS including the nature and extent of contamination, the effectiveness of Corrective Action Systems, and risks to human health and the environment. Section 9 also provides recommendations for additional investigations and corrective measures to be implemented at the Facility.

2.0 BACKGROUND

This section presents an overview of the Facility including site location, operational and regulatory history, environmental setting, hydrogeologic conditions, summaries of previous investigations and corrective actions, and an updated SCM. Additional details of previous investigations and corrective actions can be found in the referenced reports.

2.1 Site Environmental Setting

2.1.1 Site Location

The Facility is located on Highway 202, in the western part of the city of Anniston, in Calhoun County, Alabama. Calhoun County is located in the east-central part of the state. The manufacturing portion of the Facility occupies approximately 70 acres and is bounded on the south by Highway 202, on the east by the Clydesdale Avenue extension, on the north by the Norfolk Southern and Erie Railroads, and on the west by First Avenue (see Figure 1). Two closed landfills, the South and West End Landfills, are located adjacent to the Facility. The South Landfill, is located southeast of the manufacturing facility, south of (across) Highway 202. It is situated on the lower northeast slope of Coldwater Mountain and is surrounded to the east, south and west by undeveloped land. The West End Landfill is located on the southwest side of the manufacturing facility, on the north side of Highway 202.

2.1.2 Climate

The climate of Calhoun County is characterized as humid sub-tropical, with hot summers, mild winters, and some precipitation during all months of the year. Precipitation occurs primarily as rainfall and averages about 54 inches per year. The prevailing winds generally blow from the east-northeast during approximately 30 percent of the year and from the west-southwest approximately 15 percent of the year.

2.1.3 Physiography and Topography

Approximately 90 percent of Calhoun County, including the Facility, lies within the Valley and Ridge physiographic province. The geology of this area is characterized by folding and thrust faulting, with the dominant structural features being the numerous thrust faults. The Facility is located in the Weisner Ridges subsection of the Valley and Ridge province, which consists of

maturely dissected, faulted and folded quartzite mountains of high relief with intervening carbonate valleys.

Topography in the area is characterized by flat to gently rolling, northeastward trending valleys that are paralleled by ridges and mountains. The highest point at the Facility, at approximately 940 feet above mean sea level (msl), is near the southern property line. The ground surface at the Facility generally slopes from south to north.

The majority of the ground surface at the Facility is covered by gravel, cement or asphalt. The adjacent closed landfills and surrounding areas are primarily grass covered. Existing surface types across the Facility are displayed on Figure 3.

2.1.4 Drainage

In the immediate area around the Facility, drainage is through ditches leading towards Snow Creek. Snow Creek eventually drains into Choccolocco Creek, which empties into Lake Logan Martin on the Coosa River.

There are 11 storm water outfalls currently regulated at the Facility under a National Pollution Discharge Elimination System (NPDES) Permit and one non-storm water-discharge point from the Facility wastewater treatment facility (WWTF) to the City of Anniston Publicly Owned Treatment Works (POTW) (Figure 4). Although the storm water outfalls were permitted for the discharge of non-contact cooling water and condensate, all process-related water has been diverted to the WWTF. A description of the outfalls is included in Table 3.

2.1.5 Hydrogeology

2.1.5.1 Regional Hydrogeology

The stratigraphic and structural relationships of the rocks throughout most of Calhoun County are typical of the Valley and Ridge physiographic province of the southern Appalachian Highlands. Rocks that range in age from Cambrian to Pennsylvanian have been sharply folded into northeast trending anticlines and synclines that are complicated by thrust faults. The thrust faults are the dominant structural features of the Valley and Ridge province and cause the repetition of the

geologic units on the surface. Secondary stresses caused numerous high-angle faults of more limited extent. This faulting, folding, and crushing of rock units has caused the sometimes chaotic surficial distribution of formations in the County, including portions underlying the Facility.

Nine consolidated units ("bedrock" units, including the Shady Dolomite) and the overlying residuum are considered significant water-bearing units in Calhoun County. Although vertical conductivity in these units varies, there is no readily identifiable regional confining layer or layers to isolate the units into separate systems. Groundwater occurs in a variety of hydrogeologic environments. The majority of the water-bearing units in the area are carbonate rocks. Typically, these carbonate units yield only enough water for individual domestic use.

The Shady Dolomite Formation is present along the lower slopes of Coldwater Mountain and Choccolocco Mountain. This formation is approximately 500 feet thick and consists of bluish-gray or pale-yellowish gray, thick-bedded, dolomite with chert. The Shady Dolomite is considered a good aquifer in Calhoun County, and wells developed in this aquifer supply enough water for municipal or industrial uses. Regional groundwater flow is controlled by topography and the transmissivity and geologic structure of the underlying formations.

Lesser quantities of groundwater are obtained from sandstone, shale, mudstone, and quartzite units present in the County. These groundwater sources can be sufficient for domestic uses; however, it is difficult to obtain sufficient amounts of groundwater from these sources for municipal or industrial uses. The groundwater yield from these rocks is controlled by fracture orientation, grain size, grain distribution, and secondary permeability.

Minor amounts of groundwater are obtained from the metamorphic rocks in the extreme eastern and southeastern parts of the County. These minor systems are associated with the Piedmont province and usually supply only enough water for light domestic use.

Approximately 150 springs have been identified and located in the County during previous studies of the area. The discharge of these springs is variable, ranging from less than 1 gallon per minute (gpm) to over 17,000 gpm. Many of these springs are found along the trace of thrust faults and

produce enough water for domestic uses and, in some instances, for municipal supply. It is estimated that 80 percent of these springs are used for domestic, farm, stock, municipal, industrial, or recreational water supplies.

2.1.5.2 Coldwater Spring

2.1.5.2.1 Location and Topography

Coldwater Spring is located approximately five miles southwest of the Facility near the southwestern end of Coldwater Mountain (Figure 5). The land elevation near the spring is approximately 590 ft-msl. The crest of Coldwater Mountain extends to approximately 1700 ft-msl. The elevation of the Solutia plant is approximately 750 ft-msl.

2.1.5.2.2 Discharge and Usage

Coldwater Spring is one of the largest springs in northern Alabama. During an observation period from 1957 to 1983, the average discharge of Coldwater Spring was approximately 31 million gallons per day (mgd), and the minimum discharge was 23.5 mgd. The variability of the discharge from Coldwater Spring was approximately 60 percent during this observation period. Coldwater Spring is designated as a Class I aquifer by the United States Environmental Protection Agency (USEPA) and is the primary source of water for the City of Anniston, Fort McClellan, Anniston Ordinance Depot, and other municipalities and communities within Calhoun County (Scott et. al., 1987).

2.1.5.2.3 Geology and Structure

The Facility and Coldwater Spring are located along the Anniston-Coldwater Mountain-Bynum Sector of the Jacksonville Fault zone (Osborne and Szabo, 1984). The location of the Facility with respect to the Jacksonville Fault, and bedrock geology of the area is shown on Figure 6 (Warman and Causey, 1962). The Jacksonville Fault extends northeastward from the Town of Bynum, Alabama through Anniston, Piedmont, and Jacksonville. Published orientation data for the Jacksonville Fault near the site are not available, but generally the fault is considered to be a low-angle thrust fault (pers. comm. with Mr. W. Edward Osborne).

The structural geology of Anniston-Coldwater Mountain-Bynum Sector is characterized by a large, complex anticlinal structure, which forms Coldwater Mountain (Osborne and Szabo, 1984). The Coldwater Anticline plunges steeply to the southwest. The formations encountered within this area include the Rome Formation, the Shady Dolomite, and the Weisner Formation. The Rome Formation is composed of red-green shale/siltsone interbedded with red/light gray sandstone with minor limestone/dolostone units. The Shady Dolomite is typically described as an argillaceous to sandy dolostone to dolomitic limestone. The Weisner Formation is composed of sandstone, shale, and quartzite. Several imbricate splays of the Jacksonville Fault occur through Coldwater Mountain (unpublished mapping data by Geological Survey of Alabama (GSA); pers. comm. with Mr. W. Edward Osborne).

A geologic cross section (Figure 7) that extends across the Site from the Jacksonville Fault (northwest) to the southern flank of Coldwater Mountain (southeast) was prepared using the geologic data recorded on the various boring logs for the bedrock wells and piezometers at the Site, the geologic map published by Warman and Causey (1962), unpublished geologic mapping data that was provided by the GSA, and geologic data provided in Osborne and Szabo (1984). As shown in Figure 7, the Shady Dolomite underlies most of the Facility, except for the extreme northern and southern ends, which are underlain by the Rome Formation and the Weisner Formation, respectively. The Jacksonville Fault extends beneath the Facility at depth.

The discontinuity present at the north end of the Facility as shown on Figure 8 (discussed in Section 2.1.5.3) is interpreted to be a normal fault contact between the highly weathered Rome Formation and the Shady Dolomite. Physical evidence of this fault contact was not directly observed or reported during drilling or mapping; however, it is inferred because of the thickness of the Rome Formation encountered in the borings for piezometers DOP-1 and DOB-2 and the occurrence of Shady Dolomite in the borings for bedrock wells SBP-3 and SBP-5 (Figure 7). Additional physical investigation of the discontinuity has been proposed in the Supplemental RFI/CS Work Plan (Golder Associates Inc., 2002).

2.1.5.2.4 Hydrogeology of Coldwater Spring

A detailed understanding of the hydrogeology of Coldwater Spring is not documented in the published literature. However, it is generally believed that the spring discharges water from the brecciated zone of the Jacksonville Fault (Warman and Causey, 1960, 1961, and 1962; Scott et. al, 1987). The low variability of the discharge, the high yield, and the location of springs along the fault suggest that Coldwater Spring receives significant recharge from the distant sources along brecciated zone of the Jacksonville Fault and other related faults (Scott et. al., 1987). Coldwater Spring is located along the formational contact between the Shady Dolomite and the Weisner Formation and is generally aligned with the axial trace of the Coldwater Anticline (unpublished geologic mapping data by GSA).

Groundwater is readily available from the Shady Dolomite and the Weisner Formation, both in the form of springs and wells. Municipal and industrial water supply wells have been installed within the Shady Dolomite in Calhoun County. The groundwater is related to solution cavities and/or fracture zones. Groundwater availability from the Weisner Formation is generally less than from the Shady Dolomite and is related to faults and fractures. Coldwater Spring probably receives some recharge from local infiltration through residual soils overlying the Shady Dolomite and the Weisner Formation and from infiltration along the axial trace of the Coldwater Anticline.

2.1.5.2.5 Relationship of Coldwater Spring with Aquifer(s) Underneath the Facility

The detailed hydraulic relationship between the aquifers beneath the Facility and Coldwater Spring is not known because of the complex geologic structures that are associated with the Jacksonville Fault and surrounding area. As shown on Figure 6, the trace of the Jacksonville Fault is located about one-quarter mile northwest of the Facility. Figure 7 shows that the Jacksonville Fault is projected to dip underneath the site. The exact depth of the Jacksonville Fault beneath the site is unknown because the evidence of the fault was not confirmed in the site borings and the dip of the fault in this area was not reported in available publications. However, it is likely that the Jacksonville Fault occurs at depths greater than 500 feet in this area (Figure 7). Both the Facility and Coldwater Spring are underlain by the Shady Dolomite and the Weisner Formation.

Potentiometric data indicate that groundwater within the residuum beneath the Facility flows generally from the south-southeast to the northwest, north and northeast, while groundwater within the bedrock generally flows from the southeast to the northwest across the Facility. Water-level data measured in wells screened in the shallow and deep residuum and in the bedrock indicate that there is generally a downward hydraulic gradient beneath the Facility. Because the horizontal hydraulic conductivity is generally greater than the vertical hydraulic conductivity, the majority of the groundwater flow is likely in the horizontal direction. Nevertheless, groundwater flow rates within the residuum are very low because of the low hydraulic conductivity of the residuum material.

The brecciated zones associated with any of the fault systems are features of competent bedrock. At the Facility, bedrock is overlain by approximately 100 feet of residuum soils. These soils are clayey in nature. Brecciated zones are not likely to exist in residuum soils due to the natural plasticity in clayey soils.

2.1.5.3 Site Hydrogeology

Investigations previously conducted at the Facility, and confirmed during the RFI, have determined that the near-surface site geology consists of two water-bearing zones; the residuum and the Shady Dolomite. The residuum consists of low permeability silts and clays that are the products of weathering. Locally, the residuum extends to a depth of over 100 feet and acts as a semi-confining unit to the underlying Shady Dolomite. Water levels in the residuum reflect recent and seasonal variations in precipitation. The quality of groundwater in the residuum is highly variable and reflects surface and near-surface conditions.

The upper part of the residuum consists of fine-to-coarse-grained sandy to silty clays and extends laterally across most of the Facility. In general, boring logs indicate the residuum becomes denser with depth, as expected in a typical weathering profile. For this reason, the residuum has been loosely divided into two units. The material from the surface to a depth of about 45 ft bgs is referred to as the shallow residuum. The material from about 45 ft bgs to the top of weathered bedrock is referred to as the deep residuum.

Seams of white and purple clay were observed in some borings. Sand and silt filled slickensided fractures (<1 centimeter [cm]), chert gravel zones, and localized "pockets" of highly weathered sandstone and quartzite are present throughout the residuum.

Groundwater within the shallow residuum generally occurs under unconfined (water table) conditions. Typically, the water table surface is a reflection of the ground surface and shallow groundwater flow follows topography. The predominant lateral groundwater flow direction within the residuum is to the north. This is a result of a relatively steep gradient that exists across the northern face of Coldwater Mountain, trending into an essentially flat gradient across the production area of the Facility.

There is a distinct northeast component of flow in the northeast portion of the Facility. Also, there is a northwest component of flow in the vicinity of the West End Landfill. This general northwest component of flow is also present along the northern Plant boundary in the vicinity of the Old Limestone Bed Surface Impoundment (OLBSI) Corrective Action System. This is further discussed in Section 5 of this report.

The shallow groundwater is influenced by anthropogenic features such as backfilled excavations, caps, etc., which produce variable hydraulic conductivities and groundwater recharge rates. Also, three groundwater extraction systems (the South Landfill Corrective Action System, the Plant Corrective Action System, and the OLBSI Corrective Action System) influence the groundwater flow patterns in localized areas of the Facility. Data derived from pumping tests performed on these three systems were used to determine aquifer characteristics and evaluate the effectiveness of each system. These data and a discussion of the results are presented in Sections 4.6 and 7.

Based on pumping tests and variable head tests conducted during the RFI, the average hydraulic conductivity value for the shallow residuum is estimated to be approximately 8×10^{-2} feet per day (ft/day) (2.9×10^{-5} centimeters per second (cm/s)). This is a conservative estimate based primarily on pumping test results, which take into account secondary permeability and preferential flow pathways between wells.

Lateral groundwater gradients within the shallow residuum change significantly across the Facility, ranging from a maximum of 0.15 feet/foot (ft/ft) on the steeper slopes of the South Landfill to less than 0.015 ft/ft across the central area of the Plant. The horizontal groundwater flow velocity ranges from about 44 feet/year (ft/yr) across the steeper areas of the South Landfill to less than 5 ft/yr across the central and northern portion of the Facility.

The deep residuum is characterized by the same silty clay materials as the shallow residuum. However, there are localized areas within the deep residuum consisting of a dense clay with little or no secondary permeability, particularly in the northern portion of the Facility. Locally, the deep residuum extends to depths over 100 feet and acts as a semi-confining unit to the underlying bedrock aquifer.

Estimated hydraulic conductivities from variable head tests conducted in deep residuum wells ranged from 1.2×10^{-4} ft/day (4.3×10^{-8} cm/s) to 1.4 ft/day (5.0×10^{-4} cm/s). The average estimated hydraulic conductivity value calculated from the pumping tests was 8×10^{-2} ft/day (2.9×10^{-5} cm/s).

Estimated vertical permeabilities, based on laboratory tests of undisturbed soil samples, ranged from approximately 2.3×10^{-5} ft/day (8×10^{-9} cm/s) to 0.23 ft/day (8×10^{-5} cm/s). The geometric mean vertical permeability was calculated to be 6.4×10^{-4} ft/day (2.26×10^{-7} cm/s). These values are in general agreement with vertical permeability estimates obtained from previous investigations.

The hydrogeologic cross-sections presented as Figures 9 through 11 show both deep residuum and shallow residuum water level data. These data show that a strong downward gradient exists within the residuum underlying the Facility. This gradient ranges from 0.6 ft/ft to greater than 1 ft/ft.

A geologic discontinuity is present just north of the railroad tracks, which are along the north side of the Plant. The presence of this feature is based on two borings for wells DOP-1 and DOB-2 installed north of the Facility. Well DOP-1 was advanced to approximately 300 ft bgs and did not

encounter bedrock. Well DOB-2 was advanced to a total depth of 540 ft bgs, and did not encounter bedrock. Other wells (SBP-1, SBP-2, SBP-3, SBP-4, and SBP-5) in the area south of the above mentioned wells encountered competent limestone bedrock at depths ranging from 80 ft bgs to 120 ft bgs. In addition, this area is mapped as being the contact between the Rome Formation (comprised of sandstones and shales) and the Shady Dolomite Formation (comprised of karstic, dolomotized limestone), further indicating the potential for the presence of a discontinuity. This feature is depicted on hydrogeologic cross-section A-A' (Figure 10). Also, the Jacksonville Fault is depicted on a portion of the Geologic Map of Calhoun County, Alabama by J.C. Warman and L.V. Causey (1962) (see Figure 6). Although this fault is shown to be located north of the Site, fault splays associated with this feature could extend to the site area.

Boring log DOP-1 (north of the discontinuity) is described as clay and weathered shale to 300 ft bgs. Numerous borings south of the discontinuity describe a thick residual clay to the top of bedrock. These descriptions indicate similar residual soils and weathering regimes across the discontinuity/formation contact, and there is no evidence of a more permeable groundwater flow path associated with this feature.

2.2 Operational History

In 1917, the Southern Manganese Corporation, owned and operated by Theodore Swann, began operations at the site, initially manufacturing ferro-manganese, ferro-silicon and ferro-phosphorus compounds and, later, phosphoric acid. In 1927, the production of organic chemicals commenced with the introduction of biphenyl, which remains a major product of the Facility. In 1930, Southern Manganese Corporation became Swann Chemical Company with headquarters in Anniston. In May 1935, Swann Chemical Company was purchased by Monsanto. Solutia was formed in 1997 when Monsanto Company elected to separate its chemical business.

The Facility also currently manufactures 4-nitrophenol, which is used in the manufacture of acetaminophen, a non-aspirin pain reliever. It is also used as a raw material in the manufacture of some dyes and pesticides. This product has been produced for many years using the same raw materials and intermediates, even though there have been several expansions and process modifications.

A variety of organic and inorganic chemicals have been produced at the Facility during its history, including polychlorinated biphenyls (PCBs), parathion, and phosphorus pentasulfide. A summary description of the various manufacturing and associated support processes is provided below. Further information concerning historical and current manufacturing processes can be found in the RFI/CS Work Plan.

2.2.1 4-Nitrophenol Production (1965 to Present)

4-Nitrophenol is manufactured by the hydrolysis of para-nitrochlorobenzene (PNCB). PNCB and sodium hydroxide are reacted and acidified with sulfuric acid before the product is filtered and dried.

2.2.2 Polyphenyl Production (1927 to Present)

Polyphenyls are manufactured from benzene and cumene (isopropyl benzene) in a continuous pyrolysis unit. The crude product is separated into various polyphenyl products including Santotar®.

2.2.3 Therminol 59Ò Production (1983 to Present)

Therminol 59® is produced from polyethylbenzene. Distillation residues (Therminol® ends) are managed in a Totally Enclosed Treatment Facility. The ends are blended with Santotar® and burned as a non-hazardous back-up fuel in the Facility's boiler (SWMU 22).

2.2.4 Parathion and Methyl Parathion Production (1957 to 1986)

Parathion (or Niran®) and Methyl parathion were produced on a seasonal basis. These materials were produced by reacting ethanol or methanol with phosphorus pentasulfide to form 'thio acid.' The thio acid was stripped, chlorinated and then distilled to produce an intermediate. The intermediate was either sold or reacted with acetone, 4-nitrophenol, and soda ash to produce crude parathion. Wet acetone from the operation was recovered in a solvent recovery system. The residue from the distillation of the chlorinated thio acid was recycled to a crystallizer. The filtrate was returned to the parathion process, and sulfur waste was returned to the production process or landfilled (SWMU 1).

2.2.5 Phosphorus Pentasulfide Production (1967 to 1988)

Phosphorus pentasulfide (P_2S_5) was produced by reacting elemental sulfur and phosphorus. The resulting phosphorus pentasulfide was drummed for sale or used in the parathion process.

2.2.6 PCB Production (late 1929 to 1971)

PCBs were produced by reacting chlorine and biphenyl. Chlorine was produced at the Facility between the 1952 and 1969 solely for this purpose.

2.2.7 Facility Laboratory

The Facility laboratory conducts quality assurance tests. Wastes generated in the laboratory are accumulated in the Laboratory Satellite Accumulation Area (SAA) (SWMU 16) and stored in the Hazardous Materials Storage Area (SWMU 14). Spent solvents include methylene chloride, methanol, and xylenes.

2.3 Regulatory History

Solutia operates the Facility in accordance with regulatory permits issued under provisions of the Federal Clean Air Act, Clean Water Act, RCRA, and their State counterparts. The Facility previously operated two hazardous waste management areas (WMA I and WMA II). These WMAs were closed in compliance with provisions contained in an operating permit issued under the Alabama Hazardous Waste Management and Minimization Act (AHWMMA) and RCRA. Under provisions of the Hazardous and Solid Waste Amendments of 1984 (HSWA), a RCRA Facility Assessment (RFA) was conducted in 1991 by a USEPA contractor to identify SWMUs that might be subject to potential corrective action. In December 1994, and as amended in July 1995 and May 1996, an application for the re-issuance, with modifications, of the AHWMMA Permit was submitted. In October 1996, ADEM issued a Draft Hazardous Waste Post-Closure Permit to regulate the Facility's post-closure responsibilities for WMA I and WMA II and to address corrective action for SWMUs and potential AOCs located both on and off the Facility. This Draft Permit was finalized and issued on January 7, 1997, and one of the conditions was the completion of a RFI/CS. A RFI/CS Work Plan defining the scope of this RFI/CS was approved by ADEM on April 21, 1998.

On April 5, 1995, a Consent Order was entered into with ADEM requiring sampling of soils in the storm water drainage system in an area designated as "Area A" (an area immediately east of the Facility, approximately bounded by Clydesdale Avenue, 8th Street, Montrose Avenue and Highway 202). These samples and others from an additional area designated as "Expanded Area A" (an area immediately north of Area A) were collected. Both Area A and Expanded Area A are part of AOC B in the Facility's final RCRA Permit. PCBs were reported in the sediment samples from drainage ditches in this area. PCBs were also reported outside the limits of the ditches, but in proximity to the ditches in areas that were flooded during heavy rain events.

On March 8, 1996, a second Consent Order was entered into with ADEM to identify and sample additional areas for the presence of PCBs, to upgrade the West End Landfill cap, to improve storm water run-off controls, and to continue to relocate residents on the east side of the Facility. These tasks have been completed, and the effectiveness of a series of on-site interim remedial measures designed to satisfy these requirements is discussed in Section 7.1.

2.4 Previous Remedial/Corrective Measures

A summary of completed corrective measures is shown in Table 4. Details of these measures are described below.

2.4.1 Landfills

There are two landfills at the Facility, the South Landfill (SWMU-1) and the West End Landfill (SWMU-47). The South Landfill consists of ten individual cells and operated from 1960 to 1988. The West End Landfill operated from 1930 to 1960 and consists of one cell.

Following hydrogeologic assessments and groundwater sampling, storm water catchment basins were closed at the South Landfill and interceptor wells were installed to capture affected groundwater. Interceptor wells IW-1, IW-2, IW-3, and IW-4 were installed in 1982 to intercept and recover shallow groundwater from the western side of the closed South Landfill. Interceptor wells IW-5 and IW-6 were installed in 1982, and IW-7, IW-8, IW-9, IW-10, IW-11, IW-12, and IW-13 were installed in late 1987 through early 1988. These wells were installed to intercept and recover shallow groundwater along the northern side of the closed South Landfill. Interceptor

wells IW-14 and IW-15 were installed in 1987 and the pumping system began operation in early 1988 to intercept and recover shallow groundwater from the Plant Site area, which is downgradient of the South Landfill. Interceptor wells IW-1, IW-3, IW-4, and IW-15 were deactivated in 1998 pursuant to the Permit, but are still maintained and tested periodically.

The two cells used for disposal of hazardous waste (Cells 4E and 5E), which are designated as WMA-1, were closed with a RCRA compliant cap in 1989, while the remaining cells in the South Landfill, closed prior to the effective date of RCRA, were covered with clay and a vegetative layer. From the bottom up, the RCRA compliant cap consisted of consists of: a soil layer, a geotextile layer, a geomembrane layer, then a geocomposite layer with corrugated polyethylene pipe to provide subsurface drainage above the geomembrane, and topped with borrow fill and vegetation.

Interim remedial measures were constructed to prevent transport of affected soils from the South and West End Landfills. These measures include the following:

- Construction of a multi-media cap on the West End Landfill and a soil cover on the area immediately around the landfill. The cap included a minimum of six inches of compacted clay, a 60 mil thick high density polyethylene (HDPE) liner, a drainage fabric, 18 inches of cover soils, and a vegetative layer.
- Collection of storm water run-off from the West End Landfill and installation of hard piping for run-off through areas of affected soils. This allowed closure of drainage ditches with affected sediments.
- Upgrade of the cap on the South Landfill consisting of a multi-media cap over several closed cells and additional soil cover over adjacent areas.
- Construction of a retention and sedimentation pond to collect storm water run-off from the South Landfill.
- Diversion of storm water run-on from unaffected areas upstream of the South Landfill, and installation of culverts for drainage through areas of affected soils in AOC B. This allowed closure of the ditches containing affected sediments.

The location of the landfill interim measures is shown on Figure 12.

All of these measures were constructed in 1997 and 1998, with the exception of the work on the West End Landfill, which was completed in 1996. An evaluation of the effectiveness of these measures is presented in Sections 7 and 9.

The result of these and other interim remedial measures has left the site with a variety of different surface types across the facility. Over the landfills, the surface types consist of multi-media caps or natural clay covers. Across the plant site, the ground surface is generally covered with concrete, asphalt pavement, or gravel. Each of these existing surface types is displayed on Figure 3.

2.4.2 Former Production Areas

Corrective measures completed at former production areas are described below with the locations noted on Figure 2.

- **Former Parathion Area (SWMU 41)** - Production ceased in 1986, and decommissioning included removal of affected soil up to a depth of 20 feet. The area was backfilled, and the surface was covered with gravel. The dismantled structures and excavated soil were disposed of in the RCRA portion of the South Landfill.
- **Former PCB Production Area (SWMU 42)** - The area was decommissioned in 1972 and covered with asphalt. The manufacturing plant was dismantled and was disposed of in the South Landfill.
- **Former Phosphorus Pentasulfide Production Area (SWMU 43)** - The area was decommissioned in 1988. The existing concrete slab was left in place, and other areas were covered with gravel.
- **Former Holding Tanks, Aeration Basins, and Clarifiers (SWMU 46)** - These units were cleaned, demolished and closed in place. The area has been covered with gravel.

- **Product Storage Tank (AOC A)** - An over-spill of Santowax® that was observed during the RFA was cleaned up, and the spill containment was upgraded with a concrete floor. Level control circuitry on the tank has been updated.

- **Product Underground Storage Tanks (AOC C)** - Four underground storage tanks (USTs) were removed in the mid 1980s as part of a corporate UST elimination program. No evidence of releases was recorded at the time of the removal. Based on interviews with long serving plant personnel, it would appear that contrary to descriptions contained in the RFA report, only one of the four tanks was used to store petroleum products. That tank (the most northern and most eastern of the four tanks shown on Figure 2) was used to store gasoline for a fueling pump at the plant. The other three tanks were used in the manufacturing process and are more properly classified as in-ground process vessels than USTs. Specifically, the individual tanks contained the following chemicals used in the production process: a mixture of 4-nitrophenol and acetone; a mixture of acetone, water and parathion; and a mixture of acetone, water and soda ash (disodium carbonate). (Refer to the RCRA Facility Assessment Report issued by the USEPA on September 13, 1991 for further information on AOC C.)

- **Boiler feed tank (SWMU 25)** – This unit was taken out of service in 1995, and the area around a leaking flange has been cleaned.

- **New limestone bed (SWMU 11)** – This area was closed as a landfill in 1988. Around that time, a two-week pumping program significantly reduced concentrations of orthophosphate and 4-nitrophenol in groundwater. Post-closure monitoring is continuing at SWMU 11.

- **Old limestone bed (SWMU 8)** – This area was closed in 1982. A corrective action system consisting of 6 interceptor wells that intercept groundwater from both the old limestone bed and the new limestone bed areas was installed in 1988. There has been an overall reduction in the concentrations of 4-nitrophenol and parathion since pumping was initiated. An RFI has been completed on this SWMU.

The measures implemented in each of these SWMUs have been accepted as interim corrective measures by ADEM. Subject to confirmatory sampling establishing their effectiveness, these interim responses may be appropriate final corrective measures. The confirmatory sampling

program was designed to evaluate the effectiveness of these responses. These interim corrective measures will be evaluated in the CMS.

2.4.3 On-Site Storm-Water Drainage Management

The Facility NPDES permit allows the discharge of non-contact cooling water and condensate through the on-site storm water sewer system. However, in 1996, all of this process related water was re-piped to discharge to the on-site WWTF. Consequently, only storm water is discharged by the sewer system.

Additional sewer system enhancements were constructed in 1997. These included sealing a number of unused collection sewers, which discharged into a trunk main and lining that trunk main with an epoxy resin-impregnated felt liner. The trunk main discharges to one of the designated NPDES monitoring points, DSN 012.

The locations of the sewer system upgrades are shown on Figure 13.

2.4.4 Interim Remedial Measures in AOC B

In 1989, approximately 1,000 tons of sediment were removed from a drainage ditch running along the south side of 11th Street and from a portion of Snow Creek. In 1995, a program to purchase property in select areas of AOC B in close proximity to the Facility was initiated. Structures on the majority of the purchased properties were demolished, and soil covers were constructed over areas of affected soils in 1997 and 1998. The locations of the covered areas are shown on Figures 3 and 12.

The covers consisted of a geotextile fabric over the existing ground surface and a minimum of 14 inches of cover soil, which was then seeded. Covers were installed in an area around the South Landfill, as well as within AOC B immediately east and north of the Facility, as shown on Figure 12.

In addition to cover construction, storm water flowing through the covered areas was isolated in pipelines and conveyed to a discharge structure constructed on Tenth Street. The individual pipelines are as follow (refer to Figure 13):

- storm water from undeveloped land above the South Landfill is collected behind a diversion berm and conveyed in a 36-inch drainwater pipe to the discharge structure;
- storm water from the Facility which discharges to NPDES discharge point DSN 001 is collected and piped in two 36-inch diameter pipes to the discharge structure;
- storm water from the covered area east of the Facility is collected behind a berm and conveyed to the discharge point in a 24-inch diameter pipe;
- storm water from portions of Highway 202 and the southern portion of the Facility is conveyed in a 36-inch diameter pipe to the discharge structure; and
- the discharge from the sedimentation basin east of the Facility is conveyed to the Tenth Street structure in an 18-inch diameter pipe.

Storm water run-off from the West End Landfill is collected on the north side of the railroad tracks in a 42-inch diameter pipe and conveyed through the covered area to an existing culvert on the north side of West Tenth Street. Because of the limited flow capacity of this culvert, a storm water retention basin was constructed within the covered area to route the peak flow from a 100-year storm event, while reducing the existing risk of flooding.

In addition to these completed interim measures, an Off-Site Interim Measures Work Plan was approved by ADEM on August 14, 1998. This work plan proposed the following additional Interim Measures:

- submission of the Supplemental Work Plan for the Off-Site RFI approximately two months earlier than indicated in the approved RFI schedule;
- evaluation and physical stabilization (as required) of dredge spoil piles on Snow Creek and Choccolocco Creek; and

- isolation of affected sediments in a drainage ditch along the north side of the railroad tracks (south of Eleventh Street), between Clydesdale Avenue and Snow Creek.

The Supplemental Off-Site Work Plan was submitted in October 1998, and the dredge spoil piles were evaluated in October 1998. Any required stabilization measures will be implemented upon approval, as well as construction of measures required to prevent the downstream transport of any affected sediments in the Eleventh Street ditch.

2.5 Groundwater Monitoring Program

The groundwater monitoring program is divided into a Detection Monitoring Program designed to detect releases from the closed RCRA unit WMA I and a Corrective Action Effectiveness Program designed to determine the effectiveness of the three groundwater corrective action systems.

2.5.1 Detection Monitoring Program

The detection monitoring program applies to WMA-1, which includes closed cells 4E and 5E in the eastern half of the South Landfill. The system contains three downgradient point-of-compliance wells in bedrock, and one deep residuum upgradient well. The wells are sampled semi-annually, and the results have not shown any detection of constituents greater than the Concentration Limits established in the Permit.

2.5.2 Corrective Action Effectiveness Monitoring Program

The Corrective Action Effectiveness Monitoring system comprises three separate areas where corrective action by groundwater pumping and treatment is continuing. These include the South Landfill, OLBSI, and Plant Site Corrective Action Systems.

2.5.2.1 Solid Waste Management Unit I

The SWMU I Corrective Action system is comprised of three separate Corrective Action Systems; the western and northern portions of the closed South Landfill and the Plant Site Corrective Action System. Collectively, these systems contain 11 recovery wells and eight

monitoring wells. Based on water level data in this area, the Corrective Action System is capable of capturing groundwater flowing from up-gradient portions of this area.

Concentrations of parathion have decreased to below detection limits in all observation wells except OW-8A and OW-16A (13 and 68.5 micrograms per liter (µg/l), respectively in April 1998). Concentrations of 4-nitrophenol have reduced to non-detect in all observation wells that were sampled. The decrease in parathion and 4-nitrophenol concentrations with time are shown on Figure 14 and Figure 15, respectively. This decreasing pattern indicates that the Corrective Action Systems are effective in mitigating the downgradient migration of constituents. As previously noted, analyses of the water quality in the interceptor wells was discontinued by Permit in 1997.

Recent sampling has suggested that concentrations of chlorobenzene, cobalt, Aroclor 1221 and Aroclor 1248 exceed the Permit Concentration Limits in unfiltered samples. No PCBs or metals concentrations above the Permit Concentration Limits were reported from filtered samples. Chlorobenzene is a volatile organic compound (VOC); therefore, filtered samples are not applicable. The significance of these concentrations is evaluated in Section 6 of this report.

2.5.2.2 Waste Management Area II

The Waste Management Area II system addresses potential impacts from the OLBSI and a former lagoon (SWMU 8 and SWMU 9), as shown on Figure 2. It contains seven recovery wells and nine monitoring wells. Based on water level data in this area, the groundwater system is capable of capturing groundwater flowing from upgradient portions of this area.

Concentrations of parathion have reduced to non-detect in all observation wells except OW-24 (4.35 µg/L in April 1998). Concentrations of 4-nitrophenol have reduced to non-detect in all observation wells except OW-19 (218 µg/L in April 1998). The decrease in parathion and 4-nitrophenol concentrations with time are shown on Figure 16 and Figure 17, respectively. This decreasing pattern indicates that the Corrective Action System is effective in mitigating the downgradient migration of constituents. As stated in the 1997 Permit, analyses of the water quality in the interceptor wells are no longer required.

Recent sampling has suggested that concentrations of mercury and cobalt exceed the Permit Concentration Limits in both filtered and unfiltered samples. The significance of these concentrations is evaluated in Section 6 of this report, including recommendations for permit modifications.

2.6 Site Conceptual Model

The conceptual model of the site recognizes that industrial activities have been occurring for many years, and that substantial efforts have taken place over the last 17 years to understand and remediate impacts from chemicals that have migrated to the subsurface. Details of the understanding of the chemical migration patterns and potential receptors have been refined during the performance of this RFI/CS. The basic goal of protecting off-site receptors by mitigation of off-site impacts remains the same. The SCM includes four primary elements: identification and characterization of former source areas; preliminary identification of COPCs; definition of primary transport mechanisms; and identification of potential receptors and exposure points.

2.6.1 Identification and Characterization of Former Source Areas

From the time manufacturing operations began in 1917 until 1989, the Facility employed solid waste management practices which primarily relied upon the use of on-site landfills. Individual landfill cells were typically associated with specific production units. Thus the types of wastes landfilled are well defined.

Releases have been addressed as they have been discovered. Landfill areas and wastewater basins have been controlled by capping and by the installation of groundwater corrective action systems. The extent and concentration of constituents in groundwater have generally reduced since these systems have been in operation. The RFI/CS has shown that the existing corrective action systems are protective of human health and the environment. Many measures have been taken to identify and control source areas on site. These measures have been shown to be effective at producing major reductions in chemical concentrations in various media. Thus, the emphasis on defining future corrective measures should be on identifying those measures that will provide effective perimeter control of migrating constituents, while allowing the existing corrective measures to continue to reduce on-site residuals to acceptable levels.

A summary of the status of the SWMUs and AOCs for which an RFI or CS is required by the Permit is presented below.

- **South Landfill (SWMU 1)** - Parathion and 4-nitrophenol have been reported in groundwater from the landfill. Groundwater from the unit is being managed by pumping from the Western and Northern Corrective Action Systems.
- **Landfill Catchment Basins (SWMU 2)** - These former unlined units captured storm-water run-off from WMA-I and were included in the WMA-I closure.
- **Phosphate Landfill (SWMU 6)** - The unit was a neutralization pit, which provided pre-treatment of acidic scrubber water from the parathion furnace area prior to discharge to the Phosphoric Acid Basin (SWMU 12). No releases were identified in the RFA.
- **Santotar® Pit (SWMU 7)** - The unit managed Santotar®. No releases were identified in the RFA.
- **Old Limestone Bed (SWMU 8)** - The unit managed wastes from the 4-nitrophenol and parathion processes. Soils beneath the unit contained 4-nitrophenol and parathion. Groundwater from this unit is currently being managed by the OLBSI Corrective Action System.
- **Lagoon (SWMU 9)** - The unit may have handled wastewater containing 4-nitrophenol, parathion, and methyl parathion. Groundwater from this unit is currently being managed by the OLBSI Corrective Action System.
- **Phosphoric Acid Basins (SWMU 12)** - The unlined units were used to neutralize acidic wastewaters from various production processes. No releases were identified in the RFA.
- **Scrap Yard Waste Oil Satellite Accumulation Area (SWMU 17)** - The unit managed used compressor oils. Staining on the pad, gravel and surface soils was observed during the RFA.
- **Boiler Feed Tank (SWMU 25)** - The unit managed Therminol® ends. A leaking flange was observed during the RFA. The tank has since been dismantled.

- **Santotar® Tank (SWMU 27)** - The unit managed Santotar®. Black stains were observed on the concrete pad during the RFA. Investigation revealed the stains were associated with pipe insulation.
- **Steam Cleaning Pad (SWMU 31)** - The unit manages oily condensate from steam cleaning. No releases were identified in the RFA.
- **Old Boiler Scrap Yard (SWMU 34)** - The unit manages used, decontaminated equipment and scrap metal. Some stained gravel was observed in the area during the RFA. Further investigation suggested that the staining was associated with rust deposits.
- **Storm water Drainage System — Production Area Portion (SWMU 37a)** - The system managed storm water run-off from the polyphenyl and parathion production areas. It still manages storm water run-off from the 4-nitrophenol area.
- **Former Parathion Production Area (SWMU 41)** - The buildings have been demolished, and potentially affected soils were removed. No releases were identified in the RFA.
- **Former PCB Production Area (SWMU 42)** - The buildings have been demolished, and the area has been covered with asphalt.
- **Former Phosphorus Pentasulfide Production Area (SWMU 43)** - Corrosive wastewaters from this unit were discharged to the Phosphoric Acid Basins. Phosphorus was used as a raw material. The buildings have been demolished, and potentially affected soils were removed. No releases were identified in the RFA.
- **Waste Drum Satellite Accumulation Area (SWMU 44)** - This unit manages drums of Therminol® and Santotar® and potentially hazardous wastes awaiting toxicity characteristic leachate procedure (TCLP) analysis. No releases were identified in the RFA.
- **Former Holding Tanks, Aeration Basins and Clarifiers (SWMU 46)** - The units treated wastewaters that contained parathion, 4-nitrophenol and acetone still bottoms. No releases were identified in the RFA.

- **West End Landfill (SWMU 47)** - This unit received production wastes and general trash from the Facility. The upgraded multi-layer cap precludes this SWMU from being a potential source of COPCs.
- **Product Storage Tank (AOC A)** - This tank managed Santowax®. The base of the secondary containment was previously gravel, and evidence of spills was noted during the RFA. The gravel has since been removed, and the containment system has been upgraded.
- **Snow Creek Off-Site Assessment (AOC B)** - PCBs have been identified in sediments in drainage ditches leading towards Snow Creek and in a portion of Snow Creek. Between 1986 and 1990, a sediment delineation and removal project was implemented. Additional sampling and remediation have been conducted since 1994. Results of these activities have been reported to ADEM.
- **Underground Product Storage Tanks (AOC C)** - Three product USTs were removed in the mid-1980s. No releases were identified in the RFA.

2.6.2 Preliminary Identification of Constituents of Potential Concern

A list of Constituents of Potential Concern (COPCs) was identified by the Permit; by a review of historical data associated with previous investigations and remediation programs (including Appendix IX analyses conducted in 1994 and 1996); by a review of facility production and waste processes; by review of potential aerobic and anaerobic degradation products related to production and waste processes or of previously identified constituents at the Facility; and by elimination of chemicals that have a low health or environmental risk, that have not been reported at levels in excess of regulatory limits, or have not been reported in groundwater.

Following this review, the following COPCs were identified for study in the RFI/CS:

- Organophosphorus Pesticides
  - Parathion
  - Methyl parathion
  - Tetraethyldithiopyrophosphate (Sulfotepp)

- Semi-volatile Organic Compounds
  - 1,2-Dichlorobenzene (o-Dichlorobenzene)
  - 1,4-Dichlorobenzene (p-Dichlorobenzene)
  - 2,4-Dichlorophenol
  - 4-Nitrophenol (p-nitrophenol)
  - Polychlorinated biphenyls (PCBs)
  - Phenol
  - Pentachlorophenol
  - 2,4,5-Trichlorophenol
  - 2,4,6-Trichlorophenol
  - o,o,o-Triethylphosphorothioate
- Volatile Organic Compounds
  - Chlorobenzene
  - Isopropyl benzene (cumene)
  - Methylene chloride
  - 1,1,2,2-Tetrachloroethane
- Metals
  - Arsenic
  - Barium
  - Beryllium
  - Cadmium
  - Chromium
  - Cobalt
  - Lead
  - Manganese
  - Mercury
  - Nickel
  - Vanadium

2.6.3 Transport Pathways

Over the past 17 years, extensive efforts have been devoted to evaluating the potential constituent transport pathways. Based on these evaluations, a number of Interim Measures have been implemented to preclude the migration of COPCs along these various pathways. Each of the pathways is discussed below.

2.6.3.1 Surface Water

There are many natural and man-made hydrologic features at the Facility, which govern surface-water transport mechanisms. The most influential natural features are the steep side slopes of Coldwater Mountain near the South Landfill and the mild slopes which trend southeast to northeast across the production area of the Facility. During precipitation events, these moderate-to-steep slopes contributed to significant quantities of surface-water flow across the South Landfill, along the eastern and western sides of the Facility, and into various ditches that flowed through areas of affected soils. An extensive series of Interim Measures has been constructed to separate run-off from the affected soils and to prevent downstream migration of affected soils. These measures were described in earlier portions of this Section.

2.6.3.2 Groundwater

An extensive understanding of the primary hydrogeologic features that govern the flow of groundwater at the Facility has been developed during the past 17 years. The natural groundwater flow is generally to the north beneath the Facility at a rate ranging from approximately 44 ft/yr on the steeper slopes of Coldwater Mountain to less than 5 ft/yr across the Plant. This shallow groundwater flow system is influenced by the operation of the three groundwater corrective action systems, which intercept known areas of affected groundwater and remove constituents from the subsurface for treatment. These corrective action systems are helping to reduce or eliminate the potential transport of constituents away from the Facility.

2.6.3.3 Sediments

Surface stabilization measures have been undertaken at the Facility over the previous years to minimize potential transport of COPCs by sediment erosion. These measures are shown on Figure 3 and include the following:

- installation of an upgraded cap at the South Landfill (SWMU 1) and RCRA cap over WMA-I;
- installation of a gravel cover at the former Phosphate Landfill (SWMU 6);
- backfilling with clay to grade and installation of a gravel cover at the former Santotar® Pit (SWMU 7);
- backfilling to grade with clay and installation of an asphalt cover and gravel at the Old Limestone Bed and Concrete Storage Pad (SWMU 8 and 8A);
- removing the former earthen lagoon (SWMU 9) and placing borrow fill and topping with gravel;
- backfilling and seeding the New Limestone Bed (WMA-II);
- decommissioning, backfilling and seeding the Phosphoric Acid Basins (SWMU 12)[1];
- decommissioning and installation of a gravel cover at the Former Parathion Production Area (SWMU 41);
- decommissioning and installation of an asphalt cover at the Former PCB Production Area (SWMU 42);
- decommissioning and maintenance of concrete and gravel cover over the Former Phosphorus Pentasulfide Production Area (SWMU 43);
- installation of a concrete surface over the existing Biphenyl Production Area;
- installation of a gravel cover at the former holding tanks, aeration basins and clarifiers (SWMU 46); and
- installation of a multi-layer cap at the West End Landfill (SWMU 47).

[1] The North Phosphoric Acid Basin was most recently used for the retention of non-contact cooling water and storm water from the upslope catchment area. Inspection of the basin did not indicate the presence of any hazardous materials requiring removal or disposal. Consequently, the North Phosphoric Acid Basin was decommissioned with an in-place closure without excavation.

Drainage pathways from the Facility leading toward Snow Creek have been investigated. PCBs adsorbed to suspended solids have settled out in drainage ditches and on the east and north sides of the Facility. Numerous controls have previously been implemented to mitigate the potential for further transport from the Facility. These controls have been described in earlier portions of this Section and are summarized below:

- Construction of a multi-layer cap on the West End Landfill;
- Upgraded cap on South Landfill;
- Construction of a retention and sedimentation pond to collect storm water run-off from the South Landfill;
- Diversion of storm water run-off from clean areas above the South Landfill and installation of hard piping through downstream areas of affected soils in AOC B;
- Closure of ditches in AOC B; and
- Collection of storm water run-off from the West Landfill and piping through areas of affected soils.

These and additional containment measures described in Section 2.4 minimize the potential for off-site transport of sediments.

2.6.3.4 Air

The most frequently detected COPCs at the Facility are semi-volatile compounds: parathion, 4-nitrophenol and PCBs. Due to their low volatility, the major air migration pathway for these constituents would be airborne dust. However, the surface stabilization measures previously identified for sediments have also reduced the potential for airborne dust. Based on these considerations, air has not been considered as a migration pathway of concern for the RFI/CS.

2.6.3.5 Soil Gas

The most frequently detected COPCs are generally not volatile at ambient temperatures and pressures. The subsurface soil at the Facility is composed of silty clays that are not permeable to soil gases. Therefore, soil-gas emissions are not a potential migration pathway.

2.6.3.6 Soil

Several stained areas have been noted on surface soils within the Facility. Surface stabilization measures described in Section 2.4 above have mitigated migration of constituents and have reduced the potential for future impacts. Previous migration from surface soils to groundwater may have occurred; however, groundwater data will be used to assess potential effects associated with releases from surface soils.

2.6.4 Potential Receptors and Exposure Points

On-site receptors for exposure to impacted soils include production workers who work in the main processing area, site inspectors who tour around the complete Facility including the landfill areas, office workers who spend the majority (90 percent) of their time inside office buildings, construction workers who may engage in soil intrusive activities across the site on a short term basis, and adolescent trespassers who may contact surficial soils throughout the facility. On-site receptors are not expected to be exposed to groundwater since there are no drinking water or production wells in operation (or planned to be put into operation) at the Facility.

No off-site receptors of groundwater have been identified within one mile of the Facility[2]. A municipal water line extends past all improvements in the area. The Anniston Water and Sewer Board provided verbal information that all residences and other properties in the area where water is used are connected to their water distribution system. However, they would not release documentation about these connections as they consider this information to be private between

[2] As referenced in ADEM's report on Preliminary Assessment, MCT Anniston, Inc., dated August 18, 2000, only one private well exists within four miles of the Facility. That well is located on the Union Foundry property, which is approximately one mile from the Facility. Solutia included conducting a private well survey in the Supplemental RFI/CS Work Plan.

themselves and their customers. Exposure of off-site receptors to impacted surface water and sediments is possible, but is being controlled by the NPDES permit.

2.7 Additional Data Requirements

The following data requirements were identified to be collected for inclusion and analysis in this RFI/CS:

- Further data to confirm the lateral flow in the residuum and to determine if COPCs are leaving the Facility;
- Shallow groundwater data including physical, chemical, and microbiological parameters and associated hydraulic conductivities to confirm the capture or natural attenuation of COPCs downgradient of the Facility;
- Deep residuum wells to assess the quality of water flowing laterally and at depth to determine if COPCs are migrating from the Facility;
- Shallow piezometers to conduct aquifer testing to confirm the capture of COPCs associated with the Facility;
- Sampling of newly installed observation wells across the Facility and existing cased borings near the northeastern perimeter;
- Limited soil sampling in areas of sparse vegetative cover;
- Soils to be logged and samples taken during installation of new wells for use in assessing the effectiveness of corrective actions;
- Surface-water samples from select outfalls to monitor the drainage from the production area; samples to be analyzed for the COPC list;
- No sampling needs have been identified for on-site sediments;
- No sampling needs have been identified for air; and
- No sampling needs have been identified for soil gas.

3.0 RFI/CS INVESTIGATIVE PROCEDURES

3.1 Project Description

The on-site activities conducted as part of the RFI/CS program were comprised of the following groundwater, surface water and soil investigative tasks:

- installation of twelve observation wells to obtain groundwater quality information to augment the large database already generated at the Facility;
- installation of six piezometers to further clarify groundwater flow patterns and to aid in the evaluation of groundwater hydraulic parameters;
- inspection of existing wells to determine their ability to provide representative water-level measurements and, where selected, groundwater samples;
- measurements of water levels in new and existing wells to determine groundwater flow patterns at the Facility;
- sampling new observation wells along with eight existing wells for COPCs as well as specific water quality indicators for the evaluation of groundwater quality, and further groundwater sampling of seven of these wells for additional inorganic parameters for the evaluation of natural attenuation processes;
- sampling surface water discharge points to further evaluate off-site transport pathways;
- evaluating existing surface cover controls as outlined in the RFI/CS Work Plan;
- performing aquifer pumping tests and slug tests to determine the hydraulic characteristics of the subsurface and for use in assessing the effectiveness of the existing groundwater containment measures; and
- sampling on-site surface and subsurface soils for COPCs or for total petroleum hydrocarbons (TPH) to determine if the existing Facility caps and covers are adequate in preventing the movement of potential contaminants off site and to assess selected areas which show staining or are not covered with engineered controls.

The on-site RFI area is shown on Figure 18.

The investigative procedures used to complete the above tasks are discussed in the following sections. The field work done for the RFI/CS investigation was completed in accordance with the Health and Safety Plan and the Quality Assurance/Sampling Analysis Project Plan (QAP/SAP) submitted as part of the RFI/CS Work Plan.

3.2 Observation Well/Piezometer Installation

3.2.1 Soil Borings

Eighteen soil borings were advanced using hollow-stem auger drilling techniques with a CME-75 drill rig. Soil samples were collected at a minimum of five-foot intervals using either split-spoon samplers or CME samplers. The soil samples were visually inspected and geologically characterized.

Soil samples were collected from the planned screened intervals in all new monitoring wells, placed in appropriate sample containers, packaged, and sent to Savannah Laboratories, where they were analyzed for the following biological and inorganic indicator parameters: cation exchange capacity, fraction of organic carbon, acid volatile sulfide, and total organic carbon (CEC, FOC, AV Sulfide, and TOC, respectively).

Undisturbed (Shelby tube) samples were collected at approximately twenty-foot intervals and from the planned screened interval in each boring. The samples were sealed with wax, labeled, and submitted to Golder's geotechnical testing laboratory in Atlanta, Georgia. Samples were analyzed in accordance with the appropriate American Society for Testing and Materials (ASTM) Methods for the following parameters: particle size analysis, specific gravity, vertical permeability, soil classification, moisture content, and porosity. A general discussion of the soil laboratory testing results is presented in Section 4.2.

All the borings were completed in the residuum underlying the Facility. Air monitoring was performed during the course of the drilling investigation using a Mini-Rae photo-ionization detector. Drilling information and geologic descriptions were recorded on boring logs by a Golder geologist. Auger sections, split-spoon samplers, CME samplers, and the drill rig were decontaminated between boreholes. Decontamination procedures were performed by pressure

wash steam cleaning all applicable equipment in a contained decontamination area. Results of the soil boring investigation are discussed in Section 4.5. Soil boring logs and air monitoring forms are presented in Appendix A.

During the course of the soil boring program, relocation of some of the boreholes from the locations proposed in the RFI/CS Work Plan was necessary. Each of these field revisions was approved by ADEM in a letter dated July 8, 1998 and they are briefly described below.

The auger drill could not penetrate the ground at the planned location of boring OWR-2D. The obstruction is believed to be miscellaneous concrete rubble left over from the demolition of the waste treatment aeration basin, which formerly occupied the intended location of this boring. The boring was relocated approximately 15 feet south of its proposed location, as shown on Figure 19. Since borings OWR-2S and OWR-2D were intended to be used for the installation of a shallow and deep well pair, boring OWR-2S was also relocated from the location proposed in the RFI/CS Work Plan to that shown on Figure 19, in proximity to OWR-2D.

Borehole OWR-4D was relocated from its planned location on the south side of the railroad tracks to its current location on the north side, as shown on Figure 19. The relocation was required to avoid hazards posed by overhead electrical wires in the vicinity of the originally proposed location.

Boring OWR-6D was moved approximately 10 feet northeast, to the present location shown on Figure 19. At the originally proposed location, the bottom of the boring became unstable because of excess hydrostatic pressure in a relatively thin fracture zone. Subsequent to the installation of well OWR-6D, a broken water supply main was discovered south of the well location. It is believed that the relatively high hydraulic head in the fracture zone was a result of this break. A similar situation of excess hydrostatic pressure was previously encountered during the installation of well OW-8A and, on that occasion, the use of a pre-packed filter screen and filter sock was necessary to permit well construction. This well is also located along the broken water supply main. These are the only two borings in which this situation was encountered. Given the limited extent and potential man-made cause of this situation, it is not considered to be a factor in evaluating the integrity of the perimeter controls at the site.

3.2.2 Well Installation

Twelve groundwater observation wells (OWR-1D, OWR-1S, OWR-2D, OWR-2S, OWR-3D, OWR-3S, OWR-4D, OWR-5D, OWR-6D, OWR-7D, OWR-8S, and OWR-9S) and six piezometers (PZR-1, PZR-2, PZR-3, PZR-4, PZR-5, and PZR-6) were completed in the soil borings at the locations shown on Figure 19. Specific construction details, including total well depth, surface casing depth (where applicable), and the length of screened sections for each monitoring well or piezometer is presented in Table 5.

Well depths were determined based on estimated residuum thickness, depths of existing observation wells, or prescribed depths specified in the RFI/CS Work Plan. As discussed in Section 2, the residuum has been divided into shallow (0 to 45 ft bgs) and deep (greater than 45 ft bgs) zones. Shallow residuum wells were installed to a depth of 35 ft bgs, while deep residuum wells were installed to a depth of 65 ft bgs. Exceptions included shallow residuum well OWR-9S (50 ft bgs) and deep residuum well OWR-4D (80 ft bgs). These wells were installed to intercept deeper groundwater. Well OWR-9S is screened from 40 to 50 ft bgs and intercepts part of the shallow and the deep residuum. Also, OWR-2D was installed to a depth of 108 ft bgs to investigate a previously delineated bedrock trough.

Borings for the observation wells were advanced with 12 ¼-inch inside diameter (ID) augers to depths of approximately 15 ft bgs for shallow residuum wells (i.e., OWR-1S) or approximately 35 ft bgs for deeper residuum wells (i.e., OWR-1D). Ten-inch diameter steel surface casings were then installed in each of the borings for the twelve new monitoring wells. The surface casings were pressure-grouted in place and allowed to cure for at least 24 hours. Soil borings were then advanced inside the surface casings using 4 ¼-inch ID augers to the total depth of the borehole.

Two surface casings were installed for observation well OWR-9S. A 12-inch diameter steel casing was installed to a depth of approximately 8 ft bgs. After grouting the casing in place and allowing the grout to cure, augering was continued and a second surface casing (10-inch diameter) was completed at approximately 15 ft bgs following the installation methodology described above. Borings for the piezometers were drilled to their total depth using 4¼-inch ID augers. Surface casings were not utilized for piezometer construction.

Upon reaching the planned depth in each boring, groundwater observation wells or piezometers were installed. Two-inch nominal diameter, Schedule 40, flush threaded polyvinylchloride (PVC) riser pipe and machine-slotted, 0.008-inch slot size PVC screen were used to construct the wells inside the hollow-stem augers. A filter pack consisting of Grade Two silica sand was tremmied around the screen section extending from the bottom of the borehole to a minimum of two feet above the top of the screened interval. A 2.5-foot to 5-foot bentonite pellet seal was installed above the filter pack (poured) and hydrated. After allowing the pellets to hydrate (at least two hours), the remaining annular space was filled to within approximately 3 feet of the surface with a grout mixture of Portland cement and approximately 5 percent bentonite powder. Well construction logs are presented in Appendix A.

Concrete was poured into the remaining annular space, and the wells were completed at the ground surface by constructing approximately 3-foot by 3-foot square concrete pads around the wellheads. Locking aluminum protective casings (4-inches square by 5 feet long) were installed over the PVC riser pipe and into the concrete pad, extending to a depth of approximately 2.5 ft bgs.

Soil cuttings derived from the drilling were placed on plastic sheeting next to the borings and covered. These soils were later collected and staged at the Facility for proper disposal. A licensed surveyor (Environmental Precision Inc.) retained by the Facility surveyed the elevation (top of casing) and horizontal coordinates of the well to the nearest 0.01-foot. Elevations were measured with respect to the elevation of mean sea level. The elevation of the ground surface immediately adjacent to the wells was also determined by the surveyor. The well completion details (depth, elevation, screened interval, etc.) and groundwater elevations for each of the new wells and piezometers are summarized in Table 5.

3.2.3 Well Development

All of the new observation wells and piezometers, existing observation wells OW-9 and OW-10, and cased boring CB-85 were developed over a period of three weeks. Development procedures consisted of repeated cycles of surging with a Teflon® surge block and pumping using a submersible pump or a stainless steel bailer. This process was repeated until representative formation water was obtained. Representative water was considered to have been attained when the water became

visually clear of suspended solids and parameter readings had stabilized. A minimum of ten well volumes were removed from each observation well, with the exception of OWR-3D, which was dry. Well development equipment was dedicated to individual wells or decontaminated between wells. Well development forms are presented in Appendix B.

3.3 Well Inspections and Water Levels

Existing wells, cased borings, and piezometers were inspected to determine their ability to provide representative water level measurements, and where selected, groundwater samples. The outer well casing and surface completions were investigated to determine if any conditions existed that allowed surface water to enter the well annulus or the PVC well casing.

Water levels were obtained using a decontaminated electronic water level indicator. Measurements were made in reference to the north side of the top of casing unless otherwise marked. Results were recorded in feet below top of casing to the nearest hundredth of a foot. Three complete rounds of water levels were collected from the new and existing wells, piezometers, and cased borings at the Facility during the RFI investigation. These data are presented in Appendix C.

After measuring the depth to the static water level, the total well depth was measured with the water level meter. If the well contained dedicated sampling equipment (i.e., bladder pump or bailer), it was removed and placed on clean polyethylene sheeting prior to measuring the well depth. Any conditions that could compromise the condition of the well screen (i.e., screen silted-in) were noted. The probe and wetted portions of the cable on the water level meter were decontaminated before moving to the next well. A separate water level indicator was used for interceptor well water level measurements and for wells located near the OLBSI extraction well system to minimize the potential for cross-contamination. Well inspection results are presented in Section 4.1 and Appendix C.

3.4 Groundwater Sampling

3.4.1 General

A Facility-wide groundwater sampling investigation was conducted to provide supplemental information on groundwater quality underlying the Facility. The groundwater samples were collected in the new observation wells (OWR-1D, OWR-1S, OWR-2D, OWR-2S, OWR-3D, OWR-3S, OWR-4D, OWR-5D, OWR-6D, OWR-7D, OWR-8S, and OWR-9S) and existing wells (MW-1B, OW-9, OW-10, CB-85, WEL-1, WEL-2, WEL-3 and WEL-4). The existing wells were included as observation wells in the RFI investigation to provide additional groundwater quality points along the perimeter of the Facility. Samples were collected from the groundwater in the shallow residuum in the summer to confirm capture by the extraction system or natural attenuation of COPCs downgradient of the Facility. Wells WEL-1, WEL-2, WEL-3, and WEL-4 were sampled for the COPCs and the specific water quality indicator analyses in the fall to determine if climatic changes affected the downgradient water quality. Groundwater samples were collected from the deep residuum observation wells to determine if COPCs are migrating downward. The analytical results from the RFI sampling were used to determine if any COPCs were migrating across the perimeter of the Facility and to evaluate corrective action strategies.

3.4.2 Groundwater Purging, Sampling, and Analysis

The groundwater purging and sampling commenced approximately one week after development of the new wells and redevelopment of existing wells to allow time for the aquifer to recover. All groundwater purging and sampling information was recorded on field forms and maintained in a hard copy format. Copies of the groundwater purging and sample collection forms are provided in Appendix D. The groundwater purging and collection performed during the RFI/CS program was done in accordance with the Quality Assurance/Sampling and Analysis Project Plan (QAP/SAP) presented in the RFI/CS Work Plan except where otherwise noted.

Prior to purging, static water levels were measured with an electronic water level indicator. The presence of light and dense non-aqueous phase liquid (LNAPL and DNAPL) was assessed by collecting a sample from the standing water column in the observation well with a decontaminated bailer and placing the water in a clear container for visual observation. No LNAPL or DNAPL was detected in the wells.

Since some of the COPCs are hydrophobic and are strongly adsorbed to particulate matter, emphasis was placed on obtaining groundwater samples with the lowest possible turbidity. High turbidity samples are not representative of flowing groundwater and, hence, hydrophobic constituents detected in high turbidity samples are generally not migrating in the environment.

During routine semi-annual groundwater monitoring, low levels of metals and hydrophobic organic components were detected in turbid groundwater samples. These detections generally disappeared when split samples were filtered, confirming that the constituents were adsorbed to suspended solids in the samples and, hence, were not mobile.

Prior to the start of the RFI, ADEM approved the use of low-flow sampling techniques to reduce the suspended solids concentration in routine groundwater monitoring samples at the Facility. Further, while ADEM did not approve the use of filtered samples, it did agree that results from filtered duplicate samples could be submitted together with the results from unfiltered samples. In a letter to ADEM dated June 5, 1998, Solutia requested that the RFI/CS Work Plan be amended to include the use of these techniques.

In order to develop the low-flow sampling techniques best suited to the site, a pilot study was undertaken prior to the groundwater sampling during the RFI. Selected observation wells were continuously purged using a low flow peristaltic pump for periods up to three weeks. Samples were obtained every two to three days and were analyzed for PCBs. The results confirmed that the low detections were associated with suspended solids and that the total suspended solids (TSS) concentration decreased and stabilized within a few days. Additional pumping after the TSS stabilized did not provide any additional benefit. Therefore, detection of hydrophobic compounds, such as PCBs, is related to TSS concentration in the groundwater and it was decided to use low-flow sampling techniques for collecting RFI/CS groundwater samples. Duplicate samples were filtered prior to analyses for PCBs and metals as well.

The observation wells were purged for three days at a rate below 100 milliliters per minute. A minimum of three well volumes were removed from the well unless it was purged dry. The low-flow sampling rate and volume of groundwater removed were noted on the purging log forms.

Low-flow sampling was performed to minimize the disturbance of sediment in the observation wells. All purged groundwater was containerized and disposed of in the on-site WWTF. Dedicated positive pressure Teflon® bladder pumps and tubing were used in wells MW-1B, OW-9 and OW-10 to purge and sample groundwater. Non-dedicated positive pressure Teflon® bladder pumps and tubing were used to purge and sample groundwater from the remaining observation wells. These bladder pumps were decontaminated between uses according to the procedures outlined in the RFI/CS Work Plan.

The pH, temperature, conductivity, turbidity, oxidation reduction potential, and dissolved oxygen were measured in the field prior to and while purging at a frequency of one measurement per well volume for a total of four well sets where permitted. Additional dissolved oxygen and oxidation and reduction potential measurements were collected for use in natural attenuation predictive simulations (Section 8). Several observation wells went dry prior to the extraction of three well volumes. For these wells, additional field parameters were taken at the onset of sample collection. The results were recorded on the sample collection forms. The field instruments used to analyze the field parameters were calibrated at the beginning and end of each day of use and were decontaminated between monitoring wells according to the procedures outlined in the QAP/SAP.

Wells were sampled immediately after low-flow purging at the same rate at which they were purged. All unfiltered groundwater samples from RFI observation wells were sampled for COPCs analyses with VOC samples collected prior to collection of semi-volatile organic compound (SVOC), PCB, metals, and biological indicator parameter samples. Filtered samples were also collected for PCB and COPC metals analyses. Samples were also collected in select RFI observation wells (OWR-1D, OWR-1S, OWR-2D, OWR-2S, OW-10, CB-85, and MW-1B) for additional parameters which included: total phenols, total phosphorus, TOC, total organic halogen, sulfate, sulfide, nitrate, total Kjeldahl nitrogen, total dissolved solids, total suspended solids, alkalinity, and heterotrophic plate counts.

Unfiltered samples were collected directly from the Teflon® bladder pump system. Filtered samples were collected through a 0.45-micron in-line filter followed by a 0.1-micron tripod filter system. Wells OWR-1D, OWR-2D, OWR-3S, OWR-7D, OWR-9S, OW-10, CB-85, and MW-

1B went dry before the full list of samples was collected. Within 24 hours of going dry, these observation wells were sampled for the remaining samples until the well went dry again. This was repeated until the full list of samples was collected. Temperature, pH, conductivity, turbidity, oxidation reduction potential and dissolved oxygen measurements were monitored each day for those wells sampled over multiple days. The information was recorded on the sample collection forms.

All groundwater samples were stored in coolers with ice immediately upon collection to obtain a sample temperature below 4 degrees Celsius (4°C). Chain of custody forms were completed as outlined in the QAP/SAP. The groundwater samples and chain of custody were transported to Savannah Laboratories for analysis ensuring that technical hold times were not exceeded. The analytical methods used by Savannah Laboratories for the COPCs and inorganic parameters are presented in the QAP/SAP. The analytical results are discussed in Section 4.3.

3.4.3 QA/QC

Quality assurance (QA) objectives were defined in the QAP/SAP and varied according to the intended use of each analysis. For example, Level I data quality assurance was required for field parameters (pH, temperature, specific conductivity, turbidity, dissolved oxygen, and oxidation reduction potential), while Level III data quality assurance was performed for analyses associated with COPCs and inorganic indicators. The levels of QA effort associated with the various types of analysis for the groundwater sampling are discussed in detail in the QAP/SAP.

Various QA/QC samples were collected and analyzed to confirm the groundwater sample validity. These included trip blanks, field duplicates, matrix spikes, matrix spike duplicates, field blanks, and method blanks.

The trip blanks were prepared by Savannah Laboratories, transported to the Facility and handled in the same manner as other samples, except that they remained unopened, and were then returned to Savannah Laboratories for VOC analysis to assess whether chemicals were introduced to the samples via transportation or handling procedures.

A field duplicate sample was collected for every ten investigatory samples. Field duplicates were sent to the laboratory for analysis and the results were evaluated to provide indication of the homogeneity of the groundwater sample and the precision of the field sampling and laboratory sample analysis. Field duplicate samples were collected at wells OWR-2D and OWR-8S.

Matrix spike and matrix spike duplicate samples were collected for every twenty investigatory samples by taking additional sample volumes for each laboratory analysis. The matrix spike was a subsample of an investigatory sample to which the laboratory adds a spike containing analytes at known concentrations prior to extraction/analysis of the sample to address the effect of the sample matrix on the analytical laboratory's extraction and analysis methodology. The matrix spike duplicate is another subsample from the original investigatory sample, which is similarly spiked for confirmatory analysis. The matrix spike and matrix spike duplicate samples were collected at well OWR-2S.

Field blank samples were collected to determine if chemicals were introduced to the samples through the field personnel sample handling. Unfiltered field blank samples were collected by pumping distilled water through the decontaminated positive pressure Teflon® bladder pump into the sample container. Filtered field blank samples were collected by pumping distilled water through the decontaminated positive pressure Teflon® bladder pump, then through the 0.45-micron in-line filter followed by a 0.1-micron tripod filter system. The field blank analysis was obtained using decontaminated equipment from well OWR-3S.

Method blanks and blank samples were prepared by the laboratory and analyzed to determine whether chemicals were introduced to the samples via the laboratory's sample handling procedures. A method blank was analyzed by Savannah Laboratories for the analyses required for each sample batch.

Laboratory Control Standards, which contain certain concentrations of compounds dictated by the USEPA methodology, were analyzed for VOCs and SVOCs. The percent recoveries for the known compounds are evaluated to provide information on the accuracy of the analytical method and on the laboratory performance.

3.5 Surface Water Sampling

3.5.1 Objective

Surface water samples were collected and analyzed to assess the possible migration of constituents by surface routes from the Facility production areas.

3.5.2 Surface Water Sampling Procedures and Analysis

Two National Pollution Discharge Elimination System (NPDES) outfall points (DSN 004 and DSN 005) were sampled for COPCs in June 1998 after a precipitation event that produced enough water flow to the outfall points. The outfall locations are shown in Figure 4. Surface-water grab samples were manually collected from the center of the stream of water at approximately mid-depth. The sample container was lowered into the water while still capped, then uncapped under water to allow the sample bottle to fill, and then recapped before removing it from the water. Samples that required preservation were preserved immediately upon collection in the field. The methodologies used by the laboratory are presented in the QAP/SAP.

3.5.3 QA/QC

Level III data quality assurance was performed for analyses associated with COPCs. QA/QC samples were analyzed to confirm the sample validity. Method blanks and laboratory control standards were analyzed by Savannah Laboratories for each sample batch analyses for internal laboratory QA/QC. No field blanks, trip blanks or duplicates were collected for analysis.

3.6 Aquifer Testing

3.6.1 Variable Head Tests

Variable head tests (slug tests) were performed on all new observation wells and piezometers, and selected existing wells to estimate the variation of hydraulic conductivity in the residual soils at the Facility. Procedures for both rising and falling head tests, and the methods of analysis are presented in the following sections.

3.6.1.1 Testing Procedures

Static water level measurements were obtained in each well prior to the initiation of each test. Falling head tests were performed on wells where the top of the water column was above the screened interval. These tests were conducted by quickly adding approximately one gallon of distilled water and measuring the response in the well. Rising head tests were performed on wells that were screened across the water table by removing the standing water with a bailer (approximately 0.3 to 0.5 gallons). Water level changes and elapsed time were recorded with pressure transducer/data logger assemblies or with an electronic water level indicator and digital stopwatch. The total head change in each test was at least two feet.

3.6.1.2 Method of Analysis

Variable head test data collected during the RFI were analyzed using the method developed by Bouwer and Rice (1989). The Bouwer and Rice (1989) slug test method is designed to estimate the hydraulic conductivity of the aquifer material surrounding the screen of a monitoring well or piezometer. The method uses the following equation for estimating hydraulic conductivity (K):

$$K = \frac{r_c^2 \ln(R_e / r_w)}{2L_e} \frac{1}{t} \ln \frac{y_o}{y_t}$$

where,

r_c = piezometer radius (or r_w if the water level change is within the screened interval),

r_w = radius measured from the center of the well to undisturbed aquifer material,

R_e =effective radial distance over which the difference in head (y_o) is dissipated in the aquifer,

L_e = the length of the screen,

y_t = head displacement at time t, and

y_o = initial head displacement (t=0).

The following assumptions are inherent to the Bouwer and Rice method:

- unconfined aquifer of infinite extent;

- homogeneous, isotropic aquifer of uniform thickness;
- water table is horizontal prior to the test;
- instantaneous change in head;
- inertia of water column and non-linear well losses are negligible;
- fully or partially penetrating well; and
- flow to the well is in steady state.

Small deviations from these assumptions do not significantly impact the variable head test results. These results are discussed in Section 4.6.1.

Variable head tests were performed at the OLBSI Groundwater Corrective Action System in a separate investigation in 1996. The data obtained from these tests were analyzed using the Hvorslev Method (1951). This method is similar to the Bouwer and Rice Method (1989) described above. The results of these tests are discussed in Section 4.6.1.

3.6.2 Aquifer Pumping Tests

3.6.2.1 Objectives

Aquifer pumping tests were performed at the Northern Landfill and Plant Site Corrective Action Systems during the RFI investigation. Pumping tests were previously performed at the OLBSI Corrective Action System in November 1996. These tests were performed to obtain aquifer parameter values (transmissivity [T]), hydraulic conductivity [K]), and to aid in evaluating the effectiveness of each Corrective Action System.

3.6.2.2 Testing Procedures

Pumping tests were performed on five interceptor wells during the RFI investigation: IW-6, IW-10, and IW-11 at the Northern Landfill Corrective Action System; and IW-14 and IW-15 at the Plant Site Corrective Action System. The pumping tests consisted of a pumping well and one or more nearby observation wells or piezometers. The decline (drawdown) in groundwater levels

was monitored as the pumping wells were pumped at a constant rate. The general procedures used to conduct all pumping tests at the Facility are outlined below.

An in-line flow meter was installed at the pumping well to monitor the rate at which the well was pumped. Vibrating wire pressure transducers were installed in observation wells and piezometers located in relative proximity to the pumping well to measure groundwater levels throughout the duration of the pumping tests. Water level data from the transducers were recorded on data loggers, and periodically downloaded to a portable computer. Other selected observation wells and piezometers were monitored manually using an electronic water level indicator.

Prior to testing, the corrective action systems were shut off and allowed to recover for a period of two weeks. Water levels were monitored in nearby observation wells and piezometers during this recovery period. After recovery, each individual interceptor well to be tested was set to pump with a submersible pump at a constant rate for a period of up to three days. The pumping rate used for each test was based on the historic well discharge information and the minimum sustainable pumping rate for the test pump. Due to the low permeability materials that comprise the residuum at the Facility, a low rate (0.25 to 0.4 gpm) was required to attempt to sustain steady pumping for a period of three days, as described in the RFI/CS Work Plan. Once the pumping test was completed, or the well went dry, the pumps were shut off. The wells were then monitored as they recovered to within 80 percent of their static water levels. Water level data were collected throughout the duration of the pumping and recovery tests.

3.6.2.3 Method of Analysis

Pumping test data collected during the RFI investigation were analyzed using the Theis (1935), Theis-Jacob Recovery (1946), Hantush and Jacob (1955), Neuman (1975), and Moench (1993) solutions. Data were corrected for unconfined conditions using the theory developed by Jacob (1944) before performing the Theis analysis. A discussion of the data and the results of the analyses are presented in Section 4.6.

Pumping tests were performed at the OLBSI Groundwater Corrective Action System in a separate investigation in 1996. The data obtained from these tests were analyzed prior to

submittal of the RFI/CS Work Plan and thus analytical methods were used which were different from those defined in the RFI/CS Work Plan. These analyses were performed using straight line, semi-log solutions (Jacob (1950) and Chow (1952)), and the Theis-Jacob Recovery Method (1946). Both straight-line analyses are direct semi-log approximations of the Theis (1935) equation described above, and yield similar results. The results of these tests are discussed in Section 4.6.2.7.

The Theis, Theis-Jacob Recovery, Hantush and Jacob, Neuman and Moench analytical and solution methods are described below.

The Theis (1935) method of analysis uses the following analytical solution for the two-dimensional groundwater flow equation:

$$s(r,t) = \frac{Q}{2\pi T}\int_{u}^{\infty}\frac{e^{-u}du}{u}$$

where: $u = \frac{r^2 S}{4Tt}$, and

s = drawdown,

Q = pumping rate,

T = transmissivity,

S = storativity,

r = radial distance from the pumping well, and

t = time.

For the specific definition of u given above, the integral is known as the well function, W(u), which is represented by an infinite Taylor series. Using the Taylor series, the equation becomes:

$$s = \frac{Q}{4\pi T}W(u)$$

A log-log plot with W(u) along the y axis and 1/u along the x axis is called the Theis Curve. Field measurements are plotted as time (t) along the x-axis and drawdown (s) along the y-axis. The data analysis is completed by curve matching.

The following assumptions are inherent to the Theis solution:

- the aquifer is confined and has an apparent infinite extent;
- the aquifer is homogeneous, isotropic, and of uniform thickness;
- the piezometric surface was horizontal prior to pumping;
- the well is fully penetrating and pumped at a constant rate;
- water removed from storage is discharged instantaneously with a decline in head; and
- the well diameter is small, therefore well storage is negligible.

Small deviations from these assumptions do not significantly impact the test results.

Water entering a well is subject to well losses causing the drawdown in the well to be significantly greater than the drawdown in the aquifer. Use of this time-drawdown data will therefore underestimate the formation transmissivity. This can be overcome by measuring the recovery of the water level in a well after pumping ceases. Time-drawdown data can be plotted based on this recovery and the transmissivity more accurately estimated. This method of analysis is referred to as the Theis-Jacob Recovery Method. The solution to this method is as follows:

$$s' = \frac{2.3Q}{4\pi T} \log\left(\frac{t}{t'}\right)$$

where:

s' = residual drawdown (recovery),

Q = pumping rate,

T = transmissivity,

t = total time since pumping began, and

t' = time since pumping ceased.

To analyze these data, s' is plotted on the logarithmic y-axis and time is plotted on the linear x-axis as the ratio of (t/ t'). The assumptions inherent to this method are the same as those presented with the Theis equation above.

The following correction to drawdown by Jacob (1944) was incorporated to approximate unconfined conditions:

$$scor = s - (s^2/2D)$$

where:

scor = the corrected drawdown,

s = measured drawdown, and

D = saturated aquifer thickness.

This correction allows the user to use the Theis and Theis-Jacob Recovery confined solutions for the analysis of pumping test data recorded for an unconfined aquifer.

Neuman (1975) developed a solution method for pumping tests performed in unconfined aquifers. The equation developed to represent drawdown in an unconfined aquifer is as follows:

$$s = \frac{Q}{4pT} W(U_A, U_B, b)$$

where:

$W(U_A, U_B, b)$ = the unconfined well function,

U_A = $r^2S/4Tt$ (Type A curve for early time),

U_B = $r^2Sy/4Tt$ (Type B curve for early time),

b = r^2K_v/D^2K_h,

s = drawdown,

Q = pumping rate,

T = transmissivity,

S = storativity,

Sy = specific yield,

D = initial saturated thickness,

r = radial distance from the pumping well,

K_v= vertical hydraulic conductivity,

K_h=horizontal hydraulic conductivity, and

t = time.

The following assumptions are inherent to the Neuman solution:

- the aquifer is unconfined and has an apparent infinite extent;
- the aquifer is homogeneous, isotropic, and of uniform thickness over the area influenced by pumping;
- the piezometric surface was horizontal prior to pumping;
- the well is fully penetrating and pumped at an average rate; and
- the well diameter is small, therefore well storage is negligible.

Walton developed a method of solution for pumping tests (based on Hantush and Jacob (1955)) in leaky confined aquifers with transient flow as follows:

$$s = \frac{Q}{4pT}\int_{m}^{\infty} -\frac{1}{y}\exp\left(-y-\frac{r^2}{B^2 y}\right)dy$$

where:

$s = \frac{Q}{4pT}W\left(m, \frac{r}{B}\right)$ and, $m = \frac{r^2 S}{4Tt}$, and

$W\left(m, \frac{r}{B}\right)$ is known as the leaky well function (Freeze and Cherry, 1979),

s = drawdown,

Q = pumping rate,

T = transmissivity,

S = storativity,

r = radial distance from the pumping well, and

t = time.

The Moench solution (Moench, 1993) is an extension of the Neuman solution (Neuman, 1972) for drawdown in a homogeneous, anisotropic, confined or unconfined aquifer, with either a fully or partially penetrating pumping well and multiple observation wells.

The general equation developed by Moench for dimensionless drawdown, h_D, in an unconfined aquifer is

$$h_D(g, b, s, z_D, t_D) = h_{DT} + \Delta h_{DH} + \Delta h_{DN}$$

where:

$$h_D = \frac{4pKD}{Q}(h_0 - h_f)$$

$$g = abS_y / K_z$$

$$b = (r^2 K_v)/(D^2 K_h)$$

$$s = S / S_y$$

$z_D = b/D$

$t_D = Tt/r^2S$

where:

? is a dimensionless fitting parameter that incorporates the effects of delayed drawdown, and a is an empirical constant. For instantaneous drawdown, ? is approximated at $1x10^9$.

z_D is the dimensionless depth of the piezometer.

t_D is the dimensionless time.

h_{DT} is the Theis (1935) solution for a well in a confined aquifer.

? h_{DH} is the deviation from the Theis solution due to effects of partial penetration in a confined aquifer (Hantush component).

? h_{DN} is the deviation from the Theis solution due to effects of the free surface (Neuman component).

For confined aquifers, the Moench (1993) solution uses the first two components of the above equation to account for the confined aquifer and partial penetration. Thus, for confined conditions with fully penetrating pumping and observation wells, the solution is the same as the Theis solution.

If the aquifer is unconfined and both the pumping well and the observation well are fully penetrating, the solution is the same as the Neuman solution.

The Moench solution uses dimensionless parameters for the type curves with $\log(t_{dy})$ plotted on the X axis and $\log(h_d)$ plotted on the Y axis for the type curves. The data scales are $\log(t/r^2)$ on the X axis and log(s) on the Y axis.

The Moench Partially Penetrating solution assumes the following:

- the aquifer has an "apparent" infinite extent,
- the aquifer is homogeneous and isotropic,
- drawdown is small compared to saturated thickness,
- the piezometric surface was horizontal prior to pumping,
- the well is pumped at an average rate, and
- the well diameter is small, so well storage is negligible

Pumping test analyses and results are discussed in Section 4.6. Data, calculations, and curve matching are presented in Appendix E.

3.7 Soil Sampling

3.7.1 Surface Soil

Seventeen surface or near-surface soil samples were collected from various locations across the Facility, as shown on Figure 20. These samples were obtained to: (1) evaluate the potential for off-site migration from different SWMUs; (2) confirm the effectiveness of existing corrective measures; (3) investigate areas that exhibited visual indications of residual staining; and (4) provide quantitative estimates of exposure point concentrations for use in the HEA. Further

investigation into potential off-site constituent migration was achieved by sampling nearby surface water outfalls as described in Section 3.5.

Specific surface soil investigation techniques were presented in the RFI/CS Work Plan (Section 4.2.3). The general methodology for obtaining all surface soil samples (SSRs-1, 2, 3, 4, 5, 6, 7, 8, 16, 17, 18, 19, 20, 21, and 22) included clearing away grass, root mat, debris, or gravel from the sample location prior to collecting the soil sample. Surface soil samples SSR-12 and SSR-13 were collected two feet below an overlying asphalt cover that extended to approximately four feet below the surface. Soil boring methods were used in collecting these two samples as described in Section 3.7.2. All other surface soil samples were collected using the methodology described below.

A stainless steel auger was advanced to a depth of two feet. Disposable EnCore® samplers were used to obtain representative samples for Method 5035 VOC analysis. This method requires the closed-system purge-and-trap soil sampling criteria as described in USEPA SW846 Update III (1997). In addition, four-ounce sample jars were filled with non-homogenized soil to provide a bulk sample for percent solids and screening analyses. Additional soil from the auger was then homogenized in a stainless steel bowl until enough volume was accumulated to fill the appropriate sample containers. The containers were then placed on ice, packaged, and shipped to Savannah Laboratories where samples SSR-20 and SSR-22 were analyzed for Total Petroleum Hydrocarbons (TPH) and the remaining surface soil samples were analyzed for COPCs. Chain-of-custody forms were filled out and shipped with the samples. Appropriate sampling QA/QC was obtained by collecting additional soil for blind duplicate, matrix spike, and matrix spike duplicate samples. Trip blanks and equipment rinse blanks were also included. All sampling equipment was decontaminated between samplings. Table 6 summarizes the locations, depths, and analyzed parameters for each soil sample. Chemistry results are discussed in Section 4.5.

3.7.2 Subsurface Soil

Seven soil borings (five subsurface soil boring samples SSR-4, SSR-10, SSR-11, SSR-14, and SSR-15, and the two surface soil samples SSR-12 and SSR-13) were advanced to their appropriate depths in accordance with the RFI/CS Work Plan with a CME-75 drill rig using 2.25-

inch diameter hollow-stem augers. Samples were collected through the augers using split-spoon samplers. EnCore® sampling techniques (EnCore® disposable samplers and accompanying bulk sample jars) were used to obtain soil samples for VOC analysis from the bottom of the split-spoons. The remaining soil was then homogenized in a stainless steel bowl until enough volume was accumulated to fill the appropriate sample containers. The containers were then placed on ice, packaged, and shipped to Savannah Laboratories.

All five subsurface soil samples were analyzed for COPCs, and samples SSR-4 and SSR-10 were also analyzed for inorganic indicator parameters. Chain-of-custody forms were filled out and shipped with the samples. Appropriate sampling QA/QC was obtained by collecting additional soil for blind duplicate, matrix spike, and matrix spike duplicate samples. Trip blanks and equipment rinse blanks were also included. All sampling equipment was decontaminated between borings. Soil cuttings were staged at the Facility pending proper disposal. The borings were grouted shut after completing the sampling. Table 6 summarizes the locations, depths, and analyzed parameters for each soil sample. Chemistry results are discussed in Section 4.5.

3.7.3 QA/QC

Quality assurance objectives were defined in the QAP/SAP and varied according to the intended use of each analysis. The levels of QA effort associated with the various types of analysis for the soil sampling are also provided in the QAP/SAP.

Level III data quality assurance was performed for analyses associated with COPCs and inorganic indicators. Various QA/QC samples were collected and analyzed to confirm the sample validity. These included trip blanks, field duplicates, matrix spikes, matrix spike duplicates, equipment rinse blanks, and method blanks.

The trip blanks were prepared by Savannah Laboratories and transported to the Facility with the other sample containers. The trip blanks are handled in the same manner as other samples, except they remained unopened for the duration of the sampling event. The trip blanks were then returned to Savannah Laboratories for VOC analysis to assess whether chemicals were introduced to the samples via transportation or handling procedures.

A field duplicate sample was collected for every ten samples for each particular type of analysis (COPCs or TPH). Field duplicates were sent to the laboratory for analysis and the results were evaluated to provide indication of the reproducibility and precision of the field sampling and laboratory sample analyses. Field duplicate samples for COPCs were collected at SSR-10, SSR-15 and SSR-18, for TPH at SSR-22 and for inorganic indicator parameters at SSR-10.

Matrix spike and matrix spike duplicate samples (MS/MSD) were collected for every twenty samples by obtaining additional sample volumes for each of the laboratory analyses. The matrix spike is a sub-sample derived from the original sample. The laboratory adds a spike containing analytes at known concentrations prior to extraction/analysis of the sample to determine the effects of the sample matrix on the analytical laboratory's extraction and analysis methodology. The matrix spike duplicate is another sub-sample from the original sample, which is similarly spiked for confirmatory analyses. MS/MSD samples for COPCs were collected at SSR-11 and SSR-19 and for TPH at SSR-20. MS/MSD samples are not applicable to inorganic indicator parameters.

An equipment rinse blank was obtained by pouring distilled water over the sample equipment (stainless steel bowl, garden shovel, split-spoons, etc.) and collecting the run-off in sample containers. This sample was sent to the laboratory and analyzed to determine whether the samples were compromised by potentially contaminated sampling equipment.

Method blanks and blank samples were prepared by the laboratory and analyzed to determine whether chemicals were introduced to the samples via the laboratory's sample handling procedures. A method blank was analyzed by Savannah Laboratories for the analyses required for each sample batch analysis.

4.0 RFI/CS RESULTS

4.1 Well Inspections

The existing wells, cased borings, and piezometers at the Facility were inspected as described in Section 3.3. The purpose of the inspection program was to determine which wells were acceptable for water level measurement and groundwater quality sampling.

Eighteen of the nineteen wells included in the RFI sampling program (OWR-1D, OWR-1S, OWR-2D, OWR-2S, OWR-3S, OWR-4D, OWR-5D, OWR-6D, OWR-7D, OWR-8S, OWR-9S, OW-9, OW-10, WEL-1, WEL-2, WEL-3, WEL-4, and CB-85) were determined to be acceptable for water level measurement and groundwater sampling during the RFI. At the time of the RFI sampling, well OWR-3D was dry, and was therefore unacceptable for either groundwater sampling or water level measurement. The bladder pump assembly could not be removed from OW-9 due to a slight bend in the casing, but this did not inhibit either water level measurement or sampling for the RFI.

Wells that are included in the Groundwater Detection Monitoring Program (MW-1B, MW-11A, MW-12A, and MW-13A) were determined to be acceptable for water level measurement and groundwater sampling.

Wells that are included in the Corrective Action Effectiveness Monitoring Program (MW-1B, MW-15, MW-16, MW-20A, SBP-5, MW-8, MW-9, OW-2, OW-4, OW-6A, OW-7, OW-8, OW-15, OW-16A, OW-19, OW-21, OW-22, and OW-24) were generally considered acceptable for water level measurement and groundwater sampling. However, of these wells, the following have previously been used for water level measurement and water quality sampling, but have deficiencies that may make them unacceptable in the future.

- OW-2 had up to four feet of silt in the bottom. This well produces little water. The silt in the well could have potentially impacted results of previous unfiltered groundwater samples. This well will be further developed using the methods described in Section 3.2.3;
- OW-4 had a small amount (less than 6 inches) of silt in the bottom. Results of previous unfiltered groundwater samples may have been impacted by this silt. The water level is

typically below the top of the pump and the well produces little water. This well will be further developed using the methods described in Section 3.2.3;

- OW-22 had at least 10 inches of silt in bottom. Results of previous unfiltered groundwater samples collected from this well may have been impacted by the silt. The well will be further developed using the methods described in Section 3.2.3; and
- OW-9 has a bend in the casing and the bladder pump could not be removed. As long as the bladder pump remains functional, no adverse impacts to groundwater samples from this well are expected.

The majority of the remaining wells at the Facility contain various amounts of silt inside the well casing, although none of the screened sections are completely silted in. Most of these wells are considered acceptable for water level measurement, but significant well development would be required to attempt to make them suitable for water quality sampling[3]. The following wells are considered to be unacceptable for either water level measurement or groundwater quality sampling:

- Monitoring well MW-3 was filled with mud at the bottom and it produces little to no water. It is considered to be unacceptable for water quality sampling unless it is developed. However, it could be used for water level measurement when there is water in the well;
- Bedrock well BR-2 has a dedicated bailer stuck above the water level in the well that prohibits measurement of the water level or taking water quality samples;
- Cased boring CB-55 is not accessible because it has been buried by capping of the South Landfill. This well will be uncovered and properly abandoned according to ADEM regulations;

[3] All wells that are used as part of the Detection Monitoring or Corrective Action Effectiveness Monitoring programs are evaluated on an annual basis to determine well suitability. Any wells with unacceptable levels of silt infilling are redeveloped prior to subsequent sampling.

- Cased boring SA-6 is a bent, open standpipe without an adequate surface completion. It does not meet accepted industry standards for observation wells. It is considered to be unacceptable for water level measurement or water quality sampling; and
- Monitoring well SA (MW)-22 has a surface completion that potentially allows surface water to flow into the well. It is considered to be unacceptable for water level measurement or water quality sampling.

In a letter dated April 21, 1998, ADEM approved the decommissioning of certain wells, piezometers and cased borings at the Facility. These wells, piezometers, and cased borings are listed in a table attached to the cover letter of the RFI/CS Work Plan. Well decommissioning is scheduled to be completed at the conclusion of RFI activities. MW-3 and CB-55 were included in the table and were approved for abandonment by ADEM. Wells BR-2, SA-6, and SA-22 are not part of the groundwater monitoring system for the site. Should it be determined that any of the wells are needed as part of a long-term groundwater monitoring system, they will be replaced. If the wells are ultimately not needed as part of the long-term groundwater monitoring system, an application will be submitted to ADEM to add these wells to the list of those to be decommissioned.

Summary tables of the results of the well investigation program are presented in Appendix C and contain the following:

- Results of the inspection of the individual wells;
- Wells, piezometers, and cased borings, which require repair or are lacking surface completion components (i.e., concrete pads, gravel, drain holes, etc.);
- Wells, piezometers, and cased borings where the bladder pump assembly cannot be removed; and
- Wells, piezometers, and cased borings that are typically dry.

4.2 Soil Boring and Geotechnical Laboratory Test Results

Soil samples and drill cuttings from the soil boring program were visually identified and logged in the field by a Golder geologist. Undisturbed Shelby Tube samples of the cohesive soils were obtained for geotechnical laboratory testing. A summary of the geotechnical laboratory test results is presented in Appendix F, along with the soil laboratory data sheets. Boring logs are presented in Appendix A. The geologic units and soils at the Facility are discussed in Section 2.1.5.

Laboratory analyses of the undisturbed cohesive soil samples included grain size, Atterberg Limits, natural moisture content, in-situ density, vertical permeability, and calculation of porosity. The grain size and Atterberg Limits results confirm the observation well screen slot-size selection, and indicate that the cohesive soils are predominantly low to high plasticity silts and clays with the Unified Soil Classification System (USCS) designation ranging from MH and ML to CH and CL.

Vertical permeability values obtained from the laboratory analyses conducted on the undisturbed soil samples ranged from approximately 2.3×10^{-5} ft/day (8×10^{-9} cm/s) to 0.23 ft/day (8×10^{-5} cm/s). The geometric mean vertical permeability was 6.4×10^{-4} ft/day (2.3×10^{-7} cm/s). These values are in general agreement with vertical permeability estimates obtained from previous investigations. There is no apparent correlation between depth and permeability values for the cohesive soils that were sampled. However, vertical permeability values derived from the soils in the vicinity of the South Landfill were generally higher than values derived from soils underlying the Plant Site.

Total porosity values were estimated from wet and dry weight from the undisturbed soil samples, with results ranging from approximately 30 percent to 60 percent. The porosity values exhibited no apparent trend relative to depth or spatial location. The variability of the results is attributed to the highly heterogeneous nature of the soil and the different weathering rates of the soil constituents.

Based on observations made during the boring investigation, these laboratory values of total porosity do not provide a reasonable basis for estimating the effective porosity of the residuum as

a whole. The presence of slickensided, wetted fractures (conduits for groundwater flow), the apparent secondary permeability features such as weathered chert gravel and sand lenses, and the in-situ fabric of the weathered residuum will all result in higher seepage velocities. Due to these features, the effective porosity is probably closer to 10 percent. Although conservative, this value is likely a better estimate of the mass effective porosity of the groundwater flow regime at the Facility.

4.3 Groundwater Chemistry Results

4.3.1 COPCs

Groundwater samples were obtained from 18 of the 19 wells in the RFI program. Well OWR-3D was dry during the field sampling. The groundwater samples were analyzed for the COPCs listed in Table 7. Laboratory analytical results for the samples are presented in Table 9. Concentration limits for some of these constituents were established in the Permit, and are based on state and federal regulatory limits, method detection limits, and/or alternative limits approved by ADEM (Permit Concentration Limits). Final results were compared to these limits, if established.

When duplicate groundwater samples were collected from the same sample point, both results are presented in Table 9. This allows for an easy comparison of the sample results and allowed for an evaluation to determine if QA/QC conditions were met. For reporting purposes, the samples results were averaged. Averaging is a more statistically accurate representation of the sample point concentration. Subsequent reporting of the sample point concentration used this average value.

COPC VOCs, SVOCs, organophosphorus pesticides, PCBs, and/or metals were detected in some of the wells. None were detected in the background sample from well MW-1B. The following is a summary of the constituents detected in groundwater samples:

Volatile Organic Compounds

- Chlorobenzene was reported in OWR-5D (46 micrograms per liter [µg/L]) above the Permit Concentration Limit but below the Maximum Contaminant Level (MCL) (100 µg/L).

- Methylene Chloride was reported in OWR-8S (36 µg/L), above the MCL (5.0 µg/L).

Semi-volatile Organic Compounds

- Pentachlorophenol was reported above the Permit Concentration Limit (1.0 µg/L) in OWR-2S, OWR-5D (all at 1.2 µg/L) and OWR-8S (at 1.1 µg/L).
- 4-Nitrophenol was reported in OWR-5D (2,300 µg/L) above the Permit Concentration Limit (1,000 µg/L), and in sample OWR-8S (365 µg/L) below the Permit Concentration Limit (1,000 µg/L).
- o,o,o-Triethyl phosphorothioate was reported in OWR-8S (330 µg/L) below the Permit Concentration Limit (1,000 µg/L).

Organophosphorus Pesticides

- Methyl parathion was reported above the Permit Concentration Limit (MDL) in OWR-5D (5.5 µg/L) and in OWR-8S (9.7 µg/L).
- Ethyl parathion was reported in OWR-5D (28 µg/L) below the Permit Concentration Limit (200 µg/L), and in OWR-8S (645 µg/L) above the Permit Concentration Limit (200 µg/L).
- Tetraethyl dithiopyrophosphate was reported in OWR-8S (1.9 µg/L).

Polychlorinated Biphenyls (PCBs)

Filtered and unfiltered samples were collected and analyzed for PCBs. No PCBs were reported in any of the filtered samples above the detection limits. The following were reported for the unfiltered samples:

- Aroclor 1221 was reported above the MCL (0.5 µg/L) in the unfiltered sample from OWR-5D (210 µg/L).
- Aroclor 1248 was reported above the MCL (0.5 µg/L) in the unfiltered sample from OWR-7D (2.2 µg/L).

Metals

Filtered and unfiltered samples were collected and analyzed for metals. The following results were reported:

- Beryllium was reported above the MCL (0.0040 milligrams per liter [mg/L]) in both filtered (0.0043 mg/L) and unfiltered (0.0068 mg/L) samples from OW-10.
- Chromium was reported below the MCL (0.10 mg/L) in the following samples:

  WEL-1 unfiltered (0.057 mg/L);
  WEL-2 unfiltered (0.014 mg/L);
  WEL-4 unfiltered (0.011 mg/L); and
  OWR-7D filtered (0.039 mg/L) and unfiltered (0.031 mg/L).

- Cobalt was reported above or at the Permit Concentration Limit (0.010 mg/L) in the following samples:

  OW-9 filtered (0.010 mg/L);
  OW-10 filtered (0.049 mg/L) and unfiltered (0.052 mg/L);
  OWR-2S filtered (0.033 mg/L) and unfiltered (0.029 mg/L);
  OWR-5D filtered (0.081 mg/L) and unfiltered (0.079 mg/L);
  OWR-8S filtered (0.026 mg/L) and unfiltered (0.030 mg/L);
  WEL-1 unfiltered (0.036 mg/L);
  WEL-2 unfiltered (0.019 mg/L); and
  WEL-4 unfiltered (0.011 mg/L).

- Lead was reported in the following samples:

  CB-85 filtered (0.011 mg/L, estimated);
  OW-09 filtered (0.018 mg/L, estimated);
  OW-10 filtered (0.014 mg/L, estimated);
  OWR-1D filtered (0.0068 mg/L);
  OWR-3S filtered (0.015 mg/L, estimated);
  OWR-5D filtered (0.021 mg/L);
  OWR-7D filtered (0.013 mg/L);
  OWR-8S filtered (0.036 mg/L, estimated) unfiltered (0.0055 mg/L);

OWR-9S unfiltered (0.0091 mg/L);
WEL-1 unfiltered (0.033 mg/L);
WEL-2 unfiltered (0.018 mg/L); and
WEL-4 unfiltered (0.011 mg/L).

- Mercury was reported below the MCL (0.0020 mg/L) in the following samples:

  OW-9 filtered (0.00093 mg/L) and unfiltered (0.00068 mg/L);
  OWR-3S filtered (0.00023 mg/L) and unfiltered (0.00025 mg/L);
  OWR-5D unfiltered (0.00057 mg/L);
  OWR-6D filtered (0.00027 mg/L) unfiltered (0.0013 mg/L); and
  OWR-8S unfiltered (0.00027 mg/L, estimated).

- Mercury was reported above the MCL (0.0020 mg/L) in the following sample:

  OW-10 unfiltered (0.050 mg/L).

- Nickel was reported below the MCL (0.10 mg/L) in the following samples:

  OW-9 filtered (0.0092 mg/L) and unfiltered (0.0087 mg/L);
  OW-10 filtered (0.061mg/L) and unfiltered (0.063 mg/L);
  OWR-3S filtered (0.0046 mg/L);
  OWR-5D filtered (0.056 mg/L) and unfiltered (0.055 mg/L);
  OWR-6D filtered (0.011 mg/L) and unfiltered (0.0095 mg/L);
  OWR-8S filtered (0.0096 mg/L) and unfiltered (0.011 mg/L);
  OWR-9S unfiltered (0.016 mg/L);
  WEL-1 unfiltered (0.063 mg/L);
  WEL-2 filtered (0.0057 mg/L) and unfiltered (0.035 mg/L); and
  WEL-4 unfiltered (0.0145 mg/L).

- Vanadium was reported in the following samples:

  OWR-7D unfiltered (0.010 mg/L);
  OWR-9S unfiltered (0.018 mg/L);
  WEL-1 unfiltered (0.081 mg/L);

WEL-2 unfiltered (0.033 mg/L); and
WEL-4 unfiltered (0.019 mg/L).

- Barium was reported below the MCL (2.0 mg/L) in samples from 16 of the RFI observation wells (see Table 9). Barium was not detected in the unfiltered or filtered samples from CB-85 and MW-1B, or in the unfiltered sample from OWR-7D.
- Manganese was reported in all unfiltered and filtered RFI observation well samples (see Table 9), except MW-1B unfiltered, OWR-4D unfiltered (estimated), OWR-4D filtered, OWR-7D unfiltered, and OWR-7D filtered.

Laboratory reports for the groundwater COPC analyses are included in Appendix G-1 with data validation discussed in Appendix H. Constituent concentration maps are presented on Figures 21 through 26. These results were used in conjunction with historical groundwater quality data to evaluate the nature and extent of constituents in groundwater at the Facility (see Section 5).

4.3.2 Inorganic Indicator Parameters

Groundwater samples from observation wells CB-85, MW-1B, OW-10, OWR-1D, OWR-1S, OWR-2D, OWR-2S, OWR-5D, and OW-6A were analyzed for the inorganic and biological indicator parameters listed in Table 8. Results of these analyses are presented in Table 9, and reported detections are summarized as follow:

- Total organic carbon (TOC) was reported above the detection limit (1.0 mg/L) in samples OWR-1D (8.2 mg/L), OWR-2S (3.0 mg/L), OWR-5D (23 mg/L), and OW-6A (12 mg/L);
- Total Kjeldahl nitrogen was reported above the detection limit (0.020 mg/L) in samples CB-85 (0.36 mg/L), MW-1B (0.66 mg/L), OW-10 (3100 mg/L), OWR-2D (0.63 mg/L, estimated), and OWR-5D (2.3 mg/L);
- Total organic halogen (TOH) was reported above the detection limit (1.0 mg/L) in samples OW-10 (0.13 mg/L, estimated), OWR-1D (110 mg/L), OWR-2D (0.030 mg/L, estimated), OWR-2S (0.04 mg/L), and OWR-5D (1.6 mg/L);

- Total dissolved solids (TDS) were reported in samples CB-85 (33 mg/L, estimated), MW-1B (16 mg/L, estimated), OW-10 (1300 mg/L, estimated), OWR-1D (300 mg/L, estimated), OWR-1S (100 mg/L, estimated), OWR-2D (175 mg/L, estimated), OWR-2S (240 mg/L, estimated), OWR-5D (970 mg/L), and OW-6A (45 mg/L);
- Total suspended solids (TSS) were reported above the detection limit (5.0 mg/L) in samples MW-1B (20 mg/L, estimated), OW-10 (10 mg/L, estimated), OWR-1D (7.0 mg/L, estimated), OWR-2D (7.5 mg/L, estimated), OWR-5D (5400 mg/L), and OW-6A (140 mg/L);
- Standard plate counts were reported in samples CB-85 (33 colony forming units per milliliter [CFU/mL] estimated), MW-1B (440 CFU/mL, estimated), OW-10 (730 CFU/mL, estimated), OW-6A (10,000 CFU/mL), OWR-1D (5,000 CFU/mL, estimated), OWR-1S (1,000 CFU/mL, estimated), OWR-2D (620 CFU/mL, estimated), OWR-2S (740 CFU/mL, estimated), and OWR-5D (960 CFU/mL);
- Sulfate as SO4 was reported above the detection limit (5.0 mg/L) in samples MW-1B (5.9 mg/L) and OWR-1S (35 mg/L) and OWR-5D (5.0 mg/L);
- Nitrate was reported in samples CB-85 (1.2 mg/L, estimated), MW-1B (1.5 mg/L, estimated), OW-6A (0.40 mg/L), OW-10 (1.4 mg/L, estimated), OWR-1S (1.6 mg/L, estimated), OWR-2D (1.8 mg/L, estimated), and OWR-2S (2.2 mg/L, estimated);
- Alkalinity was reported above the detection limit (1.0 mg/L) in samples MW-1B (4.2 mg/L), OW-10 (20 mg/L), OWR-1D (210 mg/L), OWR-1S (9.8 mg/L), OWR-2D (120 mg/L), OWR-2S (23 mg/L), OWR-5D (11 mg/L), and OW-6A (14 mg/L);
- Ferrous iron was reported above the detection limit (0.10 mg/L) in sample OWR-5D (0.14 mg/L);
- Sulfide was not detected in any of the RFI observation well samples;
- Dissolved oxygen was reported in MW-1B (6.5 mg/L), CB-85 (0.89 mg/L), OW-9 (2.1 mg/L), OW-10 (3.3 mg/L), OWR-1D (0.030 mg/L), OWR-1S (0.73 mg/L), OWR-2D (0.67 mg/L), OWR-2S (0.79 mg/L), OWR-3S (0.85 mg/L), OWR-4D (0.79 mg/L), OWR-5D (0.57 mg/L), OWR-6D (0.86 mg/L), OWR-7D (4.5 mg/L), OWR-8S (1.3 mg/L),

OWR-9S (4.5 mg/L), WEL-1 (3.9 mg/L), WEL-2 (3.1 mg/L), WEL-3 (1.2 mg/L), and WEL-4 (5.4 mg/L);

- Oxidation reduction potential was reported in MW-1B (409 millivolts [mV]), CB-85 (-20 mV), OW-9 (-58 mV), OW-10 (30 mV), OWR-1D (17 mV), OWR-1S (25 mV), OWR-2D (-137 mV), OWR-2S (110 mV), OWR-3S (30 mV), OWR-4D (121 mV), OWR-5D (123 mV), OWR-6D (-86 mV), OWR-7D (41 mV), OWR-8S (43 mV), OWR-9S (117 mV), WEL-1 (153 mV), WEL-2 (153 mV), WEL-3 (111 mV), and WEL-4 (126 mV);
- Specific conductance was reported in MW-1B (3.4 millisiemens per centimeter [ms/cm]), CB-85 (4.2 ms/cm), OW-9 1.6 ms/cm), OW-10 (1.7 ms/cm), OWR-1D (0.54 ms/cm), OWR-2D (0.32 ms/cm), OWR-2S (0.43 ms/cm), OWR-3S (0.34 ms/cm), OWR-4D (0.31 ms/cm), OWR-5D (1.6 ms/cm), OWR-6D (1.4 ms/cm), OWR-7D (1.0 ms/cm), OWR-8S (1.0 ms/cm), OWR-9S (0.31 ms/cm), WEL-1 (0.057 ms/cm), WEL-2 (0.097 ms/cm), WEL-3 (0.073 ms/cm), and WEL-4 (0.043 ms/cm); and
- pH was reported in MW-1B (6.7), CB-85 (6.4), OW-9 (4.9), OW-10 (5.8), OWR-1D (7.6), OWR-1S (5.5), OWR-2D (8.5), OWR-2S (5.9), OWR-3S 5.9), OWR-4D (9.3), OWR-5D (4.7), OWR-6D (6.8), OWR-7D (11.3), OWR-8S (7.5), OWR-9S (7.9), WEL-1 (4.7), WEL-2 (4.5), WEL-3 (4.9), and WEL-4 (5.3).

Laboratory reports for these analyses are included in Appendix G-1. These data were used to evaluate natural attenuation processes occurring in the groundwater (see Section 8).

4.4 Surface Water Chemistry Results

Surface water samples DSN 004 and DSN 005 were analyzed for COPCs during the RFI investigation. Results are presented in Table 10. The only constituents detected in these samples were arsenic in DSN 004 at a concentration of 0.011 mg/L and barium at concentrations of 0.036 mg/L and 0.013 mg/L in DSN 004 and DSN 005, respectively.

Laboratory reports for these analyses are included in Appendix G-1 with data validation discussed in Appendix H. These data have been used to assess the effectiveness of surface stabilization

measures at the Facility and to evaluate the potential off-site migration of affected sediments (see Section 5).

4.5 Soil Chemistry Results

Soil samples were collected at specific locations across the Facility to obtain confirmatory data for individual SWMUs and AOCs. The soil sample results are presented in Table 11 and are shown on Figures 27, 28 and 29. A summary of the detections in samples associated with each SWMU and AOC is presented below.

When duplicate soil samples were collected from the same sample point, both results are presented in Table 11. This allows for an easy comparison of the sample results and allowed for an evaluation to determine if QA/QC conditions were met. For reporting purposes, the samples results were averaged. Averaging is a more statistically accurate representation of the sample point concentration. Subsequent reporting of the sample point concentration used this average value.

Phosphate "Landfill" (SWMU 6) - Two soil samples (SSR-6 and SSR-7) taken two feet below the base of the gravel cover exhibited the following detections:

- SSR-6 had Aroclor 1254 (5.2 mg/kg), Aroclor 1260 (4.1 mg/kg), arsenic (7.9 mg/kg), barium (38 mg/kg), chromium (23 mg/kg), cobalt (8.9 mg/kg), lead (48 mg/kg), manganese (690 mg/kg), mercury (0.33 mg/kg), nickel (39 mg/kg), and vanadium (50 mg/kg) reported; and
- SSR-7 had Aroclor 1254 (170 mg/kg), Aroclor 1260 (59 mg/kg), arsenic (12 mg/kg), barium (62 mg/kg), chromium (48 mg/kg), cobalt (17 mg/kg), lead (220 mg/kg), manganese (620 mg/kg), mercury (1.4 mg/kg), nickel (2400 mg/kg), and vanadium (51 mg/kg) reported.

Santotar Pit (SWMU 7) - Two soil samples (SSR-8 and SSR-9) taken two feet below the base of the gravel cover exhibited the following detections:

- SSR-8 had Aroclor 1260 (0.034 mg/kg), arsenic (10 mg/kg), barium (52 mg/kg), chromium (18 mg/kg), cobalt (9.8 mg/kg), lead (41 mg/kg), manganese (520 mg/kg), mercury (0.093 mg/kg), nickel (12 mg/kg), and vanadium (45 mg/kg) reported; and
- SSR-9 had Aroclor 1232 (67 mg/kg), Aroclor 1254 (120 mg/kg), Aroclor 1260 (95 mg/kg), arsenic (14 mg/kg), barium (780 mg/kg), beryllium (0.78 mg/kg), cadmium (0.92 mg/kg), chromium (14 mg/kg), cobalt (12 mg/kg), lead (150 mg/kg), manganese (12,000 mg/kg), mercury (0.46 mg/kg), nickel (120 mg/kg), and vanadium (26 mg/kg) reported.

Phosphoric Acid Basins (SWMU 12) - Two surface soil samples (SSR-3 and SSR-5) collected from locations downgradient of the basins exhibited detections of PCBs and metals. Two subsurface soil samples (SSR-4 and SSR-15) collected within the northern-most basin at depths of 6 to 10 feet exhibited detections of volatile organics, PCBs, and/or metals. Biological indicator parameters were also detected in SSR-4. The reported detections are summarized as follow:

- SSR-3 had Aroclor 1254 (0.77 mg/kg), Aroclor 1260 (1.4 mg/kg), arsenic (3.1 mg/kg), barium (22 mg/kg), chromium (7.4 mg/kg), cobalt (2.2 mg/kg), lead (25 mg/kg), manganese (220 mg/kg), mercury (0.052 mg/kg), nickel (5.7 mg/kg), and vanadium (10 mg/kg) reported;
- SSR-5 had Aroclor 1248 (35 mg/kg), Aroclor 1254 (44 mg/kg), Aroclor 1260 (27 mg/kg), arsenic (11 mg/kg), barium (51 mg/kg), chromium (38 mg/kg), cobalt (6.1 mg/kg), lead (52 mg/kg), manganese (610 mg/kg), mercury (1.8 mg/kg), nickel (15 mg/kg), and vanadium (42 mg/kg) reported;
- SSR-4 had Aroclor 1232 (70 mg/kg), Aroclor 1254 (24 mg/kg), Aroclor 1260 (10 mg/kg), arsenic (4.2 mg/kg), barium (43 mg/kg), chromium (19 mg/kg), cobalt (5 mg/kg), lead (41 mg/kg), manganese (120 mg/kg), mercury (1.1 mg/kg), nickel (7.5 mg/kg), vanadium (33 mg/kg), cation exchange capacity (9.4 meq/100g), and organic carbon (1600 mg/kg) reported; and
- SSR-15 had chlorobenzene (0.0129 mg/kg), Aroclor 1232 (362 mg/kg, estimated), Aroclor 1242 (43 mg/kg, estimated), Aroclor 1254 (55 mg/kg, estimated), Aroclor 1260 (26 mg/kg, estimated), arsenic (7.7 mg/kg), barium (32 mg/kg, estimated), beryllium (0.58 mg/kg), chromium (39 mg/kg), cobalt (4.2 mg/kg), lead (41 mg/kg), manganese (110 mg/kg),

mercury (2.2 mg/kg, estimated), nickel (7.7 mg/kg, estimated), and vanadium (50 mg/kg) reported.

Scrap Yard Oil Satellite Accumulation Area (SWMU 17) - One soil sample (SSR-20) collected from the surface beneath the gravel cover in the center of the unit was analyzed for TPH, and no detections were reported.

Steam Cleaning Pad (SWMU 31) - One soil sample (SSR-22) and duplicate collected from the surface beneath the gravel cover in a stained area were analyzed for TPH, and no detections were reported.

Old Boiler Scrap Yard (SWMU 34) - One soil sample (SSR-21) collected from the surface beneath the gravel cover exhibited the following detections:

- SSR-21 had methyl parathion (0.049 mg/kg, estimated), ethyl parathion (0.056 mg/kg, estimated), Aroclor 1248 (0.059 mg/kg, estimated), Aroclor 1254 (0.12 mg/kg), Aroclor 1260 (0.38 mg/kg), arsenic (5.7 mg/kg), barium (49 mg/kg), chromium (16 mg/kg), cobalt (9.1 mg/kg), lead (28 mg/kg), manganese (670 mg/kg), mercury (0.30 mg/kg), nickel (8.6 mg/kg), and vanadium (40 mg/kg) reported.

Former Parathion Production Area (SWMU 41) - One soil sample (SSR-2) collected from the surface in an open grassy area downgradient of the production area exhibited detections of PCBs and metals. One shallow soil sample (SSR-16) obtained from a depth of 10 inches to 3 feet exhibited detections of metals. Two deeper soil samples (SSR-10 and SSR-11) taken from depths of 19 to 21 feet and 6 to 10 feet, respectively, exhibited detections of PCBs and metals. SSR-10 was also analyzed for and had detection of biological indicator parameters. The reported detections are summarized as follow:

- SSR-2 had Aroclor 1254 (4.0 mg/kg), Aroclor 1260 (7.2 mg/kg), arsenic (7.6 mg/kg), barium (150 mg/kg), beryllium (1.0 mg/kg), chromium (20 mg/kg), cobalt (9.1 mg/kg), lead (88 mg/kg), manganese (590 mg/kg), mercury (0.21 mg/kg), nickel (18 mg/kg), and vanadium (39 mg/kg) reported;

- SSR-16 had arsenic (13 mg/kg), barium (38 mg/kg), beryllium (0.83 mg/kg), chromium (25 mg/kg), cobalt (7.4 mg/kg), lead (15 mg/kg), manganese (310 mg/kg), mercury (0.056 mg/kg), nickel (18 mg/kg), and vanadium (41 mg/kg) reported;
- SSR-10 had Aroclor 1242 (0.052 mg/kg, estimated), Aroclor 1254 (0.024 mg/kg, estimated), arsenic (7.9 mg/kg, estimated), barium (23 mg/kg), beryllium (1.7 mg/kg, estimated), chromium (19 mg/kg, estimated), cobalt (34 mg/kg, estimated), lead (29.5 mg/kg, estimated), manganese (890 mg/kg, estimated), mercury (0.044 mg/kg, estimated), nickel (22 mg/kg, estimated), vanadium (61 mg/kg), cation exchange capacity (16 meq/100g), total organic carbon (150 mg/kg), and fraction organic carbon (135 mg/kg) reported; and
- SSR-11 had Aroclor 1248 (0.15 mg/kg), Aroclor 1254 (0.054 mg/kg), arsenic (13 mg/kg), barium (23 mg/kg), beryllium (0.69 mg/kg), chromium (16 mg/kg), cobalt (6.9 mg/kg), lead (18 mg/kg), manganese (250 mg/kg), mercury (0.032 mg/kg), nickel (11 mg/kg), and vanadium (25 mg/kg) reported.

Former PCB Production Area (SWMU 42) - Two samples (SSR-12 and SSR-13) collected from 6 to 8 feet below ground surface (2 feet below the base of the asphalt cover) exhibited detections of volatile organics, PCBs and/or metals as follow:

- SSR-12 had chlorobenzene (0.017 mg/kg), Aroclor 1248 (0.20 mg/kg), Aroclor 1254 (0.32 mg/kg), Aroclor 1260 (0.15 mg/kg), arsenic (6.9 mg/kg), barium (85 mg/kg), beryllium (0.75 mg/kg), chromium (23 mg/kg), cobalt (3.2 mg/kg), lead (23 mg/kg), manganese (100 mg/kg), mercury (0.050 mg/kg), nickel (9.0 mg/kg), and vanadium (41 mg/kg) reported; and
- SSR-13 had Aroclor 1248 (6 mg/kg), Aroclor 1254 (10 mg/kg), arsenic (5.2 mg/kg), barium (110 mg/kg), beryllium (1 mg/kg), cadmium (0.73 mg/kg), chromium (110 mg/kg), cobalt (7.5 mg/kg), lead (36 mg/kg), manganese (360 mg/kg), mercury (0.046 mg/kg), nickel (33 mg/kg), and vanadium (36 mg/kg) reported.

Former Phosphorus Pentasulfide Production Area (SWMU 43) - One soil sample (SSR-9) collected at a depth of two feet below the cover exhibited detections of PCBs and metals. In

addition, soil sample SSR-2, which was sampled to evaluate SWMU 41, was also used to evaluate potential run-off from this area. The reported detections are summarized as follow:

- SSR-2 results were presented above in the SWMU 41 results; and
- SSR-19 had detections of Aroclor 1248 (0.48 mg/kg, estimated), Aroclor 1260 (0.027 mg/kg) barium (65 mg/kg), cobalt (47 mg/kg), lead (52 mg/kg), manganese (2600 mg/kg), mercury (0.055 mg/kg), nickel (69 mg/kg), and vanadium (93 mg/kg) reported.

Waste Drum Satellite Accumulation Area (SWMU 44) – One sample (SSR-18) collected from 3 to 6 inches below the gravel surface exhibited detections of organophosphorus pesticide, PCBs and metals as follows:

- SSR-18 had methyl parathion (0.1 mg/kg, estimated,), Aroclor 1248 (12,900 mg/kg, estimated), Aroclor 1260 (2,210 mg/kg, estimated), arsenic (26 mg/kg , estimated), barium (43 mg/kg, estimated), chromium (15 mg/kg , estimated), cobalt (3.8 mg/kg, estimated), lead (98 mg/kg, estimated), manganese (320 mg/kg, estimated), mercury (0.35 mg/kg, estimated), nickel (12 mg/kg), and vanadium (12.4 mg/kg, estimated) reported.

Former Holding Tanks, Aeration Basins and Clarifiers (SWMU 46) - One soil sample (SSR-17) collected from 1.25 to 3.5 feet to below the cover exhibited detections of PCBs and metals as follows:

- SSR-17 had Aroclor 1254 (0.14 mg/kg), Aroclor 1260 (0.065 mg/kg), arsenic (12 mg/kg), barium (350 mg/kg), chromium (12 mg/kg), cobalt (74 mg/kg), lead (35 mg/kg), manganese (5500 mg/kg), mercury (0.049 mg/kg), nickel (98 mg/kg), and vanadium (67 mg/kg) reported.

Underground Product Storage tanks (AOC C) - One soil sample (SSR-14) collected from 10 to 12 feet below grade immediately north of the location of the former eastern most underground storage tank location exhibited detections of PCBs and metals as follows:

- SSR-14 had Aroclor 1248 (2.9 mg/kg), Aroclor 1254 (2.4 mg/kg), Aroclor 1260 (1.1 mg/kg), arsenic (4.7 mg/kg), barium (48 mg/kg), chromium (16 mg/kg), cobalt (6 mg/kg),

lead (250 mg/kg), manganese (68 mg/kg), mercury (0.079 mg/kg), nickel (8.4 mg/kg), and vanadium (30 mg/kg) reported.

Northern Facility Area - One soil sample (SSR-1) collected from 0 to 2 feet below the surface at the northeastern corner of the Facility, which is west of AOC B, exhibited detections of PCBs and metals as follows:

- SSR-1 had Aroclor 1254 (0.023 mg/kg), arsenic (3.9 mg/kg), barium (18 mg/kg), chromium (18 mg/kg), cobalt (2.0 mg/kg), lead (8.7 mg/kg), manganese (70 mg/kg), and vanadium (31 mg/kg) reported.

Soil Borings - Soil samples were collected from the planned screened section of each new observation well and piezometer installed during the RFI investigation. These samples were analyzed for the following biological and inorganic indicator parameters: cation exchange capacity; total organic carbon; fraction organic carbon using the Walkley/Black method; and acid volatile sulfide. These data were used to evaluate the potential mobility of constituents within the residuum. The results are summarized below and presented in Table 12. No acid volatile sulfide results were reported above the detection limit for the residual soils at the Facility.

Cation exchange capacity (CEC) values ranged from 0.0045 milli-equivalents per 100 grams (meq/100g) in the soil sample from OWR-5D to 15 meq/100g in the soil sample from PZR-4. No other trends or similarities with respect to depth or spatial location were observed in the CEC values.

Total organic carbon (TOC) results ranged from 180 milligrams per kilograms (mg/kg) in the soil sample from OWR-3S to 15,000 mg/kg in the soil sample from OWR-3D. The TOC value from OWR-3D is an order of magnitude larger than all other values, which are in the range of 180 mg/kg to 1,400 mg/kg. No apparent relationship exists between TOC results and depth or spatial location of the samples.

Fraction organic carbon (FOC) results ranged from 290 mg/kg in the soil sample from PZR-1 to 9,200 mg/kg reported for the soil sample from PZR-3. There is a high variability in reported

values for all samples for this parameter, and no apparent relationship exists between the results and depth or spatial location of the samples.

Laboratory reports for these analyses are included in Appendix G-1, with data validation discussed in Appendix H.

4.6 Aquifer Test Results

4.6.1 Variable Head Test Results

Variable head (slug) tests were performed on all new RFI observation wells and piezometers and on selected existing wells. The Bouwer and Rice Method (1989) was used to analyze the response of water level versus time. The well designations and the applied methodology are presented in Section 3.6. The results of the RFI variable head tests are summarized on Table 13.

The hydraulic conductivity values ranged from 1.7×10^{-3} ft/day (6×10^{-7} cm/s) to 0.28 ft/day (1×10^{-4} cm/s) across the Facility, and the mean value of all of the tests conducted during the RFI was calculated to be 2.0×10^{-2} ft/day (7.2×10^{-6} cm/s). Values for the screened intervals within the shallow residuum observation wells and piezometers (i.e., 0 to 45 ft bgs) at the Facility yielded a geometric mean hydraulic conductivity of 1.5×10^{-2} ft/day (5.4×10^{-6} cm/s). Values for the screened intervals in the deep residuum observation wells and piezometers (greater than 45 feet deep) at the South Landfill yielded a geometric mean hydraulic conductivity of 1.57×10^{-1} ft/day (5.54×10^{-5} cm/s), while values derived from deep residuum tests conducted at the Plant Site yielded a geometric mean hydraulic conductivity of 6.5×10^{-3} ft/day (2.3×10^{-6} cm/s).

A separate, previous investigation was conducted at the OLBSI Corrective Action System in November 1996. Variable head tests were performed on piezometers PZ-4A, PZ-6A, PZ-7, and monitoring well MW-16. The geometric mean of hydraulic conductivity values from these wells was 8.5×10^{-4} ft/day (3.0×10^{-7} cm/s). These data are presented in Appendix I.

The hydraulic conductivity values from the RFI tests are in general agreement with values discussed in the literature and those provided by Law Engineering from previous investigations, but

are greater than values presented by Geraghty and Miller in their previous investigations (Appendix I).

4.6.2 Aquifer Pumping Tests

4.6.2.1 General

Pumping tests were performed on five interceptor wells during the RFI investigation; wells IW-6, IW-10, and IW-11 at the Northern Landfill Corrective Action System; and wells IW-14 and IW-15 at the Plant Site Corrective Action System. The data derived from these tests were analyzed using a variety of methods, as described in Section 3.6. Results of each pumping test are presented below.

Transmissivity (T) and hydraulic conductivity (K) values were obtained by curve matching methods using AquiferTest, a software package developed by Waterloo Hydrogeologic. This software package allows various curve matching techniques to be applied to determine aquifer characteristic values for a variety of aquifer types.

Drawdown versus time data, corrected drawdown for unconfined conditions, and curve matching plots for each pumping test and the related observation wells and/or piezometers are presented in Appendix I. Late time, steady-state data could not be collected during the prescribed testing periods for each test due to the low transmissivity of the residuum. Therefore, specific yield values were not obtained. Storativity values are not applicable due to unconfined conditions.

4.6.2.2 IW-6 Pumping Test

Pumping began at 2:00 p.m. on September 9, 1998 and continued for approximately 56.5 hours. The test was stopped at this time because the well went dry. Short interruptions in pumping occurred during later portions of the test. These interruptions are evident on the water level versus time plot for IW-6 presented in Appendix E. However, they did not adversely affect the analysis of the test data. Locations of the wells and piezometers used in the pumping test are shown on Figure 30. Distances between the pumping well and its respective observation wells and piezometers are shown in Appendix E.

During the test, water levels were monitored in the pumping well and nearby observation wells and piezometers. Water level data were collected as frequently as necessary, and transducer readings were verified by manual measurements made periodically throughout the test period. Groundwater was pumped from the interceptor well to a holding tank sump at a rate of approximately 0.4 gpm. This rate was based on historic discharge data from the pumping well. The pumping rate was monitored by an in-line flow meter that had been calibrated before the test.

Drawdown response to pumping was nearly immediate in observation well OWR-5D and piezometers PZR-2, and PZR-3, all located to the east of the pumping well IW-6. Piezometer PZR-4 was located further from the pumping well and displayed a slightly delayed response to the pumping. At the end of the pump test, after about 56 hours of pumping, the observed drawdown was 8.3 feet at the pumping well and 0.25 feet at PZR-4, approximately 85 feet away. With the exception of OWR-5D, PZR-2, PZR-3, and IW-6, no drawdown was observed from measurements in any other observation wells, cased borings or piezometers during the pumping test.

Well IW-10 is located closer to IW-6 than PZR-4, but no drawdown was observed during the test. Well IW-10 is a 2-foot diameter well, and the absence of measurable drawdown is attributed to the large amount of borehole storage in the well.

No drawdown from pumping was observed in piezometer PZR-1, a 2-inch diameter piezometer, which is also located closer to IW-6 than PZR-4, but which is to the west of the pumping well (Figure 30). This is believed to be the result of anisotropic flow conditions. Anisotropic conditions were expected given the heterogeneous nature of the residuum materials that comprise the aquifer. However, there were no wells or piezometers between PZR-1 and the pumping well to estimate the degree of anisotropy.

Based on review of the drawdown data, IW-6 exhibited good hydraulic connection with observation well OWR-5D and piezometers PZR-2, and PZR-3. Transmissivity and hydraulic conductivity values were derived from the test data using the methods described in Section 3.6.2. The geometric mean hydraulic conductivity value for the IW-6 pumping test analyses was 5.02 x

10^{-2} ft/day (1.77×10^{-5} cm/s). This value was calculated from a geometric mean transmissivity value of 1.26 ft^2/day with an estimated effected saturated thickness of 25 feet. Because the pumping well did not fully penetrate the unit tested, the saturated thickness was estimated to extend to a depth approximately 10 feet below the bottom of the well.

4.6.2.3 IW-10 Pumping Test

Pumping of IW-10 began at 1:47 p.m. on September 15, 1998 and continued for approximately 71 hours. Water level versus time plots for the IW-10 pumping test are presented in Appendix E. Figure 30 shows the locations of the wells and piezometers. Distances between the pumping well and its respective observation wells and piezometers are shown in Appendix E. During the test, water levels were monitored in the pumping well and nearby observation wells and piezometers. Water level data were collected as frequently as necessary, and transducer readings were verified by manual measurements made periodically throughout the test period. Groundwater was pumped from the interceptor well to a holding tank sump at a rate of approximately 0.4 gallons per minute (gpm). This rate was based on historic discharge data from the pumping well. The pumping rate was monitored by an in-line flow meter that had been calibrated before the test.

Drawdown response to pumping was nearly immediate in piezometer PZR-4. Piezometer PZR-3 displayed a slightly delayed response to pumping. At the end of the pump test, after about 71 hours of pumping, the observed drawdown was 5.7 feet at the pumping well and 0.25 feet at PZR-3, about 23 feet away. Well IW-10 was pumped at the same rate (0.4 gpm) as IW-6, yet the observed drawdown was not as large. Potential reasons for this observation include increased well efficiency in IW-10 and/or hydraulic connection with a more transmissive zone. No drawdown was observed from measurements in any other observations wells, cased borings or piezometers during the pumping test.

Well IW-6 is located approximately 76 feet from IW-10 and no drawdown was observed during the test, similar to the situation during the pumping test performed at IW-6. Well IW-6 is also a 2-foot diameter well, and the absence of measurable drawdown is similarly attributed to the large amount of borehole storage in the well.

Based on review of the drawdown data, IW-10 exhibits good hydraulic connection with the two nearby piezometers. Transmissivity and hydraulic conductivity values were derived using the methods described in Section 4.7. The geometric mean hydraulic conductivity value for the IW-10 pumping test analyses was 1.35×10^{-1} ft/day (4.76×10^{-5} cm/s). This value was calculated from a geometric mean transmissivity value of 3.38 $ft.^2$/day with an estimated saturated thickness of 25 feet. Because the pumping well did not fully penetrate the unit tested, the saturated thickness was estimated to extend to a depth approximately 10 feet below the bottom of the well.

4.6.2.4 IW-11 Pumping Test

Pumping began at 12:50 p.m. on September 23, 1998 and continued for approximately 76 hours. Water level versus time plots for the IW-11 pumping test are presented in Appendix E. Locations of the wells and piezometers used in the pumping test are shown on Figure 30. Distances between the pumping well and its respective observation wells and piezometers are shown in Appendix E.

During the test, water levels were monitored in the pumping well and nearby observation wells and piezometers. Water level data were collected as frequently as necessary, and transducer readings were verified by manual measurements made periodically throughout the test period. Groundwater was pumped from the interceptor well to a holding tank sump at a rate of approximately 0.4 gpm. This rate was based on historic discharge data from the pumping well. The pumping rate was monitored by an in-line flow meter that had been calibrated before the test.

Drawdown response to pumping was nearly immediate in piezometer PZR-1, located approximately 8 feet from IW-11. No drawdown was observed in piezometer PZR-2, the next closest observation point located approximately 82 feet away from the pumping well, throughout the duration of the test. After pumping for approximately 76 hours, the maximum observed drawdown was 15.9 feet at the pumping well and 3.23 feet at PZR-1. No drawdown was observed from measurements in any other observations wells, cased borings or piezometers during the pumping test.

Based on review of the drawdown data, IW-11 exhibited good hydraulic connection with piezometer PZR-1. Transmissivity and hydraulic conductivity values were derived using the methods described in Section 4.7. The geometric mean hydraulic conductivity value for the IW-11 pumping test analyses was 1.05×10^{-1} ft/day (5.28×10^{-5} cm/s). This value was derived from a transmissivity value of 2.63 ft^2/day and an estimated saturated thickness of 25 feet. Because the pumping well did not fully penetrate the unit tested, the saturated thickness was estimated to extend to a depth approximately 10 feet below the bottom of the well.

4.6.2.5 IW-14 Pumping Test

Pumping began at 4:30 p.m. on October 12, 1998 and continued for approximately 52 hours. The test was stopped at this time because the well had been pumped nearly dry. Two previous attempts at conducting the test were aborted due to rain events. Water level versus time plots for the IW-14 pumping test are presented in Appendix E. Locations of the wells and piezometers used in the pumping test are shown on Figure 30. Distances between the pumping well and its respective observation wells and piezometers are shown in Appendix E.

During the test, water levels were monitored in the pumping well and nearby observation wells and piezometers. Water level data were collected as frequently as necessary, and transducer readings were verified by manual measurements made periodically throughout the test period. Groundwater was pumped from the interceptor well at a rate of approximately 0.25 gpm, directed into the plumbing in the well, and then gravity fed to a holding tank. This rate was based on historic discharge data from the pumping well. The pumping rate was monitored by an in-line flow meter that had been calibrated before the test.

Drawdown response to pumping was nearly immediate in piezometer PZR-5, approximately 8 feet from the pumped well. At the end of the test, after pumping for approximately 52 hours, the maximum observed drawdown was 21.5 feet at the pumping well and 5.6 feet at PZR-5. No drawdown was observed in piezometer PZR-6 or interceptor well IW-15, or any other observation wells cased borings or piezometers monitored during the test.

Over a five-day recovery period after pumping, piezometer PZR-5 recovered approximately one foot of its total drawdown of 5.6 feet. The pumping well recovered approximately 10 feet of its total drawdown of 21.5 feet over that same period. These data indicate one or more of the following conditions: (1) the wells are screened in a generally low transmissivity area, (2) an artificial head was present at the beginning of the test, or (3) they both intercept a shallow, more transmissive feature. During the rain events that postponed the start of the test, the water level in the pumping well was observed to rise immediately, indicating potential connection with a shallow transmissive feature.

Based on review of the drawdown data, IW-14 exhibited good hydraulic connection with piezometer PZR-5. Transmissivity and hydraulic conductivity values were derived from drawdown data using the methods described in Section 4.7. The geometric mean hydraulic conductivity value for the IW-14 pumping test analyses was 3.0×10^{-2} ft/day (1.07×10^{-5} cm/s). This value was derived from a transmissivity value of 1.21 ft^2/day and an estimated saturated thickness of 40 feet. Because the pumping well did not fully penetrate the unit tested, the saturated thickness was estimated to extend to a depth approximately 10 feet below the bottom of the well.

4.6.2.6 IW-15 Pumping Test

The pumping test at IW-15 began at 9:15 a.m. on September 20, 1998. The well was pumped at a constant rate of 0.8 gpm for the remainder of that day. Overnight, it began raining. Although there was no standing water at the surface, water was observed to be flowing into the well casing at a depth of approximately 10 feet to 14 feet beneath the ground surface. This caused the water level in the well to rise, even during pumping.

The test was continued through September 22, 1998, but during a check of the system that evening, the water level in the pumping well was observed to be rising rapidly. This was attributed to a broken water main at the plant earlier that day. The test was then stopped, but the dedicated pump in the well was turned on to prevent the well from overflowing and shorting out the electric power supply at the well.

Due to the reasons discussed above, the test was not completed. However, the observed recharge to the well during rain events and the broken water main indicate that the well intercepts a shallow transmissive zone or conduit, which directly receives rain water. The historic average annual pumping rates for this well compared to other wells also indicate that the majority of water entering this well is likely from rain water.

4.6.2.7 OLBSI Pumping Tests

Pumping tests were performed on interceptor wells IW-16 and IW-19 at the OLBSI Groundwater Corrective Action Systems in a separate, previous investigation in 1996. The purpose of these tests was to gain hydrogeologic data and to provide a first estimate of the effectiveness of the system. Calculations and data plots for the OLBSI pumping tests are presented in Appendix E. Locations of the wells and piezometers used in the pumping test are shown on Figure 31. Distances between the pumping well and its respective observation wells and piezometers are shown in Appendix E.

The system was shut down on October 28, 1996. Initial recovery data in the extraction wells was of limited use because water in the header pipes leading to the holding tank drained into the interceptor wells. Recovery was monitored in nearby piezometers and observation wells with an electronic water level indicator and/or pressure transducers. Water levels in the vicinity of the extraction system exhibited a rise associated with recovery.

Interceptor wells IW-16 and IW-19 were pumped for 26 hours beginning November 19, 1996. The extraction pumps in each well were used to perform the tests. Flow meters were placed in-line on the drop pipe of each pump in the well, and a check-valve was installed to restrict flow to approximately 0.1 gpm and to prevent backflow into the well. Water levels were monitored in the pumping well and nearby observation wells and piezometers. Water level data were collected as frequently as necessary, and transducer readings were verified by manual measurements made periodically throughout the test period. Groundwater was pumped from the interceptor well at a rate of approximately 0.1 gpm, directly into the system header pipes leading to an above ground holding tank.

Interceptor well IW-16 sustained a 0.1 gpm flow rate for the duration of the test. No measurable flow could be sustained in interceptor well IW-19, which was therefore pumped dry. A maximum flow rate of 0.04 gpm was estimated for this well.

After completing the pumping tests, the recovery of the water table was monitored for 24 hours. Interceptor well IW-16 recovered to its initial water level. The data from this test were analyzed using the straight line, semi-log solutions and the Theis-Jacob Recovery Method presented in Section 3.6. Interceptor well IW-19 exhibited less than ten percent recovery over the 24-hour period. The data from this test were therefore not analyzed.

The geometric mean of the calculated hydraulic conductivity values was 6.0×10^{-3} ft/day (2.1×10^{-6} cm/s). This value is lower than those derived from the RFI investigation pump tests. Variable head tests also produced lower values for hydraulic conductivity than the RFI investigation. These data indicate that the residuum underlying the northern boundary of the Facility is less transmissive than elsewhere at the Facility.

4.6.2.8 Summary

Variable head hydraulic conductivity test results from observation wells and piezometers and from pumping test results from wells at the South Landfill show general agreement in hydraulic conductivity values. A geometric mean hydraulic conductivity value of 1.57×10^{-1} ft/day (5.54×10^{-5} cm/s) was derived from variable head tests conducted on wells and piezometers on the South Landfill (see Table 13). The geometric mean hydraulic conductivity from pumping tests conducted on wells IW-6, IW-10, and IW-11 on the South Landfill was estimated at 8.2×10^{-2} ft/day (2.89×10^{-5} cm/s).

An earlier, separate investigation was performed at the OLBSI Corrective Action System. Analysis of the data collected during this earlier investigation yielded a geometric mean of the calculated hydraulic conductivity values of 6.0×10^{-3} ft/day (2.1×10^{-6} cm/s). This value is lower than those derived from the RFI investigation pump tests. Variable head tests conducted previously on wells in this area also produced lower values for hydraulic conductivity than the RFI

investigation. These data indicate that the residuum underlying the northern boundary of the Facility is less transmissive than elsewhere at the Facility.

There is also general agreement between estimated hydraulic conductivity results from variable head tests and the pumping test from wells at the Plant Site. A geometric mean hydraulic conductivity of 6.5×10^{-3} ft/day (2.3×10^{-6} cm/s) was derived from variable head tests conducted on deep residuum wells at the Plant Site, while the geometric mean hydraulic conductivity value derived from the IW-14 pumping test analyses was 3.0×10^{-2} ft/day (1.07×10^{-5} cm/s).

Overall, the hydraulic parameters derived from the aquifer testing during the RFI are in the same range as values from previous investigations, and are in general agreement with literature values for the high plasticity silts and clays that comprise the residuum underlying the Facility. A summary of the estimated aquifer parameter values is presented in Tables 13 and 14. These data were used to evaluate the capture zones of each of the groundwater Corrective Action Systems discussed in Section 7 of this report.

5.0 NATURE AND EXTENT OF CHEMICALS ON-SITE

5.1 General

Information from the RFI/CS investigation and previous investigations conducted at the Facility over the past 17 years has provided an understanding of the nature of constituents in the surface and subsurface environments and the associated transport mechanisms. The preliminary Site Conceptual Model, presented in Section 2, provided a list of COPCs and identified six potential transport pathways. These pathways consist of surface water, groundwater, soil, air, soil gas, and sediments. Due to the low volatility of the most frequently detected COPCs, air and soil gas were not considered migration pathways of concern for the RFI/CS and were removed from future consideration in the approved RFI/CS Work Plan. Thus, the on-site investigations have focused primarily on the nature and extent of chemicals in soil, surface water and groundwater. Off-site impacts are being evaluated as part of the off-site RFI.

The approach applied to the RFI focused on treating the Facility as a single potential release source. Water quality data were collected from selected wells and surface water outfalls to develop a better understanding of conditions at the downgradient perimeter of the Facility. This information, along with data collected during previous site investigations, was used to evaluate the potential for off-site migration of constituents. In addition, confirmatory soil samples were collected from selected SWMUs and AOCs at the Facility to identify areas of impacted soil and to assess the need for further surface stabilization measures.

This Section discusses the nature and extent of the releases to the surface soil, surface water and groundwater transport pathways at the Facility and the potential for off-site migration through these pathways. Special emphasis has been placed on evaluating groundwater quality and characterizing the groundwater flow system at the Facility, since this pathway represents the greatest potential for off-site migration of constituents.

5.2 Surface Soil

The RFA identified several source areas (SWMUs and AOCs) at the Facility with potentially affected soils. In addition to potential direct exposure to on-site soils by plant workers, there is a potential for off-site migration of constituents through erosion or release to groundwater.

Extensive surface stabilization measures, consisting of a series of caps and covers, have reduced the potential for direct exposure to on-site soils and have mitigated migration of constituents in most of the source areas by preventing erosion and reducing infiltration.

Confirmatory samples were collected from several of these areas and from areas not covered by engineering controls for analysis of COPCs. Results of these analyses are presented in Section 4.5. Based on these results, the primary COPCs detected in surface soils at the Facility consist of PCBs, chromium, cobalt, nickel, and, to a lesser extent, mercury and arsenic.

As shown on Figure 27, the highest PCB concentration was reported in surface soil sample SSR-18 (13,400 mg/kg) collected immediately downgradient from the former PCB production area and within SWMU 44. This sample was collected from the surface soil covered by approximately three inches of gravel. Other areas exhibiting PCB detections in surface soils include SSR-7 (230 mg/kg) at the former location of the phosphate landfill (SWMU 6) and SSR-9 (280 mg/kg) in the old Santotar pit (SWMU 7). These areas are currently covered by a gravel layer to prevent erosion from surface water. Surface soil sample SSR-5, which is located downgradient from the phosphoric acid basins (SWMU 12), had a PCB concentration of 110 mg/kg. PCBs were also detected in two subsurface soil samples collected from this SWMU, SSR-4 (100 mg/kg) and SSR-15 (463 mg/kg). The remaining soil samples had PCB detections ranging from less than 1 mg/kg to 16 mg/kg.

Chromium concentrations in the soil generally ranged between 10 mg/kg and 50 mg/kg, with the exception of sample SSR-13 (110 mg/kg) collected from SWMU 42 and sample SSR-19 (BDL) collected from SWMU 43 (former phosphorus production area). Recent data developed for the Army Corps of Engineers indicate that a reasonable estimate of a background soil concentration (i.e., 2 times the mean value) of chromium in the area near Fort McClellan, located in Anniston, is approximately 37 mg/kg (Science Applications International Corp., 1998) (see Appendix G-2). Therefore, the majority of the detected concentrations are below, or only slightly above, the estimated background concentration.

Cobalt was detected at concentrations ranging from 2.0 mg/kg to 74 mg/kg with the majority of detections below 10 mg/kg. The highest cobalt concentrations were detected in surface soil samples SSR-17 (74 mg/kg) at SWMU 46 and sample SSR-19 (47 mg/kg) at SWMU 43. SWMU 46 is covered by gravel, while SWMU 43 is grass covered. Based on the Army Corps of Engineers study at Fort McClellan, a reasonable estimate of a background soil concentration for cobalt in the area is approximately 15 mg/kg (see Appendix G-2).

The highest concentration of nickel was found in surface soil sample SSR-7 (2,400 mg/kg) collected from the phosphate landfill (SWMU 6). The next highest nickel concentration was detected in sample SSR-9 (120 mg/kg) collected from the old Santotar pit area (SWMU 7). These areas are covered by gravel. The remaining soil samples reported nickel at concentrations below 100 mg/kg. Based on the Army Corps of Engineers study at Fort McClellan, a reasonable estimate of a background soil concentration for nickel in the area is approximately 10 mg/kg (see Appendix G-2).

Mercury was detected in all but one of the soil samples at concentrations ranging from 0.011 mg/kg to 3.3 mg/kg (estimated). The highest mercury concentrations were detected in samples SSR-3 (0.052 mg/kg), SSR-4 (1.1 mg/kg), and SSR-15 (2.2 mg/kg, estimated) from the phosphoric acid basins (SWMU 12), with the highest reported concentration being 2.2 mg/kg estimated in subsurface sample SSR-15, collected from a depth of 6 to 10 feet. Surface sample SSR-5, located downgradient from SWMU 12, had mercury detected at 1.8 mg/kg. With the exception of sample SSR-7 (1.1 mg/kg), collected from SWMU 6, the remaining soil samples had mercury reported below 1.0 mg/kg. Based on the Army Corps of Engineers study at Fort McClellan, a reasonable estimate for of a background soil concentration for mercury in the area is approximately 0.08 mg/kg (see Appendix G-2).

Most of the subject SWMUs are covered by gravel, concrete or asphalt to prevent erosion from surface water or reduce infiltration. These covers were inspected during the RFI/CS to verify their integrity and determine gravel thickness. The results of these inspections and the effectiveness of the surface stabilization measures are addressed in Section 7 of this report. Any

potential migration of constituents in the soil will be evaluated through surface water and groundwater samples collected at downgradient perimeter monitoring points.

In addition to the confirmatory samples collected during the on-site RFI/CS, numerous soil and sediment samples were collected around the perimeter of the Facility (primarily off-site) for analysis of PCBs in 1995 and 1996 as part of a storm water run-off control investigation. The locations of the soil samples with the reported PCB detections are presented on Figure 29.

5.3 Surface Water

A large component of the precipitation, which falls onto the Facility, leaves the site as run-off. When the surface water comes into contact with affected soils or Facility production areas, constituents can become entrained in the water and subsequently be transported off site. Extensive corrective measures, consisting of caps and covers over affected areas, upgraded storm sewers, diversion ditches, retention ponds, and various drainage structures, have been implemented at the Facility to control storm water run-off and mitigate the transport of constituents. These corrective measures and storm water control projects are described in Section 2. All on-site surface water was directed either toward the storm-sewer system or on-site drainage swales. The former Facility drainage patterns and outfall discharge points are presented on Figure 4. Table 3 provides a summary of outfall descriptions. The majority of the storm water that falls within the Plant was directed into the upgraded storm sewer that routes the flow through the discharge structure to outfall DSN 012. Some areas of the plant, however, did not drain to the upgraded sewer. These areas are primarily in the northwest corner of the Facility. Run-off from these areas was sampled at outfalls DSN 004 and DSN 005. Outfall DSN 006 receives storm water from the West End Landfill. Run-off from the South Landfill is directed into a recently constructed storm sewer which outfalls through the detention basin to DSN 012. Similarly, areas immediately east of the Plant drain into a storm sewer which outfalls to DSN 012.

The potential off-site migration of constituents in surface water has been evaluated by monitoring surface water outfalls at the downgradient perimeter of the Facility. Surface water outfalls DSN 006 and DSN 012 were sampled quarterly for PCBs and other indicator parameters in accordance

with the NPDES Permit[4] for the Facility. There were no detections of PCBs at the DSN 006 outfall over the four quarterly events since September 1997. Analyses results from DSN 012 have exhibited a steady decrease in PCB concentrations over the quarterly sampling events, and there were no PCB detections in the DSN 012 sample taken in July 1998.

To supplement the monitoring results from outfalls DSN 006 and DSN 012, surface water samples were collected from outfalls DSN 004 and DSN 005 during the RFI/CS and analyzed for COPCs. The sample from DSN 004, which receives surface water from the former 4-nitrophenol production area, had detections of arsenic (0.011 mg/L) and barium (0.036 mg/L). The sample from DSN 005 had a detection of barium (0.013 mg/L). No other COPCs were detected in these surface water samples. Water from these outfalls drains to off-site areas.

The effectiveness of the corrective measures implemented to date are further evaluated in Section 7. Off-site impacts are being evaluated in the off-site RFI.

5.4 Groundwater

The nature and extent of constituents in groundwater has been evaluated using groundwater quality monitoring data and an understanding of the groundwater flow system at the Facility. From this, the fate and transport of constituents in groundwater were evaluated to assess the potential for off-site migration. The RFI/CS program has provided additional groundwater data to augment the existing data at the perimeter of the Facility to assess perimeter control.

5.4.1 Site Conceptual Groundwater Flow Model

A conceptual groundwater flow model of the Facility was developed, consisting of hydrogeologic cross-sections, potentiometric maps and hydraulic parameters. The conceptual model was developed using site-specific data and a review of pertinent regional literature and is discussed below.

[4] The revised NPDES Permit no longer requires monitoring at DSN006.

Two hydrogeologic cross-sections were developed using regional data along with soil boring logs and potentiometric data from wells installed at the Facility. The location of these sections is shown on Figure 9. The cross-sections are presented on Figures 10 and 11. As shown on the cross-sections, the stratigraphy beneath the Facility consists of two primary units; the residuum and the bedrock (Shady Dolomite). There is a transition zone of fractured (highly weathered) bedrock and residuum between these units. Based on the stratigraphic information contained in boring logs and as shown on these cross-sections, the shallow site stratigraphy is characterized by fine to coarse sandy to silty clays. Sand and silt filled slickensided fractures (<1 cm), chert gravel zones, and localized "pockets" of weathered sandstone and quartzite are present throughout the residuum and provide localized preferential flow pathways. The degree of interconnection between these secondary permeability features varies widely across the Facility.

Based on boring logs and observations made during the drilling program, the residuum generally becomes more dense with depth. For this reason, the residuum has been loosely divided into two units. The material from the surface to a depth of about 45 ft bgs will be referred to herein as the shallow residuum. The material from about 45 ft bgs to the top of weathered bedrock is referred to as the deep residuum.

Groundwater within the shallow residuum generally occurs under unconfined (water table) conditions. Typically, the water table surface is a reflection of the ground surface and shallow groundwater flow follows topography. Potentiometric maps were constructed using water levels from a series of shallow wells installed at similar depths within the upper residuum. These maps are presented on Figures 32 and 33. The maps show the predominant lateral groundwater flow direction within the residuum to be to the north. This is a result of a relatively steep gradient, which exists across the northern face of Coldwater Mountain, trending into an essentially flat gradient across the production area of the Facility. As shown on the maps, there is a distinct northeast component of flow in the northeast portion of the Facility, in the vicinity of wells OW-9, OW-10, CB-85, and OWR-1S. Likewise, lateral groundwater flow is toward the northwest in the vicinity of the West End Landfill. This general northwest component of flow is also present along the northern Plant boundary in the vicinity of the OLBSI Corrective Action System.

Lateral groundwater gradients within the shallow residuum change significantly across the Facility, ranging from approximately 0.15 ft/ft on the steeper slopes of the South Landfill to less than 0.015 ft/ft across the central area of the Plant.

Three groundwater extraction systems; the South Landfill Corrective Action System, the Plant Corrective Action System, and the OLBSI Corrective Action System influence the groundwater flow patterns in localized areas of the Facility. Figure 32 depicts the shallow potentiometric surface with the three extraction systems operating. Figure 33 depicts the potentiometric surface after the extraction systems were shut down for six weeks during the aquifer testing program. These maps indicate that the extraction systems have a very localized effect on flow patterns at the Facility.

The shallow groundwater is also influenced by anthropogenic features such as backfilled excavations, caps, etc., which produce variable hydraulic conductivities and groundwater recharge rates. Based on a comparison of potentiometric data from 1995 and 1996 with data from 1998, it appears that the water levels across the South Landfill have lowered (a difference of 0.5 feet to 2 feet) due to upgrades in the cap at the South Landfill and redirection of surface water run-off away from the landfill. This drop in the water table indicates that the amount of infiltration entering the landfill has been reduced.

Based on pumping tests and variable head tests conducted during the RFI, the mean hydraulic conductivity value for the shallow residuum is estimated to be approximately 8×10^{-2} ft/day (2.9×10^{-5} cm/s). This is a conservative (high) estimate based primarily on pumping test results, which take into account secondary permeability and preferential flow pathways between wells. The majority of the wells used in the pumping tests were screened in both the shallow and the deep residuum. The material in the shallow residuum is very heterogeneous as evidenced by hydraulic conductivity estimates from variable head tests that ranged from 5×10^{-4} ft/day to 1.1 ft/day (2.0×10^{-7} cm/s to 4.0×10^{-4} cm/s). Estimated hydraulic conductivity values were generally higher in the vicinity of the Northern Corrective Action System at the South Landfill than in other areas of the Facility.

Horizontal flow velocities within the residuum were calculated using site-specific aquifer parameter values. Based on the estimated geometric mean hydraulic conductivity for the shallow residuum (8×10^{-2} ft/day), the calculated lateral hydraulic gradients (approximately 0.15 ft/ft across the South Landfill and approximately 0.015 ft/ft across the central portion of the Facility), and an estimated effective porosity of 10 percent, horizontal groundwater flow velocities were calculated as follows:

$$V = (Ki)/n_e$$

where,

V = average groundwater flow velocity,

K = hydraulic conductivity,

i = hydraulic gradient, and

n_e = effective porosity.

The average horizontal groundwater flow velocity ranges from about 44 ft/yr across the steeper areas of the South Landfill to about 4 ft/yr across the central and northern portion of the Facility.

The deep residuum is characterized by the same sandy and silty clay material as the shallow residuum. However, there are localized areas within the deep residuum consisting of a dense clay with little or no secondary permeability, particularly in the northern portion of the Facility. Locally, the deep residuum extends to depths over 100 feet and acts as a semi-confining unit to the underlying bedrock aquifer.

As shown in the cross-sections on Figures 10 and 11, water level data from paired wells screened in the shallow and the deep residuum indicate a strong downward gradient within the residuum beneath the Facility. This downward gradient ranges from approximately 0.6 ft/ft in wells MW-15, MW-16 and SBP-5 to greater than 1.0 ft/ft in OW-10 and OWR-6D. Shallow residuum well OWR-3S had water in it while the paired deep residuum well OWR-3D was dry. While OWR-3D was screened in a relatively permeable silty material, the material above this zone was very clayey, indicating possible perched water table conditions in this vicinity. The pronounced vertical gradients present across much the Facility are likely a result of low vertical hydraulic

conductivities within the residuum and a lower potentiometric surface within the underlying bedrock aquifer.

Estimated vertical hydraulic conductivities, based on laboratory tests of undisturbed soil samples, ranged from approximately 2.3 x 10^{-5} ft/day (8 x 10^{-9} cm/s) in a sample from borehole OWR-1D, to 0.23 ft/day (8.1 x 10^{-5} cm/s) in a sample from borehole PZR-3. The geometric mean vertical hydraulic conductivity was 6.4 x 10^{-4} ft/day (2.26 x 10^{-7} cm/s). These estimated values are in general agreement with vertical hydraulic conductivities estimates obtained from previous investigations.

Due to the different depths of the deep residuum wells and the variability of water levels, a potentiometric map could not be produced for the deep residuum. However, water levels in these wells indicate a general northward direction of flow. Water level data collected at various times during the RFI are included Appendix C.

Estimated hydraulic conductivities from variable head tests conducted in deep residuum wells ranged from 12 x 10^{-4} ft/day (4.3 x 10^{-8} cm/s) in OWR-1D to 1.4 ft/day (5.0 x 10^{-4} cm/s) in OWR-2D. The mean estimated hydraulic conductivity value calculated from the pumping tests, 8 x 10^{-2} ft/day (2.9 x 10^{-5} cm/s), can also be applied to the deep residuum as a conservative (high) estimate. Therefore, using similar values for effective porosity and lateral hydraulic gradients as those estimated for the shallow residuum, groundwater velocity estimates for the deep residuum are the same as those calculated for the shallow residuum.

As shown on the cross-sections, a transition zone of saprolite and fractured bedrock is present at the residuum-Shady Dolomite interface. In 1992, investigations of the profile of the bedrock surface and the groundwater quality and flow direction in the bedrock system were conducted to investigate the hypothesis that COPCs might collect and migrate along the bedrock surface as a preferred migration pathway in the vicinity of the OLBSI and WMA-II. Geophysical methods were used to map the bedrock surface. Shallow bedrock and deep residuum piezometers were subsequently installed to verify the geophysical surveys and collect samples for chemical analyses.

The geophysical investigation consisted of a seismic refraction survey and a cone penetrometer testing (CPT) survey to define the bedrock surface. Results of these surveys indicated a structural low, which apparently transects the Facility from the southwest to the northeast.

The objective of the 1992 investigation was to evaluate groundwater quality in the shallow bedrock system. Nine borings were drilled. Five were converted to shallow bedrock piezometers (SBP-1 through SBP-5), and one was converted to a deep residuum piezometer (DOP-1). Three deep residuum borings were drilled in an attempt to locate the bedrock interface and locate the structural low within the area north of the railroad tracks. Bedrock was not found at depths expected based on the geophysical investigations. These borings were drilled to depths at least twice the expected depth to bedrock and were abandoned when bedrock was not found. Odor associated with the COPCs was not detected during the drilling of any of these borings.

In the course of this investigation, it was found that the deeper residuum north of the railroad tracks (i.e., at depths greater than about 50 ft bgs) consists of lenses of chert and laminated weathered shale. The residuum extends to depths below 540 feet in this area. This difference in deeper lithology and the large difference in apparent thickness of residuum suggest the presence of a geologic discontinuity within the study area. The interpreted location of this discontinuity is shown on Figure 10. South of this discontinuity, competent bedrock was encountered at depths ranging from 82 to 130 ft bgs. Competent bedrock was not found north of this discontinuity. Further discussion of this bedrock investigation is included in Appendix A of the RFI/CS Work Plan (Golder Associates, 1997). Further physical investigation of this area was presented in the Supplemental RFI/CS Work Plan (Golder Associates, September 2002).

RFI well OWR-2D was installed within the deep residuum at the southeast edge of the trough feature discussed above at a depth of 108 feet below ground surface. This well monitors the potential off-site migration of constituents within the deep residuum along this trough feature. The variable head test for OWR-2D resulted in the highest estimated hydraulic conductivity value out of all the tested wells, indicating a possible preferential flow pathway within the deep residuum along this feature.

In general, water entering the subsurface through infiltration of precipitation will reach the water table and primarily move within the shallow residuum. Transport of groundwater and any dissolved constituents is governed by the groundwater flow paths, which are generally defined by the hydraulic gradients and refraction that occurs during flow across media with different hydraulic conductivities. Therefore, some of the infiltrating water moves laterally within the residuum, while another component of this groundwater movement is controlled by the downward gradient present within the residuum. Because the horizontal hydraulic conductivity is generally much greater than the vertical hydraulic conductivity, the majority of the groundwater flux is in the horizontal direction. Based on the potentiometric maps for the Facility, the groundwater within the residuum in the eastern half of the Facility eventually moves off-site toward the northeast. Groundwater in the western half of the Facility moves off-site to the northwest or directly to the north. The groundwater within the bedrock generally flows from the southeast to the northwest across the Facility.

Based on the calculated flow velocities within the residuum, travel rates for any dissolved constituents are slow. A discussion of the nature and extent of COPCs in the groundwater system at the Facility is presented in the following section.

5.4.2 Nature and Extent of Constituents in Groundwater

Based on groundwater quality data collected during the RFI and during previous investigations, an evaluation of the nature and extent of constituents in groundwater at the Facility can be made. The focus of the evaluation is on treating the Facility as a single potential release source to assess perimeter control; however, a basic understanding of the specific source areas within the Facility is needed to evaluate where potential off-site migration could occur given the groundwater flow patterns at the Facility.

Previous groundwater quality investigations have identified specific areas where COPCs have entered the groundwater system, including the South Landfill (SWMU 1) and the old limestone bed storage area and surface impoundment (WMA II and OLBSI). Three separate groundwater extraction systems were installed to remove constituents emanating from the South Landfill area (the Western Landfill Corrective Action System, the Northern Landfill Corrective Action System,

the Plant Site Corrective Action System), and one system (the OLBSI Corrective Action System) was installed in the WMA II/OLBSI area. The effectiveness of these Corrective Action Systems is discussed in Section 7 of this report.

Selected wells located at the downgradient perimeter of the Facility were used to evaluate perimeter containment. These include wells: OW-6A, OW-7, OW-21, OW-22, MW-8, MW-9, MW-11A, MW-12A, MW-13A, MW-15, and SBP-5 which are sampled regularly in accordance with the Permit; and wells OW-9, OW-10, CB-85, OWR-1S, OWR-1D, OWR-2S, OWR-2D, OWR-4D, OWR-5D, OWR-6D, OWR-7D, OWR-9S, WEL-1, WEL-2, WEL-3, and WEL-4 which were sampled specifically for the RFI.

COPCs that could potentially be present in groundwater have been identified in the SCM and are listed in Table 7. The COPCs that are most prevalent across the Facility and that have been detected above the Permit Concentration Limits include: ethyl parathion (parathion); 4-nitrophenol; PCBs; cobalt; and mercury. The nature and extent of each of these COPCs in groundwater at the Facility is discussed below.

Parathion

Parathion (ethyl parathion) has been detected in the vicinity of all four Corrective Action Systems. Operation of the four systems has resulted in a downward trend in concentrations of parathion in these areas. The most recent sampling event conducted at interceptor wells (IW-1 through IW-15) in the Western Landfill, Northern Landfill and Plant Site Corrective Action Systems in 1996, indicated parathion detections in only three wells (IW-6 [2.1 µg/L], IW-7 [37 µg/L] and IW-10 [45 µg/L]). Parathion was also detected in observation well OWR-5D (28 µg/L) that is screened at the same depth as the interceptor wells (65 feet) and is located within the capture zone of interceptor well IW-6. All of these detections were below the Permit Concentration Limit (200 µg/L).

Based on the groundwater flow patterns discussed in the groundwater flow model, constituents leaving the South Landfill will generally flow northwest toward OW-16A and then on to the Plant Site Corrective Action System. This is further evidenced by the consistent parathion detections

reported in OW-16 and OW-16A (see Figure 34). There is no indication that parathion has migrated downward into the deep residuum in this area. Historical data from observation well OW-5, screened in the deep residuum near OW-16A, reported only one anomalous detection of parathion between 1988 and 1996.

Groundwater at the eastern end of the North Landfill Corrective Action System, in the vicinity of IW-7, flows northward toward wells OW-6A and OW-7. No parathion detections have been reported in samples from wells OW-6A or OW-7. Both of these wells are screened in the shallow residuum.

Samples from well OW-8A, located downgradient of the Plant Site Corrective Action System within the shallow residuum, have consistently exhibited concentrations of parathion below the Permit Concentration Limit. Samples from perimeter wells OW-9 and OW-10, located within the shallow residuum downgradient of OW-8A exhibited no detections of parathion (see Figure 34).

The most recent samples collected from the interceptor wells in the OLBSI Corrective Action System (1996) near the northern boundary of the Plant exhibited detections of parathion in four of the six wells at concentrations ranging from 520 µg/L (IW-20) to 3,700 µg/L (IW-18). Based on groundwater flow patterns in this area, any constituents leaving this area would travel north-northwest toward shallow wells MW-8, MW-9, OW-21, and OW-22, and deep residuum well OWR-4D at a maximum rate of about 4 feet per year. As shown on Figure 34, samples from these wells exhibited no detections of parathion. The groundwater flow model also indicated a possible bedrock trough extending southwest across this area, which may provide a conduit for lateral flow within the deeper residuum. Samples from observation wells located west (OW-15, OW-16 and SBP-5) and southwest (OWR-2S and OWR-2D) of the OLBSI Corrective Action System along this trough exhibited no detections of parathion.

There is no indication of parathion being present in other areas of the Facility or in any of the off-site perimeter control wells around the Facility. Currently, there is no indication of off-site migration of this constituent. An evaluation of the natural attenuation of this constituent in groundwater at the Facility is presented in Section 8.

4- Nitrophenol

Based on historical groundwater monitoring data, 4-nitrophenol is present in groundwater at the South Landfill and in the vicinity of the OLBSI. Operation of the groundwater Corrective Action Systems has resulted in a downward trend in concentrations of 4-nitrophenol in these areas. Recent water quality data from observation wells sampled during the RFI and during the regular semi-annual sampling events (since January 1997) indicate a similar distribution of 4-nitrophenol in the groundwater as described above for parathion. During these sampling events, 4-nitrophenol was detected above the Permit Concentration Limit (1,000 µg/L) in observation well OWR-5D (2,300 µg/L), and below the Permit Concentration Limit in observation wells OWR-8S (390 µg/L), OW-16 (93 µg/L and 96 µg/L), OW-19 (500 µg/L and 218 µg/L), and OW-22 (26 µg/L and BDL). Wells OWR-5D and OW-19 are located within the capture zones of the South Landfill and OLBSI Corrective Action Systems, respectively. No detections of 4-nitrophenol were reported in other areas of the Facility. The distribution of 4-nitrophenol detections in observation wells across the Facility is presented on Figure 35.

The potential migration patterns for constituents emanating from these specific source areas are the same as described above in the parathion discussion. With the exception of a 4-nitrophenol detection in observation well OW-22 (26 µg/L) in April 1997, there were no 4-nitrophenol detections in the off-site perimeter control wells around the Facility. It should be noted that the detection in OW-22 was below the Permit Concentration Limit of 1,000 µg/L and that 4-nitrophenol was reported below the detection limit in the most recent sample from OW-22 in March 1998. An evaluation of the natural attenuation of 4-nitrophenol in groundwater at the Facility is presented in Section 8.

PCBs

A total of five different Aroclors have been reported in two general areas of the Facility since sampling for PCBs commenced in April 1997. For the purpose of this discussion, the individual Aroclor detections in each sample will be grouped together and reported as total PCBs. This is not considered to produce an overestimate of total PCB concentration since any peak overlap has been recognized. Figure 36 shows the distribution of reported PCB detections in wells across the Facility since groundwater samples have been routinely analyzed for PCBs starting in the first half

of 1997. Thus, this figure includes data developed during the RFI as well as during routine groundwater monitoring.

One area where PCBs have been detected in more than one well is in the vicinity of the OLBSI Corrective Action System. Unfiltered samples from observation wells OW-21, OW-22 and OW-24 have reported detections of PCBs ranging from a maximum concentration of 2.2 µg/L in well OW-22 to a maximum concentration of 14.8 µg/L in OW-21. Filtered samples from these wells reported no detections of PCBs. These data demonstrate that the PCBs detected in these samples were adsorbed onto suspended soil particles in the sample and were not present in dissolved form. Therefore, these detections are not representative of the water quality of groundwater moving off-site in this area. During a previous soil sampling investigation, several samples collected from the surface in this specific area reported detections of PCBs. Therefore, it is possible that these constituents were dragged down into the borehole from the surface during drilling. Surface stabilization measures (capping) are currently being implemented in this area. An Interim Measures Plan (Golder Associates Inc., 2002) has been submitted to address PCBs in this area.

The other primary area of unfiltered PCB detections is in the vicinity of the Plant Site Corrective Action System. During routine semi-annual groundwater monitoring, PCBs have been detected in samples from observation wells OW-8, OW-8A, OW-15, OW-16 and OW-16A at concentrations ranging from up to 4.2 µg/L in OW-15 to up to 603 µg/L in OW-8. Because of these detections (primarily in OW-8 and OW-16), these wells were re-developed and re-sampled. Wells OW-8 and OW-16 continued to produce samples with high turbidity, and these wells were replaced. Unfiltered samples from the replacement wells, OW-8A and OW-16A, have contained maximum PCB concentrations of 320 µg/L and 99 µg/L, respectively, while PCBs were not detected in filtered samples from these wells and from OW-15. These data demonstrate that the PCBs detected in these samples were adsorbed onto suspended soil particles in the sample and were not present in dissolved form. Therefore, these detections are not representative of the water quality of groundwater moving off-site in this area. Extensive soil sampling previously conducted in this area also indicated the presence of PCBs at the surface. Surface stabilization measures (capping) have since been implemented in this area.

The sample from RFI well OWR-5D, located within the capture zone of the South Landfill Corrective Action System, also reported PCBs (210 µg/L) in the unfiltered sample, but not the filtered sample. None of these wells (OW-8A, OW-15, OW-16A and OWR-5D) are part of the off-site perimeter control monitoring well system, and there is no indication that PCBs are migrating off site in this area.

PCBs were detected in the sample collected from well OWR-7D, in the vicinity of the West End Landfill, during the RFI at a concentration of 2.2 µg/L in the unfiltered sample, but were not detected in the filtered sample. This also demonstrates that PCBs are not likely being transported off-site in the groundwater in this area. No other samples have exhibited detections of PCBs since 1997.

The frequency of PCB detections in groundwater samples was lower during the RFI than in previous sampling events. This can be attributed to the fact that all wells were micro-purged before sampling during the RFI. The lower turbidity samples resulted in the lower frequency of PCB detection, demonstrating that the PCBs are, in fact, adsorbed to suspended particulates.

Mercury

Recent water quality data from observation wells sampled during the RFI and during the regular semi-annual sampling events (since January 1997) indicate that mercury is present in the groundwater in several areas across the Facility. The distribution of mercury concentrations in groundwater samples since that date is presented in Figure 37. Based on these data, mercury is most prevalent around the OLBSI and WMA II areas and downgradient of the phosphoric acid basins (SWMU 12).

In the vicinity of the OLBSI and WMA II, total mercury has been detected below the established MCL (0.0020 mg/L) in samples from wells MW-15, MW-16, MW-20A, OW-21, OW-22, and OW-24 at concentrations ranging up to 0.001 mg/L. Wells MW-16, MW-20A and OW-24 are located within the capture zone of the OLBSI Corrective Action System. Since mercury, like most metals, has a low solubility and is sorbed to suspended solids, it is expected that these detections were related to the turbidity of the samples and were not representative of groundwater

quality. Analyses of filtered samples tended to confirm this expectation. Mercury was detected only in filtered samples from wells MW-16, OW-21 and OW-22. There is no indication of off-site migration of this constituent above the established MCL.

Mercury was also detected in unfiltered samples from wells OW-9 (0.00068 mg/L), OW-10 (0.050 mg/L) and OWR-6D (0.0013 mg/L), located downgradient from the phosphoric acid basins (SWMU 12). Mercury was reported only in the filtered samples from OW-9 (0.00093 mg/L) and OWR-6D (0.00027 mg/L), indicating that the mercury concentration in OW-10 was likely a result of suspended soil particulates in the sample and not representative of the actual groundwater. The mercury detections in this area are consistent with results from the soil sampling investigation, where the highest mercury concentrations (up to 2.2 mg/kg, estimated) were reported in samples collected from SWMU 12.

Cobalt

Groundwater quality data collected during the RFI and during the regular semi-annual sampling events (since January 1997) indicate that cobalt is present in the groundwater in several areas across the Facility, including the South Landfill (SWMU 1 and WMA I), the limestone bed storage area and surface impoundment (WMA II and OLBSI), the closed phosphoric acid basins (SWMU 12), the West End Landfill, and the production areas located in the center of the Facility. The distribution of cobalt concentrations in groundwater is presented in Figure 38. With cobalt being present in virtually all areas of the Facility, this evaluation primarily focused on detections associated with the perimeter well system.

Cobalt was detected in unfiltered samples from monitoring well MW-11A (0.0040 mg/L in April 1997 and 0.030 mg/L in September 1997), located downgradient of WMA I on the South Landfill, but not in a filtered sample from this well, indicating that the total cobalt concentrations in this well were likely a result of turbidity in the sample and not representative of the actual groundwater. Samples from the other downgradient wells for WMA I exhibited no detections of cobalt. Observation well OW-7, located downgradient of the South Landfill, had a detection of cobalt in an unfiltered sample in April 1997. Subsequent samples (filtered and unfiltered) collected from this well in September 1997 and October 1998 exhibited no detections of cobalt. There were no

reported detections of cobalt in adjacent downgradient well OW-6A. Therefore, there appears to be no off-site migration of cobalt in this area. This also occurred in wells WEL-1, WEL-2 and WEL-4 near the West End Landfill. The unfiltered samples from these wells were very turbid and exhibited concentrations of total cobalt ranging from 0.012 mg/L to 0.036 mg/L. Filtered samples from these wells exhibited no detections of cobalt. Therefore, it is unlikely that cobalt from these areas is being transported off site through groundwater.

Samples from wells OW-9 and OW-10, located downgradient from the phosphoric acid basins, exhibited detections of cobalt. Cobalt was detected in the unfiltered (0.052 mg/L) and the filtered (0.049 mg/L) sample from OW-10, but only in the filtered sample from OW-9 (0.010 mg/L). The fact that cobalt was not detected in the unfiltered sample from OW-9 suggests that the reported detection in the filtered sample was an artifact of sampling and not representative of the actual groundwater. The sample from the adjacent deep residuum well (OWR-6D) did not contain cobalt.

Cobalt was detected below the Permit Concentration Limit of 0.010 mg/L in unfiltered samples from observation wells OW-22 (0.0030 mg/L) and MW-15 (0.0030 mg/L), located downgradient from the OLBSI and WMA II areas. Subsequent samples from these wells (unfiltered and filtered) exhibited no detections of cobalt. Therefore, there is no indication of off-site migration of cobalt to the north and northwest of the OLBSI and WMA II areas. Well OWR-2S, located southwest of these areas and upgradient from MW-15, exhibited cobalt in both the unfiltered (0.029 mg/l) and filtered (0.033 mg/L) samples. The sample results from MW-15 indicate a significant reduction in these cobalt concentrations by the time the groundwater reaches this well. Well OWR-2D, located within the deep residuum adjacent to OWR-2S, exhibited no detections of cobalt.

As discussed previously in Section 5.2, cobalt occurs naturally in the soils in this area. Data from a recent study conducted at nearby Fort McClellan indicated that a reasonable estimate of a background soil concentration (i.e., 2 times the mean value) of cobalt in the area is approximately 15 mg/kg (Science Applications International Corp., 1998). Groundwater flowing through this soil matrix is expected to be influenced by the cobalt in the soil. Thus, it is likely that the cobalt

detections reported in these and other groundwater samples are due in part to the natural occurrence of cobalt in the soil.

6.0 HEALTH AND ENVIRONMENTAL ASSESSMENT

6.1 Introduction

The purpose of the Health and Environmental Assessment (HEA) is to evaluate whether constituents detected in on-site media represent a potential health risk and therefore require additional action such as the implementation of a corrective measure study. The objective of this HEA is to identify which constituents in on-site media may represent an elevated risk, and therefore require further evaluation. As described in the RFI/CS Work Plan, the methodology adopted for the on-site HEA is similar in approach to the Risk-Based Corrective Action (RBCA) recently published by the American Society for Testing and Materials (ASTM, 2000). The RBCA process is a tiered approach, starting with a relatively simple assessment and moving to more sophisticated analyses as dictated by initial results. Chemical-specific, risk-based concentrations are the basis for comparison in a RBCA process. These concentrations are analogous to "action levels" typically developed for RCRA investigations (ADEM, 1996). Action levels are defined as "health-based concentrations of hazardous constituents determined to be indicators for the protection of human health and the environment" (ADEM, 1996).

For the Anniston facility, potential exposure pathways were identified and described in the preliminary site exposure model (SEM). This model illustrates the interrelationship between various environmental media and potential exposure pathways. The USEPA (1996b) defines the conceptual model as:

> *. . . a three dimensional picture of site conditions that illustrate contaminant distributions, release mechanisms, exposure pathways and migration routes, and potential receptors. . . The initial design of the [model] is based on existing data compiled from previous studies.*

The preliminary SEM is illustrated on Figure 39 and represents a general estimation of the sources of on-site chemicals, affected media, potential routes of exposure, and likely human receptors. This preliminary SEM is re-evaluated and revised as needed, prior to the development of any subsequent (i.e., Tier 2) evaluation (ASTM, 2000).

Initially, site analytical data from media shown to represent potential exposure pathways are compared to background concentrations or generic risk-based concentrations representative of

appropriate potential receptors. This simple step constitutes the Tier 1 evaluation and is meant to eliminate from further consideration all chemicals, which because of their low on-site concentrations, are not expected to represent a potential significant risk to on-site receptors. The source of the Tier 1 values, the site-specific constituent levels determined from field sampling data, and the evaluated exposure pathways represented by the site concentrations which are compared to the risk-based values, are described in Section 6.2.

Following this preliminary screening step, any chemicals found to have on-site concentrations in excess of these values are carried though for a more thorough analysis. Merely exceeding these generic risk-based values does not imply that the concentrations found on-site represent a significant health risk. The purpose of the subsequent analysis is to provide risk-based concentrations that are more reflective of current and reasonably anticipated future conditions at the particular facility. The development of these site-specific risk-based concentrations requires certain modifications to the assumptions and default variables used to derive the Tier 1 screening levels. The specific modifications, and the scientific justification for these changes are described in Section 6.3. The critical first step in this second tier assessment is to revise and update the site exposure model, including an analysis of the various exposure pathways assumed in the Tier 1 evaluation. Revisions to the site exposure model and exposure pathway analysis provide the basis for selecting specific values for the various exposure variables used in the Tier 1 calculations.

The product of the revised algorithms provide the basis for the Tier 2 evaluation. The Tier 2 concentrations, known as Site-Specific Target Levels (SSTLs) are only developed for those constituents that have on-site concentrations exceeding the Tier 1 values. The results of the SSTL development are presented in Section 6.3. Once SSTLs have been developed for those constituents exceeding the Tier 1 values, the site data are again compared to these concentrations. Any constituent with an on-site concentration exceeding the SSTL requires further evaluation, such as a corrective measure study. The results of the Tier 2 evaluation are described in Section 6.3.

6.2 Tier 1 Evaluation

6.2.1 Constituents of Potential Concern

Constituents of potential concern are listed in Table 7 as identified by the Permit. This list was established based on review of historical site data, and facility production and waste processes and degradation products related to these processes. Further chemicals that have a low health or environmental risk and chemicals that were not reported at levels in excess of regulatory limits or were not detected in groundwater were eliminated.

6.2.2 Risk-Based Screening Levels (RBSLs) for Tier 1 Evaluation

The purpose of the Tier 1 evaluation is twofold. First, it identifies which COPCs do not pose a significant health risk and can be eliminated from further evaluation; and second, it identifies which COPCs need to be evaluated further. A "look-up" table of RBSLs for groundwater and surficial soil exposures to humans was created for the Tier 1 evaluation. The screening levels considered for the Tier 1 comparison include ADEM Groundwater Protection Standards (GPSs), and Permit-approved Alternative Concentration Limits (ACLs), USEPA Maximum Contaminant Levels (MCLs) for drinking water, and USEPA Region 9 Preliminary Remediation Goals (PRGs) for tap water and industrial soil.

To determine an appropriate hierarchy for application of screening levels from the various regulatory agencies, consideration was given to the relevance of the various screening levels for application at the Anniston site.

- ADEM GPSs are not strictly risk-based. ADEM provides the MDL as the first screening level for constituents. RBCA Tier 1 evaluation utilizes risk-based values, and MDLs are technology-based limits. Since imposing this technical limit as a screening value does not indicate that concentrations above this level will pose a human health risk, ADEM GPSs were not used as screening criteria in the Tier 1 look-up table.
- ACLs were incorporated into the Facility Permit, as approved by ADEM, specifically for use as groundwater monitoring levels at the Anniston facility. The ACLs are for parathion; sulfotepp; phenol; 4-nitrophenol; and o,o,o-triethylphosphorothioate.

- USEPA MCLs are defined as the maximum permissible levels of a contaminant in water, which is delivered to any user of a public water system. These levels are national primary drinking water standards that apply to public water systems. Drinking water quality is protected by limiting the levels of specific contaminants that can adversely affect public health and are known or anticipated to occur in water. (USEPA, 1998a)
- USEPA Region 9 PRGs are based on calculated risks to a specific receptor. These concentrations are derived with standard equations and default exposure values (Appendix J-1). Region 9 values have been chosen as the comparative benchmark due to the fact that PRGs in industrial soil were calculated using three routes of exposure: inhalation, ingestion, and dermal contact. Other USEPA values (e.g., Region 3 Risk-based Concentrations) do not incorporate the dermal exposure pathway (a significant source of potential exposure to industrial soils) into the calculation, resulting in a less appropriate concentration estimation. Region 9 soil PRGs protective of groundwater are also available. These values assume that chemicals have the potential to leach from soils to groundwater and are derived assuming groundwater is a source of drinking water.
- USEPA Region 4 Freshwater Screening Values are available as part of the Region 4 Ecological Risk Assessment Bulletins - Supplement to RAGS (USEPA, 2002). The values were obtained from USEPA's Water Quality Criteria documents and represent the chronic ambient water quality values for the protection of aquatic life. For constituents without Region 4 ecological values, Michigan Department of Environmental Quality's (MDEQ) Water Quality Values (final chronic values) were used at Tier 1 values. These values are used to evaluate potential risks associated with constituents in groundwater released to surface water.

USEPA Region 9 PRGs are chemical concentrations that correspond to fixed levels of risk in soil, air and water. This means that the concentrations are derived assuming a 1 in 1,000,000 cancer risk using a chemical-specific cancer slope factor (CSF), or a noncarcinogenic hazard quotient of 1 using the chemical-specific reference dose (RfD). For those constituents for which both a CSF and RfD are available, Region 9 typically employs the toxicity value giving the most conservative

(i.e., lowest) PRG (USEPA, 2002a). This more conservative value is the one used in the PRG look-up table.

The following hierarchy of precedence was used to create the Tier 1 RBSL "look-up" table. For groundwater, ACLs took precedence over all other values; where no ACL was provided, USEPA MCLs were used; and where no MCL was provided, the USEPA Region 9 "Tap Water" PRGs were used. For soil, Region 9 Industrial PRGs were used. The Region 4 surface water values were compared to a subset of monitoring wells that theoretically represent concentrations discharging to surface water. Any COPC exceeding the RBSL was carried through to the Tier 2 evaluation.

6.2.3 Exposure Point Concentration

The maximum reported sample value was chosen as the concentration to compare to the RBSL. The 95 percent Upper Concentration Limit (95% UCL) of the sample mean is generally the statistical representation recommended by USEPA (1992a) as the exposure point concentration. However, since the 95% UCL may include a high degree of uncertainty in situations where data sets have fewer than 10 samples per exposure area, or extreme variability exists in measured or modeled data, the UCL can be greater than the highest measured or modeled concentration. In these cases, if additional data cannot practicably be obtained, the highest measured or modeled value should be used as the exposure point concentration (USEPA, 1992a). The maximum reported value was chosen over a statistical representation of the mean due to the limited number of surficial soil samples (n=15), and the degree of variability in concentrations among the groundwater and soil samples. While this likely overestimates actual exposures, the conservative approach is appropriate for the screening level step of the assessment. For samples results with values reported below the sample quantitation limit (SQL), a surrogate value equivalent to ½ the SQL was used in the Tier 1 analysis.

The groundwater data set used for the HEA (Table 9) contains analytical results from samples collected as part of the RFI (sampling dates from July to October, 1998). Unfiltered and filtered groundwater samples were analyzed for PCBs, metals, and all other COPCs listed in Table 7.

The maximum concentration reported from either unfiltered or unfiltered data was used in the Tier 1 evaluation.

The soil data set (Table 11) contains all RFI soil samples tested for COPCs. Samples were collected to represent both surface and subsurface soils. Soil surface was defined in the RFI/CS Work Plan (Golder, 1997) as starting below any gravel, brush, root mat, grass, leaves or other debris covering the area. Table 6 contains a description of the sample locations and sample depths. The soil sample taken at location SSR-5 was collected by removing an obstructive root mass that extended to a depth of approximately 2.5 feet and sampling the soil that was below this obstruction. Although this sample satisfied the definition of surficial soil as provided in the work plan, soil at this depth (2.5 ft to 4.5 ft) was not considered to be representative of surficial soils for the purposes of an exposure point concentration. Rather, this particular sample was included as a "near surface" or subsurface sample.

As there are no ponds or continuously flowing streams within the property boundary, exposure to surface water is not expected to occur on site, except at the perimeter of the designated on-site area (i.e., from discharge outfalls) and only during storm events. The issue of COPCs in on-site surface water releases is addressed by the NPDES permit that regulates the discharge of constituents from the Facility outfalls. Data from these outfalls collected during the recent RFI investigation did not contain any COPCs above the detection limit, and therefore no further action currently is required under the NPDES permit. Based on this information, it was determined that further analysis of NPDES permitted releases was not required at this time.

Theoretically, there is a potential for site groundwater to discharge into off-site surface waters, exposing human and ecological receptors to constituents contained in this media. Surface waters immediately adjacent to the facility have not been sampled for releases of on-site groundwater constituents. In order to investigate this hypothetical pathway, data from northeast perimeter wells (OWR-01S, OWR-01D, OWR-06D, OW-10, OW-09, OWR-09S) which, in theory, conservatively represent COPC concentrations discharged to surface water were evaluated with respect to this pathway. The maximum concentration detected in the perimeter wells was used

because of the chemicals of concern were detected infrequently in these wells, and, as previously mentioned, this is an appropriately conservative step in a Tier 1 analysis.

6.2.4 Comparison of the Maximum Detected Value to RBSLs for Soil and Groundwater at the Solutia, Anniston Facility

Concentrations of the COPCs measured at the Facility were compared to the look-up tables of RBSLs for groundwater (Tables 15 and 16) and surficial soil (Table 17). As there are no specific RBSLs for subsurface soil, analytical results from subsurface samples were compared to the surface soil standards (Table 17). This is a conservative approach and is considered appropriate for the Tier 1 analysis.

Twenty-eight COPCs were originally identified for the on-site HEA at Solutia's Anniston facility. Eighteen of these COPCs were detected in groundwater samples, and 11 were above the RBSL (Table 18). Eight of these COPC were detected in the northeast perimeter wells, with 7 of the compounds exceeding the screening values. Sixteen COPCs were detected in soil samples (surficial and subsurface), but only five were above the RBSL (Table 19). Thus, 16 COPCs found in either groundwater or soil exceeded Tier 1 screening values and required further evaluation - a Tier 2 evaluation. Toxicological profiles for the COPCs exceeding Tier 1 values are included in Appendix J-2.

6.3 Tier 2 Evaluation

Of the 16 chemicals detected in on-site soil, only PCBs and arsenic exceeded the chemical specific Tier 1 values for direct contact with surface soil. Methylene chloride, chromium and nickel in soil exceeded the Tier 1 value protective of groundwater. A total of 18 chemicals were found in groundwater, and 11 of these exceed the Tier 1 values for drinking water. The constituents found in groundwater above this Tier 1 screening level are: methylene chloride, parathion, methyl parathion, sulfotepp (tetraethyldithiopyrophosphate), 4-nitrophenol (paranitrophenol), lead, manganese, pentachlorophenol, polychlorinated biphenyls, beryllium, and mercury. Lastly, a total of 7 chemicals were above the ecological screening values (barium, beryllium, lead, manganese, mercury, nickel and vanadium). Therefore, a total of 15 chemicals could not be eliminated and required further evaluation.

According to the RBCA final guidance (ASTM, 2000), if the Tier 1 values are exceeded, site-specific target levels (SSTLs) form the basis of the Tier 2 evaluation. Tier 2 SSTLs are derived from essentially the same equations used to calculate Tier 1 concentrations, except that site-specific parameters are used in the calculations.

> *In moving to Tier 2 the non-site-specific assumptions and points of exposure used in Tier 1 are replaced with site-specific data and information. . . Based on this additional information the user should revise and update the site classification, site conceptual model, and exposure pathway completeness analysis.* (ASTM, 2000)

The modifications to the Tier 1 algorithms and site conceptual model, along with the development of the Tier 2 SSTLs, are described in the following sections.

6.3.1 Tier 2 Evaluation for Groundwater

As previously stated, one of the key features of deriving Tier 2 values is to "revise and update the site classification, site conceptual model, and exposure pathway completeness analysis" (ASTM, 2000). This reevaluation of the site conceptual model is particularly important in developing risk-based values for the assessment of groundwater beneath the Facility. The groundwater has been characterized, and various interim measures have been in place for many years to contain and recover various constituents found in the groundwater. Furthermore, groundwater is not now, nor will it ever be in the future, a source of drinking water for the workers or future users of the property (see Deed Restrictions included in Appendix J-3). Also, this medium is not now, nor will it be in the future used as a source of production or non-contact cooling water (see Deed Restrictions included in Appendix J-3). Furthermore, municipal water is supplied to all residents in the area. Therefore on-site exposures via dermal contact, incidental ingestion or inhalation due to constituent volatilization from groundwater will not occur.

As a result of this site-specific consideration, a revised exposure pathway analysis demonstrates that the particular pathway, groundwater to on-site workers, does not represent a complete

exposure pathway (see Figure 40). Consequently, since there is no potential for exposure to this medium, and therefore no potential risk, further analysis of this pathway is not required.

Historical data indicate that the groundwater recovery system has been effective at eliminating off-site migration. However, possible data gaps required the evaluation of a potential off-site release of groundwater to surrounding surface water. For the Tier 1 analysis, naturally occurring metals barium, beryllium, lead, manganese, mercury, nickel and vanadium detected in some of the northeast perimeter wells exceeded the ecologically based water screening values. Maximum concentrations were used for this comparison. For the Tier 2 analysis, a reevaluation of the site-specific conceptual model was required. The reevaluation required the consideration of a hypothetical discharge of groundwater into a receiving water body. The area likely to act as the receiving water of groundwater releases from the northeastern portion of the site was judged to be Snow Creek. The modeling of a discharges to surface water necessitated the consideration of potential mixing of groundwater as it entered the creek (see Appendix J-4). Incorporating this mixing-zone factor, the revised exposure point concentrations (i.e., reduced surface water concentration) were compared to the Tier 1 value (Table 20). Based on this comparison, no exceedances of Tier 1 values were found.

6.3.2 Tier 2 Evaluation for Soil

Site-specific modifications are required for only two Tier 1 direct contact soil values, the Region 9 Industrial PRG for PCBs and arsenic. Two Tier 1 soil values, for the protection of groundwater, were exceeded (chromium and nickel). However, these PRGs are based on modeling a concentration equivalent to a drinking water protection value, and the groundwater beneath the facility is not used as a drinking water source. Thus, revising the site conceptual exposure model eliminates this pathway. Soil values protective of an incomplete pathway are not appropriate for a Tier 2 evaluation.

Inhalation of COPCs resulting from volatilization from soil was also considered an incomplete pathway. The only site-associated organic chemical that exceeded the Tier 1 soil screening level was PCBs. In general, PCB mixtures are relatively non-volatile, with vapor pressures, on average, below 1×10^{-4} millimeters of mercury (Shiu and Mackay, 1986). The low potential for

volatilization (and therefore exposure via inhalation) is especially true for "weathered" PCB mixtures in surface soils. Therefore, for the determination of a Tier 2 SSTL for PCBs, inhalation of volatilized congeners was not considered, although inhalation of soil dust was included in the calculation.

For direct contact soil exposure pathways, inclusion of site-specific characteristics of potential on-site receptors will result in risk-based screening values reflective of conditions found at the Facility. For assessment purposes, given the current and future use considerations at the location, the only on-site receptors for which specific parameters need to be developed are workers engaged in various activities at the site. In order to reasonably characterize the "Anniston worker," various sources of information were investigated including job descriptions and activity records. This information was obtained from relevant sources on a voluntary basis, with the understanding that any data obtained would be used to describe a prototype worker. Deriving a Tier 2 value for the worker population is likely protective of any populations that may be present on the site less frequently (e.g., the trespasser). However, to ensure that this population is adequately protected, this receptor has been added to the SEM, and an appropriate Tier 2 value has been developed.

The exposure equations and default values used by Region 9 to develop the PRGs have been previously described (see Section 6.2.2). The following is a brief description of the modifications to these exposure variables based on site-specific information. The scientific basis for these modifications is presented in the following paragraphs and, in some instances, in more detail in attached appendices.

6.3.2.1 Description of Receptors

Based on a consideration of current and reasonably anticipated future use scenarios (see Deed Restrictions in Appendix J-3), there are five categories of human receptors for which risk-based SSTLs have been considered. These receptor categories include:

1) Production Worker: individuals involved in the day-to-day production operations at the plant; every-day direct exposure to surficial soils associated with production areas (i.e.,

high contact areas) and no direct exposure to soils in low contact areas (see Section 6.3.2).

2) Plant Inspector/Supervisor: individual responsible for the routine inspection of low contact areas (e.g., West End Landfill; South Landfill). As a result, there is only limited contact with soils in production areas since this job description does not include day-to-day production responsibilities. Likewise, this individual has only limited exposure to soils in low contact areas. Often, this exposure occurs infrequently and for short periods of time.

3) Office Worker: individuals working inside the office buildings; little, if any, direct contact with on-site soils.

4) Construction Worker: individuals that may be involved in certain land intrusive activities at the Facility which may result in exposure to surface and subsurface soils associated with both low and high contact areas. Unlike the other potential receptors, the exposure for these individuals will be of relatively short duration.

5) Trespasser: individuals aged 7 to 16, consistent with USEPA Region 4 guidance, that may contact on-site soils on an infrequent basis.

Since the office worker will have only limited or no contact with on-site soils, particularly when compared to the production worker, a SSTL was not determined for this receptor. This receptor population is most likely to come into contact with soil in, the high contact areas. However, the SSTL derived for these areas will be based on the variables describing the production worker. Since the production worker would have a greater potential for direct contact with soils from these common areas, the SSTL derived for this exposure scenario will be more than adequately protective of the office worker.

6.3.2.2 Site Specific Modifications to Tier 1 Values

6.3.2.2.1 Exposed Skin Surface Area

The PRG default value for exposed skin surface area for an adult worker is 3,300 square centimeters (cm^2) (USEPA, 2002a), which represents the 50th percentile (central estimate) for males and females greater than 18 years of age. The assumption is that the head, hands, and

forearms are uncovered and exposed to soil. Based on the Anniston Plant Safety & Health Procedure #9, Section 2.3, any production worker or plant inspector working in the production areas is required to wear a long sleeved shirt, long pants, steel-toed boots and a hard hat. The shirt sleeves must be worn down and buttoned at all times, even during summer months. Therefore, the exposed skin surface area is limited to the head and hands (Note: some portion of the neck might also be exposed while a portion of the head would be covered by the hard hat, therefore use of the total head is a conservative estimate of exposed skin). Any construction worker involved in activities on-site is also required to follow these Facility guidelines. The recent USEPA Supplemental Guidance: Dermal Risk Assessment (USEPA, 2001) recommends that the 50th percentile (or central estimate) be used for skin surface area. For the purposes of the SSTL, only data from adult males will be used since they constitute the majority of the work force. This is also a conservative approach as it considers a larger exposure surface. The 50th percentile of adult males for the skin surface area of the hands and head is 2,290 cm^2.

The trespasser is assumed to be a 7 to 16 year old, who may be on site infrequently. Consistent with the child scenario presented in the recent dermal guidance (USEPA, 2001), this receptor is assumed to be wearing a short-sleeved shirt and shorts (no shoes). As a result the head, hands, forearms, lower legs and feet may be exposed. The resulting surface area (using data for the >7 to <18 year old in USEPA, 2001) is 5,300 cm^2.

6.3.2.2.2 Dermal Absorption Factor

Region 9 utilizes a chemical-specific dermal absorption factor of 14 percent for PCBs (USEPA, 1998b). The basis for the absorption factor is a single report by Wester and co-workers (1993a). In this study, PCB-contaminated soil was applied to the abdominal skin of female rhesus monkeys for a period of 24 hours. Following removal, absorption of PCBs (Aroclor 1242 and Aroclor 1254) was determined by urinary and fecal excretion over a 5-week period. The amount of PCB excreted following dermal exposure was compared to the amount excreted following an intravenous administration (assumed to represent 100 percent absorption). Although the study provided interesting information on the kinetics of dermal absorption of PCBs in rhesus monkeys, there are serious uncertainties that preclude scientifically justifying the extrapolation of these

results to derive an absorption factor for quantitatively estimating a dose in individuals exposed in a workplace environment.

Recently, Mayes et. al. (2002) reported on the results of a PCB dermal absorption study conducted on monkeys. The goal of the investigation was to duplicate, to the extent possible, the Wester et. al. (1993a) study which forms the basis of the dermal absorption factor used by Region 9 to develop the soil PRGs for PCBs. Perhaps the most significant difference between the studies was that Mayes and co-workers used a soil matrix with a total organic carbon more typical of common soils (5% in the Mayes study and less than 1% in the Wester report). While Wester et. al. concluded that approximately 14% of the dermally applied dose was absorbed following a 24 hour exposure, Mayes et. al. found that only 4% of the applied dose was absorbed. These more recent data indicate that the use of the 14% dermal absorption factor results in a 3-fold overestimation of the dose received from PCBs in soil contacting the skin.

As detailed in Appendix J-5, the scientific data overall do not provide support for the high dermal absorption factor used to develop the Region 9 PRG for PCBs. Therefore, the calculation of a SSTL will incorporate the dermal absorption factor previously recommended by USEPA of 6 percent (USEPA, 1992b).

A dermal absorption factor of 3%, as recommended in the recent RAGS Supplemental Guidance for Dermal Risk Assessment (USEPA, 2001) was used for arsenic.

6.3.2.2.3 Soil Adherence Factor

The adherence factor quantifies the amount of soil that remains attached to the skin allowing chemicals associated with the soil to transfer to the skin. The soil adherence factors, developed by the USEPA, are a function of activity. The agency recommends that "an activity which best represents all soils, body parts, and activities be selected" (USEPA, 2001). Although the recent Exposure Factors Handbook (USEPA, 1997) and Supplemental Guidance for Dermal Risk Assessment (USEPA, 2001) lists a number of occupational activities, none of the reported field studies correspond to the activities engaged in by the Anniston production worker. For this reason, the default value of 0.2 used as the adherence factor to develop the Tier 1 values (i.e.,

Region 9 PRGs), was retained for this receptor. This value is also recommended in the new Dermal Guidance document as representative of an industrial Reasonably Maximally Exposed (RME) scenario (USEPA, 2001).

For the inspector/supervisor, it was determined that given his limited direct contact with soil, an alternative valued needed to be adopted to derive the Tier 2 SSTL. Based on a comparison of activity patterns, it was determined that the "groundskeeper" is the outdoor activity that best describes the inspector/supervisor. The Supplemental Guidance for Dermal Risk Assessment (USEPA, 2001) lists 5 separate "groundskeeper" field studies, evaluating a total of 29 individuals, used to quantify the soil adherence factors. Two specific soil adherence factors, representing the geometric mean of the individuals in the 5 studies, were used in the Tier 2 calculation: for the hands – 0.046 mg/cm^2; for the face – 0.004 mg/cm^2. These values were used in developing the Tier 2 SSTL relevant for the inspector/supervisor, applying the specific values to the surface area of the hands and face, respectively.

The Supplemental Guidance for Dermal Risk Assessment (USEPA, 2001) contains soil adherence factors specifically for a construction worker. The value assigned for the hands is 0.24 mg/cm^2, while for the face 0.029 mg/cm^2 is listed as the geometric mean value. These values were adopted in the Tier 2 calculation.

For the trespasser, a soil adherence factor of 0.04 mg/cm^2 was used in the Tier 2 calculations. This value is the geometric mean of teenage (13-15 yrs old) soccer players, participating in moist conditions (USEPA, 2001).

6.3.2.2.4 Intestinal Absorption Factor

The default assumption adopted by Region 9 for the PRG for PCBs is that 100 percent of PCBs associated with soil are bioavailable and absorbed in the gastrointestinal tract. This assumption is not only inconsistent with the understanding of partitioning kinetics between a soil matrix and lipophilic chemicals, it is also inconsistent with established EPA policy. Moreover, this assumption is also inconsistent with the known bioavailability of PCBs not associated with a matrix (e.g., soil, food). Indeed, the most recent PCB toxicology profile prepared by the Agency for Toxic

Substances and Disease Registry (ATSDR, 1997) reported that the average oral PCB absorption factor was 85 percent for all congeners based on studies that used pure (i.e., "neat") PCB fluids administered directly into the stomach of the animals.

The adoption of an 85% bioavailability factor for application to PCB associated with soils is also overly conservative, particularly for the development of a Tier 2 value. Recent reports have described complex desorption kinetics for PCBs from sediment and soil, particularly "historically contaminated" material (Bjorklund et. al., 1999; Pilorz et. al., 1999; Huang and Weber, 1998; Cornelissen et. al., 1998). These reports describe rapidly desorbing and slow desorbing sites within the soil matrix, which, although not specifically evaluated as to their effect on bioavailablity, support the position that PCBs in soil have lower intestinal bioavailablity than pure compounds. This is particularly true in those instances where PCBs have been associated with soil or sediment material in the environment for prolonged periods of time. Such is the case with PCBs detected in soil from the Solutia property. Given the fact that these materials have been exposed to wind, high temperatures, and rain for over twenty-five years, any remaining material is assumed to be relatively tightly associated with desorption sites within the soil matrix. Use of a 30% intestinal absorption factor recommended by USEPA in 1986 assumes that the matrix effect of aged PCBs reduces the relative absorption by less than two-thirds. Based on an understanding of desorption kinetics, including a consideration of the equilibrium partitioning occurring in the lumen of the gut as described in the HEA, this reduction in absorption efficiency is a reasonable estimate.

There are data in the scientific literature that support the consideration of a matrix effect on bioavailability. Extensive research into the bioaccumulation of PCBs into earthworms has demonstrated that, on average, less than 20% of the soil associated compound is taken up by these organisms (Belfroid et. al., 1995; Pickard et. al., 1997). While a direct extrapolation from an earthworm in vitro intestine preparation to an on-site worker is not appropriate, these data do illustrate the significant effect soil has on retarding accumulation of PCB by biological receptors.

USEPA has long recognized the significant effect soil can have on the absorption of PCBs from the gastrointestinal tract. In the agency's *Development of Advisory Levels for Polychlorinated Biphenyls Cleanup* (USEPA, 1986a), USEPA recommended that the daily intake of PCBs from

soil be determined using a 30 percent absorption factor. A review of the current scientific literature does not provide any support for the modification of this recommendation. Therefore, in the development of the Tier 2 SSTL, the daily dose estimates are based upon a 30 percent absorption of soil-associated PCBs.

For arsenic, Region 9's default assumption for oral bioavailability is also 100%. However, unlike PCBs, there are no other EPA recommendations contained in previous guidance documents to support a modification in the oral bioavailability value. Similar to the issue associated with PCBs, it has long been recognized that the soil matrix hinders the absorption of metals in the gastrointestinal tract. The Integrated Exposure Uptake Biokinetic Model (IEUBK) that is used by EPA to predict lead blood levels in young children contains a 30% bioavailability factor for lead in soil (USEPA, 1994). For adults, the EPA model assumes a "total bioavailability" for lead in soil of 12% (USEPA, 1996). Thus, consideration of the impact on gastrointestinal absorption of metals by soil is consistent with EPA policy and methodology. Recently, new research was completed that directly addresses this issue. Roberts et. al. (2002) evaluated the effect soil had on absorption in the non-human primate the cebus monkey fed arsenic-containing soil. The oral bioavailability of five soils tested in this animal model ranged from 10% to 25%. Based on these data, the Florida Department of Environmental Protection is considering applying a 30% bioavailability factor in its calculation of risk-based Soil Cleanup Target Levels. Based on these data, a similar bioavailability factor was applied to the Tier 2 calculation of the arsenic SSTLs.

6.3.2.2.5 Soil Ingestion Rate

For industrial exposures, the default soil ingestion rate is 50 mg/day (USEPA, 2002). This default value was maintained for plant worker scenarios (i.e., production worker and plant inspector/supervisor). However, the consideration of two of the on-site exposure scenarios required a change in this default assumption. For the construction worker, it was assumed that this individual was engaged in intrusive activities that resulted in relatively high exposures to surface and subsurface soils. For this receptor, a daily soil ingestion rate of 480 mg as recommended in USEPA's Supplemental Guidance to RAGS (USEPA, 1991) was incorporated into the SSTL calculation. For the adolescent trespasser, an ingestion rate of 100 mg/day was used. Recently, Dr. Calabrese (personal communication) identified the improvements in study

design and analytical procedures that lead to a superior estimate of the 95% soil ingestion for children based on Stanek et. al. (2000). The advantages of this recent study include improved particle size measurements, longer study duration, a randomized selection of participants, and better control for input/output error. The soil ingestion rates for children reported by Stanek et. al. (1999) are:

- 95%: 106 mg/day
- Mean: 31 mg/day
- Median: 17 mg/day

Following the recommendation of Dr. Calabrese, and adopting the findings of the strongest available study (i.e., Stanek et. al.), we recommend that the high-end soil ingestion rate for children be 100 mg/day.

6.3.2.2.6 Exposure Frequency

The default assumption for the exposure frequency adopted by USEPA and Region 9 for industrial exposures assumes that the worker will be exposed at the site 5 days a week for 50 weeks per year (250 days). With regard to the site-specific conditions, due to significant changes in the manufacturing profile of the Facility, not all areas are either accessible or visited by employees on a routine basis.

For the typical production worker, areas of the plant associated with ongoing manufacturing activities are assumed to be contacted on a daily basis. For these particular areas, identified as high contact areas (HCAs), an exposure frequency of 250 days per year is a reasonably conservative estimate. However, there are significant portions of the Facility, which are not routinely visited by the majority of plant employees. These areas are designated low contact areas and were not considered as exposure points for the production worker.

Low contact areas (LCAs) are portions of the Facility where 1) no active production structures, storage areas, maintenance areas or frequently traveled roads exist; or 2) landfills or other disposal areas currently exist. These low contact areas are only visited by individuals designated

with the responsibility of performing routine visual inspections. The stated purpose of these inspections is to ensure that these managed areas are not disturbed and/or are maintaining their structural integrity. The low contact areas represent a potential exposure point only for the inspector/supervisor receptor. Based on interviews with Solutia representatives, it is assumed that these areas are visited on a weekly basis, and an exposure frequency of 50 days per year was adopted for this scenario. In addition, the inspector/supervisor was assumed to visit the production areas (high contact areas) twice weekly (100 days per year), while the remaining two days of the work week were assumed to be spent within the office complex (i.e., no direct contact with on-site soils).

The sectors of the Facility designated as low contact and high contact areas are illustrated on Figure 41. Based on an extensive understanding of current and reasonably anticipated future activities at the site, the general areas can be delineated with a high degree of confidence. Due to clear differences in exposure parameters that define the low contact and high contact areas, separate PCB and arsenic SSTLs were developed for these regions. It is important to note that much of the high contact area is covered by roadways, parking lots, and buildings, significantly reducing the potential for direct soil contact even in these portions of the Facility.

The assumption for the construction worker exposure scenario is that this individual has the potential to engage in activities anywhere within the Facility boundaries. Since any area of the Facility can be contacted with equal probability in this exposure scenario, there are no low or high contact areas. However, construction activities were assumed to occur for only relatively short periods of time. For the calculation of a construction worker SSTL, the exposure duration was assumed to be one year, with an exposure frequency of 120 days/year.

Similar to the considerations for the construction worker, the trespasser was assumed to potentially contact any area of the facility in an indiscriminant manner. Therefore, the SSTL derived for this receptor population can be applied site wide. Given the assumed age of trespasser (7 to 16), it is likely most of the activity on-site would be during the summer months, as a result it was assumed that the trespasser was on-site 60 days a year (5 days a week for 12 weeks) for 10 years.

6.3.2.2.7 Target Risk Level

For carcinogens, the default target risk level used to derive the PRGs is set at 1 in 1 million (1 x 10^{-6}). The purpose for using this specific target risk value is to develop the most conservative cancer-based PRG for use a "screening tool," rather than providing a final "stringent" cleanup level (USEPA, 2002a). As noted by Region 9, there is a "range of values that may be 'acceptable' for carcinogenic risk (USEPA's cancer risk range is from 10^{-6} to 10^{-4})." This position is consistent with the risk range contained in USEPA's proposed RCRA guidance (USEPA, 1990), which states:

> *To be "protective" of human health, EPA believes that cleanup levels for carcinogens must be equal to or below an upper bound excess lifetime cancer risk of 1 in 10,000 (1 x 10^{-4}). As proposed today, cleanup levels would be selected within the upper bound 1 x 10^{-4} to 1 x 10^{-6} risk range during the selection of the remedy process.*

Thus, consistent with the RCRA proposed guidance, SSTLs can be developed using a risk range, rather than relying on the single, most "stringent" value. The SSTLs for PCBs and arsenic in soil are based on a cancer risk range of 1 in 10,000 (i.e., 1 x 10^{-4}) to 1 in 1,000,000 (i.e., 1 x 10^{-6}).

One of the justifications for adopting chemicals levels determined at the low end of the risk range (1 x 10^{-6}) concerns the need expressed by the regulatory community to address potential cumulative risk. The concept of cumulative risk assumes that the carcinogenic effect of multiple chemicals is additive, regardless of the exposure pathway, if they are acting at the same target organ. In theory, if 10 chemicals are found at a site, all of which have a common site of action (e.g., the liver), and the "target" concentrations are set at values equating to a 1 x 10^{-6} risk, added together these concentrations combine to result in a 1 x 10^{-5} cumulative risk. This assumption requires that for sites with a large number of chemicals, the SSTLs for individual chemicals should be set at this lower end of the risk range to protect against the theoretical additivity. However, in the case of the Anniston facility, where the potential risks are associated with only two chemicals, multiple chemical additivity is not expected to affect the protectiveness of the individual SSTLs.

Consequently, in this particular instance, the use of the low end of the USEPA risk range is not necessary to maintain potential cumulative risk within the USEPA defined range.

6.3.2.3 Calculation of the Tier 2 SSTL

In the development of these risk-based values, a theoretical dose of PCBs and arsenic from soil occurs via three exposure pathways: dermal contact, incidental ingestion, and inhalation of dust. The algorithms used to derive the SSTL are the same as those used to develop the Tier 1 screening levels, although site-specific factors are included (Appendix J-6). The site-specific variables that replace generic default values are listed in Table 21.

The SSTL for low contact areas (LCA) was derived based on the estimated exposure frequency of the inspector/supervisor, with the consideration that this receptor will have exposure points other than only the low contact areas. Taken into consideration for this receptor is the likelihood that he will also visit high contact areas (HCA), and receive some theoretical dose of PCBs from these areas, and spend time indoors (office complex) and receive no measurable dose of soil-associated PCBs.

The modified equations used to develop the SSTLs are found in Appendix J-6. The products of these calculations, the SSTLs for high contact areas (based on the production worker), for low contact areas (based on the inspector/supervisor), for the construction worker, and for the adolescent trespasser are as follows:

	PCB Site-Specific Target Levels (mg/kg)		
Exposure Area	**1×10^{-4}**	**1×10^{-5}**	**1×10^{-6}**
Low Contact Area	3,290	329	32.9
High Contact Area	337	33.7	3.4
Construction Area	4,640	464	46.4
Trespasser Area	8,720	872	87.2
	Arsenic Site-Specific Target Levels (mg/kg)		
Exposure Area	**1×10^{-4}**	**1×10^{-5}**	**1×10^{-6}**
Low Contact Area	4,440	444	44.4
High Contact Area	660	66.0	6.6
Construction Area	6,520	652	65.2
Trespasser Area	13,600	1,360	136.0

Since the SSTL for either short-term (i.e., the construction areas) or intermittent (i.e., trespasser) exposure scenarios are significantly higher than either the SSTL for low contact areas or high contact areas, relying simply on these two values for surficial soils would provide adequate protection to any individual performing short-term construction work within the Facility. Therefore, the SSTLs for the low contact areas and high contact areas were used as the Tier 2 values for comparison to site-specific surface soil concentrations. The construction worker SSTL is used to evaluate sub-surface soils.

A comparison of these values to PCB soil sample data collected in the respective areas reveals that one surficial soil sample exceeded the high contact SSTL (SSR-18). Since this PCB soil concentration exceeds the level developed in the Tier 2 evaluation, Corrective Action measures for this area are required and are presented in Section 9.1. Since the SSTLs calculated for the low and high contact areas are protective of the trespasser, this exposure pathway did not require independent evaluation. None of the subsurface soil sample results exceeded the construction area SSTL. Therefore, no further evaluation or Corrective Action is required for subsurface soil.

For arsenic, SSTLs derived at a 1×10^{-5} cancer risk were used to evaluate soil data. None of the arsenic levels found onsite exceeded the SSTLs, and therefore no further action based on arsenic concentrations is required.

For the groundwater release to surface water exposure pathway, concentrations of 7 COPCs detected in the perimeter wells exceed Tier 1 criteria. Following modifications of the predicted surface water concentration based on the mixing zone of Snow Creek, none of the constituent concentrations exceeded the Tier 1 values.

6.4 Summary

A total of 16 chemicals were detected in on-site soils, and 18 chemicals were found in groundwater beneath the Facility. The maximum concentration found in these two media were compared to chemical-specific, risk-based screening levels as part of a Tier 1 evaluation. The toxicological benchmarks that are the basis of these Tier 1 values are provided in Table 22. Of the 16 chemicals associated with on-site soils, only five compounds, PCBs (total), arsenic,

methylene chloride, chromium and nickel exceeded the conservative Tier 1 values. Eleven (11) of the constituents' maximum concentrations detected in groundwater exceeded the chemical-specific Tier 1 screening value. Seven (7) chemicals detected in the perimeter wells exceeded the ecological screening values and were included in the Tier 2 analysis. Thus, a Tier 2 evaluation was required for the 16 chemicals that exceeded Tier 1 values.

The initial step in the Tier 2 evaluation was to develop a revised site conceptual model outlining potential receptors and exposure pathways based on site-specific conditions. This revised SCM revealed that there were no completed on-site exposure pathways for the groundwater existing beneath the Facility. Since the goal of the Tier 2 evaluation was to develop "safe" exposure concentrations, and as this medium did not represent a potential risk, no additional evaluation (i.e., development of media specific SSTLs) was required.

Although historical data indicate that the groundwater recovery system has been effective at eliminating off-site migration, possible data gaps required the evaluation of a potential off-site release of groundwater to surrounding surface water. Seven metals exceeded Tier 1 screening levels. Rather than deriving Tier 2 SSTLs, the modeled exposure point concentration was modified to account for natural processes (i.e., mixing) expected to occur at the groundwater release point. The revised EPCs did not exceed these screening levels.

The SSTLs for PCBs and arsenic in soil were derived based on consideration of facility-specific factors that were used to develop appropriate receptor characteristics. Four site-specific receptors were identified: 1) the production worker (exposed to high contact areas); 2) the inspector/supervisor (exposed to both high contact and low contact areas); 3) the construction worker (exposed to all areas of the Facility on a short-term basis); and 4) the adolescent trespasser (also exposed to all areas of the Facility on an intermittent basis). Modifications, including consideration of site-specific conditions, were made to the default assumptions used by USEPA in developing the Region 9 PRGs used as Tier 1 screening values. These changes resulted in the calculation of a PCB risk-based SSTL, at a 1×10^{-5} incremental risk level, for the high contact areas of 33.7 mg/kg and a risk-based SSTL for the low contact areas of 329 mg/kg. In the case of shorter exposures (i.e., the construction worker and adolescent trespasser) the

PCB SSTL for the entire site (both surface and subsurface soils) is 464 mg/kg and 872 mg/kg, respectively.

For arsenic in soil, the calculated risk-based SSTL, again at a 1 x 10^{-5} incremental risk level, for the high contact areas was 66 mg/kg and for the low contact areas the SSTL was 444 mg/kg. In the case of shorter exposures (i.e., the construction worker and adolescent trespasser) the arsenic SSTL for the entire site (both surface and subsurface soils) is 652 mg/kg and 1,360 mg/kg, respectively.

The SSTLs for short-term exposure (i.e., the construction and trespasser scenarios) are significantly higher than either of the SSTLs for low contact areas or high contact areas, which are based on longer and more frequent exposures. Thus, relying simply on these latter two values for surficial soils would provide adequate protection to any individual performing short-term construction work or trespassing on the Facility property. Therefore, the SSTLs for the low contact areas and high contact areas for both arsenic and PCBs were used as the Tier 2 values for comparison to site-specific surface soil concentrations. The construction worker SSTL is used to evaluate sub-surface soils.

A comparison of these values to soil sample data collected in the respective areas reveals that none of surficial soil sample results exceeded the low contact SSTL calculated at a 1 x 10^{-5} cancer risk. Only one surficial soil sample exceeded the high contact SSTL for PCBs (SSR-18). Since this PCB soil concentration exceeds the level developed in the Tier 2 evaluation, Corrective Action measures for this area are required and are presented in Section 9.1. Since the SSTLs calculated for the low and high contact areas are protective of the trespasser, this exposure pathway did not require independent evaluation. None of the subsurface soil sample results exceeded the construction area SSTL. Therefore, no further evaluation or Corrective Action is required for subsurface soil. For arsenic, SSTLs derived at a 1 x 10^{-5} cancer risk were used to evaluate soil data. None of the arsenic levels found on the site exceeded the SSTLs. Therefore, no further action based on arsenic concentrations is required.

6.5 Uncertainty

The use of site-specific inputs in the derivation of the Tier 2 SSTLs makes the resultant values relevant for use at the Facility as it maintains the protectiveness desired in a risk-based analysis. Also, the modifications that have been proposed to generic default values retain considerable conservatism when compared with the actual exposures that are likely to be experienced by workers at the Facility. Relatively straightforward changes to the standard parameters in the PRG equations have been recommended because the basis for the proposed modifications is readily justified. While further refinements could be used to produce the most closely characterized site-specific values (e.g., adjusting implicit assumption of 8-hrs of contact per work day), such a degree of specification is not suggested in order to retain substantial conservatism in the exposure assumptions, and to ensure that even if there are changes in work practices, the Tier 2 SSTLs will be considerably robust and protective for on-site workers.

An example of the inherent conservatism retained in the SSTLs is found in the assumptions used for the inspector/supervisor receptor. The exposure frequency in the inspector/supervisor scenario is 50 days per year. The implicit assumption associated with this frequency is that the exposure is for the entire 8 hours of the work day. However, based upon interviews with plant personnel, not only is the time spent at the low contact areas significantly shorter than 8 hours, but given the way in which most of these sites are visited, the potential for direct contact (either dermal or incidental ingestion) is minimal. Often these low contact areas are only visited in a vehicle, and only rarely does the inspector/supervisor exit the vehicle and spend any significant time in contact with the soils. Therefore, the assumed daily ingestion rate (50 mg/day) and the skin adherence factors (0.054 and 0.0065 for the hands and head, respectively) overestimate the amount that could occur under these exposure conditions.

Likewise, for the production worker, it is assumed that the individual is in contact with the high contact area soils for the entire eight hours of the 250 days he is at work. According to interviews with Facility supervisors, the "operator work group" represents the highest potentially exposed job classification. Based on a review of plant job descriptions and communications with experienced operators at the plant, under normal operating conditions, only 2 hours a day are actually spent outside the control rooms. Additionally, during process upsets, which occur on average

approximately five times a year, the entire 8 hours may be spent outside for a 2-day period. Based on a 49 week per year schedule (3 weeks of vacation), this amounts to a conservatively estimated total of 550 hours spent outdoors. In contrast, the exposure assumption used to calculate the SSTL assumes an exposure frequency of 2,000 hours. Given this extremely limited amount of direct contact time, the exposure frequency assumption used to calculate the SSTL overestimates the PCB dose received from high contact area soils via the incidental ingestion and dermal route of exposure.

Of all of the various exposure pathways evaluated in the HEA, perhaps the one with the highest degree of uncertainty is the groundwater release to surface water. The exposure point concentration used in the evaluation is the maximum concentration detected in wells located at the perimeter of the northeastern sector of the facility. The explicit assumption in this pathway analysis is that the maximum concentration is representative of the level of exposure experienced by an ecological receptor population living at or near the release point, in this case Snow Creek. For the Tier 2 analysis, the assumption is that the maximum value is representative of the concentration released to the surface water, which is subsequently diluted by ambient flow. Both of these assumptions contain a significant level of uncertainty. In the first instance, there are no data from area surface waters indicating that a release is occurring, much less at the maximum concentration detected in the on-site wells. Concerning the second assumption, use of a site-specific dilution model for Snow Creek resulted in a reduction in the predicted exposure point concentrations of chemicals theoretically released to surface water so that all measured maximum concentrations were well below the Tier 1 levels.

7.0 EFFECTIVENESS OF CORRECTIVE ACTION SYSTEMS

7.1 On-Site Interim Remedial Measures

A series of interim remedial measures have been implemented at the Facility in accordance with ADEM requirements to mitigate the migration of constituents from the Facility. These interim measures were described in Section 2 of this report and consist of a series of upgraded caps and covers on landfills and specific SWMUs along with various storm water control upgrades (see Figure 12). Table 4 provides a summary of completed interim remedial measures. The effectiveness of these on-site interim remedial measures has been evaluated through Facility-wide groundwater quality monitoring, inspection of the caps and covers, and confirmatory sampling at selected SWMUs, surface water outfalls and groundwater monitoring wells. Results of these evaluations, as well as the effectiveness of existing groundwater corrective action systems, are discussed in the following sections. Recommendations concerning these interim remedial measures will be made in the CMS.

7.1.1 Landfill Remedial Measures

Previous on-site and off-site soil sampling investigations indicated that PCBs were being transported in storm water run-off. Interim remedial measures were implemented to prevent transport of affected soils. These included the following:

- Construction of a multi-media cap on the West End Landfill and a soil cover on the area immediately around the landfill. The cap included a minimum of six inches of compacted clay, a 60-mil thick high density polyethylene liner (HDPE), a drainage fabric, 18 inches of cover soil, and a vegetative layer.
- Upgrade of the cap on the South Landfill consisting of a multi-media cap over several closed cells and additional soil cover over the adjacent areas.
- Construction of a retention and sedimentation pond to collect storm water run-off from the South Landfill.
- Diversion of storm water run-on from unaffected areas upstream of the South Landfill, and installation of culverts for drainage through areas of affected soils in AOC B. This allowed closure of the ditches containing affected sediments.

- Collection of storm water run-off from the West End Landfill and installation of hard piping for run-off through areas of affected soils. This allowed closure of drainage ditches with affected sediments.

All of these measures were constructed in 1997 and 1998, with the exception of the work on the West End Landfill, which was completed in 1996. The effectiveness of these remedial measures has primarily been evaluated through water quality monitoring at surface water outfalls and by observing patterns of storm water run-off during rainfall events. Locations of storm water outfalls are shown on Figure 4.

Surface water outfalls DSN 006 and DSN 012 receive storm water run-off from the Facility. These two outfalls are sampled quarterly for PCBs and other indicator parameters in accordance with the NPDES Permit for the Facility (see Table 10). There have been no detections of PCBs at the DSN 006 outfall over the four quarterly events since September 1997. Sample results from DSN 012 have exhibited a steady decrease in PCB concentrations over the past four quarterly sampling events. There were no PCB detections in the latest DSN 012 sample taken in July 1998. This indicates that the interim remedial measures implemented at the Facility have been effective at mitigating off-site migration of constituents through surface run-off.

Soil stabilization measures which have been installed on the South Landfill cap to reduce erosion have been effective at maintaining the integrity of the cap. Also, surface water from upstream of the South Landfill is being diverted around the landfill. The caps on both the South Landfill and the West End Landfill have been inspected and are in good condition. They can visually be seen to be controlling run-off and are effective at reducing infiltration. As noted in Section 5.4.1, water levels around the South Landfill have decreased by about one or two feet since the first half of 1997.

By reducing the amount of precipitation infiltrating through the landfills, the potential impact to groundwater has also been reduced. As discussed in Section 5, groundwater sample results from downgradient perimeter monitoring wells indicate that there is no off-site migration of constituents emanating from the West End or South Landfills.

7.1.2 Former Production Areas

Interim corrective measures completed at former production areas at the Facility were described in Section 2 of this report. The effectiveness of these interim corrective measures has been evaluated through the confirmatory sampling program and through inspection of surface covers. Results of the confirmatory sampling program are presented in Section 4. Soil sample locations and results are shown on Figures 27, 28 and 29. Results of the surface cover inspections are presented in Tables 1 and 2. The effectiveness of each of the corrective measures completed at former production areas is discussed below.

- Former Parathion Area (SWMU 41) - Production ceased in 1986, and decommissioning included removal of affected soil up to a depth of 20 feet. The area was backfilled, and the surface was covered with gravel. The dismantled structures and excavated soil were disposed of in the RCRA portion of the South Landfill. One surface (SSR-16) and two subsurface (SSR-10 and SSR-11) soil samples collected from this SWMU exhibited detections of PCBs and metals. As discussed in the HEA (Section 6), the reported concentrations do not pose a risk to plant workers exposed to these soils. The gravel cover was inspected and found to be in good condition over the entire SWMU. A surface water sample collected from outfall DSN 005, which receives run-off from the former parathion production area, exhibited no detections of PCBs or metals above background concentrations. This indicates that the corrective measures implemented in this area are effective at mitigating transport of affected soils and reducing risk of exposure to the soils.
- Former PCB Production Area (SWMU 42) - The area was decommissioned in 1972 and covered with asphalt. The manufacturing plant was dismantled and was disposed of in the South Landfill. Subsurface soil samples (SSR-12 and SSR-13) from this SWMU exhibited PCBs and metals below the acceptable risk level defined in the HEA. This area is presently covered by an asphalt cap, which is in good condition. Surface water run-off from this area of the Plant is ultimately directed to outfall DSN 012. Sample results from DSN 012 have exhibited a steady decrease in PCB concentrations over the past four quarterly sampling events. There were no PCB detections in the latest DSN 012 sample taken in July 1998. This indicates that the corrective measures implemented in this area

are effective at mitigating transport of affected soils and reducing risk of exposure to the soils.

- Former Phosphorus Pentasulfide Production Area (SWMU 43) - The area was decommissioned in 1988. The existing concrete slab was left in place, and other areas were covered with gravel. A soil sample (SSR-19) from below the cover of this SWMU exhibited PCBs and metals below the acceptable risk level defined in the HEA. The thickness of the gravel cover was measured at approximately eight inches and found to be in good condition in all areas. Surface water run-off from this SWMU is directed to outfall DSN 004. A sample collected from this outfall exhibited no detections of PCBs and detections below drinking water standards for arsenic (0.011 mg/L) and barium (0.036 mg/L). The corrective measures implemented in this area appear to be effective at mitigating transport of affected soils and reducing risk of exposure to the soils.

- Former Holding Tanks, Aeration Basins, and Clarifiers (SWMU 46) - These units were cleaned, demolished and closed in place. The area has been covered with gravel. A soil sample (SSR-17) collected from 1 to 3 feet below the cover exhibited detections of PCBs and metals. As discussed in the HEA, the reported concentrations do not pose a risk to plant workers exposed to these soils. The gravel cover was inspected and found to be in good condition over the entire SWMU. A surface water sample collected from outfall DSN 005, which receives run-off from the former parathion production area, exhibited no detections of PCBs or metals above background concentrations. This indicates that the corrective measures implemented in this area are effective at mitigating transport of affected soils and reducing risk of exposure to the soils.

- Product Storage Tank (AOC A) - An over-spill of Santowax® that was observed during the RFA was cleaned up, and the spill containment was upgraded with a concrete floor. Level control circuitry on the tank has been updated. No confirmatory sampling was performed on this SWMU. The necessity of any further corrective action for this area will be evaluated in the CMS.

- Boiler feed tank (SWMU 25) – This unit was taken out of service in 1995, and the area around a leaking flange has been cleaned. No confirmatory samples were collected from

this SWMU. The necessity of any further corrective action for this area will be evaluated in the CMS.

- Product Underground Storage Tanks (AOC C) – Three underground storage tanks (USTs) were removed in the mid-1980s as part of a corporate UST elimination program. No evidence of releases was recorded. A subsurface soil sample (SSR-14) collected immediately north of the location of the former eastern most UST location exhibited detections of PCBs and metals. As discussed in HEA, the reported concentrations do not pose a risk to plant workers exposed to these soils. This area is presently covered with asphalt. The corrective measures implemented at this SWMU are effective at mitigating transport of affected soils and reducing risk of exposure to the soils.

Groundwater monitoring data from observation wells located downgradient of these production areas are discussed in Sections 4 and 5, and the effectiveness of the associated groundwater corrective action system is discussed in Section 7.4. Based on these data, there has been an overall decrease in constituent concentrations in groundwater.

The measures implemented in each of these SWMUs have previously been accepted as interim corrective measures by ADEM. Based on the above evaluation, these interim responses will be evaluated as final corrective measures in the CMS.

7.1.3 Miscellaneous SWMUs

Interim corrective measures completed at SWMUs which are not associated with former production areas are presented below. The effectiveness of each of these interim corrective measures has been assessed through the Facility-wide evaluation of groundwater quality, confirmatory sampling program, and through inspection of surface covers. Results of the confirmatory sampling program and groundwater sampling are presented in Section 4. Soil sample locations and results are shown on Figures 27, 28 and 29. Results of the surface cover inspections are presented in Tables 1 and 2. The effectiveness of each of the interim corrective measures completed at these SWMUs is discussed below.

- Phosphate Landfill (SWMU 6) - This unit was a neutralization pit which provided pretreatment of acidic scrubber water from the parathion furnace area prior to discharge to the Phosphoric Acid Basin. No releases were identified in the RFA. This area is presently covered by gravel ranging in thickness from about 8 inches to 2 feet. Two soil samples (SSR-6 and SSR-7) collected from beneath the gravel exhibited detections of PCBs and metals. As discussed in the HEA, the reported concentrations do not pose a risk to plant workers exposed to these soils. The gravel cover is in good condition and is effective at mitigating transport of the affected soils.

- Santotar® Pit (SWMU 7) - This unit managed Santotar. In 1989 the area was excavated and backfill was added to return to grade. The area is presently covered by about 7 to 12 inches of gravel. Two soil samples (SSR-8 and SSR-9) collected from beneath the gravel cover exhibited detections of PCBs and metals. Surface water run-off from this area of the Plant is ultimately directed to outfall DSN 012. Sample results from DSN 012 have exhibited a steady decrease in PCB concentrations over the past four quarterly sampling events, and there were no PCB detections in the latest DSN 012 sample taken in July 1998.

- Phosphoric Acid Basins (SWMU 12) - Two basins were used to neutralize acid wastewaters from various production processes. No releases were identified in the RFA. The north basin was decommissioned, backfilled and covered by grass. The south basin was excavated, backfilled and covered by asphalt. Two surface soil samples (SSR-3 and SSR-5) collected from locations downgradient of the basins exhibited detections of PCBs and metals. According to the HEA, these reported detections do not pose a health risk to plant workers. Sample SSR-3 was collected from an area covered by approximately 4 inches of gravel, and sample SSR-5 was collected from beneath a thick (2 feet) layer of root mat. Thus, these soils are not exposed to the surface. Subsurface samples (SSR-4 and SSR-15) collected from the northern basin at depths of 6 to 10 feet exhibited detections of volatile organics, PCBs and Metals. None of these constituents pose a health risk to plant workers at the reported concentrations. The corrective measures implemented at this SWMU appear to be effective at mitigating transport of constituents and reducing risk of exposure to the soils. However, further soil sampling has been proposed for this SWMU.

- Waste Drum Satellite Accumulation Area (SWMU 44) - This unit manages drums of Therminol and Santotar and potentially hazardous wastes awaiting toxicity characteristic leachate procedure (TCLP) analysis and is located immediately north of the former PCB production area. No releases were identified in the RFA; however, a sample (SSR-18) was collected from just below the gravel cover in an area exhibiting residual staining. This sample exhibited detections of PCBs above the allowable screening level for exposure to plant workers. The gravel cover in this area is approximately 3 inches thick. This area will require additional surface stabilization measures (i.e., a concrete or asphalt cap) to mitigate the potential transport of affected soils and reduce risk of exposure to plant workers.
- Miscellaneous SWMUs - The steam cleaning pad (SWMU 31) and Old Boiler Scrap Yard (SWMU 34) are presently covered by approximately 4 inches of gravel. Samples were collected from the soil beneath the gravel covers at these SWMUs and analyzed for TPH. No detections were reported in either sample. No further corrective measures are planned for these SWMUs.

Groundwater monitoring data from observation wells located downgradient of these SWMUs are discussed in Sections 4 and 5. Based on these data, there is no indication of constituents originating from these areas that are migrating off-site.

Based on the above evaluation, further surface stabilization measures are required at SWMU 44. The recommendations for these measures are presented in Section 9.1. The interim responses implemented at the other SWMUs will be evaluated as final corrective measures in the CMS.

7.1.4 Storm Sewer Upgrades

In 1996, all of the non-contact process-related water generated at the Facility (cooling water, condensate, etc.) was re-piped to discharge to the on-site WWTF. Consequently, only storm water is discharged by the sewer system.

Additional sewer system enhancements were constructed in 1997 to mitigate off-site transport of PCBs through storm water discharge. These included sealing a number of unused collection

sewers which discharged into a trunk main and lining that trunk main with an epoxy resin-impregnated felt liner. The trunk main discharges to former outfall DSN 001 and ultimately to DSN 012. The locations of the sewer system upgrades are shown on Figure 13.

Sample results from DSN 012 have exhibited a steady decrease in PCB concentrations over the past four quarterly sampling events. There were no PCB detections in the latest DSN 012 sample taken in July 1998. This indicates that these interim remedial measures implemented for the on-site sewer system have been effective at mitigating off-site migration of constituents through storm water discharge.

7.2 South Landfill Groundwater Corrective Action Systems

7.2.1 Hydraulic Capture

Interceptor wells installed along the western and northern boundaries of the South Landfill are referred to as the Western Landfill Corrective Action System (IW-1, IW-2, IW-3, and IW-4) and the Northern Landfill Corrective Action System (IW-5, IW-6, IW-7, IW-8, IW-9, IW-10, IW-11, IW-12, and IW-13), respectively. Together, they comprise the South Landfill Groundwater Corrective Action System.

The Western Landfill interceptor wells were installed in 1983, and have been successful in reducing parathion and 4-nitrophenol concentrations to non-detectable levels in downgradient observation wells. Due to the success of the corrective actions, interceptor wells IW-1, IW-3, and IW-4 have previously been determined to be no longer necessary. Interceptor well IW-2 has historically produced the majority of the total captured flow from this system and, therefore, remains in operation.

The Northern Landfill Corrective Action System has been in operation since 1983. Interceptor wells IW-5 and IW-6 were installed in 1982, and began operation in 1983. The other interceptor wells were installed in 1987 and began operation in 1988.

Hydraulic capture at the South Landfill Groundwater Corrective Action System was determined by comparing the amount of water that could theoretically flow past the wells in a year with that

actually recovered during the year (Appendix E). This analysis indicated that the volume recovered was much greater than the volume of flow calculated by Darcy's Law. The additional volume is attributed to surface water leakage into the wells and recovery of groundwater from outside the theoretical cross-sectional area of flow.

Further analysis of the capture zone induced by the extraction system was carried out with data derived from the aquifer test investigation (Section 4). Interceptor well IW-10 had been temporarily turned off prior to turning off the rest of the system for the testing program. Therefore, any drawdown observed in the observation wells and piezometers located between interceptor wells IW-6 and IW-10 was considered attributable to the cone of depression induced by the pumping of IW-6.

An examination of the recovery data collected after the system was shut off showed that water levels recovered more than four feet in observation well OWR-5D (located 28 feet away from IW-6), and only very slightly (less than one half foot) in piezometer PZR-3 (located 53 feet away from IW-6). These data indicate that the estimated radius of influence from IW-6, as defined by a minimum drawdown of one foot, extends at least between OWR-5D and PZR-3. This estimated radius of influence reaches more than half the distance between IW-6 and the adjacent interceptor well IW-10. Therefore, with both wells operating, it is likely that the cones of depression induced by pumping intersect, with resulting capture.

A qualitative review of the drawdown data from the tests indicates that the center portion of the system (IW-6, IW-10, IW-11) provides adequate capture, primarily due to the capture zone provided by interceptor well IW-6.

Based on qualitative observations of pumping test data and historic discharge data, the eastern and western ends (i.e., IW-7 and IW-13) of the system may not provide full capture. Interceptor well IW-7 is dry throughout the majority of the year. Based on discharge rates in wells at the western end (IW-12 and IW-13), total capture is not likely. However, the reported concentrations of parathion and 4-nitrophenol in these wells are below the Permit Concentration Limits.

Recommendations related to the South Landfill Groundwater Corrective Action System are provided in Section 9.4.

7.2.2 Groundwater Quality

The South Landfill Groundwater Corrective Action System (South Landfill System) is comprised of interceptor wells IW-2 and IW-5 through IW-13. Wells OW-11 and OW-12 are located directly upgradient to IW-2. OW-17 is located directly upgradient to IW-11. Interceptor wells IW-5 through IW-10 and IW-12 through IW-13 do not have upgradient monitoring or observation wells. Wells OW-13, OW-14 and OWR-5D are located among the IW wells but are neither upgradient nor downgradient of the South Landfill System. Downgradient groundwater quality is represented in wells OW-5, OW-15, and OW-16A.

Wells OW-11, OW-12, OW-13, OW-14, and OW-17 are no longer on the Facility groundwater monitoring program established by the Permit. Previously, these observation wells were sampled for 4-nitrophenol and parathion. The latest groundwater data available from these wells is from 1996. Well OWR-5D has no historical data associated with it except for the RFI/CS investigation results. Well OW-16 was decommissioned and was replaced by well OW-16A at the beginning of 1998. Wells OW-15, OW-16 and OW-16A are currently being monitored in accordance with the Permit.

Upgradient wells historically had sporadic detections of 4-nitrophenol and parathion. The historic data are from sampling events during 1987 to 1996. The 4-nitrophenol and parathion historical data summary for the upgradient wells is as follow:

- Well OW-11 had twelve 4-nitrophenol and seven parathion detections reported in 33 sampling events. The reported results ranged from 4.5 to 114 µg/L for 4-nitrophenol and 1.7 to 223 µg/L for parathion. Fewer detections of 4-nitrophenol have been reported since December 1991. No detections of 4-nitrophenol were reported between December 1992 and March 1996. One detection was reported in June 1996. Parathion has not been detected since July 1991.

- Well OW-12 had two 4-nitrophenol and eight parathion detections reported in 36 sampling events. The reported results ranged from 5.1 to 52 µg/L for 4-nitrophenol and 1.2 to 60 µg/L for parathion. The concentration of 4-nitrophenol has reduced over time and it has not been detected since October 1989. The parathion concentration has generally reduced over time.
- Well OW-17 had no 4-nitrophenol detections reported in one sampling event and no parathion detections in two sampling events.

Samples from interceptor wells have historically had varied detections of 4-nitrophenol and parathion. The historical data are from sampling events during 1987 to 1996 and are summarized as follow:

- Well IW-2 had six 4-nitrophenol detections and seven parathion detections reported in 60 sampling events. The 4-nitrophenol results ranged from 4.0 to 195 µg/L, and the parathion results ranged from 1.1 to 25 µg/L. The concentrations of both compounds have generally reduced over time. Parathion has not been detected since March 1996.
- Well IW-5 had 29 4-nitrophenol detections reported and 13 parathion detections reported in 53 sampling events. The 4-nitrophenol results ranged from 3.6 to 14,966 µg/L, and the parathion results ranged from 1.1 to 33 µg/L. 4-Nitrophenol concentrations have generally decreased since August 1989, and the parathion concentrations have decreased since September 1989.
- Well IW-6 had 52 4-nitrophenol detections reported in 60 sampling events and 16 parathion detections reported in 59 sampling events. The 4-nitrophenol results were from 4.6 to 15,934 µg/L, and the parathion results ranged from 1.2 to 13 µg/L. The 4-nitrophenol concentration has generally decreased since September 1992. The parathion concentration has generally decreased since July 1989.
- Well IW-7 had 17 4-nitrophenol detections and 22 parathion detections reported in 29 sampling events. The 4-nitrophenol results ranged from 5.0 to 12,709 µg/L, and the parathion results ranged from 1.2 to 478 µg/L. The 4-nitrophenol concentration has no apparent trend. The parathion concentration has generally decreased since April 1989.

- Well IW-8 had 31 4-nitrophenol detections and 24 parathion detections reported in 41 sampling events. The 4-nitrophenol results ranged from 5.9 to 500,714 µg/L, and the parathion results ranged from 1.4 to 145 µg/L. The 4-nitrophenol concentration has generally decreased over time since May 1989, and the parathion concentration has decreased since July 1989.
- Well IW-9 had 24 4-nitrophenol detections and 7 parathion detections reported in 34 sampling events. The 4-nitrophenol results ranged from 6.0 to 133 µg/L, and the parathion results ranged from 1.6 to 168 µg/L. The 4-nitrophenol concentration has decreased since 1988. The parathion concentration has generally decreased since March 1993.
- Well IW-10 had 44 4-nitrophenol detections and 43 parathion detections reported in 47 sampling events. The 4-nitrophenol results ranged from 4.0 to 1,102,825 µg/L, and the parathion results ranged from 1.7 to 596 µg/L. The parathion and 4-nitrophenol concentrations have generally decreased over time.
- Well IW-11 had 42 4-nitrophenol detections and 12 parathion detections reported in 48 sampling events. The 4-nitrophenol results ranged from 4.4 to 95,732 µg/L, and the parathion results ranged from 1.1 to 241 µg/L. The 4-nitrophenol concentration had been non-detect until September 1996. The parathion concentration decreased from August 1989 to non-detect in January 1991. The 4-nitrophenol concentrations have generally decreased over time.
- Well IW-12 had 18 4-nitrophenol detections and 12 parathion detections reported in 42 sampling events. The 4-nitrophenol results ranged from 8.0 µg/L to 308 µg/L, and the parathion results ranged from 1.1 to 29 µg/L. The 4-nitrophenol and parathion concentrations have decreased since August 1989.
- Well IW-13 had 22 4-nitrophenol detections and 10 parathion detections reported in 48 sampling events. The parathion results ranged from 1.4 to 92 µg/L. The 4-nitrophenol concentrations ranged from 4.9 to 195 µg/L. The 4-nitrophenol and parathion concentrations have generally decreased over time.

The general area of 4-nitrophenol and parathion extent and concentrations has decreased over time for the South Landfill System. The 4-nitrophenol and parathion concentrations plotted over time are included in Appendix K.

Downgradient wells historically also had sporadic detections of 4-nitrophenol. The 4-nitrophenol and parathion historical data are from sampling events during 1987 to the present and are summarized as follow:

- Well OW-5 was sampled through 1996 and had two detections of 4-nitrophenol (20.9 and 7.3 µg/L and one detection of parathion (18.2 µg/L) in 36 sampling events.
- Well OW-15 has been sampled through the present and had 19 4-nitrophenol and two parathion (2.0 and 2.6 µg/L) detections in 39 sampling events. The reported results ranged from 4.1 to 28 µg/L for 4-nitrophenol.
- Well OW-16 has been sampled through the present and had 28 4-nitrophenol detections and 36 parathion detections reported in 38 sampling events. The reported results ranged from 17 to 180 µg/L for 4-nitrophenol and 1.7 to 38 µg/L for parathion.
- Well OW-16A had no 4-nitrophenol and one parathion (68.5 µg/L) detection reported in a 1998 sampling event.

Figures 14 and 15 show isoconcentration contours for parathion and 4-nitrophenol using data from sampling events in 1989 and 1996. The distribution of parathion and 4-nitrophenol concentrations detected in observation wells since 1997 are shown in Figures 34 and 35. In addition to 4-nitophenol and parathion, the following COPCs were also sampled for in wells OW-15, OW-16 and OW-16A during 1997 and 1998 sampling events:

- chlorobenzene,
- cobalt,
- 1,2-dichlorobenzene,
- 1,4-dichlorobenzene,
- 2,4-dichlorophenol,
- mercury,

- methylene chloride,
- pentachlorophenol,
- phenol,
- PCBs,
- tetraethyldithiopyrophosphate,
- o,o,o-triethylphosphorothioate,
- 2,4,5-trichlorophenol, and
- 2,4,6-trichlorophenol.

A summary of the detections is as follow:

- Well OW-15 had reported detections of Aroclor 1221 (2.9 ug/L), Aroclor 1248 (1.3 ug/L), 1,2-dichlorobenzene (4.0 ug/L, estimated), cobalt (0.0073 mg/L, estimated), and mercury (0.000083 mg/L, estimated). No Aroclors or metals were detected in filtered samples.
- The combined results for wells OW-16 and OW-16A had reported detections of chlorobenzene (2.4, 3.4, and 5 µg/L), 1,4-dichlorobenzene (5.0 µg/L, estimated), 1,2-dichlorobenzene (14 and 37 µg/L), 2,4-dichlorophenol (0.30 µg/L, estimated), o,o,o-triethyl phosphorothioate (12, 12, and 15 µg/L), Aroclor 1221 (94, 255, and 99, estimated, µg/L), Aroclor 1242 (14 µg/L), parathion (7, estimated, 14, and 68 µg/L), cobalt (0.015, 0.020, and 0.029 mg/L). The only detection of Aroclor 1221 (8.9 µg/L, estimated) in filtered samples occurred when the unfiltered sample had a result of 255 µg/L. The only detection of cobalt (0.027 mg/L) in filtered samples occurred when the unfiltered sample had a result of 0.029 mg/L.

OWR-5D was sampled during the RFI/CS investigation for the full list of COPCs. The results for OWR-5D were previously presented in Section 4.3. The historical data for the Facility are presented in Appendix L.

7.2.3 Conclusions

Based on pumping test data, potentiometric data and water quality data from interceptor wells and observation wells, the South Landfill Corrective Action System has been effective at removing COPCs from the groundwater and mitigating the downgradient transport of COPCs. The area of extent and concentration of 4-nitrophenol and parathion has decreased over time in the vicinity of this system. An evaluation of natural attenuation mechanisms and recommendations related to the operation of this system are presented in Sections 8.1 and 9.4, respectively.

7.3 Plant Site Groundwater Extraction System

7.3.1 Hydraulic Capture

The Plant Site Groundwater Extraction System consists of two interceptor wells (IW-14 and IW-15). These wells were installed in 1987 and began operation in 1988.

The collected water volume from these wells is much greater than the groundwater flux across the estimated area of capture (Appendix E). However, observations made during the RFI investigation suggest that the collected volume is exaggerated due to surface water infiltration. The observed recharge to the wells during rain events indicates the wells intercept a shallow transmissive zone or conduit, which directly receives rain water. This is especially evident in interceptor well IW-15.

Observed drawdown during the Plant Site pumping test performed on interceptor well IW-14 did not extend to piezometer PZR-6 or interceptor well IW-15, indicating that the capture zone is less than a radial distance of eighty feet from the pumping well. Interceptor well IW-14 was pumped dry during the pumping test, in spite of using a lower flow rate to perform this test compared to the flow rate used during other pumping tests performed at the Facility (Section 4). Also, the observed recovery in interceptor well IW-14 and adjacent piezometer PZR-5 was poor, indicating that the well is receiving most of its water through surface recharge.

Further evidence is found when comparing the Plant Site discharge rates with the other interceptor wells at the Facility. The Plant Site interceptor wells consistently produced the largest volumes of water of the Facility's 21 interceptor wells.

These data lead to the following conclusions:

- The Plant Site interceptor wells likely receive the majority of their annual collected water volume from surface recharge;
- The low permeability residuum that the wells are installed in does not likely allow for intersecting capture zones between the two interceptor wells; and
- Rain events contribute a significant amount of water to the interceptor wells; therefore, the respective cones of depression are dampened, and groundwater capture is likely decreased.

7.3.2 Groundwater Quality

The Plant Site Corrective Action System (Plant Site System) is comprised of interceptor wells IW-14 and IW-15. Observation wells OW-5, OW-15, OW-16, and OW-16A are hydraulically upgradient of the Plant Site System and observation wells OW-8, OW-8A and OW-9 are hydraulically downgradient.

Wells OW-5 and OW-9 are no longer on the Facility groundwater monitoring program established by the Permit. Prior to the implementation of the 1997 Permit, these observation wells were sampled for 4-nitrophenol and parathion along with wells OW-8, OW-15 and OW-16. The last sampling event data available from OW-5 are from 1996. Well OW-9 has data prior to 1996 and from the RFI/CS investigation. Wells OW-8 and OW-16 were decommissioned and replaced by OW-8A and OW-16A, respectively, at the beginning of 1998. Wells OW-8A, OW-15 and OW-16A are currently being monitored under the Permit and have data up to the present; however, wells OW-8A and OW-16A have only been sampled under the groundwater monitoring program one time since their installation in 1998.

Upgradient wells historically have sporadically reported 4-nitrophenol and parathion. The historical data are from sampling events during 1987 to the present and are summarized as follow:

- Well OW-5 was sampled through 1996 and had two 4-nitrophenol detections (20.9 and 7.3 ug/L) and one parathion detection reported in October 1991 (18 µg/L) in 36 sampling events.
- Well OW-15 had 19 4-nitrophenol and two parathion (2.0 and 2.6 µg/L) detections in 39 sampling events. The reported results ranged from 4.1 to 28 µg/L for 4-nitrophenol. There is no apparent 4-nitrophenol concentration trend. Parathion concentrations have reduced over time. The last positive detection of parathion occurred in April 1988.
- Well OW-16 has been sampled through the present and had 28 4-nitrophenol detections and 36 parathion detections reported in 38 sampling events. The reported results ranged from 17 to 180 µg/L for 4-nitrophenol and 1.7 to 38 µg/L for parathion.
- Well OW-16A (the replacement for OW-16) has only been sampled in 1998 with no detection of 4-nitrophenol and parathion detected at 69 µg/L.

Interceptor wells have historically had varied reports of 4-nitrophenol and parathion. The historical results summary for the Plant Site System interceptor wells is as follow:

- Well IW-14 had 24 4-nitrophenol detections and 27 parathion detections in 49 sampling events. The reported results ranged from 5.3 to 918 µg/L for 4-nitrophenol and 1.1 to 37 µg/L for parathion. The concentrations for both compounds decreased over time. There were no detections of 4-nitrophenol or parathion during the last sampling event in 1996.
- Well IW-15 had 10 4-nitrophenol detections and 13 parathion detections in 49 sampling events. The reported results ranged from 4.1 to 66.0 µg/L for 4-nitrophenol and 1.3 to 20 µg/L for parathion. The concentrations for both compounds decreased over time. There were no detections of 4-nitrophenol or parathion during the last sampling event in 1996.

Downgradient wells historically also had sporadic detections of 4-nitrophenol and parathion. The 4-nitrophenol and parathion historical data summary for the downgradient wells is as follow:

- Well OW-8 had 10 4-nitrophenol and eight parathion detections in 41 sampling events during 1988 to 1996. The reported results ranged from 2.2 to 41 µg/L for 4-nitrophenol

and 1.2 to 8.4 µg/L for parathion. The 4-nitrophenol concentration has generally reduced over time. The parathion concentrations indicate no apparent trend.

- Well OW-8A was only sampled in 1998 with no detection of 4-nitrophenol and parathion detected at 13 µg/L.
- Well OW-9 had two 4-nitrophenol and two parathion detections reported in 36 sampling events during 1987 to 1997. The reported results ranged from 21 to 22 µg/L for 4-nitrophenol and 1.4 to 2.3 µg/L for parathion. 4-nitrophenol has not been detected since January 1989 (22.4 ug/L), and parathion has not been detected since October 1989 (1.4 ug/L).

The 4-nitrophenol and parathion area of extent and concentration appear to have reduced over time at the Plant Site System. Time versus concentration plots are presented in Appendix K. Figures 14 and 15 show isoconcentration contours for parathion and 4-nitrophenol using data from sampling events in 1989 and 1996. The distribution of parathion and 4-nitrophenol concentrations detected in observation wells since 1997 are shown in Figures 34 and 35.

In addition to 4-nitrophenol and parathion, the following COPCs were also sampled for in wells OW-8, OW-8A, OW-15, OW-16, and OW-16A during 1997 and 1998 sampling events:

- chlorobenzene,
- cobalt,
- 1,2-dichlorobenzene,
- 1,4-dichlorobenzene,
- 2,4-dichlorophenol,
- mercury,
- methylene chloride,
- pentachlorophenol,
- phenol,
- PCBs,
- tetraethyldithiopyrophosphate,

- o,o,o-triethyl phosphorothioate,
- 2,4,5-trichlorophenol, and
- 2,4,6-trichlorophenol.

A summary of the detections is as follow:

- Wells OW-8 and OW-8A had reported detections of chlorobenzene (1.6 and 2.9 µg/L), o,o,o-triethylphosphorothioate (6.0 µg/L, estimated), Aroclor 1221 (15, 603 and 320 µg/L), Aroclor 1242 (7.0 µg/L, estimated), and Aroclor 1254 (3 µg/L, estimated). The only detection of Aroclor 1221 (79 µg/L) in filtered samples occurred when the unfiltered samples had a result of 603 µg/L.
- Upgradient well OW-15 had reported detections of Aroclor 1221 (2.9 µg/L), Aroclor 1248 (1.3 µg/L), 1,2-dichlorobenzene (4 µg/L, estimated), cobalt (0.0073 mg/L, estimated) and mercury (0.000083 mg/L, estimated). No Aroclors or metals were detected in filtered samples.
- Upgradient wells OW-16 and OW-16A had reported detections of chlorobenzene (2.0, 3.0, and 5.7 µg/L), 1,4-dichlorobenzene (5.0 µg/L, estimated), 1,2-dichlorobenzene (14 and 37 µg/L), 2,4-dichlorophenol (0.30 µg/L, estimated), o,o,o-triethyl phosphorothioate (12, 12, and 15 µg/L), Aroclor 1221 (80, 255, 99, estimated, and 94 µg/L), Aroclor 1242 (14 µg/L) parathion (7, estimated, 14, and 69 µg/L), cobalt (0.015, 0.020 and 0.029 mg/L). The only detection of Aroclor 1221 (8.9 µg/L, estimated) in filtered samples occurred when the unfiltered sample had a result of 255 µg/L. The only detection of cobalt in filtered samples (0.027 mg/L) occurred when the unfiltered sample had a result of 0.029 mg/L.

The historical data for the Facility are presented in Appendix L.

7.3.3 Conclusions

Parathion and 4-nitrophenol have been reported in samples collected from the extraction wells (IW-14 and IW-15) that comprise the Plant Corrective Action System during previous sampling events. Parathion was not detected in the last three samples collected from IW-14 during September 1995, March 1996 and September 1996. 4-Nitrophenol was not detected in the last

sample collected from IW-14 during 1996. Parathion was not detected in samples collected from IW-15 during sampling events from August 1990 to September 1996. 4-Nitrophenol was not detected in samples collected from IW-15 during sampling events from March 1992 to September 1996. IW-14 and IW-15 have not been sampled since September 1996. All previous detections of parathion and 4-nitrophenol in samples collected from IW-14 and IW-15 during sampling events after March 1989 have been below the current concentration limits established in the Site's RCRA Part B Permit.

Based on pumping test data and observations, these interceptor wells likely receive the majority of their annual collected water volume from surface recharge, with rain events contributing a significant amount of water to the wells. Furthermore, parathion and 4-nitrophenol have not been detected in the last samples taken from two wells (OW-5 and OW-15) immediately upgradient of this system. No detections for these compounds have occurred in OW-5 since October 1991 and only sporadic detections of COPCs have occurred in OW-15. In summary, this Corrective Action System has effectively removed COPCs from the groundwater. It should be noted that interceptor well IW-15 has been turned off as per the Permit. Recommendations related to the Plant Site Corrective Action System are presented in Section 9.4.

7.4 OLBSI Groundwater Corrective Action System

Six residuum groundwater interceptor wells (IW-16, IW-17, IW-18, IW-19, IW-20, and IW-21) and one deep extraction well (DW-1) comprise the Old Limestone Bed Surface Impoundment Groundwater Corrective Action System (OLBSI System). This system was installed and began operating in 1988. Interceptor well DW-1 was incorporated in the OLBSI System in1997. The purpose of this system was to remove parathion and 4-nitrophenol from the groundwater in this area and to mitigate off-site transport of these constituents. Captured groundwater from the OLBSI System is pumped to a holding tank, which in turn pumps to the Facility WWTF.

7.4.1 Hydraulic Capture

Hydraulic capture at the OLBSI System was determined, in part, by comparing the amount of water that could theoretically flow past the wells in a year (groundwater flux) with that recovered during a year (Appendix E). This analysis indicated that the recovery system is removing a much

larger volume of water than the calculated volume of groundwater flow across the area. The additional volume is attributed to the direct infiltration of surface water into the interceptor wells during rain events and recovery of groundwater from outside the theoretical cross-sectional area of flow. Water has been observed leaking into the casing of these wells during heavy rain events.

Figure 42 depicts groundwater potentiometric contours in the vicinity of this system and illustrates the general zone of influence resulting from the interceptor wells when all wells are operating. These data indicate that an effective capture zone has been established across this area.

7.4.2 Groundwater Quality

Groundwater quality data have been collected from the OLBSI System interceptor wells and from a system of observation wells located upgradient and downgradient of the recovery system. Well MW-20A is hydraulically upgradient to the OLBSI System, and well OWR-8S is slightly upgradient and within the capture zone of the system. Wells OW-18, OW-19, OW-20, OW-21, OW-22, OW-23, OW-24, MW-8, and MW-9 are located hydraulically downgradient of the OLBSI System. Of these, wells OW-18, OW-19, OW-23, OW-24, and possibly OW-20 appear to be located within the capture zone of the OLBSI System. Wells OWR-4D and DOP-1 are located hydraulically downgradient within the deeper residuum.

Wells OW-18, OW-20 and OW-23 are no longer part of the Facility groundwater monitoring program established by the Permit and are presently not sampled. The chemistry data available for these wells are from 1988 to 1996. These data consist of parathion and 4-nitrophenol analyses. Wells OW-19, OW-24, MW-8 MW-9, and MW-20A are currently being monitored under the current Permit and have chemistry data available from 1988 to the present. Well OWR-8S was installed specifically for the RFI. The data from 1988 to 1996 consist of parathion and 4-nitrophenol analyses. The data from 1997 to the present consist of the constituents defined in the Permit, including parathion and 4-nitrophenol.

Upgradient wells MW-20A and OWR-8S have reported 4-nitrophenol and parathion concentrations. The historical data for MW-20A are from sampling events conducted from 1988

to 1998. Data for OWR-8S are from one RFI sampling event in 1998. These data are summarized as follow:

- Well MW-20A had 20 4-nitrophenol detections reported in 66 sampling events and six parathion detections reported from 46 sampling events. The reported results ranged from 4.4 to 109 µg/L for 4-nitrophenol and from 1.1 to 5.5 µg/L for parathion. The reported concentrations for 4-nitrophenol and parathion have been generally reducing over time. 4-Nitrophenol has not been detected in MW-20A since April 1995 (4.6 µg/L), and parathion has not been detected above the detection limit since October 1992 (2.7 µg/L).
- Well OWR-8S had reported detections of 4-nitrophenol (390 µg/L) and parathion (560 µg/L) from one sampling event.

Samples from interceptor wells have historically reported varied concentrations of 4-nitrophenol and parathion. The historical monitoring results during the period from 1989 to 1996 for the OLBSI System interceptor wells are summarized as follow:

- Well IW-16 had 16 4-nitrophenol detections reported in 35 sampling events and 19 parathion detections reported in 33 sampling events during the period from 1989 to 1996. The reported results ranged from 4.0 to 1,226 µg/L for 4-nitrophenol and 1.2 to 381 µg/L for parathion. There are no apparent concentration trends associated with these detections.
- Well IW-17 had 18 4-nitrophenol detections reported in 35 sampling events and 27 parathion detections reported in 33 sampling events. The reported results ranged from 5.2 to 35,000 µg/L for 4-nitrophenol and from 1.3 to 1,345 µg/L for parathion. The concentrations for 4-nitrophenol and parathion have generally been reducing since September 1990, although parathion concentrations have increased and decreased four times since 1990. 4-Nitrophenol has not been detected in IW-17 after March 1996 (5.2 µg/L), and parathion was not detected after March 1995 (1.8 µg/L).
- Well IW-18 had 35 4-nitrophenol and 33 parathion detections reported in 35 and 33 sampling events, respectively. The reported results ranged from 929 to 823,452 µg/L for

4-nitrophenol and from 9.6 to 1,531,644 µg/L for parathion. The concentrations for both compounds have generally reduced over time.

- Well IW-19 had 35 4-nitrophenol and 33 parathion detections reported in 35 and 33 sampling events, respectively. The reported results ranged from 4,974 to 1.0 x 10^8 µg/L for 4-nitrophenol and from 21 to 143,540 µg/L for parathion. The concentration for 4-nitrophenol has generally reduced over time. There is no apparent parathion concentration trend.
- Well IW-20 had 34 4-nitrophenol and 32 parathion detections reported in 34 and 32 sampling events, respectively. The reported results ranged from 12 to 382,351 µg/L for 4-nitrophenol and from 7.2 to 12,964 µg/L for parathion. The concentrations for both compounds have reduced over time since December 1990.
- Well IW-21 had 33 4-nitrophenol detections reported in 35 sampling events and 32 parathion detections reported in 33 sampling events. The reported results ranged from 13 to 188,293 µg/L for 4-nitrophenol and from 2.5 to 424,052 µg/L for parathion. The 4-nitrophenol concentration has reduced over time since 1994, and the parathion concentration has reduced since 1992.
- Well DW-1 had 2 4-nitrophenol and 2 parathion detections reported in both sampling events. The reported results were 1,200 and 4,000 µg/L for 4-nitrophenol and 1,300 and 221,500 µg/L for parathion. There are insufficient data to determine the concentration trends for DW-1.

Downgradient wells historically have also had sporadic detections of 4-nitrophenol and parathion. The historical 4-nitrophenol and parathion monitoring results for the downgradient wells are summarized as follow:

- Well OW-18 had no 4-nitrophenol and five parathion detections reported in 34 sampling events. The reported parathion results ranged from 1.2 to 12 µg/L. Parathion has not been detected in OW-18 since July 1991 (1.6 µg/L).
- Well OW-19 had 35 4-nitrophenol and 29 parathion detections reported in 37 sampling events. The reported results ranged from 218 to 159,800 µg/L for 4-nitrophenol and from

1.6 to 135 µg/L for parathion. The concentrations for both compounds have generally reduced over time.

- Well OW-20 had eight 4-nitrophenol and 30 parathion detections reported in 34 sampling events. The reported results ranged from 4.9 to 185,000 µg/L for 4-nitrophenol and 5.3 to 983 µg/L for parathion. 4-Nitrophenol and parathion concentrations have generally reduced over time.

- Well OW-21 had 2 4-nitrophenol and 3 parathion detections reported in 36 sampling events. The reported results were 17 and 82 µg/L for 4-nitrophenol and ranged from 1.0 to 1.2 for parathion. There have been no detections since July 1989 for 4-nitrophenol and April 1990 for parathion.

- Well OW-22 had 18 4-nitrophenol detections and five parathion detections reported in 37 sampling events. The reported 4-nitrophenol results ranged from 8.0 to 42 µg/L, and the reported parathion results ranged from 1.2 to 4.5 µg/L. No trend has been established for reported 4-nitrophenol concentrations. Parathion has not been detected in OW-22 since July 1990.

- Well OW-23 had no 4-nitrophenol and three parathion detections reported in 34 sampling events. The reported parathion results ranged from 1.3 to 5.6 µg/L. Parathion concentrations have reduced since 1991.

- Well OW-24 had 24 4-nitrophenol and 24 parathion detections reported in 37 sampling events. The reported results ranged from 3.9 to 428 µg/L for 4-nitrophenol and 1.2 to 1,491 µg/L for parathion. The concentrations have generally reduced since April 1991 for 4-nitrophenol and since July 1990 for parathion.

- Well MW-8 had no 4-nitrophenol or parathion detections reported in 4 and 2 sampling events, respectively.

- Well MW-9 had no 4-nitrophenol or parathion detections reported in 4 and 2 sampling events, respectively.

Based on the historical monitoring data, the 4-nitrophenol and parathion concentrations have generally reduced over time. The size of the area affected by these constituents has also been reduced. Plots of concentrations versus time are presented in Appendix K. The distribution of

parathion and 4-nitrophenol concentrations detected in observation wells since 1997 are shown in Figures 34 and 35. Based on these data, the only detection which exceeded the Permit Concentration Limit in the OLBSI area was parathion detected in upgradient well OWR-8S (645 µg/L).

7.4.3 Conclusions

The effectiveness of the Corrective Action System at the OLBSI has been evaluated using potentiometric data, pumping test data, and groundwater quality data from the OLBSI interceptor wells and observation wells. Based on these data, the OLBSI Corrective Action System has been effective at removing parathion and 4-nitrophenol from the groundwater and mitigating the downgradient migration of these constituents emanating from WMA II and the OLBSI areas.

The historical groundwater quality data from the interceptor wells indicate a decreasing trend in both parathion and 4-nitrophenol concentrations in most of the wells. The highest reported concentrations were found in the interceptor wells IW-18 through IW-21, comprising the middle and western portion of the system. The majority of samples from interceptor wells IW-16 and IW-17, located on the eastern end of the recovery system, either exhibited no detections or exhibited detections that were below the Permit Concentration Limits.

Samples from observation wells located within, and upgradient of, the capture zone of the extraction system have reported a general decrease in constituent concentrations since the system has been in operation. The historical data also indicate a decrease in the areal extent of affected groundwater from 1989 to the present. Figures 16 and 17 show isoconcentration contours for parathion and 4-nitrophenol using data from sampling events in 1989 and 1996. Figures 43 and 44 depict the general capture zone of the OLBSI extraction system and show detected concentrations of parathion and 4-nitrophenol in observation wells in the OLBSI area since 1997. As shown in Figure 43, the only reported exceedance of a Permit Concentration Limit was in the sample from well OWR-8S (parathion at 645 µg/L), which is located within the capture zone of the OLBSI system. Groundwater quality data from shallow and deep residuum wells located downgradient of the recovery system indicate that no COPCs are migrating off-site in this area of the Facility.

Based on the hydraulic capture evaluation, the existing OLBSI interceptor wells provide capture across the affected area. However, data from recorded discharge rates, pumping tests and field observations indicate that the recovery system is pumping more water than is required to maintain an effective capture zone, primarily because it is also pumping surface water. Portions of the system are currently pumping and treating groundwater with constituent concentrations well below Permit Concentration Limits. Potential options for augmenting and optimizing the OLBSI extraction system have been proposed in an Interim Measures Study.

8.0 NATURAL ATTENUATION

Natural attenuation involves the combined effects of dispersion, dilution, adsorption, abiotic transformation (e.g., hydrolysis), volatilization and biological degradation. These mechanisms can effectively reduce contaminant toxicity to levels that are protective of human health and the environment. Abiotic transformation and biodegradation are important "destructive" attenuation mechanisms as they typically transform the constituent to less toxic compounds, and can ultimately result in the complete degradation of a compound to benign end products such as ethene or carbon dioxide. The RFI/CS field program has included assessment of the capture of COPCs by the Groundwater Corrective Action Systems, and natural attenuation of the COPCs downgradient of these systems. This assessment has provided information for corrective action strategies. The potential natural attenuation of constituents in the vicinity of each Groundwater Corrective Action System is discussed below.

8.1 South Landfill Corrective Action System

Interceptor wells installed along the western and northern boundaries of the South Landfill constitute the Western Landfill Corrective Action System (wells IW-1, IW-2, IW-3, and IW-4) and the Northern Landfill Corrective Action System (wells IW-5, IW-6, IW-7, IW-8, IW-9, IW-10, IW-11, IW-12, and IW-13). Together, they comprise the South Landfill Groundwater Corrective Action System. The historic reduction of concentrations of constituents in groundwater associated with the Western Landfill system has resulted in only well IW-2 currently being active. Observation wells OW-11 and OW-12 are located directly upgradient to IW-2 and OW-17 is located directly upgradient to IW-11. Interceptor wells IW-5 through IW-10 and IW-12 through IW-13 do not have upgradient monitoring or observation wells. Wells OW-13, OW-14 and OWR-5D are located among the IW wells, but are neither upgradient nor downgradient of the South Landfill System. Downgradient groundwater quality is represented in wells OW-5, OW-06, OW-15, and OW-16A.

For the South Landfill, monitored natural attenuation has been assessed to determine its potential viability as a remediation technology for the Facility. Preliminary review suggests that natural attenuation could be a viable remedial solution for groundwater associated with the South Landfill.

Since there is a significant amount of historical parathion data for the Site, Parathion was used as an example to understand if natural attenuation may be occurring at the Facility. A literature review of the possible breakdown pathways of parathion has been performed. Parathion is the common term for the organophosphate o,o-diethyl-o-4-nitrophenyl phosphorothioate. This compound contains carbon, oxygen, hydrogen, sulfur, and phosphorus and is biodegraded to 4-nitrophenol with the mineralization of sulfur and phosphorus. Additionally:

- Parathion has been shown to undergo hydrolysis to 4-nitrophenol. This process can be enhanced in the presence of excess calcium, magnesium, iron, or copper ions. The rate of hydrolysis is significantly affected by water content with an optimal rate occurring at the limit of sorbed water (about 11 percent). Dissolved organic matter can play an important role in affecting hydrolysis kinetics of organic pollutants. Its effect on the hydrolysis of parathion is not known.
- Parathion can be reduced to aminoparathion by an enzyme. This in turn breaks down to p-aminophenol or diethylthiophosphoric acid which themselves are degraded to mineralization.
- Parathion can degrade in sunlight to 4-nitrophenol.
- Clays, sediments and dusts in surface soils can promote the oxidation of parathion to produce paraoxon which degrades to 4-nitrophenol and diethyl phosphoric acid which themselves are degraded to mineralization via carboxylic acid and other aliphatics.

Three lines of evidence can be used to support biodegradation of chemicals of concern, including:

1. An observed reduction of chemical concentrations along the flow path downgradient from the source area;
2. A documented loss of contaminant mass using analytical data or a conservative tracer; and
3. Microbiological laboratory or field data that support the occurrence and rate of biodegradation.

Initial data collection at the Facility in support of natural attenuation has included analytical data for concentrations of parathion and 4-nitrophenol in groundwater, and collection of a suite of geochemical data that could indicate electron donor and acceptor concentrations in groundwater, which can then be correlated to increases in metabolic end products.

USEPA Region 4, in their draft "Suggested Practices for Evaluation of a Site for Natural Attenuation (Biological Degradation) of Chlorinated Solvents", dated November 1997, provide a screening mechanism to indicate evidence of biodegradation based on reducing conditions. Although developed for chlorinated solvents, this same mechanism can be used to determine reducing conditions that could be causing the natural attenuation, by reduction, of parathion.

In general, strong evidence of a reducing environment is indicated by:

- Dissolved oxygen less than 0.5 mg/l;
- Nitrate less than 1 mg/l;
- $Iron^{II}$ greater than 1 mg/l;
- Sulfate less than 20 mg/l;
- Sulfide greater than 1 mg/l; and
- Alkalinity greater than two times background.

These indicator parameters were collected at wells across the Facility. The results of analyses are presented in the table below. Based on these results, the following wells indicate more reducing conditions:

	Strong Evidence of Reducing Conditions per USEPA, 1997		Site Evidence of Reducing Conditions	
Parameter	Concentration	Wells	Concentration	See Figure
Dissolved oxygen	<0.5 mg/L	OWR-01D	<0.9 mg/L	M-1 (App. M)
Nitrate	<1 mg/L	MW-01B, OWR-01D, OWR-05D, MW-01B, OW-06A	<1.1 mg/L	
$Iron^{II}$	>1 mg/L	OWR-05D		

	Strong Evidence of Reducing Conditions per USEPA, 1997		Site Evidence of Reducing Conditions	
Parameter	Concentration	Wells	Concentration	See Figure
Sulfate	<20 mg/L	CB-85, MW-01B, OW-06A, OW-10, OWR-01D, OWR-02D, OWR-02S, OWR-05D		
Alkalinity	>2xbackground	OWR-01D, OWR-02D, OWR-02S, OW-10, OW-06A, OWR-05D, OWR-01S	>80 mg/L	M-2
Redox	<-190mv	OWR-02D	<0 mv	M-3

Figures M-1 through M-4 illustrate the evidence for natural attenuation via biological degradation. As shown on Figure M-1, the area of consumption of dissolved oxygen to concentrations less than 0.8 mg/L is quite extensive. Associated with this dissolved oxygen consumption, Figure M-3 shows that area of strongly reducing conditions, as mapped by eH ≤ 0 millivolts. Figure M-2 shows the area of increased alkalinity that would correspond to a reducing environment, as CO_2 is evolved during the respiration process and then partitions to alkalinity in the aqueous phase and through the direct production of alkalinity during the cell synthesis reaction. Figure M-4 combines Figures M-1 through M-3, showing those well locations where more than one parameter is indicative of a "natural attenuation environment".

Based on review of these data, it appears that there may be a robust natural attenuation environment at the site. Additionally, biological plate counts were performed on water from the same well set, and the following wells reported bacterial culture populations greater than background: OW-06A, OWR-01D, OWR-01S, OWR-05D, OWR-02S, OWR-02D, and OW-10.

The tracking of the breakdown of parathion by review of daughter products is not possible with the data collected to date, since 4-nitrophenol, the main anticipated degradation product, was produced at the Facility. Breakdown products of 4-nitrophenol have not been analyzed at this point.

Review of mechanistic chemistry and microbiological processes suggests that microorganisms incorporate carbon and phosphorus from the parathion into their cell structure. The parathion is biodegraded to 4-nitrophenol that biodegrades to carboxylic acid by mineralization of nitrogen and

breaking of the six member carbon ring. The sulfur is released from the organic molecule as a reactive species, which is immediately scavenged by the cations in the soil.

With a maximum of 68.5 µg/L parathion in any downgradient monitoring well in the vicinity of the South Landfill, this could only liberate 7.54 µg/L of sulfur. Therefore, with a plume width of less than 500 ft at the downgradient toe of the landfill, a plume thickness of 50 feet, a flow rate of 17 ft/yr, and an effective porosity of 10 percent, this would result in less than 11 grams per year of sulfur liberated from landfills from the biodegradation of parathion as described. Hence, this amount of sulfur would be easily quenched by very little limestone (stoichiometrically about 35 grams). Therefore, the soil on site has, in practice, a limitless ability to quench the sulfur released by biodegradation of parathion without the water containing any sulfide above the Method Detection Limit.

The screening level, 2-dimensional model Bioscreen was used to examine the possibility of parathion biodegradation. Bioscreen is a model created by USEPA to provide support in assessing the applicability of natural attenuation to specific sites. Input to the model included:

Hydrogeological parameters of

- hydraulic conductivity 3×10^{-5} cm/s
- hydraulic gradient 0.055 ft/ft
- effective porosity 0.1

Dispersion estimates of

- longitudinal dispersivity 80 feet
- transverse dispersivity 8 feet

Adsorption estimates of

- soil bulk density 1.64 kg/L
- parathion partition coefficient 460 L/kg
- fraction organic carbon 3.5×10^{-3}

A biodegradation half-life for parathion of one year was used. An exact field value for the half-life of the parathion is not known, and is therefore based on published half-lives for parathion by hydrolysis (half-life of 72 days at pH 7, Howard et. al., 1991) and by base-catalyzed hydrolysis (half-life of 45 days, Howard et. al., 1991). The value of one year appears to be conservatively approximate.

Initially, an area downgradient of the South Landfill, outside the calculated capture zone of the remediation system was selected for evaluation. Under natural conditions groundwater flows from the South Landfill at about 17 ft/yr. This number was based on calculated hydraulic gradients immediately downgradient of the South Landfill. The first extraction wells at the Landfill started operating in 1983. Therefore, the chemicals any further downgradient than about 255 feet from the landfill (15 years at 17 ft/yr) would have left the area with no capture by those extraction wells and will be showing the effects of natural attenuation, if present.

Bioscreen was run assuming a source area starting at OW-16 (assumed outside the active remediation system capture zone) and extending downgradient. The model predicts the distribution of parathion at various distances from the source area, first based on dilution with no attenuation, and second also allowing for biodegradation assuming the given half-life. The model runs were compared with actual data collected from monitoring wells (OW-5, OW-15, and IW-14) downgradient of the landfill.

The model was run using a time of 38 years (assuming parathion had migrated from the landfill since 1960 when the first cells were used through to the present day). The model indicates that parathion will have reduced to non-detect at 60 feet from the source area when including the effects of biodegradation, while if no attenuation were occurring the parathion would have migrated approximately 150 feet. Comparison of predicted and actual parathion concentrations with distance from the source match well with the data set provided. A sensitivity analysis was performed by substituting different parathion half-lives into the model run. It appeared that a half-life between six months and five years had little effect on the concentration-distance curve, so a half-life of one year was retained in the model parameters.

The model was then run for extended periods of time to assess the relative travel distances of parathion, with and without the effects of natural attenuation. The model results indicate that without the effects of biodegradation (but including advection and dispersion), the parathion will reach the Facility boundary (approximately 2,000 feet) in 2,000 years, while with the effects of natural attenuation, the parathion concentrations will have stabilized to a maximum distance of approximately 300 feet from the source area. This distance is prior to reaching the plant site groundwater system and another source area for parathion. Model runs are included in Appendix M.

Since the data set indicates that the effects of natural attenuation occur within 60 feet of the source area based on a 38-year source migration, monitoring for natural attenuation will be required close to the landfill. Data collected close to the landfill will allow more exact elucidation of the attenuation rates.

Based on this model, it is concluded that if the South Landfill Corrective Action System was shut off, parathion would still naturally attenuate prior to crossing the Facility boundary. Additional monitoring points would need to be installed close to the landfill to assess this natural attenuation. Recommendations for the South Landfill Groundwater Corrective Action System are presented in Section 9.4.1.

8.2 Plant Corrective Action System

Neither parathion nor 4-nitrophenol have been reported in the last samples taken from the extraction wells (IW-14 and IW-15) that comprise the Plant Corrective Action System. Furthermore, parathion and 4-nitrophenol have not been detected in the last samples taken from two wells (OW-5 and OW-15) immediately upgradient of this system. No detections of these compounds have occurred in OW-5 since October 1991. In upgradient wells OW-16 and OW-16A, parathion was detected in samples from January and April 1988, with sporadic detections of 4-nitrophenol from April 1988 to October 1998. PCBs were reported in the unfiltered aliquot, but not in the filtered aliquot of the last sample collected from OW-15 in April 1998. In summary, since no chemicals of concern are present, there is no need to consider the possibility of natural

attenuation. Recommendations related to the Plant Site Corrective Action System are presented in Section 9.4.2.

8.3 OLBSI Corrective Action System

Although natural attenuation is occurring in the OLBSI area, as seen by the reductions in concentrations and areal extent of constituents upgradient of the system, the system is sufficiently close to the Facility boundary that the limit for natural attenuation could be beyond the Facility boundary. Natural attenuation could be considered in the future after the effectiveness and efficiency of the system have been increased. Natural attenuation of constituents in this area will continue to be evaluated while maintaining perimeter control with the groundwater extraction system. Recommendations for the OLBSI Corrective Action System are presented in Section 9.4.3.

9.0 CONCLUSIONS AND RECOMMENDATIONS FOR CORRECTIVE ACTION

9.1 On-Site Interim Remedial Measures

As discussed in Section 7.1, a series of interim remedial measures have been implemented at the Facility in accordance with ADEM requirements to mitigate the migration of constituents from the Facility. These interim measures were described in Section 2 of this report and consist of a series of upgraded caps and covers on landfills and specific SWMUs along with various storm water control upgrades (see Figure 12). Table 4 provides a summary of completed interim remedial measures. The effectiveness of these on-site interim remedial measures has been evaluated through Facility-wide groundwater quality monitoring, inspection of the caps and covers, and confirmatory sampling at selected SWMUs, surface water outfalls and groundwater monitoring wells. Results of these evaluations, as well as the effectiveness of existing groundwater corrective action systems, are discussed in the following sections. Recommendations concerning these interim remedial measures will be made in the CMS.

9.2 Soil

A Tier 2 Site-Specific Target Level (SSTL) for PCBs and arsenic in soil was developed based on consideration of facility-specific factors used to develop appropriate receptor characteristics. Four site-specific receptors were identified: 1) the production worker (exposed to high contact areas); 2) the inspector/supervisor (exposed to low contact areas); 3) the construction worker (exposed to surface and subsurface soil throughout the Facility); and, 4) an adolescent trespasser (exposed to surface soil throughout the Facility). Modifications, including consideration of site-specific conditions, were made to the default assumptions used by USEPA in developing the Region 9 PRGs used as Tier 1 screening values.

These changes resulted in the calculation of a risk-based SSTL for PCBs in surface soil for HCAs of the Facility of 34 mg/kg, a risk-based SSTL for surface soil in LCAs of the Facility of 329 mg/kg, and a risk-based SSTL for subsurface soil of 464 mg/kg. A comparison of these values to soil sample data collected during the RFI/CS reveals that only one surficial soil sample SSR-18 at SWMU 44 exceeded the HCA SSTL. None of the samples collected in the LCA exceeded the area-specific value. None of the subsurface soil samples exceeded the subsurface soil SSTL. The potential health risk associated with the sample that exceeded the Tier 2 SSTL is

primarily based on direct contact. Consequently, a corrective action that would prevent direct contact would address the potential risk.

For arsenic, the SSTL for surface soil in the HCA and LCA of the Facility were 66 mg/kg and 444 mg/kg, respectively. The SSTL for subsurface soils was 652 mg/kg. None of the soil samples collected within the Facility had arsenic concentrations exceeding these risk-based concentrations. Therefore, corrective action was not required to address arsenic in surface or subsurface soils.

SWMU 44, where the high contact SSTL was exceeded in sample SSR-18, is located within an active portion of the Facility. To address this area, it is recommended that this area be covered with a concrete or asphalt pavement, thus preventing direct contact and providing an appropriate Interim Corrective Action. The effectiveness of this Interim Corrective Action will be further evaluated in the CMS.

No Corrective Action is required for soil at other site areas.

9.3 Potential Facility-Wide Groundwater Health Risks

As part of the process of deriving Tier 2 values for groundwater at the Facility, the site classification, site conceptual model and the exposure pathway completeness analysis were revised and updated. The groundwater beneath the Facility property has been characterized, and various interim remedial measures have been in place for many years to contain and recover those constituents found in the groundwater. Despite the presence of some constituents at concentrations above the Tier 1 screening level, none are leaving the site at concentrations exceeding human health or ecological risk levels. Furthermore, municipal water is supplied to all residents in the area. The site groundwater is not presently used, nor will it be used in the future, as a source of production or non-contact cooling water.

The results of the revised exposure pathway completeness analysis demonstrate that potential exposure via groundwater to on-site workers is not a complete exposure pathway. As a result, it

is apparent that exposures via dermal contact, incidental ingestion or inhalation due to constituent volatilization from groundwater will not occur.

For the groundwater release to surface water exposure pathway, maximum concentrations of 7 COPCs detected in perimeter wells exceed Tier 1 criteria. Following modifications of the predicted surface water concentration based on mixing in Snow Creek, none of these constituent concentrations exceeded the ecologically based screening concentration. As such, there is no potential risk and, therefore, no need for Corrective Action for the on-site groundwater.

9.4 Existing Corrective Action Systems

9.4.1 South Landfill Groundwater Corrective Action System

Interceptor wells installed along the western and northern boundaries of the South Landfill constitute the Western Landfill Corrective Action System (wells IW-1, IW-2, IW-3, and IW-4) and the Northern Landfill Corrective Action System (wells IW-5, IW-6, IW-7, IW-8, IW-9, IW-10, IW-11, IW-12, and IW-13). Together, they comprise the South Landfill Groundwater Corrective Action System. The historic reductions of constituents in groundwater associated with the Western Landfill system has resulted in only well IW-2 currently being active. Observation wells OW-11 and OW-12 are located directly up gradient to IW-2 and OW-17 is located directly up gradient to IW-11. Interceptor wells IW-5 through IW-10 and IW-12 through IW-13 do not have up gradient monitoring or observation wells. Wells OW-13, OW-14 and OWR-5D are located among the IW wells, but are neither upgradient nor downgradient of the South Landfill System. Downgradient groundwater quality is represented in wells OW-5, OW-06, OW-15, and OW-16A.

Based on an evaluation of the data from the above wells, it appears that natural attenuation may be occurring at the South Landfill Corrective Action area. Further evaluation of natural attenuation occurrence for all COPCs in the South Landfill Corrective Action area will be addressed during the CMS. The South Landfill Groundwater Corrective Action pumping system will be maintained and operated until further evaluations and recommendations are performed.

9.4.2 Plant Site Groundwater Extraction System

Evaluation of the Plant Site Groundwater Extraction System (Plant Site System) during the RFI/CS has led to the recommendation that the system should be closed. Groundwater data at and up gradient of the system indicates either no detection or only sporadic detection of COPCs. Also, the system does not effectively extract groundwater.

The Plant Site Groundwater Extraction System (Plant Site System) consists of two interceptor wells, IW-14 and IW-15. These wells were installed in 1987 and began operation in 1988, and have historically had only sporadic reported detections of 4-nitrophenol and parathion. Neither parathion nor 4-nitrophenol was reported in the last samples from these interceptor wells in 1996. These interceptor wells likely receive the majority of their annual collected water volume from surface recharge, with rain events contributing a significant amount of water to the interceptor wells. This was determined from a pumping test performed on interceptor well IW-14 and observations that recharge to the wells during rain events indicate that they intercept a shallow transmissive zone or conduit which directly receives rain water. This is especially evident in interceptor well IW-15. Consequently, these wells do not effectively extract groundwater. As per the Permit, interceptor well IW-15 has been turned off.

Observation wells OW-5 and OW-15 are the closest wells hydraulically up gradient of the Plant Site System. Well OW-5 was monitored for parathion and 4-nitrophenol from 1987 through 1996; it is no longer included in the Facility groundwater monitoring program established by the Permit and was not monitored in 1997 or 1998. From 1987 through 1996, detection of 4-nitrophenol was not reported and parathion was only reported once in October 1991. Well OW-15 was monitored for parathion and 4-nitrophenol from 1988 through 1998. Parathion was only reported in January and April 1988, and not since. Sporadic detection of 4-nitrophenol was reported from April 1988 to October 1996, with no reported detection since. Well OW-15 was analyzed for other COPCS during 1997 and 1998 with only 1,2-dichlorobenzene (4 µg/L, estimated detection below the PQL) and cobalt (0.0073 mg/L, estimated detection below the PQL) reported in April 1997, and PCB Aroclors 1221 (2.9 µg/L) and 1248 (1.3 µg/L) reported in April 1998. The reported detection of the PCB Aroclors were from unfiltered samples; filtered sample results for the same sample reported as not detected.

The analytical results from the samples from the interceptor wells and the two observation wells up gradient of the interceptor wells indicate either no detection or only sporadic detection of COPCs. As per the Permit, IW-15 has been turned off. The remaining interceptor well (IW-14) does not effectively extract groundwater. A proposal for the replacement of IW-14 has been submitted to ADEM. The Plant Site Groundwater Corrective Action pumping system will be maintained and operated until further evaluations and recommendations are performed in the CMS.

9.4.3 OLBSI Groundwater Corrective Action System

Six residuum groundwater interceptor wells (IW-16, IW-17, IW-18, IW-19, IW-20, and IW-21) and one deep extraction well (DW-1) comprise the Old Limestone Bed Surface Impoundment Groundwater Corrective Action System (OLBSI System). This system was installed and began operating in 1988. The purpose of this system was to remove parathion and 4-nitrophenol from the groundwater in this area and to mitigate off-site transport of these constituents.

Groundwater quality data has been collected from the OLBSI System interceptor wells and from observation wells located upgradient and downgradient of the recovery system. Well MW-20A is hydraulically up gradient to the OLBSI System and well OWR-8S is slightly up gradient and within the capture zone of the system. Wells OW-18, OW-19, OW-20, OW-21, OW-22, OW-23, OW-24, MW-8, and MW-9 are located down gradient of the OLBSI System. Of these, wells OW-18, OW-19, OW-23, OW-24, and possibly OW-20 appear to be located within the capture zone of the OLBSI System. Wells OW-18, OW-20, OW-23 are no longer part of the Facility groundwater monitoring program established by the Permit and are presently not sampled. Wells OW-19, OW-24, MW-8 MW-9, and MW-20A are currently being monitored under the current Permit and have chemistry data available from 1988 to the present.

The effectiveness of the OLBSI System has been evaluated using potentiometric data, pumping test data, and groundwater quality data from the OLBSI interceptor wells and observation wells. The OLBSI System has been effective at removing parathion and 4-nitrophenol from the groundwater and mitigating the down gradient migration of these constituents emanating from WMA II and the OLBSI areas.

Historical groundwater quality data from the interceptor wells indicate a general decreasing trend in parathion and 4-nitrophenol concentrations in most of the wells. The highest reported concentrations were generally found in the interceptor wells IW-18 through IW-21, comprising the middle and western portion of the system. With the exception of a few anomalous detections above the Permit Concentration Limits, the majority of analysis results of samples from interceptor wells IW-16 and IW-17 located on the eastern end of the recovery system reported no detections or reported detections that were below the Permit Concentration Limits.

The upgradient residuum observation well MW-20A and residuum observation wells OW-18, OW-19, OW-20, OW-21, OW-22, OW-23, OW-24, MW-8, and MW-9 located within and down gradient of the capture zone of the extraction system have reported a general decrease in constituent concentrations since the system has been in operation. The historical data also indicate a decrease in the areal extent of affected groundwater in the residuum from 1989 to the present. Groundwater quality data from shallow and deep residuum wells located down gradient of the recovery system indicate that no COPCs are migrating off site in this area of the Facility.

Based on the hydraulic capture evaluation, the existing OLBSI interceptor wells provide capture across the affected area. However, data from recorded discharge rates, pumping tests and field observations indicate that the recovery system is pumping more water than is required to maintain an effective capture zone, primarily because it is also pumping surface water. Also, portions of the system are currently pumping and treating groundwater with constituent concentrations well below Permit Concentration Limits.

Potential options for augmenting and optimizing the OLBSI extraction system will be addressed in an Interim Measures Plan (Golder Associates Inc., 2002). Following completion of the upgraded OLBSI system, an effectiveness evaluation will be performed. Based on the results of the effectiveness evaluation, an updated Facility groundwater monitoring program will be proposed including selection of appropriate wells, parameters, and action levels for further assessment.

10.0 REFERENCES

Agency for Toxic Substances and Disease Registry (ATSDR), 1987. Exposure Study Of Persons Possibly Exposed To Polychlorinated Biphenyls In Paoli, Pennsylvania, USDHHS, Atlanta, Georgia.

Agency for Toxic Substances and Disease Registry (ATSDR), 1995. Toxicological Profile for Polychlorinated Biphenyls.

Agency for Toxic Substances and Disease Registry (ATSDR), 1997. Toxicological Profile for Polychlorinated Biphenyls (Update/Final), Research Triangle Institute, Atlanta, GA.

Alabama Department of Environmental Management (ADEM), 1996. Hazardous Waste Post-Closure Permit (Draft), Anniston, Alabama.

Alexander, M. 1995. How toxic are toxic chemicals in soil? Environ. Sci. Technol. 29:2713-2717.

American Society for Testing and Materials (ASTM), 2000. Standard Provisional Guide for Risk-Based Corrective Action, ASTM, West Conshohocken, PA. PS 104-98.

BBL (Blasland Bouck and Lee), Inc. 1999. Supplemental RCRA Facility Investigation Work Plan For the Off-Site Portion of the RFI/CS Program. Solutia Inc. Anniston, Alabama. February.

Benet, L. and L. Sheiner, 1985. Pharmacokinetics: The Dynamics of Drug Absorption, Distribution, And Elimination, Goodman and Gilman's.

Bjorklund E, Bowadt S, Mathiasson L, and Hawthorne SB. 1999. Determining PCB Sorption-Desorption Behavior On Sediments Using Selective Supercritical Fluid Extraction. 1. Desorption From Historically Contaminated Samples**.** Environmental Science & Technology 33(13):2193-2203.

Bouwer, H., 1989. The Bouwer and Rice Slug Test - An Update, Groundwater, Volume 27, Number 3, pp. 304-309.

Chow, V.T. 1952. On The Determination Of Transmissivity And Storage Coefficients From Pumping Test Data, Am. Geopys. Union Trans., vol. 33: 397-404.

Cooper, H.H. and C.E. Jacob, 1946. A Generalized Graphical Method For Evaluating Formation Constants And Summarizing Well Field History, Am. Geophysical Union Transcript, Volume 27, pp.526-534.

Cornelissen G, Van Noort P CM, and Govers H AJ. 1998. Mechanism of Slow Desorption of Organic Compounds From Sediments: A Study Using Model Sorbents. Environmental Science & Technology 32(20): 3124-3131.

Federal Register, July 27, 1990. 40 CFR Parts 264, 265, 270, and 271. Corrective Action for Solid Waste Management Units at Hazardous Waste Management Facilities; Proposed Rule.

Fetter, C.W., 1988. Applied Hydrogeology, Second Edition, Macmillan Publishing Company, NY, NY, 592 pp.

Freeze, R.A and J.A. Cherry, 1979. Groundwater, Prentice-Hall Inc., Englewood Cliffs, NJ, 604 pp.

Garner, C.E. and H.B. Matthews, 1998. The Effect of Chlorine Substitution on the Dermal Absorption of Polychlorinated Biphenyls, Toxicol. Appl. Pharmacol. 149:150-158.

Golder Associates, Inc., 1997. RFI/CS Work Plan for the Anniston, Alabama Facility, November 1997. Golder Associates, Atlanta, GA.

Golder Associates, Inc., 1998. First 1998 Semi-Annual Groundwater Detection Monitoring and Corrective Action Effectiveness Report, August 1998.

Golder Associates, 2002. Solutia Interim Measures Plan for the Anniston, Alabama Facility. Golder Associates, Atlanta, GA.

Goodman and Gilman's The Pharmacological Basis of Therapeutics. Seventh Edition, 1985. Gilman, A.G., L.S. Goodman, T.W. Rall and F. Murad, eds. MacMillan Publishing Company, New York, NY.

Hantush, M.S. and C.E. Jacob, 1955, Non-steady radial flow in an infinite leaky aquifer, Am. Geophysical Union Transcript, Volume 36, pp. 95-100.

Howard, P.H., R.S. Boethling, W.F. Jarvis, W.M. Meylan and E.M. Michalenko, 1991. Handbook of Environmental Degradation Rates, Lewis Publishers Inc.

Huang W; Weber W J Jr. 1998. A Distributed Reactivity Model for Sorption by Soils and Sediments: 11. Slow Concentration-Dependent Sorption Rates. Environmental Science & Technology 32(22). 3549-3555.

Hvorslev, M.J. 1951. Time Lag and Soil Permeability in Groundwater Observations. U.S. Army Corps of Engineers Waterways Experimentation Station, Bulletin 36, 50 pp.

Jacob, C.E., 1950. Flow of Groundwater, Engineering Hydraulics, John Wiley and Sons, NY, NY, pp.321-386.

Kimbrough, R., 1995. Polychlorinated Biphenyls (PCBs) And Human Health: An Update. Crit. Rev. Toxicol. 25:133-163.

Loehr, R.C., 1996. The Environmental Impact of Soil Contamination: Bioavailability, Risk Assessment, And Policy Implications, Reason Foundation, Los Angeles, CA, and National Environmental Policy Institute, Washington, D.C. Policy Study No. 211.

Mayes, B., G. Brown, F. Mondello, K. Holtzclaw, et. al. 2002 Dermal absorption in rhesus monkeys of polychlorinated biphenyls from soil contaminated with Aroclor 1260. Regul. Toxicol. Pharmacol. 35(3):289-295.

Moench, A.F., 1993, Computation of Type Curves for Flow to Partially Penetrating Wells in Water-Table Aquifers. Ground Water, vol. 31, No. 6, pp. 966-971.

Moody, R.P., C.A. Franklin, L. Ritter, and H.I. Maibach, 1990. Dermal Absorption Of The Phenoxy Herbicides 2,4-D, 2,4-D Amine, 2,4-D Isooctyl, And 2,4,5-T In Rabbits, Rats, Rhesus Monkeys, And Humans: A Cross-Species Comparison, J Toxicol Environ Health. 29:237-245.

Needham, L., J. Pirkle, et. al., 1992. Case Studies Of Relationship Between External Dose And Internal Dose, J. Exp. Anal. Environ. Epidemiol, Sup:209-221.

Neuman, S.P., 1975. Analysis of pumping test data from anisotropic unconfined aquifers considering delayed yield, Water Resources Research, vol. 11, no.2, pp. 329-342.

Noonan, P.K. and R.C. Webster, 1989. Cutaneous Metabolism Of Xenobiotics, Percutaneous Absorption, R.L. Bronaugh and H.I. Maibech, eds. Marcel Dekker, New York, pp. 65-85.

OMEE (Ontario Ministry of Environmental and Energy). 1993. Development of the Ontario provincial sediment quality guidelines for the PCBs and the organochlorine pesticides. Ontario Ministry of the Environment and Energy. Ontario Canada.

Osborne, W.E. and Szabo, M.W., 1984 Stratigraphy and Structure of the Jacksonville Fault, Calhoun County, Alabama: Geological Survey of Alabama Circular 117, 30 p.

Phillips, D.L., A.B. Smith, V.W. Burse, G.K. Steele, L. Needham and W.H. Hannon, 1989. Half-Life of Polychlorinated Biphenyls in Occupationally Exposed Workers, Arch Environ Health, 44:351-354.

Pilorz K, Bjorklund E, Bowadt S, Mathiasson L, and Hawthorne SB. 1999. Determining PCB Sorption-Desorption Behavior on Sediments using Selective Supercritical Fluid Extraction. 2. Describing PCB Extraction with Simple Diffusion Models. Environmental Science & Technology 33(13): 2204-2212.

Roberts, S., W. Weimar, J. Vinson, J. Munson, and R. Bergeron. 2002. Measurement of arsenic bioavailability in soil using a primate model. Toxicol. Sci. 67(2):303-310.

Science Applications International Corporation, 1998. Background Metals Survey Report, McLean, Virginia.

Science Applications International Corporation, 1998. Background Metals Survey Report, Fort McClellan, Anniston, Alabama.

Scott, J.C., Harris, W.F. and Cobb, R.H., 1987, Geohydrology and Susceptibility of Coldwater Spring and the Jacksonville fault areas to surface contamination in Calhoun County, Alabama: U.S. Geological Survey Water-Resources Investigation Report 87-4031, 20p.

Shiu, W., and D. Mackay, 1986. A Critical Review Of Aqueous Solubilities, Vapor Pressures, Henry's Law Constants, And Octanol-Water Partition Coefficients Of The Polychlorinated Biphenyls, J. Phys. Chem. Ref. Data 15(2):911-929.

Shu, H., P. Teitelbaum, A.S. Webb, L. Marple, B. Brunck, D.D. Rossi, F.J. Murray, and D. Paustenbach, 1988. Bioavailability of Soil-Bound TCDD: Dermal Bioavailability in the Rat, Fund Appl Toxicol, 10:335-343.

Stanek, EJ 3rd, Calabrese, EJ. 2000. Daily soil ingestion estimates for children at a Superfund site. Risk Anal. 20(5):627-35.

Taylor, P.R. and C.E. Lawrence, 1992. Polychlorinated Biphenyls: Estimated Serum Half Lives, Br J Ind Med. 49:527-528.

Theis, C.V., 1935. The Relation Between Lowering of the Piezometric Surface and the Rate and Duration of Discharge of a Well Using Groundwater Storage, Am. Geophysical Union Transcript, Volume 16, pp. 519-524.

Tryphonas, L., S. Charbonneau, H. Tryphonas, Z. Awidzka, J. Mes, J. Wong, and D.L. Arnold, 1986. Comparitive Aspects of Aroclor® 1254 Toxicity in Adult Cynomolgus And Rhesus Monkeys: A Pilot Study, Arch Environ Contam Toxicol, 15:159-169.

Umbreit, T.H., E.J. Hesse, and M.A. Gallo, 1986. Bioavailability of Dioxin in Soil from a 2,4,5-T Manufacturing Site, Science, 232:497-499.

USEPA, 1986a. Development of Advisory Levels for Polychlorinated Biphenyls (PCBs) Cleanup, Exposure Assessment Group, Office of Health and Environmental Assessment, Washington, D.C. EPA/600/6-86/002.

USEPA, 1986b. Superfund Public Health Evaluation Manual, Washington, D.C. EPA/540/1-86/060.

USEPA, 1989a. Briefing Report to the EPA Science Advisory Board on the Equilibrium Partitioning Approach to Generating Sediment Quality Criteria, Office of Water Regulations and Standards, Washington, D.C. EPA/440/5-89-002.

USEPA. 1989b. Risk Assessment Guidance for Superfund, Volume 1, Human Health Evaluation Manual, Part A, Interim Final. Office of Emergency and Remedial Response. EPA/540/1-89-002.

USEPA, 1990. Corrective Action for Solid Waste Management Units at Hazardous Waste Management Facilities; Proposed Rule.

USEPA. 1991. Risk Assessment Guidance for Superfund. Volume 1. Human Health Evaluation Manual. Supplemental Guidance. "Standard Default Exposure Factors." March 25, 1991. PB91-921314. USEPA, Washington, DC.

USEPA, May 1992a. Supplemental Guidance to RAGS: Calculating the Concentration Term, Office of Solid Waste and Emergency Response, Washington, D.C. USEPA 9285.7-081.

USEPA, 1992b. Dermal Exposure Assessment: Principles and Applications, Office of Health and Environmental Assessment, Washington, D.C. EPA/600/8-91/011B.

USEPA. 1994. Guidance Manual for the Integrated Exposure Uptake Biokinetic Model for Lead in Children. OSWER #9285.7-15-1

USEPA. 1995. Final Water Quality Guidance for the Great Lakes System. Fed. Reg. 60(56):15366-15425.

USEPA, 1996a. Drinking Water Regulations and Health Advisories, Office of Water, Washington, D.C. EPA 822-8-96-002.

USEPA. 1996b. Soil Screening Guidance: User's Guide. Office of Emergency and Remedial Response. EPA/540/R-96/018.

USEPA, 1997. Exposure Factors Handbook Volume 1: General Factors, Office of Research and Development, Washington, D.C. EPA/600/P-95/002Fa.

USEPA, 1998a. Setting Standards For Safe Drinking Water, Office of Water, Office of Ground Water and Drinking Water. http://www.epa.gov/OGDW/standard/setting.html

USEPA, 1998b. Preliminary Remediation Goals, USEPA Region 9, Waste Program. http://www.epa.gov/region09/waste/sfund/prg

USEPA, 2001. Risk Assessment for Superfund. Volume I: Human Health Evaluation Manual. Supplemental Guidance. Dermal Risk Assessment. Interim Guidance. Office of Emergency and Remedial Response, Washington, D.C. EPA/540/R/99/005.

USEPA, 2002a. Preliminary Remediation Goals. USEPA Region 9, Waste Program. http://www.epa.gov/region09/waste/sfund/prg/index.htm

USEPA. 2002b. Region 4 Supplemental Guidance to RAGS: Human Health Risk Assessment Bulletins. http://www.epa.gov/region4/waste/ots/healtbul.htm

Warman, J.C., Causey, L.V., Burks, J.H., and Ziemond, H.W., 1960, Geology and Ground-water Resources of Calhoun County, Alabama – an interim report: Geological Survey of Alabama Information Series 17, 67 p.

Warman, J.C. and L.V. Causey, 1961, Relation of springs to thrust faults in Calhoun County, Alabama: Geological Survey of Alabama Reprint Series 3, p. 87-94.

Warman, J.C. and L.V. Causey, 1962. Geology and Ground-water Resources of Calhoun County, Alabama, Geological Survey of Alabama, County Report 7.

Wester, R. and H. Maibach, 1975. Percutaneous Absorption in the Rhesus Monkey Compared to Man, Toxicol. Appl. Pharmacol, 32:394-398.

Wester, R.C., H.I. Maibach, D.A.W. Bucks, J. McMaster, and M. Mobayen. 1990. Percutaneous Absorption and Skin Decontamination of PCBs: In Vitro Studies with Human Skin and in Vivo Studies in the Rhesus Monkey, J Toxicol Environ Health, 31:235-246.

Wester, R.C., H.I. Maibach, D.A.W. Bucks, L. Sedik, J. Melendres, C. Liao, and S. DiZio. 1990. Percutaneous Absorption of [^{14}C]DDT and [^{14}C]Benzo[a]Pyrene from Soil, Fund Appl. Pharmacol, 510-516.

Wester, R.C., H.I. Maibach, L. Sedik, and J. Melendres. 1993a. Percutaneous Absorption of PCBs from Soil: In Vivo Rhesus Monkey, In Vitro Human Skin, and Binding to Powdered Human Stratum Corneum. J Toxicol Environ Health, 39:375-382.

Wester, R.C., H.I. Maibach, L. Sedik, J. Melendres, M. Wade, and S. DiZio, 1993b. Percutaneous Absorption of Pentachlorophenol from Soil, Fund. Appl. Pharmacol, 20:68-71.

Wester, R.C., J. Melendres, F. Logan, X. Hui, and H.I. Maibach, 1996. Percutaneous Absorption of 2,4-Dichlorophenoxyacetic Acid from Soil with respect to Soil Load And Skin Contact Time: In Vivo Absorption in Rhesus Monkey and In Vitro Absorption In Human Skin, J. Toxicol. Environ. Health, 47:335-344.

TABLES

TABLE 1
SWMUs and AOCs Where RFI Was Performed

SWMU/AOC	Description	Dimensions	Soil Samples	Thickness of Cover Verified	Condition of Cover	Facility-Wide Hydrogeology/ Groundwater Quality	Surface Water	Existing Data Reviewed	Notes
SWMU 1	South Landfill	21.63 acres	no	no	good	yes	no	yes	Installation of a new cap over the western portion of the landfill
SWMU 2	Landfill Catchment Basins	unknown	no	no	good	yes	no	yes	Part of the WMA-I closure
SWMU 8	Old Limestone Bed Surface Impoundment	163'x165' ellipse with an asphalt cover	no	no	good	yes	yes	yes	Groundwater managed by the OLBSI Corrective Action System
SWMU 9	Former Lagoon	unknown (see Figure 2 for location)	no	no	good	yes	yes	yes	Groundwater managed by the OLBSI Corrective Action System
AOC B	Off-Site Contamination Areas, Including Receiving Waterways	to be determined	off-site	p	good	yes	p	yes	Storm water management controls and other interim measures

p = To be determined in a supplemental workplan.

TABLE 2
SWMUs and AOCs Where Confirmatory Sampling Was Performed

SWMU/AOC	Description	Dimensions	Soil Samples	Thickness of Cover Verified	Condition of Cover	Facility-Wide Hydrogeology/ Groundwater Quality	Surface Water	Existing Data Reviewed	Notes
SWMU 6	Phosphate Landfill	~150'x170' area with a gravel cover. No identifiable limits in the field.	SSR-6, SSR-7	yes	good	yes	no	yes	
SWMU 7	Santotar® Pit	See Figure 2. Gravel Cover. No identifiable limits in the field.	SSR-8, SSR-9	yes	good	yes	no	yes	In 1989 the area was excavated and clean backfill was added to return to grade.
SWMU 12	Phosphoric Acid Basins	North basin (115' to 150' long x 50'wide) with a grass cover. South basin (see Notes).	SSR-3, SSR-4, SSR-5, SSR-15	no	good	yes	no	yes	South basin (115' to 150' long by 50' wide) contains clean fill clay to 10 to 12 feet below grade with an asphalt cover
SWMU 17	Scrap Yard Waste Oil Satellite Accumulation Area	~50'x220' gravel area containing a 28'x12' concrete pad with roof and a 15'x25' concrete pad with partial roof.	SSR-20	yes	good	yes	no	yes	Inspect for residual staining. One sample for TPH was collected.
SWMU 25	Boiler Feed Tank	5' diameter, 1,000 gallon capacity tank. Concrete secondary containment 30'x10'x1.5'	no	no	good	yes	no	yes	Tank is no longer used.

TABLE 2
SWMUs and AOCs Where Confirmatory Sampling Was Performed

SWMU/AOC	Description	Dimensions	Soil Samples	Thickness of Cover Verified	Condition of Cover	Facility-Wide Hydrogeology/ Groundwater Quality	Surface Water	Existing Data Reviewed	Notes
SWMU 27	Santotar® Tank	12' diameter, 22,000 gallon capacity tank. Concrete secondary containmant 40'x30'x42.5"	no	no	good	yes	no	yes	
SWMU 31	Steam Cleaning Pad	10'2"x11'1" concrete pad with a 3' deep grated pit and sump.	SSR-22	yes	good	yes	no	yes	One TPH sample was collected.
SWMU 34	Old Boiler Scrap Yard	~60'x125' area with gravel cover	SSR-21	yes	good	yes	no	yes	Inspect for residual staining. One sample for COPCs was collected.
SWMU 37a	Storm-water Drainage System (Production Area Portion)	22,150 linear feet of underground piping and trenches (site-wide)	SSR-2	N/A	good	yes	SWR-2	yes	
SWMU 41	Former Parathion Production Area	460'x85' area with a gravel cover. Clean fill soil to 20' below grade.	SSR-2, SSR-10, SSR-11, SSR-16	no	good	yes	SWR-1 & SWR-2	yes	
SWMU 42	Former PCB Production Area	Asphalt cap 180'x100'	SSR-12, SSR-13, SSR-18	no	good	yes	yes	yes	Asphalt cap surrounds a control room (45'x35')
SWMU 43	Former Phosphorous Production Area	551'x205' area with a combination of covers.	SSR-2, SSR-19	yes	good	yes	yes	yes	In addition to SSR-2, one sample for COPCs was collected.

TABLE 2
SWMUs and AOCs Where Confirmatory Sampling Was Performed

SWMU/AOC	Description	Dimensions	Soil Samples	Thickness of Cover Verified	Condition of Cover	Facility-Wide Hydrogeology/ Groundwater Quality	Surface Water	Existing Data Reviewed	Notes
SWMU 44	Waste Drum Satellite Accumulation Area	19'x19' concrete pad with 4" deep curbing containment and outlet drain with valve.	no	no	good	yes	no	yes	No staining was evident.
SWMU 46	Former Holding Tanks, Aeration Basins and Clarifiers	~330'x160' area with aggregate rock and gravel cover.	SSR-17	no	good	yes	SWR-1	yes	Inspect for residual staining. One sample for COPCs was collected.
SWMU 47	West End Landfill	unknown (see Figure 2)	no	no	good	yes	no	yes	Upgraded multi-layer cap installed.
AOC A	Product Storage Tank	10' diameter, 15,600 gallon capacity tank with concrete secondary containment 30'x27'x2.5'	no	no	good	yes	no	yes	Corrective action has been completed.
AOC C	Product Underground Storage Tank	unknown (see Figure 2)	SSR-14	no	good	yes	no	yes	Inspect for residual staining.

TABLE 3
Outfall Discharge Descriptions

Outfall Designation	Outfall Description
DSN 001	Manages storm water from the Facility.
DSN 002	Non-storm-water discharge point from plant WWTF to City of Anniston POTW.
DSN 003	Manages storm water from production area.
DSN 004	Manages storm water from PNP Process Area.
DSN 005	Manages storm water from production area.
DSN 006	Manages storm water from the West End Landfill.
DSN 007	Manages storm water from the South Landfill. Routed through the detention basin.
DSN 008	Manages storm water from the South Landfill. Routed through the detention basin.
DSN 009	Manages storm water from the South Landfill. Routed through the detention basin.
DSN 010	Manages storm water from the South Landfill. Routed through the detention basin.
DSN 011	Manages storm water from the South Landfill. Routed through the detention basin.
DSN 012	Manages storm water from the Facility (DSN 001), the South Landfill and the East Side Drainage Control Project.

TABLE 4
Summary of Completed Facility Corrective Measures

SWMU/Area Designation	Type of Remedial Measure
1 - South Landfill (unregulated cells)	Multi-layer cap and drainage controls over waste; clay and vegetated cap around disposal area
6 - Phosphate Landfill	Clay/Gravel Cover
7 - Santotar® Pit	Removal/Clay/Gravel Cover
8 - Old Limestone Bed Surface Impoundment	Partial Removal/Clay/ Asphalt Cap/Gravel Cover
9 - Former Lagoon	Removal (several feet below grade)/Fill Placed/Gravel Cover
12 - Phosphoric Acid Basin (South Basin)	Removal/Clay/Seed
12 - Phosphoric Acid Basin (North Basin)	Decommission/Backfill/Seed
41 - Former Parathion Production Area	Removal/Clay/Gravel Cover
42 - Former PCB Production Area	Decommission/Concrete/Asphalt/Gravel Cover
43 - Former Phosphorous Production Area	Decommission/Concrete/Gravel Cover
46 - Former Hold Tanks, Aeration Basins and Clarifiers	Clay/Gravel Cover
47 - West End Landfill	Multi-Layer Cap and drainage controls
WMA-I - South Landfill (regulated cells 4E/5E)	Multi-Layer Cap (and drainage controls)
WMA-II - New Limestone Bed	Removal/Clay/Seed
AOC-A - Product Storage Tank	Removal of stained gravel, upgrade of spill containment, backup secondary level control circuits
AOC-B - Off-Site Contamination Areas, Including Receiving Waterways	Sediment removal, stormwater controls, soil cover and vegetation
AOC-C - Product Underground Storage Tanks	Tank Removal

Notes:

1) In addition to measures cited, three (3) groundwater corrective action systems have been installed to intercept affected groundwater.
2) The term “Decommission” means the removal of above-grade facilities and connections to underground sewer and process lines, where removal of below grade appurtenances has not been confirmed.
3) The term “Removal” means the excavation of soils and underground structures (including process lines and sewers).

TABLE 5
New Monitoring Well and Piezometer Construction

Well I.D.	Installation Date	Ground Surface Elev. (ft. MSL)	Top of Casing Elev. (ft. MSL)	Depth (ft. BGS)	Screen (ft. BGS)	Screen Elev. (ft. MSL)	Water Level (ft. BTOC)	Water Level Elev. (ft. MSL)
PZR-1	6/18/1998	804.40	806.91	60.00	40.00 - 60.00	744.40 - 764.40	50.94	755.97
PZR-2	6/16/1998	803.50	805.86	60.00	40.00 - 60.00	743.50 - 763.50	50.72	755.14
PZR-3	6/10/1998	802.40	805.05	61.00	41.00 - 61.00	742.40 - 762.40	45.06	759.99
PZR-4	6/17/1998	801.50	803.94	60.00	40.00 - 60.00	741.50 - 761.50	44.00	759.94
PZR-5	6/17/1998	753.30	755.73	46.00	26.00 - 46.00	707.30 - 727.30	22.44	733.29
PZR-6	6/18/1998	754.90	757.09	46.00	26.00 - 46.00	708.90 - 728.90	28.98	728.11
OWR-1S	6/2/1998	736.60	738.89	35.00	25.00 - 35.00	701.60 - 711.60	13.64	725.25
OWR-1D	6/9/1998	737.59	739.59	65.00	55.00 - 65.00	672.59 - 682.59	57.78	681.81
OWR-2S	6/16/1998	754.90	757.46	35.00	25.00 - 35.00	719.90 - 729.90	10.47	746.99
OWR-2D	6/23/1998	754.70	756.99	110.00	98.00 - 108.00	646.70 - 656.70	62.31	694.68
OWR-3S	6/9/1998	758.30	760.48	35.00	25.00 - 35.00	723.30 - 733.30	10.85	749.63
OWR-3D	6/10/1998	757.50	759.76	65.00	55.00 - 65.00	692.50 - 702.50	DRY	DRY
OWR-4D	5/27/1998	741.90	746.03	80.00	70.00 - 80.00	661.90 - 671.90	67.33	678.70
OWR-5D	6/5/1998	802.40	804.93	68.00	58.00 - 68.00	734.40 - 744.40	48.84	756.09
OWR-6D	6/3/1998	734.50	736.79	65.00	55.00 - 65.00	669.50 - 679.50	52.16	684.63
OWR-7D	5/28/1998	772.10	774.49	65.00	55.00 - 65.00	707.10 - 717.10	60.83	713.66
OWR-8S	6/12/1998	752.90	755.17	35.00	25.00 - 35.00	717.90 - 727.90	13.76	741.41
OWR-9S	6/21/1998	750.70	753.09	50.00	40.00 - 50.00	700.70 - 710.70	37.67	715.42

Notes:

Water levels presented in this table were measured on August 11, 1998.

(ft. BGS) = feet below ground surface

Elev. (ft. MSL) = Elevation (feet mean sea level)

(ft. BTOC) = feet below top of casing

TABLE 6
Summary of Soil Sample Locations and Analyses

Sample ID	Approximate Depth (bgs)	Location	Constituents	Other
SSR-1	0 - 2'	Open Grassed Area in Northern area of Facility	COPCs	Soil at surface
SSR-2	0 - 2'	Open Grassed area in DSN 005 drainage area	COPCs	Soil at surface
SSR-3	6" - 2'6"	Downgradient of Phosphoric Acid Basins (SWMU 12)	COPCs	Gravel to ~ 4"
SSR-4	6' - 10'	(Northernmost basin of) Phosphoric Acid Basins (SWMU 12)	COPCs	Augered to prescribed depth
SSR-5	2'6" - 4'6"	Downgradient of Phosphoric Acid Basins (SWMU 12)	COPCs	Root mass/soil to ~ 2'6"
SSR-6	8" - 2'	Phosphate 'Landfill' (SWMU 6)	COPCs	Gravel/soil to ~ 8"
SSR-7	2' - 3'	Phosphate 'Landfill' (SWMU 6)	COPCs	Gravel to ~ 2'
SSR-8	1' - 3'	Santotar Pit (SWMU 7)	COPCs	Gravel to ~ 1'
SSR-9	7" - 2'7"	Santotar Pit (SWMU 7)	COPCs	Gravel to ~ 7"
SSR-10	19' - 21'	Former Parathion Production Area (SWMU 41)	COPCs	Augered to prescribed depth - Dupe 2 collected here
SSR-11	6' - 10'	Former Parathion Production Area (SWMU 41)	COPCs	Augered to prescribed depth - MS/MSD samples collected here
SSR-12	6' - 8'	Former PCB Production Area (SWMU 42)	COPCs	Augered to prescribed depth
SSR-13	6' - 8'	Former PCB Production Area (SWMU 42)	COPCs	Augered to prescribed depth
SSR-14	10' - 12'	Immediately North of Easternmost Underground Product Storage Tanks (AOC C)	COPCs	Augered to prescribed depth
SSR-15	6' - 10'	(Northernmost basin of) Phosphoric Acid Basins (SWMU 12)	COPCs	Augered to prescribed depth - Dupe 1 collected here
SSR-16	10" - 3'	SWMU 41 south of ACL warehouse (SWMU 46)	COPCs	Gravel to ~ 10"

TABLE 6
Summary of Soil Sample Locations and Analyses

Sample ID	Approximate Depth (bgs)	Location	Constituents	Other
SSR-17	1'3" - 3'6"	Additional point between OWR-2S and ACL warehouse (SWMU 46)	COPCs	Gravel to ~ 1'3"
SSR-18	3" - 6"	Additional point in SWMU 44 next to road	COPCs	Gravel to ~ 3" - Dupe 4 collected here - Attempted multiple locations - Could not penetrate
SSR-19	8" - 3'	Former Phosphorous Production Area (SWMU 43)	COPCs	Gravel to 8" - MS/MSD samples collected here
SSR-20	3" - 6"	Scrap Yard Waste Oil Satellite Area (SWMU 17)	TPH	MS/MSD samples collected here - Gravel to 3" - Concrete slab @ 6" bgs - Collected soil on top
SSR-21	4" - 2'6"	Old Boiler Scrap Yard (SWMU 34)	COPCs	Gravel to ~ 4"
SSR-22	4" - 6"	Steam Cleaning Pad (SWMU 31)	TPH	Gravel to ~ 4" - Dupe 3 collected here - Could not penetrate surface below 6" bgs

Notes:

bgs = Below Ground Surface
Dupe = Duplicate sample

TABLE 7
List of Constituents of Potential Concern

Volatile Organic Analysis
1,1,2,2-Tetrachloroethane
Chlorobenzene
Isopropyl benzene (cumene)
Methylene chloride

Organophosphorous Pesticides
Parathion
Methyl parathion
Sulfotepp

Semi-Volatile Organic Analysis
1,2-Dichlorobenzene
1,4-Dichlorobenzene
2,4,5-Trichlorophenol
2,4,6-Trichlorophenol
2,4-Dichlorophenol
Phenol
4-Nitrophenol (paranitrophenol)
Pentachlorophenol
o,o,o-Triethylphosphorothioate

Polychlorinated Biphenyls Analysis
Total PCBs

Inorganic Analysis
Arsenic
Barium
Beryllium
Cadmium
Chromium (Total)
Cobalt
Lead
Manganese
Mercury
Nickel
Vanadium

TABLE 8
Inorganic and Biological Indicators

Inorganic Indicators (Water)
Alkalinity (to pH 4.5) as $CaCO_3$
Dissolved Oxygen
Ferrous (2+)Iron
Nitrate-N
Total Recoverable Phenolics
Total Phosphorus
Standard Plate Count
Sulfate as SO_4
Sulfide
Total Dissolved Solids
Total Kjeldahl Nitrogen-N
Total Organic Carbon
Total Organic Halogen
Total Suspended Solids

Biological Indicators (Water)
Standard Plate Count

Inorganic Indicators (Soil)
Cation Exchange Capacity
Organic Carbon (Walkley-Black)
Acid Volatile Sulfide
Total Organic Carbon

TABLE 9
Groundwater Sampling Results

Parameter	Units	CB-85	CB-85-F	MW-01B	MW-01B-F	OW-06A	OW-09	OW-09-F	OW-10	OW-10-F	OWR-01D	OWR-01D-F	OWR-01S	OWR-01S-F
Inorganic Indicators														
Alkalinity (to pH 4.5) as CaCO3	mg/L	< 1.0	N/A	4.2	N/A	14	N/A	N/A	20	N/A	210	N/A	9.8	N/A
Iron, Ferrous (2+)	mg/L	< 0.10	N/A	< 0.10	N/A	< 0.1	N/A	N/A	< 0.50	N/A	< 0.10	N/A	< 0.050	N/A
Nitrate-N	mg/L	1.2 J	N/A	0.15 J	N/A	0.40	N/A	N/A	1.4 J	N/A	< 0.050	N/A	1.6 J	N/A
Phenolics, Total Recoverables	mg/L	< 0.050	N/A	< 0.050	N/A	< 0.05	N/A	N/A	< 0.050	N/A	< 0.050	N/A	< 0.050	N/A
Phosphorus, Total	mg/L	< 0.044	N/A	< 0.044	N/A	6.8	N/A	N/A	< 0.10	N/A	< 0.044	N/A	< 0.044	N/A
Standard Plate Count	CFU/mL	33 J	N/A	440 J	N/A	10,000	N/A	N/A	730 J	N/A	5,000 J	N/A	1,000 J	N/A
Sulfate as SO4	mg/L	< 5.0	N/A	5.9	N/A	< 5.0	N/A	N/A	< 5.0	N/A	< 5.0	N/A	35	N/A
Sulfide	mg/L	< 0.10	N/A	< 0.10	N/A	< 0.10	N/A	N/A	< 0.10	N/A	< 0.10	N/A	< 0.10	N/A
Total Dissolved Solids	mg/L	33 J	N/A	16 J	N/A	45	N/A	N/A	1,300 J	N/A	300 J	N/A	100 J	N/A
Total Kjeldahl Nitrogen-N	mg/L	0.36	N/A	0.66	N/A	< 0.20	N/A	N/A	3,100	N/A	< 0.20 J	N/A	< 0.20	N/A
Total Organic Carbon	mg/L	< 1.0	N/A	< 1.0	N/A	12	N/A	N/A	< 1.0	N/A	8.2	N/A	< 1.0	N/A
Total Organic Halogen	mg/L	< 0.010	N/A	< 0.010	N/A	< 0.010	N/A	N/A	0.13 J	N/A	110	N/A	< 0.010	N/A
Total Suspended Solids	mg/L	< 5.0 J	N/A	20 J	N/A	140	N/A	N/A	10 J	N/A	7.0 J	N/A	< 5.0 J	N/A
Metals														
Arsenic	mg/L	< 0.010	< 0.010	< 0.010	< 0.010	N/A	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Barium	mg/L	< 0.010	< 0.010	< 0.010	< 0.010	N/A	0.19	0.19	1.0	1.0	0.21	0.13	0.04	0.041
Beryllium	mg/L	< 0.0040	< 0.0040	< 0.0040	< 0.0040	N/A	< 0.0040	< 0.0040	0.0068	0.0043	< 0.0040	< 0.0040	< 0.0040	< 0.0040
Cadmium	mg/L	< 0.0050	< 0.0050	< 0.0050	< 0.0050	N/A	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Chromium	mg/L	< 0.010	< 0.010	< 0.010	< 0.010	N/A	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Cobalt	mg/L	< 0.010	< 0.010	< 0.010	< 0.010	N/A	< 0.010	0.010	0.052	0.049	< 0.010	< 0.010	< 0.010	< 0.010
Lead	mg/L	< 0.0050	0.011 J	< 0.0050	< 0.0050 J	N/A	< 0.0050	0.018	< 0.0050	0.014 J	< 0.0050	0.0068	< 0.0050	< 0.0050 J
Manganese	mg/L	0.025	0.017 J	< 0.010	0.025 J	N/A	0.31	0.33 J	1.5	1.4 J	2.3	0.83	0.25	0.25 J
Mercury	mg/L	< 0.00020	< 0.00020	< 0.00020	< 0.00020	N/A	0.00068	0.00093	0.050	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020
Nickel	mg/L	< 0.0040	< 0.0040	< 0.0040	< 0.0040	N/A	0.0087	0.0092	0.063	0.061	< 0.0040	< 0.0040	< 0.0040	< 0.0040
Vanadium	mg/L	< 0.010	< 0.010	< 0.010	< 0.010	N/A	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Organophosphorus Pesticides														
Methyl parathion	µg/L	< 0.50	N/A	< 0.50	N/A	N/A	< 0.50	N/A	< 0.50	N/A	< 0.50	N/A	< 0.50	N/A
Parathion	µg/L	< 1.0	N/A	< 1.0	N/A	N/A	< 1.0	N/A	< 1.0	N/A	< 1.0	N/A	< 1.0	N/A
Tetraethyldithiopyrophosphate (Sulfotepp)	µg/L	< 0.50	N/A	< 0.50	N/A	N/A	< 0.50	N/A	< 0.50	N/A	< 0.50	N/A	< 0.50	N/A

N/A = Not Analyzed
Q = Field Duplicate
F = Filtered
J = Estimated Value

TABLE 9
Groundwater Sampling Results

Parameter	Units	CB-85	CB-85-F	MW-01B	MW-01B-F	OW-06A	OW-09	OW-09-F	OW-10	OW-10-F	OWR-01D	OWR-01D-F	OWR-01S	OWR-01S-F
PCBs														
Aroclor 1016	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	N/A	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aroclor 1221	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	N/A	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aroclor 1232	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	N/A	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aroclor 1242	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	N/A	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aroclor 1248	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	N/A	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aroclor 1254	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	N/A	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aroclor 1260	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	N/A	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total PCBs	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	N/A	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
SVOCs														
1,2-Dichlorobenzene	µg/L	< 10	N/A	< 10	N/A	N/A	< 10	N/A	< 10	N/A	< 10	N/A	< 10	N/A
1,4-Dichlorobenzene	µg/L	< 10	N/A	< 10	N/A	N/A	< 10	N/A	< 10	N/A	< 10	N/A	< 10	N/A
2,4,5-Trichlorophenol	µg/L	< 10	N/A	< 10	N/A	N/A	< 10	N/A	< 10	N/A	< 10	N/A	< 10	N/A
2,4,6-Trichlorophenol	µg/L	< 10	N/A	< 10	N/A	N/A	< 10	N/A	< 10	N/A	< 10	N/A	< 10	N/A
2,4-Dichlorophenol	µg/L	< 10	N/A	< 10	N/A	N/A	< 10	N/A	< 10	N/A	< 10	N/A	< 10	N/A
4-Nitrophenol	µg/L	< 50	N/A	< 50	N/A	N/A	< 50	N/A	< 50	N/A	< 50	N/A	< 50	N/A
o,o,o-Triethylphosphorothioate	µg/L	< 10	N/A	< 10	N/A	N/A	< 10	N/A	< 10	N/A	< 10	N/A	< 10	N/A
Pentachlorophenol	µg/L	< 1.0	N/A	< 1.0	N/A	N/A	< 1.0	N/A	< 1.0	N/A	< 1.0	N/A	< 1.0	N/A
Phenol	µg/L	< 10	N/A	< 10	N/A	N/A	< 10	N/A	< 10	N/A	< 10	N/A	< 10	N/A
VOCs														
1,1,2,2-Tetrachloroethane	µg/L	< 5.0	N/A	< 5.0	N/A	N/A	< 5.0	N/A	< 5.0	N/A	< 5.0	N/A	< 5.0	N/A
Chlorobenzene	µg/L	< 5.0	N/A	< 5.0	N/A	N/A	< 5.0	N/A	< 5.0	N/A	< 5.0	N/A	< 5.0	N/A
Isopropylbenzene	µg/L	< 5.0	N/A	< 5.0	N/A	N/A	< 5.0	N/A	< 5.0	N/A	< 5.0	N/A	< 5.0	N/A
Methylene chloride	µg/L	< 5.0	N/A	< 5.0	N/A	N/A	< 5.0	N/A	< 5.0	N/A	< 5.0	N/A	< 5.0	N/A

N/A = Not Analyzed
Q = Field Duplicate
F = Filtered
J = Estimated Value

TABLE 9
Groundwater Sampling Results

Parameter	Units	OWR-02D	OWR-02D-Q	OWR-02D AVERAGE	OWR-02D-F	OWR-02D-Q-F	OWR-02D-F AVERAGE	OWR-02S	OWR-02S-F	OWR-03S	OWR-03S-F	OWR-04D	OWR-04D-F	OWR-05D
Inorganic Indicators														
Alkalinity (to pH 4.5) as CaCO3	mg/L	120	120	120	N/A	N/A	N/A	23	N/A	N/A	N/A	N/A	N/A	11
Iron, Ferrous (2+)	mg/L	< 0.10	< 0.10	< 0.10	N/A	N/A	N/A	< 0.10	N/A	N/A	N/A	N/A	N/A	0.14
Nitrate-N	mg/L	1.7 J	1.8 J	1.8 J	N/A	N/A	N/A	2.2 J	N/A	N/A	N/A	N/A	N/A	< 0.050
Phenolics, Total Recoverables	mg/L	< 0.050	< 0.050	< 0.050	N/A	N/A	N/A	< 0.050	N/A	N/A	N/A	N/A	N/A	< 0.050
Phosphorus, Total	mg/L	< 0.044	< 0.044	< 0.044	N/A	N/A	N/A	< 0.044	N/A	N/A	N/A	N/A	N/A	0.039
Standard Plate Count	CFU/mL	720 J	520 J	620 J	N/A	N/A	N/A	740 J	N/A	N/A	N/A	N/A	N/A	960
Sulfate as SO4	mg/L	< 5.0	< 5.0	< 5.0	N/A	N/A	N/A	< 5.0	N/A	N/A	N/A	N/A	N/A	5.0
Sulfide	mg/L	< 0.10	< 0.10	< 0.10	N/A	N/A	N/A	< 0.10	N/A	N/A	N/A	N/A	N/A	< 10
Total Dissolved Solids	mg/L	180 J	170 J	175 J	N/A	N/A	N/A	240 J	N/A	N/A	N/A	N/A	N/A	970
Total Kjeldahl Nitrogen-N	mg/L	0.71 J	0.54 J	0.63 J	N/A	N/A	N/A	< 0.20	N/A	N/A	N/A	N/A	N/A	2.3
Total Organic Carbon	mg/L	< 1.0	< 1.0	< 1.0	N/A	N/A	N/A	3.0	N/A	N/A	N/A	N/A	N/A	23
Total Organic Halogen	mg/L	0.032	0.028 J	0.030 J	N/A	N/A	N/A	0.040	N/A	N/A	N/A	N/A	N/A	1.6
Total Suspended Solids	mg/L	6.0 J	9.0 J	7.5 J	N/A	N/A	N/A	< 5.0 J	N/A	N/A	N/A	N/A	N/A	5,400
Metals														
Arsenic	mg/L	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Barium	mg/L	0.029	0.034	0.032	0.017	0.016	0.017	0.093	0.092	0.038	0.043	0.022	0.025	1.2
Beryllium	mg/L	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040
Cadmium	mg/L	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Chromium	mg/L	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Cobalt	mg/L	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	0.029	0.033	< 0.010	< 0.010	< 0.010	< 0.010	0.079
Lead	mg/L	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050 J	< 0.0050	0.015 J	< 0.0050	< 0.0050 J	< 0.0050
Manganese	mg/L	0.13	0.14	0.14	0.013	0.012 J	0.013 J	4.5	4.5 J	0.27	0.27 J	< 0.010	< 0.010	1.3
Mercury	mg/L	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	0.00025	0.00023	< 0.00020	< 0.00020	0.00057
Nickel	mg/L	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	0.0046	< 0.0040	< 0.0040	0.055
Vanadium	mg/L	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Organophosphorus Pesticides														
Methyl parathion	µg/L	< 0.50	< 0.50	< 0.50	N/A	N/A	N/A	< 0.50	N/A	< 0.50	N/A	< 0.50	N/A	5.5
Parathion	µg/L	< 1.0	< 1.0	< 1.0	N/A	N/A	N/A	< 1.0	N/A	< 1.0	N/A	< 1.0	N/A	28
Tetraethyldithiopyrophosphate (Sulfotepp)	µg/L	< 0.50	< 0.50	< 0.50	N/A	N/A	N/A	< 0.50	N/A	< 0.50	N/A	< 0.50	N/A	< 0.50

N/A = Not Analyzed
Q = Field Duplicate
F = Filtered
J = Estimated Value

TABLE 9
Groundwater Sampling Results

Parameter	Units	OWR-02D	OWR-02D-Q	OWR-02D AVERAGE	OWR-02D-F	OWR-02D-Q-F	OWR-02D-F AVERAGE	OWR-02S	OWR-02S-F	OWR-03S	OWR-03S-F	OWR-04D	OWR-04D-F	OWR-05D
PCBs														
Aroclor 1016	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 10	< 20
Aroclor 1221	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 10	210
Aroclor 1232	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 10	< 20
Aroclor 1242	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 10	< 20
Aroclor 1248	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 10	< 20
Aroclor 1254	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 10	< 20
Aroclor 1260	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 10	< 20
Total PCBs	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 10	210
SVOCs														
1,2-Dichlorobenzene	µg/L	< 10	< 10	< 10	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	N/A	< 10
1,4-Dichlorobenzene	µg/L	< 10	< 10	< 10	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	N/A	< 10
2,4,5-Trichlorophenol	µg/L	< 10	< 10	< 10	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	N/A	< 10
2,4,6-Trichlorophenol	µg/L	< 10	< 10	< 10	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	N/A	< 10
2,4-Dichlorophenol	µg/L	< 10	< 10	< 10	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	N/A	< 10
4-Nitrophenol	µg/L	< 50	< 50	< 50	N/A	N/A	N/A	< 50	N/A	< 50	N/A	< 50	N/A	2,300
o,o,o-Triethylphosphorothioate	µg/L	< 10	< 10	< 10	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	N/A	< 10
Pentachlorophenol	µg/L	< 1.0	< 1.0	< 1.0	N/A	N/A	N/A	1.2	N/A	< 1.0	N/A	< 1.0	N/A	1.2
Phenol	µg/L	< 10	< 10	< 10	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	N/A	< 10
VOCs														
1,1,2,2-Tetrachloroethane	µg/L	< 5.0	< 5.0	< 5.0	N/A	N/A	N/A	< 5.0	N/A	< 5.0	N/A	< 5.0	N/A	< 5.0
Chlorobenzene	µg/L	< 5.0	< 5.0	< 5.0	N/A	N/A	N/A	< 5.0	N/A	< 5.0	N/A	< 5.0	N/A	46
Isopropylbenzene	µg/L	< 5.0	< 5.0	< 5.0	N/A	N/A	N/A	< 5.0	N/A	< 5.0	N/A	< 5.0	N/A	< 5.0
Methylene chloride	µg/L	< 5.0	< 5.0	< 5.0	N/A	N/A	N/A	< 5.0	N/A	< 5.0	N/A	< 5.0	N/A	< 5.0

N/A = Not Analyzed
Q = Field Duplicate
F = Filtered
J = Estimated Value

TABLE 9
Groundwater Sampling Results

Parameter	Units	OWR-05D-F	OWR-06D	OWR-06D-F	OWR-07D	OWR-07D-F	OWR-08S	OWR-08S-Q	OWR-08S AVERAGE	OWR-08S-F	OWR-08S-Q-F	OWR-08S-F AVERAGE	OWR-09S	OWR-09S-F
Inorganic Indicators														
Alkalinity (to pH 4.5) as CaCO3	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Iron, Ferrous (2+)	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Nitrate-N	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Phenolics, Total Recoverables	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Phosphorus, Total	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Standard Plate Count	CFU/mL	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sulfate as SO4	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sulfide	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Dissolved Solids	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Kjeldahl Nitrogen-N	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Organic Carbon	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Organic Halogen	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Suspended Solids	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Metals														
Arsenic	mg/L	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Barium	mg/L	1.3	0.15	0.18	< 0.010	0.017	0.24	0.24	0.24	0.19	0.23	0.21	0.044	0.015
Beryllium	mg/L	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040
Cadmium	mg/L	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Chromium	mg/L	< 0.010	< 0.010	< 0.010	0.031	0.039	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Cobalt	mg/L	0.081	< 0.010	< 0.010	< 0.010	< 0.010	0.029	0.030	0.030	0.024	0.028	0.026	< 0.010	< 0.010
Lead	mg/L	0.021	< 0.0050	< 0.0050	< 0.0050	0.013	< 0.0050	0.0060	0.0055	0.027 J	0.045 J	0.036 J	0.0091	< 0.0050 J
Manganese	mg/L	1.3	0.47	0.66	< 0.010	< 0.010	1.4	1.5	1.5	1.1 J	1.4 J	1.3 J	0.51	0.082 J
Mercury	mg/L	< 0.00020	0.0013	0.00027	< 0.00020	< 0.00020 J	< 0.00020	0.00033 J	0.00027 J	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020
Nickel	mg/L	0.056	0.0095	0.011	< 0.0040	< 0.0040	0.010	0.011	0.011	0.0091	0.010	0.0096	0.016	< 0.0040
Vanadium	mg/L	< 0.010	< 0.010	< 0.010	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	0.018	< 0.010
Organophosphorus Pesticides														
Methyl parathion	µg/L	N/A	< 0.50	N/A	< 0.50	N/A	9.6	9.7	9.7	N/A	N/A	N/A	< 0.50	N/A
Parathion	µg/L	N/A	< 1.0	N/A	< 1.0	N/A	560	730	645	N/A	N/A	N/A	< 1.0	N/A
Tetraethyldithiopyrophosphate (Sulfotepp)	µg/L	N/A	< 0.50	N/A	< 0.50	N/A	1.8	1.9	1.9	N/A	N/A	N/A	< 0.50	N/A

N/A = Not Analyzed
Q = Field Duplicate
F = Filtered
J = Estimated Value

TABLE 9
Groundwater Sampling Results

Parameter	Units	OWR-05D-F	OWR-06D	OWR-06D-F	OWR-07D	OWR-07D-F	OWR-08S	OWR-08S-Q	OWR-08S AVERAGE	OWR-08S-F	OWR-08S-Q-F	OWR-08S-F AVERAGE	OWR-09S	OWR-09S-F
PCBs														
Aroclor 1016	µg/L	< 20	< 1.0	< 1.0	< 1.0	< 1.0	< 10	< 10	< 10	< 10	< 10	< 10	< 1.0	< 1.0
Aroclor 1221	µg/L	< 20	< 1.0	< 1.0	< 1.0	< 1.0	< 10	< 10	< 10	< 10	< 10	< 10	< 1.0	< 1.0
Aroclor 1232	µg/L	< 20	< 1.0	< 1.0	< 1.0	< 1.0	< 10	< 10	< 10	< 10	< 10	< 10	< 1.0	< 1.0
Aroclor 1242	µg/L	< 20	< 1.0	< 1.0	< 1.0	< 1.0	< 10	< 10	< 10	< 10	< 10	< 10	< 1.0	< 1.0
Aroclor 1248	µg/L	< 20	< 1.0	< 1.0	2.2	< 1.0	< 10	< 10	< 10	< 10	< 10	< 10	< 1.0	< 1.0
Aroclor 1254	µg/L	< 20	< 1.0	< 1.0	< 1.0	< 1.0	< 10	< 10	< 10	< 10	< 10	< 10	< 1.0	< 1.0
Aroclor 1260	µg/L	< 20	< 1.0	< 1.0	< 1.0	< 1.0	< 10	< 10	< 10	< 10	< 10	< 10	< 1.0	< 1.0
Total PCBs	µg/L	< 20	< 1.0	< 1.0	2.2	< 1.0	< 10	< 10	< 10	< 10	< 10	< 10	< 1.0	< 1.0
SVOCs														
1,2-Dichlorobenzene	µg/L	N/A	< 10	N/A	< 10	N/A	< 40	< 40	< 40	N/A	N/A	N/A	< 10	N/A
1,4-Dichlorobenzene	µg/L	N/A	< 10	N/A	< 10	N/A	< 40	< 40	< 40	N/A	N/A	N/A	< 10	N/A
2,4,5-Trichlorophenol	µg/L	N/A	< 10	N/A	< 10	N/A	< 40	< 40	< 40	N/A	N/A	N/A	< 10	N/A
2,4,6-Trichlorophenol	µg/L	N/A	< 10	N/A	< 10	N/A	< 40	< 40	< 40	N/A	N/A	N/A	< 10	N/A
2,4-Dichlorophenol	µg/L	N/A	< 10	N/A	< 10	N/A	< 40	< 40	< 40	N/A	N/A	N/A	< 10	N/A
4-Nitrophenol	µg/L	N/A	< 50	N/A	< 50	N/A	390	340	365	N/A	N/A	N/A	< 50	N/A
o,o,o-Triethylphosphorothioate	µg/L	N/A	< 10	N/A	< 10	N/A	330	330	330	N/A	N/A	N/A	< 10	N/A
Pentachlorophenol	µg/L	N/A	< 1.0	N/A	< 1.0	N/A	1.2	< 1.0	1.1	N/A	N/A	N/A	< 1.0	N/A
Phenol	µg/L	N/A	< 10	N/A	< 10	N/A	< 40	< 40	< 40	N/A	N/A	N/A	< 10	N/A
VOCs														
1,1,2,2-Tetrachloroethane	µg/L	N/A	< 5.0	N/A	< 5.0	N/A	< 5.0	< 5.0	< 5.0	N/A	N/A	N/A	< 5.0	N/A
Chlorobenzene	µg/L	N/A	< 5.0	N/A	< 5.0	N/A	< 5.0	< 5.0	< 5.0	N/A	N/A	N/A	< 5.0	N/A
Isopropylbenzene	µg/L	N/A	< 5.0	N/A	< 5.0	N/A	< 5.0	< 5.0	< 5.0	N/A	N/A	N/A	< 5.0	N/A
Methylene chloride	µg/L	N/A	< 5.0	N/A	< 5.0	N/A	36	36	36	N/A	N/A	N/A	< 5.0	N/A

N/A = Not Analyzed
Q = Field Duplicate
F = Filtered
J = Estimated Value

TABLE 9
Groundwater Sampling Results

Parameter	Units	WEL-01	WEL-01-F	WEL-02	WEL-02-F	WEL-03	WEL-03-F	WEL-04	WEL-04-Q	WEL-04-AVERAGE	WEL-04-F	WEL-04-Q-F	WEL-04-F AVERAGE
Inorganic Indicators													
Alkalinity (to pH 4.5) as CaCO3	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Iron, Ferrous (2+)	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Nitrate-N	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Phenolics, Total Recoverables	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Phosphorus, Total	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Standard Plate Count	CFU/mL	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sulfate as SO4	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sulfide	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Dissolved Solids	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Kjeldahl Nitrogen-N	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Organic Carbon	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Organic Halogen	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Suspended Solids	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Metals													
Arsenic	mg/L	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Barium	mg/L	0.16 J	0.029	0.15 J	0.068	0.048 J	0.047	0.074 J	0.01	0.042 J	0.012	0.011	0.012
Beryllium	mg/L	< 0.0040	< 0.0050	< 0.0040	< 0.0040	< 0.0050	< 0.0050	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040
Cadmium	mg/L	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Chromium	mg/L	0.057	< 0.010	0.014	< 0.010	< 0.010	< 0.010	0.012	< 0.010	0.011	< 0.010	< 0.010	< 0.010
Cobalt	mg/L	0.036	< 0.010	0.019	< 0.010	< 0.010	< 0.010	0.012	< 0.010	0.011	< 0.010	< 0.010	< 0.010
Lead	mg/L	0.033	< 0.0050	0.018	< 0.0050	< 0.0050	< 0.0050	0.016	< 0.0050	0.011	< 0.0050	< 0.0050	< 0.0050
Manganese	mg/L	2.0	0.13	1.7	0.19	0.25	0.25	1.1	0.053	0.577	0.058	0.055	0.057
Mercury	mg/L	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020
Nickel	mg/L	0.063	< 0.0040	0.035	0.0057	< 0.0040	< 0.0040	0.025	< 0.0040	0.0145	< 0.0040	< 0.0040	< 0.0040
Vanadium	mg/L	0.081	< 0.010	0.033	< 0.010	< 0.010	< 0.010	0.027	< 0.010	0.019	< 0.010	< 0.010	< 0.010
Organophosphorus Pesticides													
Methyl parathion	µg/L	< 0.50	N/A	< 0.50	N/A	< 0.50	N/A	< 0.50	< 0.50	< 0.50	N/A	N/A	N/A
Parathion	µg/L	< 1.0	N/A	< 1.0	N/A	< 1.0	N/A	< 1.0	< 1.0	< 1.0	N/A	N/A	N/A
Tetraethyldithiopyrophosphate (Sulfotepp)	µg/L	< 0.50	N/A	< 0.50	N/A	< 0.50	N/A	< 0.50	< 0.50	< 0.50	N/A	N/A	N/A

N/A = Not Analyzed
Q = Field Duplicate
F = Filtered
J = Estimated Value

TABLE 9
Groundwater Sampling Results

Parameter	Units	WEL-01	WEL-01-F	WEL-02	WEL-02-F	WEL-03	WEL-03-F	WEL-04	WEL-04-Q	WEL-04-AVERAGE	WEL-04-F	WEL-04-Q-F	WEL-04-F AVERAGE
PCBs													
Aroclor 1016	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aroclor 1221	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aroclor 1232	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aroclor 1242	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aroclor 1248	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aroclor 1254	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aroclor 1260	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total PCBs	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
SVOCs													
1,2-Dichlorobenzene	µg/L	< 10	N/A	< 10	N/A	< 10	N/A	< 10	< 10	< 10	N/A	N/A	N/A
1,4-Dichlorobenzene	µg/L	< 10	N/A	< 10	N/A	< 10	N/A	< 10	< 10	< 10	N/A	N/A	N/A
2,4,5-Trichlorophenol	µg/L	< 10	N/A	< 10	N/A	< 10	N/A	< 10	< 10	< 10	N/A	N/A	N/A
2,4,6-Trichlorophenol	µg/L	< 10	N/A	< 10	N/A	< 10	N/A	< 10	< 10	< 10	N/A	N/A	N/A
2,4-Dichlorophenol	µg/L	< 10	N/A	< 10	N/A	< 10	N/A	< 10	< 10	< 10	N/A	N/A	N/A
4-Nitrophenol	µg/L	< 50	N/A	< 50	N/A	< 50	N/A	< 50	< 50	< 50	N/A	N/A	N/A
o,o,o-Triethylphosphorothioate	µg/L	< 10	N/A	< 10	N/A	< 10	N/A	< 10	< 10	< 10	N/A	N/A	N/A
Pentachlorophenol	µg/L	< 1.0	N/A	< 1.0	N/A	< 1.0	N/A	< 1.0	< 1.0	< 1.0	N/A	N/A	N/A
Phenol	µg/L	< 10	N/A	< 10	N/A	< 10	N/A	< 10	< 10	< 10	N/A	N/A	N/A
VOCs													
1,1,2,2-Tetrachloroethane	µg/L	< 5.0	N/A	< 5.0	N/A	< 5.0	N/A	< 5.0	< 5.0	< 5.0	N/A	N/A	N/A
Chlorobenzene	µg/L	< 5.0	N/A	< 5.0	N/A	< 5.0	N/A	< 5.0	< 5.0	< 5.0	N/A	N/A	N/A
Isopropylbenzene	µg/L	< 5.0	N/A	< 5.0	N/A	< 5.0	N/A	< 5.0	< 5.0	< 5.0	N/A	N/A	N/A
Methylene chloride	µg/L	< 5.0	N/A	< 5.0	N/A	< 5.0	N/A	< 5.0	< 5.0	< 5.0	N/A	N/A	N/A

N/A = Not Analyzed
Q = Field Duplicate
F = Filtered
J = Estimated Value

TABLE 10
Outfall Sampling Results

Parameter	Units	DSN-004	DSN-004	DSN-005	DSN-005	DSN-006	DSN-006	DSN-006	DSN-006	DSN-012	DSN-012	DSN-012	DSN-012
Date		Jun-98	Jul-98	Jun-98	Jul-98	Jan-98	Jun-98	Jul-98	Dec-98	Jan-98	Jun-98	Jul-98	Dec-98
Inorganic Indicators													
Oil & Grease	mg/L	< 5.0	N/A	N/A	N/A	< 5.0	< 5.0	< 5.0	8.3	< 5.0	< 5.0	N/A	8.6
Metals													
Arsenic	mg/L	0.011	N/A	< 0.010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Barium	mg/L	0.036	N/A	0.013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Beryllium	mg/L	< 0.0050	N/A	< 0.0050	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cadmium	mg/L	< 0.0050	N/A	< 0.0050	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chromium	mg/L	< 0.010	N/A	< 0.010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cobalt	mg/L	< 0.010	N/A	< 0.010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Lead	mg/L	< 0.0050	N/A	< 0.0050	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Manganese	mg/L	< 0.010	N/A	< 0.010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mercury	mg/L	< 0.00020	N/A	< 0.00020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Nickel	mg/L	< 0.040	N/A	< 0.040	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Vanadium	mg/L	< 0.010	N/A	< 0.010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Organophosphorus Pesticides													
Methyl parathion	µg/L	< 0.50	N/A	< 0.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Parathion	µg/L	< 1.0	N/A	< 1.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tetraethyldithiopyrophosphate (Sulfotepp)	µg/L	< 0.50	N/A	< 0.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PCBs													
Aroclor 1016	µg/L	< 1.0	< 1.0	< 1.0	N/A	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aroclor 1221	µg/L	< 1.0	< 1.0	< 1.0	N/A	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aroclor 1232	µg/L	< 1.0	< 1.0	< 1.0	N/A	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aroclor 1242	µg/L	< 1.0	< 1.0	< 1.0	N/A	< 1.0	< 1.0	< 1.0	< 1.0	1.5	< 1.0	< 1.0	1.6
Aroclor 1248	µg/L	< 1.0	< 1.0	< 1.0	N/A	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.90	< 1.0	< 1.0
Aroclor 1254	µg/L	0.57	< 1.0	< 1.0	N/A	< 1.0	< 1.0	< 1.0	< 1.0	0.62	0.64	< 1.0	0.54 J
Aroclor 1260	µg/L	0.52	< 1.0	< 1.0	N/A	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.25 J
Total PCBs	µg/L	1.1	< 1.0	< 1.0	N/A	< 1.0	< 1.0	< 1.0	< 1.0	2.1	1.5	< 1.0	2.4

N/A = Not Analyzed
J = Estimated Value

TABLE 10
Outfall Sampling Results

Parameter	Units	DSN-004	DSN-004	DSN-005	DSN-005	DSN-006	DSN-006	DSN-006	DSN-006	DSN-012	DSN-012	DSN-012	DSN-012
Date		**Jun-98**	**Jul-98**	**Jun-98**	**Jul-98**	**Jan-98**	**Jun-98**	**Jul-98**	**Dec-98**	**Jan-98**	**Jun-98**	**Jul-98**	**Dec-98**
SVOCs													
1,2-Dichlorobenzene	µg/L	< 10	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,4-Dichlorobenzene	µg/L	< 10	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2,4,5-Trichlorophenol	µg/L	< 10	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2,4,6-Trichlorophenol	µg/L	< 10	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2,4-Dichlorophenol	µg/L	< 10	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4-Nitrophenol	µg/L	< 50	N/A	< 50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
o,o,o-Triethylphosphorothioate	µg/L	< 10 J	N/A	< 10 J	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pentachlorophenol	µg/L	< 50	N/A	< 50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Phenol	µg/L	< 10	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
VOCs													
1,1,2,2-Tetrachloroethane	µg/L	< 5.0	N/A	< 5.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Benzene	µg/L	< 5.0	< 5.0	< 5.0	< 5.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chlorobenzene	µg/L	< 5.0	N/A	< 5.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ethylbenzene	µg/L	< 5.0	< 5.0	< 5.0	< 5.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Isopropylbenzene	µg/L	< 5.0	N/A	< 5.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Methylene chloride	µg/L	< 5.0	N/A	< 5.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Toluene	µg/L	< 5.0	< 5.0	< 5.0	< 5.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Xylenes	µg/L	< 5.0	< 5.0	< 5.0	< 5.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

N/A = Not Analyzed
J = Estimated Value

TABLE 11
Soil Sampling Results

Parameter	Units	SSR-01	SSR-02	SSR-03	SSR-04	SSR-05	SSR-06	SSR-07	SSR-08	SSR-09	SSR-10	SSR-10-Q	SSR-10 AVERAGE	SSR-11
Inorganic Indicators														
Cation Exchange Capacity	meq/100g	N/A	N/A	N/A	9.4	N/A	N/A	N/A	N/A	N/A	15	17	16	N/A
Organic Carbon (Walkley-Black)	mg/kg	N/A	N/A	N/A	1600	N/A	N/A	N/A	N/A	N/A	130	140	135	N/A
Petroleum Hydrocarbons	mg/kg	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sulfide, Acid Volatile	mg/kg	N/A	N/A	N/A	< 1.2	N/A	N/A	N/A	N/A	N/A	< 1.3	< 1.4	< 1.4	N/A
Total Organic Carbon	mg/kg	N/A	N/A	N/A	4500	N/A	N/A	N/A	N/A	N/A	< 100	200	150	N/A
Metals														
Arsenic	mg/kg	3.9	7.6	3.1	4.2	11	7.9	12	10	14	6.8 J	9 J	7.9 J	13
Barium	mg/kg	18	150	22	43	51	38	62	52	780	25	21	23	23
Beryllium	mg/kg	< 0.55	1.0	< 0.51	< 0.55	< 0.58	< 0.5	< 0.53	< 0.56	0.78	1.5 J	1.9 J	1.7 J	0.69
Cadmium	mg/kg	< 0.55	< 0.55	< 0.51	< 0.55	< 0.58	< 0.5	< 0.53	< 0.56	0.92	< 0.59	< 0.61	< 0.60	< 0.54
Chromium	mg/kg	18	20	7.4	19	38	23	48	18	14	17 J	21 J	19 J	16
Cobalt	mg/kg	2.0	9.1	2.2	5.0	6.1	8.9	17	9.8	12	22 J	45 J	34 J	6.9
Lead	mg/kg	8.7	88	25	41	52	48	220	41	150	39 J	20 J	29.5 J	18
Manganese	mg/kg	70	590	220	120	610	690	620	520	12,000	680 J	1,100 J	890 J	250
Mercury	mg/kg	< 0.033	0.21	0.052	1.1	1.8	0.33	1.4	0.093	0.46	0.076 J	0.011 J	0.044 J	0.032
Nickel	mg/kg	< 4.4	18	5.7	7.5	15	39	2,400	12	120	17 J	26 J	22 J	11
Vanadium	mg/kg	31	39	10	33	42	50	51	45	26	55	67	61	25
Organophosphorus Pesticides														
Methyl parathion	mg/kg	< 0.020	< 0.021	< 0.019	< 0.021	< 0.020	< 0.020	< 0.020	< 0.021	< 0.018	< 0.022	< 0.023	< 0.023	< 0.020
Parathion	mg/kg	< 0.040	< 0.040	< 0.037	< 0.040	< 0.038	< 0.039	< 0.039	< 0.041	< 0.037	< 0.043	< 0.044	< 0.044	< 0.039
Tetraethyldithiopyrophosphate (Sulfotepp)	mg/kg	< 0.020	< 0.021	< 0.019	< 0.021	< 0.020	< 0.020	< 0.020	< 0.021	< 0.018	< 0.022	< 0.023	< 0.023	< 0.020

N/A = Not Analyzed
Q = Duplicate
J = Estimated Value

TABLE 11
Soil Sampling Results

Parameter	Units	SSR-01	SSR-02	SSR-03	SSR-04	SSR-05	SSR-06	SSR-07	SSR-08	SSR-09	SSR-10	SSR-10-Q	SSR-10 AVERAGE	SSR-11
PCBs														
Aroclor 1016	mg/kg	< 0.04	< 2	< 0.37	< 8	< 3.8	< 2	< 39	< 0.041	< 7.3	< 0.043	< 0.045	< 0.044	< 0.039
Aroclor 1221	mg/kg	< 0.04	< 2	< 0.37	< 8	< 3.8	< 2	< 39	< 0.041	< 7.3	< 0.043	< 0.045	< 0.044	< 0.039
Aroclor 1232	mg/kg	< 0.04	< 2	< 0.37	70	< 3.8	< 2	< 39	< 0.041	67	< 0.043	< 0.045	< 0.044	< 0.039
Aroclor 1242	mg/kg	< 0.04	< 2	< 0.37	< 8	< 3.8	< 2	< 39	< 0.041	< 7.3	0.059 J	0.045 J	0.052 J	< 0.039
Aroclor 1248	mg/kg	< 0.04	< 2	< 0.37	< 8	35	< 2	< 39	< 0.041	< 7.3	< 0.043	< 0.045	< 0.044	0.15
Aroclor 1254	mg/kg	0.023	4	0.77	24	44	5.2	170	< 0.041	120	0.028 J	0.02 J	0.024 J	0.054
Aroclor 1260	mg/kg	< 0.04	7.2	1.4	10	27	4.1	59	0.034	95	< 0.043	< 0.045	< 0.044	< 0.039
Total PCBs	mg/kg	0.023	11	2.2	100	110	9.3	230	0.034	280	0.087 J	0.065	0.076 J	0.2
SVOCs														
1,2-Dichlorobenzene	mg/kg	< 0.4	< 0.4	< 0.37	< 0.4	< 0.38	< 0.39	< 1.9	< 0.4	< 0.36	< 0.43	< 0.44	< 0.44	< 0.39
1,4-Dichlorobenzene	mg/kg	< 0.4	< 0.4	< 0.37	< 0.4	< 0.38	< 0.39	< 1.9	< 0.4	< 0.36	< 0.43	< 0.44	< 0.44	< 0.39
2,4,5-Trichlorophenol	mg/kg	< 0.4	< 0.4	< 0.37	< 0.4	< 0.38	< 0.39	< 1.9	< 0.4	< 0.36	< 0.43	< 0.44	< 0.44	< 0.39
2,4,6-Trichlorophenol	mg/kg	< 0.4	< 0.4	< 0.37	< 0.4	< 0.38	< 0.39	< 1.9	< 0.4	< 0.36	< 0.43	< 0.44	< 0.44	< 0.39
2,4-Dichlorophenol	mg/kg	< 0.4	< 0.4	< 0.37	< 0.4	< 0.38	< 0.39	< 1.9	< 0.4	< 0.36	< 0.43	< 0.44	< 0.44	< 0.39
4-Nitrophenol	mg/kg	< 2.1	< 2.0	< 1.9	< 2.1	< 2.0	< 2.0	< 10.0	< 2.1	< 1.9	< 2.2	< 2.3	< 2.3	< 2.0
o,o,o-Triethylphosphorothioate	mg/kg	< 0.4	< 0.4	< 0.37	< 0.4	< 0.38	< 0.39	< 1.9	< 0.4	< 0.36	< 0.43	< 0.44	< 0.44	< 0.39
Pentachlorophenol	mg/kg	< 2.1	< 2.0	< 1.9	< 2.1	< 2.0	< 2.0	< 10.0	< 2.1	< 1.9	< 2.2	< 2.3	< 2.3	< 2.0
Phenol	mg/kg	< 0.4	< 0.4	< 0.37	< 0.4	< 0.38	< 0.39	< 1.9	< 0.4	< 0.36	< 0.43	< 0.44	< 0.44	< 0.39
VOCs														
1,1,2,2-Tetrachloroethane	mg/kg	< 0.005	< 0.0052	< 0.005	< 0.0071	< 0.005	< 0.0056	< 0.0052	< 0.005	< 0.0047	< 0.0057	< 0.0058	< 0.0058	< 0.0049
Chlorobenzene	mg/kg	< 0.005	< 0.0052	< 0.005	< 0.0071	< 0.005	< 0.0056	< 0.0052	< 0.005	< 0.0047	< 0.0057	< 0.0058	< 0.0058	< 0.0049
Isopropylbenzene	mg/kg	< 0.005	< 0.0052	< 0.005	< 0.0071	< 0.005	< 0.0056	< 0.0052	< 0.005	< 0.0047	< 0.0057	< 0.0058	< 0.0058	< 0.0049
Methylene chloride	mg/kg	< 0.005	< 0.0052	< 0.005	< 0.0071	< 0.005	< 0.0056	< 0.0052	< 0.005	< 0.0047	< 0.0057	< 0.0058	< 0.0058	0.033

N/A = Not Analyzed
Q = Duplicate
J = Estimated Value

TABLE 11
Soil Sampling Results

Parameter	Units	SSR-12	SSR-13	SSR-14	SSR-15	SSR-15-Q	SSR-15 AVERAGE	SSR-16	SSR-17	SSR-18	SSR-18-Q	SSR-18 AVERAGE	SSR-19	SSR-20
Inorganic Indicators														
Cation Exchange Capacity	meq/100g	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Organic Carbon (Walkley-Black)	mg/kg	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Petroleum Hydrocarbons	mg/kg	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 11
Sulfide, Acid Volatile	mg/kg	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Organic Carbon	mg/kg	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Metals														
Arsenic	mg/kg	6.9	5.2	4.7	7.2	8.2	7.7	13	12	33 J	19 J	26 J	< 12	N/A
Barium	mg/kg	85	110	48	36 J	28 J	32 J	38	350	55 J	30 J	43 J	65	N/A
Beryllium	mg/kg	0.75	1.0	< 0.49	0.62	< 0.53	0.58	0.83	< 5.6	< 0.51	< 0.52	< 0.52	< 6	N/A
Cadmium	mg/kg	< 0.55	0.73	< 0.49	< 0.55	< 0.53	< 0.54	< 0.55	< 5.6	< 0.51	< 0.52	< 0.52	< 6	N/A
Chromium	mg/kg	23	110	16	40	37	39	25	12	10 J	19 J	15 J	< 12	N/A
Cobalt	mg/kg	3.2	7.5	6.0	4.3	4.0	4.2	7.4	74	4.3 J	3.3 J	3.8 J	47	N/A
Lead	mg/kg	23	36	250	42	40	41	15	35	110 J	85 J	98 J	52	N/A
Manganese	mg/kg	100	360	68	100	120	110	310	5,500	370 J	270 J	320 J	2,600	N/A
Mercury	mg/kg	0.05	0.046	0.079	3.3 J	1.1 J	2.2 J	0.056	0.049	0.42 J	0.28 J	0.35 J	0.055	N/A
Nickel	mg/kg	9.0	33	8.4	8.6 J	6.7 J	7.7 J	18	98	11	13	12	69	N/A
Vanadium	mg/kg	41	36	30	52	47	50	41	67	15 J	9.7 J	12.4 J	93	N/A
Organophosphorus Pesticides														
Methyl parathion	mg/kg	< 0.020	< 0.021	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.021	0.10 J	0.10 J	0.10 J	< 0.022	N/A
Parathion	mg/kg	< 0.038	< 0.040	< 0.038	< 0.040	< 0.038	< 0.039	< 0.039	< 0.040	< 0.037	< 0.037	< 0.037	< 0.043	N/A
Tetraethyldithiopyrophosphate (Sulfotepp)	mg/kg	< 0.020	< 0.021	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.021	< 0.019	< 0.019	< 0.019	< 0.022	N/A

N/A = Not Analyzed
Q = Duplicate
J = Estimated Value

TABLE 11
Soil Sampling Results

Parameter	Units	SSR-12	SSR-13	SSR-14	SSR-15	SSR-15-Q	SSR-15 AVERAGE	SSR-16	SSR-17	SSR-18	SSR-18-Q	SSR-18 AVERAGE	SSR-19	SSR-20
PCBs														
Aroclor 1016	mg/kg	< 0.04	< 4	< 0.78	< 4	< 39	< 22	< 0.04	< 0.041	< 930	< 3,800	< 2365	< 0.043	N/A
Aroclor 1221	mg/kg	< 0.04	< 4	< 0.78	< 4	< 39	< 22	< 0.04	< 0.041	< 930	< 3,800	< 2365	< 0.043	N/A
Aroclor 1232	mg/kg	< 0.04	< 4	< 0.78	< 4 J	720	362 J	< 0.04	< 0.041	< 930	< 3,800	< 2365	< 0.043	N/A
Aroclor 1242	mg/kg	< 0.04	< 4	< 0.78	46 J	< 39	43 J	< 0.04	< 0.041	< 930	< 3,800	< 2365	< 0.043	N/A
Aroclor 1248	mg/kg	0.2	6	2.9	< 4	< 39	< 22	< 0.04	< 0.041	16,000 J	9,800 J	12,900 J	0.48 J	N/A
Aroclor 1254	mg/kg	0.32	10	2.4	12 J	97	55 J	< 0.04	0.14	< 930	< 3,800	< 2365	< 0.043	N/A
Aroclor 1260	mg/kg	0.15	< 4	1.1	7.0 J	44	26 J	< 0.04	0.065	620 J	< 3,800 J	2,210 J	0.027	N/A
Total PCBs	mg/kg	0.67	16	6.4	65 J	860	463 J	< 0.04	0.2	17,000 J	9,800 J	13,400 J	0.51	N/A
SVOCs														
1,2-Dichlorobenzene	mg/kg	< 0.4	< 0.4	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.4	< 37	< 38	< 38	< 0.43	N/A
1,4-Dichlorobenzene	mg/kg	< 0.4	< 0.4	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.4	< 37	< 38	< 38	< 0.43	N/A
2,4,5-Trichlorophenol	mg/kg	< 0.4	< 0.4	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.4	< 37	< 38	< 38	< 0.43	N/A
2,4,6-Trichlorophenol	mg/kg	< 0.4	< 0.4	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.4	< 37	< 38	< 38	< 0.43	N/A
2,4-Dichlorophenol	mg/kg	< 0.4	< 0.4	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.4	< 37	< 38	< 38	< 0.43	N/A
4-Nitrophenol	mg/kg	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.1	< 190	< 190	< 190	< 2.2	N/A
o,o,o-Triethylphosphorothioate	mg/kg	< 0.4	< 0.4	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.4	< 37	< 38	< 38	< 0.43	N/A
Pentachlorophenol	mg/kg	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.1	< 190	< 190	< 190	< 2.2	N/A
Phenol	mg/kg	< 0.4	< 0.4	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.4	< 37	< 38	< 38	< 0.43	N/A
VOCs														
1,1,2,2-Tetrachloroethane	mg/kg	< 0.005	< 0.005	< 0.048	< 0.005	< 0.0048	< 0.0049	< 0.0042	< 0.0045	< 0.0067	< 0.0049	< 0.0058	< 0.0056	N/A
Chlorobenzene	mg/kg	0.017	< 0.005	< 0.048	0.0088	0.017	0.0129	< 0.0042	< 0.0045	< 0.0067	< 0.0049	< 0.0058	< 0.0056	N/A
Isopropylbenzene	mg/kg	< 0.005	< 0.005	< 0.048	< 0.005	< 0.0048	< 0.0049	< 0.0042	< 0.0045	< 0.0067	< 0.0049	< 0.0058	< 0.0056	N/A
Methylene chloride	mg/kg	< 0.005	< 0.005	< 0.048	< 0.005	< 0.0048	< 0.0049	< 0.0042	< 0.0045	< 0.0067	< 0.0049	< 0.0058	< 0.0056	N/A

N/A = Not Analyzed
Q = Duplicate
J = Estimated Value

TABLE 11
Soil Sampling Results

Parameter	Units	SSR-21	SSR-22	SSR-22-Q	SSR-22 AVERAGE
Inorganic Indicators					
Cation Exchange Capacity	meq/100g	N/A	N/A	N/A	N/A
Organic Carbon (Walkley-Black)	mg/kg	N/A	N/A	N/A	N/A
Petroleum Hydrocarbons	mg/kg	N/A	< 11	12	12
Sulfide, Acid Volatile	mg/kg	N/A	N/A	N/A	N/A
Total Organic Carbon	mg/kg	N/A	N/A	N/A	N/A
Metals					
Arsenic	mg/kg	5.7	N/A	N/A	N/A
Barium	mg/kg	49	N/A	N/A	N/A
Beryllium	mg/kg	< 0.54	N/A	N/A	N/A
Cadmium	mg/kg	< 0.54	N/A	N/A	N/A
Chromium	mg/kg	16	N/A	N/A	N/A
Cobalt	mg/kg	9.1	N/A	N/A	N/A
Lead	mg/kg	28	N/A	N/A	N/A
Manganese	mg/kg	670	N/A	N/A	N/A
Mercury	mg/kg	0.3	N/A	N/A	N/A
Nickel	mg/kg	8.6	N/A	N/A	N/A
Vanadium	mg/kg	40	N/A	N/A	N/A
Organophosphorus Pesticides					
Methyl parathion	mg/kg	0.049 J	N/A	N/A	N/A
Parathion	mg/kg	0.056 J	N/A	N/A	N/A
Tetraethyldithiopyrophosphate (Sulfotepp)	mg/kg	< 0.020	N/A	N/A	N/A

N/A = Not Analyzed
Q = Duplicate
J = Estimated Value

TABLE 11
Soil Sampling Results

Parameter	Units	SSR-21	SSR-22	SSR-22-Q	SSR-22 AVERAGE
PCBs					
Aroclor 1016	mg/kg	< 0.039	N/A	N/A	N/A
Aroclor 1221	mg/kg	< 0.039	N/A	N/A	N/A
Aroclor 1232	mg/kg	< 0.039	N/A	N/A	N/A
Aroclor 1242	mg/kg	< 0.039	N/A	N/A	N/A
Aroclor 1248	mg/kg	0.059 J	N/A	N/A	N/A
Aroclor 1254	mg/kg	0.12	N/A	N/A	N/A
Aroclor 1260	mg/kg	0.38	N/A	N/A	N/A
Total PCBs	mg/kg	0.56	N/A	N/A	N/A
SVOCs					
1,2-Dichlorobenzene	mg/kg	< 0.39	N/A	N/A	N/A
1,4-Dichlorobenzene	mg/kg	< 0.39	N/A	N/A	N/A
2,4,5-Trichlorophenol	mg/kg	< 0.39	N/A	N/A	N/A
2,4,6-Trichlorophenol	mg/kg	< 0.39	N/A	N/A	N/A
2,4-Dichlorophenol	mg/kg	< 0.39	N/A	N/A	N/A
4-Nitrophenol	mg/kg	< 2.0	N/A	N/A	N/A
o,o,o-Triethylphosphorothioate	mg/kg	< 0.39	N/A	N/A	N/A
Pentachlorophenol	mg/kg	< 2.0	N/A	N/A	N/A
Phenol	mg/kg	< 0.39	N/A	N/A	N/A
VOCs					
1,1,2,2-Tetrachloroethane	mg/kg	< 0.0048	N/A	N/A	N/A
Chlorobenzene	mg/kg	< 0.0048	N/A	N/A	N/A
Isopropylbenzene	mg/kg	< 0.0048	N/A	N/A	N/A
Methylene chloride	mg/kg	< 0.0048	N/A	N/A	N/A

N/A = Not Analyzed
Q = Duplicate
J = Estimated Value

TABLE 12
Boring Sampling Results

Parameter	Units	OWR-01D	OWR-01S	OWR-02D	OWR-02S	OWR-03D	OWR-03S	OWR-04D	OWR-05D	OWR-06D	OWR-07D	OWR-08S	OWR-09S
Inorganic Indicators													
Cation Exchange Capacity	meq/100g	10	0.022	16	3.6	10	12	0.017	0.0045	0.012	0.008	9.8	9.1
Organic Carbon (Walkley-Black)	mg/kg	3,200	< 130	3,400	3,800	6,500	6,900	< 100	8,000	8,700	< 100	7000	3700
Sulfide, Acid Volatile	mg/kg	< 12	< 13	< 14	< 12	< 12	< 14	< 14	< 12	< 15	< 14	< 13	< 13
Total Organic Carbon	mg/kg	570	1,200	350	760	15,000	180	450	330	640	980	320	1400

TABLE 12
Boring Sampling Results

Parameter	Units	PZR-01	PZR-02	PZR-03	PZR-04	PZR-05	PZR-06
Inorganic Indicators							
Cation Exchange Capacity	meq/100g	11	10	7.9	15	1.7	7.3
Organic Carbon (Walkley-Black)	mg/kg	290	4,700	9,200	1,800	1,400	2,900
Sulfide, Acid Volatile	mg/kg	< 15	< 12	< 13	< 15	< 11	< 12
Total Organic Carbon	mg/kg	260	230	400	510	610	1000

TABLE 13
Variable Head Hydraulic Conductivity Test Results

Well I.D.	Screened Interval (ft. BGS)	Test Type	Hydraulic Conductivity (cm/s)	Unit Screened	Comments	Geometric Mean Hydraulic Conductivity (cm/s)
MW-1B	58 - 63	F	3.5 E-07	shallow residuum		
OW-1	20 - 25	NA	---	shallow residuum	Could not remove pump	
OW-2	19 - 24	NA	---	shallow residuum	Could not remove pump	
OW-3	19 - 24	NA	---	shallow residuum	dry	**Shallow Residuum**
OW-4	22 - 27	NA	---	shallow residuum	dry	
OW-7	38 - 43	F	7.1 E-05	shallow residuum		5.4E-06
OW-8A	15 - 25	R	1.8 E-04	shallow residuum	Water level below top of filter pack	
OW-10	33 - 38	F	2.0 E-07	shallow residuum		
OW-11	9 - 14	F	---	shallow residuum	No response after slug	
OW-12	30 - 35	NA	---	shallow residuum	Could not remove pump	
OW-13	38 - 43	NA	---	shallow residuum	dry	**South Landfill**
OW-14	41 - 46	NA	---	shallow residuum	dry	**Deep Residuum**
OW-15	35 - 40	F	2.1 E-07	shallow residuum		
OW-17	35 - 40	NA	---	shallow residuum	dry	5.54E-05
OWR-1S	25 - 35	F	3.4 E-04	shallow residuum		
OWR-1D	55 - 65	F	4.3 E-08	deep residuum		
OWR-2S	25 - 35	F	4.0 E-04	shallow residuum		**Plant Site**
OWR-2D	98 - 108	F	5.0 E-04	deep residuum		**Deep Residuum**
OWR-3S	25 - 35	F	2.9 E-06	shallow residuum		
OWR-3D	55 - 65	NA	---	deep residuum	dry	2.3E-06
OWR-4D	70 - 80	R	1.3 E-06	deep residuum	Water level below top of filter pack	
OWR-5D	58 - 68	F	1.5 E-04	deep residuum		
OWR-6D	55 - 65	R	3.4 E-06	deep residuum	Water level below top of filter pack	
OWR-7D	55 - 65	R	2.9 E-06	deep residuum	Water level below top of filter pack	
OWR-8S	25 - 35	F	3.4 E-06	shallow residuum		
OWR-9S	40 - 50	F	5.5 E-07	shallow residuum		**Total Residuum**
CB-85	23 - 32	F	5.7 E-07	shallow residuum		
PZR-1	40 - 60	R	2.0 E-05	deep residuum	Water level below top of filter pack	7.2E-06
PZR-2	40 - 60	R	1.3 E-04	deep residuum	Water level below top of filter pack	
PZR-3	41 - 61	R	3.0 E-05	deep residuum	Water level below top of filter pack	
PZR-4	40 - 60	R	4.4 E-05	deep residuum	Water level below top of filter pack	
PZR-5	26 - 46	F	2.7 E-06	shallow/deep residuum		
PZR-6	26 - 46	F	1.6 E-06	shallow/deep residuum		

Notes:
Hydraulic conductivity values were determined by slug test calculations using the Bouwer and Rice slug test equation.
F = falling head slug test
R = rising head slug test
NA = not applicable
(ft. BGS) = feet below ground surface

Table 14
Pumping Test Hydraulic Conductivity Results

Pumping Test I.D.	Well I.D.	Well Type	Analysis Method	Hydraulic Conductivity (ft./day)	Hydraulic Conductivity (cm/second)	Geometric Mean (cm/second)
IW-6 Pumping Test						
	IW-6	Pumping	Theis/Jacob Recovery	1.86E-02	6.57E-06	
	IW-6	Pumping	Neuman	2.44E-02	8.61E-06	
	PZR-2	Observation	Theis/Jacob Recovery	2.09E-02	7.38E-06	1.77E-05
	PZR-2	Observation	Neuman	2.27E-02	8.01E-06	
	PZR-3	Observation	Theis (corrected)	5.39E-01	1.90E-04	
	OWR-5D	Observation	Neuman	2.70E-02	9.53E-06	
	OWR-5D	Observation	Theis/Jacob Recovery	2.50E-02	8.83E-06	
	OWR-5D	Observation	Moench	1.62E-01	5.72E-05	
	OWR-5D	Observation	Theis (corrected)	1.58E-01	5.58E-05	
IW-10 Pumping Test						
	IW-10	Pumping	Theis (corrected)	2.14E-01	7.55E-05	
	IW-10	Pumping	Neuman	6.58E-02	2.32E-05	
	IW-10	Pumping	Theis/Jacob Recovery	4.57E-02	1.61E-05	
	PZR-4	Observation	Moench	5.12E-01	1.81E-04	
						4.76E-05
IW-11 Pumping Test						
	PZR-1	Pumping	Neuman	2.27E-01	8.01E-05	
	IW-11	Pumping	Theis/Jacob Recovery	2.82E-02	9.95E-06	5.28E-05
	PZR-1	Observation	Moench	2.75E-01	9.71E-05	
	PZR-1	Observation	Theis (corrected)	2.84E-01	1.00E-04	
				WMA II Total Geometric Mean		**2.89E-05**
IW-14 Pumping Test						
	IW-14	Pumping	Theis	4.28E-02	1.51E-05	
	PZR-5	Observation	Theis	2.14E-02	7.55E-06	1.07E-05
				Total Site Geometric Mean		**2.60E-05**

Tier 1 Comparison of Maximum Detected Values of Constituents of Potential Concern in Groundwater to Risk-Based Screening Levels

Constiuent of Potential Concern	CAS#	Groundwater Screening Level	RBSLs Benchmark	Maximum Detected Groundwater Concentration	Frequency of Detection/Total Number of Samples	
Volatile Organic Analysis		***(ug/L)***		***(ug/L)***		
1,1,2,2-Tetrachloroethane	79345	0.055	PRG-C	2.5*	0/19	
Chlorobenzene	108907	100 (as monochlorobenzene)	MCL	46	1/19	
Isopropyl benzene (cumene)	988828	660	PRG-N	2.5*	0/19	
Methylene Chloride	**75092**	**5.0**	**MCL**	**36**	**1/19**	
Organophosphorus Pesticides		***(ug/L)***		***(ug/L)***		
Parathion (Ethyl parathion)	**56382**	**200.0**	**ADEM ACL**	**645**	**2/19**	
Methyl parathion	**298000**	**9.1**	**PRG-N**	**9.7**	**2/19**	
Sulfotepp (tetraethyldithiopyrophosphate)	**268245**	**MDL (0.5)**	**ADEM ACL**	**1.9**	**1/19**	
Semi-Volatile Organic Analysis		***(ug/L)***		***(ug/L)***		
1,2-Dichlorobenzene	95501	600	MCL	20*	0/19	
1,4-Dichlorobenzene	106467	75	MCL	20*	0/19	
2,4,5-Trichlorophenol	95954	3600	PRG-N	20*	0/19	
2,4,6-Trichlorophenol	88062	6.1	PRG-C	20*	0/19	
2,4-Dichlorophenol	120832	110	PRG-N	20*	0/19	
Phenol	108952	20000[a]	ADEM ACL	20*	0/19	
4-Nitrophenol (paranitrophenol)	**100027**	**1000[a]**	**ADEM ACL**	**2300**	**2/19**	
Pentachlorophenol	**87865**	**1.0**	**MCL**	**1.2**	**3/19**	
o,o,o-Triethylphosphorothioate	126681	1000	ADEM ACL	330	1/19	
Polychlorinated Biphenyl Analysis		***(ug/L)***		***(ug/L)***	***Unfiltered***	***Filtered***
Total PCBs	**133636 3**	**0.5**	**MCL**	**210**	**2/19**	**0/19**
Inorganic Analysis		***(mg/L)***		***(mg/L)***	***Unfiltered***	***Filtered***
Arsenic	7440382	0.05	MCL	0.005*	0/19	0/19
Barium	7440393	2	MCL	1.3	16/19	17/19
Beryllium	**744041 7**	**0.004**	**MCL**	**0.0068**	**1/19**	**1/19**
Cadmium	7440439	0.005	MCL	0.0025*	0/19	0/19
Chromium (Total)	7440473	0.1	MCL	0.057	4/19	1/19
Cobalt	7440484	2.2	PRG-N	0.081	7/19	5/19
Lead	**743992 1**	**0.015**	**Action Level**	**0.036**	**5/19**	**8/19**
Manganese	**743996 5**	**0.88**	**PRG-N**	**4.5**	**16/19**	**16/19**
Mercury and Compounds	**743997 6**	**0.011**	**PRG-N**	**0.05**	**6/19**	**3/19**
Nickel	7440020	0.73	PRG-N	0.063	9/19	7/19
Vanadium	7440622	0.26	PRG-N	0.081	5/19	0/19

ADEM GPS ACLs – Alabama Groundwater Protection Standard or Alternative Concentration Levels (RCRA permit Table II.4)

MCLs = USEPA Maximum Contaminant levels (USEPA, 2001)

PRG = USEPA Region 9 Preliminary Remediation Goals (PRGs) for tap water (USEPA, 2002); C and N

Tier 1 Comparison of Maximum Detected Values of Constituents of Potential Concern in Groundwater to Risk-Based Screening Levels

denote cancer and noncancer endpoints, respectively
Action Level = USEPA recommended action level
Values in bold exceeded the screening level
* For non detected analytes, one-half (1/2) of the SQL is given.

Tier 1 Comparison of Maximum Detected Values of Constituents of Potential Concern in Northeast Perimeter Groundwater to Surface Water to Risk-Based Screening Levels

Constiuent of Potential Concern	CAS#	Surface Water Screening Level	Maximum Detected Perimeter Well Concentration	Frequency of Detection/Total Number of Samples	
Volatile Organic Analysis		***(ug/L)***	***(ug/L)***		
1,1,2,2-Tetrachloroethane	79345	240	2.5*	0/7	
Chlorobenzene	108907	195	2.5*	0/7	
Isopropyl benzene (cumene)	988828	NA	2.5*	0/7	
Methylene Chloride	75092	1930	2.5*	0/7	
Organophosphorus Pesticides		***(ug/L)***	***(ug/L)***		
Parathion (Ethyl parathion)	56382	**0.013**	0.5*	0/7	
Methyl parathion	298000	NA	0.25*	0/7	
Sulfotepp (tetraethyldithiopyrophosphate)	368245	NA	0.25*	0/7	
Semi-Volatile Organic Analysis		***(ug/L)***	***(ug/L)***		
1,2-Dichlorobenzene	95501	15.8	5*	0/7	
1,4-Dichlorobenzene	106467	11.2	5*	0/7	
2,4,5-Trichlorophenol	95954	NA	5*	0/7	
2,4,6-Trichlorophenol	88062	3.2	5*	0/7	
2,4-Dichlorophenol	120832	36.5	5*	0/7	
Phenol	108952	256	5*	0/7	
4-Nitrophenol (paranitrophenol)	100027	82.8	25*	0/7	
Pentachlorophenol	87865	13	0.5*	0/7	
o,o,o-Triethylphosphorothioate	126681	NA	5*	0/7	
Polychlorinated Biphenyl Analysis		***(ug/L)***	***(ug/L)***	***Unfiltered***	***Filtered***
Total PCBs	1336363	0.014	0.5*	0/7	0/7
Inorganic Analysis		***(mg/L)***	***(mg/L)***	***Unfiltered***	***Filtered***
Arsenic	7440382	0.190	0.005*	0/7	0/7
Barium	**7440393**	**NA (0.079[1])**	**1**	**6/7**	**6/7**
Beryllium	**7440417**	**0.00053**	**0.0068**	**1/7**	**1/7**
Cadmium	7440439	0.00066	0.0025*	0/7	0/7
Chromium (Total)	7440473	0.011 (as VI)	0.005*	0/7	0/7
Cobalt	7440484	NA (0.100)	0.052	1/7	2/7
Lead	**7439921**	**0.00132**	**0.018**	**1/7**	**4/7**
Manganese	**7439965**	**NA (1.0[1])**	**2.3**	**7/7**	**7/7**
Mercury	**7439976**	**0.000012**	**0.05**	**3/7**	**2/7**
Nickel	**7440020**	**0.04040[1]**	**0.063**	**4/7**	**3/7**
Vanadium	**7440622**	**NA (0.012)**	**0.018**	**1/7**	**0/7**

Screening values are from Region IV Ecological Risk Assessment Bulletins, the values in parentheses are MiDEQ final chronic value

(1) Hardness dependent were applied in cases where sample hardness data were available

NA = No screening value available

* For non detected analytes, one-half (1/2) of the SQL is given.

Tier 1 Comparison of Maximum Detected Values of Constituents of Potential Concern in Soil to Risk-Based Screening Levels

Constiuent of Potential Concern	CAS#	USEPA Region 9 PRGs for Industrial Soil (mg/kg)	RBSL Benchmark	USEPA Region 9 PRGs for Protection of Groundwater (mg/kg)	Maximum Detected Soil Concentration (mg/kg)	Frequency of Detection/Total Number of Samples
Volatile Organic Analysis						
1,1,2,2-Tetrachloroethane	79345	9.0E-01	C	3.0E-03	3.55E-03*	0/20
Chlorobenzene	108907	5.4E+02	N	1.0E+00	1.7E-02	2/20
Isopropyl benzene (cumene)	988828	5.2E+02	N	--	3.55E-03*	0/20
Methylene Chloride	**75092**	**2.1E+01**	**C**	**2.0E-02**	**3.3E-02**	**1/20**
Organophosphorus Pesticides						
Parathion (Ethyl parathion)	56382	5.3E+03	N	--	5.6E-02	1/20
Methyl parathion	298000	2.2E+02	N	--	1.0E-01	2/20
Sulfotepp (tetraethyl-dithiopyrophosphate)	368245	4.4E+02	N	--	1.15E-02*	0/20
Semi-Volatile Organic Analysis						
1,2-Dichlorobenzene	95501	3.7E+02	SAT	1.7E+01	1.9E+01*	0/20
1,4-Dichlorobenzene	106467	8.1E+00	C	2.0E+00	1.9E+01*	0/20
2,4,5-Trichlorophenol	95954	8.8E+04	N	2.7E+02	1.9E+01*	0/20
2,4,6-Trichlorophenol	88062	2.2E+02	C	2.0E-01	1.9E+01*	0/20
2,4-Dichlorophenol	120832	2.6E+03	N	1.0E+00	1.9E+01*	0/20
Phenol	108952	1.0E+05	MAX	1.0E+02	1.9E+01*	0/20
4-Nitrophenol (paranitrophenol)	100027	7.0E+03	N	--	9.5E+01*	0/20
Pentachlorophenol	87865	1.1E+01	C	3.0E-02	9.5E+01*	0/20
o,o,o-Triethyl-phosphorothioate	126681	--	--	--	1.9E+01*	0/20
Polychlorinated Biphenyl Analysis						
Total PCBs	**1336363**	**1.0E+00**	**C**	**--**	**1.34E+04**	**19/20**
Inorganic Analysis						
Arsenic	**7440382**	**2.7E+00**	**C**	**2.9E+01**	**2.6E+01**	**19/20**
Barium	7440393	1.0E+05	MAX	1.6E+03	7.8E+02	20/20
Beryllium	7440417	2.2E+03	C	6.3E+01	1.7E+00	8/20
Cadmium	7440439	8.1E+02	N	8.0E+00	9.2E-01	2/20
Chromium (Total)	**7440473**	**4.5E+02**	**C**	**3.8E+01**	**1.1E+02**	**19/20**
Cobalt	7440484	1.0E+05	MAX	--	7.4E+01	20/20
Lead	7439921	7.5E+02	N	--	2.5E+02	20/20
Manganese	7439965	3.2E+04	N	--	1.2E+04	20/20
Mercury	7439976	6.1E+02	N	--	2.2E+00	19/20
Nickel	**7440020**	**4.1E+04**	**N**	**1.3E+02**	**2.4E+03**	**19/20**
Vanadium	7440622	1.4E+04	N	6.0E+03	9.3E+01	20/20

[a] USEPA, 2002. Region 9 Preliminary Remediation Goals

[b] Values in bold exceed the screening level.

Toxicological basis for RBSL: C=cancer; N=noncancer; SAT=saturation; MAX=ceiling limit

Soil saturation equation (sat); or for relatively less toxic inorganic and semi-volatile contaminants a non-risk based ceiling limit concentration is given as 10-5 mg/kg (max).

* For non detected analytes, one-half (1/2) of the SQL is given.

Constituents of Potential Concern in Groundwater that Exceeded Tier 1 Screening Levels

Methylene chloride
Beryllium
Parathion
Methyl Parathion
Sulfotepp (tetraethyldithiopyrophosphate)
4-Nitrophenol (paranitrophenol)
Lead
Manganese
Pentachlorophenol
Polychlorinated biphenyls
Mercury

Constituents of Potential Concern in Groundwater that Exceeded Tier 1 Ecological Screening Levels

Barium
Beryllium
Lead
Manganese
Mercury
Nickel
Vanadium

TABLE 19

Constituents of Potential Concern
in Surficial Soil that Exceeded Tier 1 Screening Levels

Polychlorinated biphenyls
Arsenic
Chromium
Nickel
Methylene chloride

Tier 1 Comparison of Modeled Concentrations in Surface Water to Applicable Risk-Based Screening Levels

Constiuent of Potential Concern	CAS#	Surface Water Screening Level	Modeled Surface Water Concentration
Volatile Organic Analysis		***(ug/L)***	***(ug/L)***
1,1,2,2-Tetrachloroethane	79345	240	1.4E-04
Chlorobenzene	108907	195	1.4E-04
Isopropyl benzene (cumene)	988828	NA	1.4E-04
Methylene Chloride	75092	1930	1.4E-04
Organophosphorus Pesticides		***(ug/L)***	***(ug/L)***
Parathion (Ethyl parathion)	56382	0.013	2.8E-05
Methyl parathion	298000	NA	1.4E-05
Sulfotepp (tetraethyldithiopyrophosphate)	268245	NA	1.4E-05
Semi-Volatile Organic Analysis		***(ug/L)***	***(ug/L)***
1,2-Dichlorobenzene	95501	15.8	2.8E-04
1,4-Dichlorobenzene	106467	11.2	2.8E-04
2,4,5-Trichlorophenol	95954	NA	2.8E-04
2,4,6-Trichlorophenol	88062	3.2	2.8E-04
2,4-Dichlorophenol	120832	36.5	2.8E-04
Phenol	108952	256	2.8E-04
4-Nitrophenol (paranitrophenol)	100027	82.8	1.4E-03
Pentachlorophenol	87865	13	2.8E-05
o,o,o-Triethylphosphorothioate	126681	NA	2.8E-04
Polychlorinated Biphenyl Analysis		***(ug/L)***	***(ug/L)***
Total PCBs	1336363	0.014	2.8E-05
Inorganic Analysis		***(mg/L)***	***(mg/L)***
Arsenic	7440382	0.190	2.8E-07
Barium	7440393	NA (0.079[1])	5.6E-05
Beryllium	7440417	0.00053	3.8E-07
Cadmium	7440439	0.00066	1.4E-07
Chromium (Total)	7440473	0.011 (as VI)	2.8E-07
Cobalt	7440484	NA (0.100)	2.9E-06
Lead	7439921	0.00132	1.0E-06
Manganese	7439965	NA (1.0[1])	1.3E-04
Mercury	7439976	0.000012	2.8E-06
Nickel	7440020	0.04040[1]	3.5E-06
Vanadium	7440622	NA (0.012)	1.0E-06

Screening values are from Region IV Ecological Risk Assessment Bulletins, the values in parenthesis are MiDEQ final chronic value

NA – No screening value available

(1) Hardness dependent were applied in cases where hardness data were available

TABLE 21

Site-specific Variables that Were Used to Replace Default Values in the Calculation of Site-Specific Target Levels (SSTLs)

Exposure Variable	Tier 1 Values	Tier 2 Values				Reference
		Production Workers	Inspector/ Supervisor	Construction Workers	Trespasser	
Exposed Skin Surface Area (cm^2/day)	3300	2290	990 (hands) 1300 (head)	990 (hands) 1300 (head)	5300	USEPA, 2001
Skin Adherence Factor (mg/cm^2)	0.2	0.2	0.046 (hands) 0.004 (head)	0.24 (hands) 0.029 (head)	0.04	USEPA, 2001
Soil Ingestion Rate (mg/day)	50	50	50	480	100	USEPA, 1991; USEPA, 1997; Stanek et al.,1999.
Dermal Absorption Factor	14% (PCBs) 3% (arsenic)	6% (PCBs) 3% (arsenic)				USEPA, 1992
Intestinal Absorption Factor	100% (PCBs)	30% (PCBs) 30% (arsenic)				USEPA, 1986; Roberts et al., 2002
Exposure Frequency (days/year)	250	250	50 @LCA 100 @ HCA	120	24	Solutia, 1998
Exposure Duration (years)	25	25	25	1	10	USEPA, 2002
Target Risk Level	1×10^{-6}	1×10^{-5}				USEPA, 2002

TABLE 22
Toxicity Values Used in the Derivation of Tier 1 Screening Criteria

Chemical	Slope Factor (mg/kg-day)$^{-1}$				Reference Dose (mg/kg-day)				Reference Dose (mg/kg-day)			
	Oral	Inhalation	WOE	Tumor Type	Oral	Confidence Level	Critical Effect	UF/MF	Inhalation	Confidence Level	Critical Effect	UF/MF
Volatile Organic Analysis												
1,1,2,2-Tetrachloroethane	2.0E-01i	2.0E-01 i	C	Hepatocellular carcinoma in mice								
Chlorobenzene					2.0E-02 i	Medium	Histopathological changes in liver	1000	1.7E-02 n		Region 9	
Isopropyl benzene (cumene)					1.0E-01 i	Low	Increased average kidney weight in female rats	1000	1.1E-01 i	Medium	Increased kidney weights in femal rats and adrenal weights in male and female rats	1000
Methylene Chloride	7.5E-03 i	1.6E-03 i	B2	Hepatocellular adenomas and carcinomas and heptacellular cancer and neoplastic nodules in mice								
Organophosphorus Pesticides												
Parathion (Ethyl parathion)					6.0E-03 h		Decreased cholinesterase activity	10	6.0E-03 r		Route to route extrapolation	
Methyl parathion					2.5E-04 i	Medium	RBC, ChE inhibition, reduced hemoglobin, hematocrit and RBCS	100	2.5E-04 r		Route to route extrapolation	
Sulfotepp (tetraethyldithio-pyrophosphate)					5.0E-04 i	Low	Depressed RBC and plasma cholinesterase activity	1000	5.0E-04 r		Route to route extrapolation	
Semi-Volatile Organic Analysis												
1,2-Dichlorobenzene					9.0E-02 i	Low	NOAEL	1000	5.7E-02 h		Decreased weight gain	1000
1,4-Dichlorobenzene	2.4E-02 h	2.2E-02 n	C	Liver tumors in mice								
2,4,5-Trichlorophenol					1.0E-01 i	Low	Liver and kidney pathology	1000	1.0E-01 r		Route to route extrapolation	
2,4,6-Trichlorophenol	1.1E-02 i	1.1E-02 i	B2	Leukemia in rats								
2,4-Dichlorophenol					3.0E-03 i	Low	Decreased delayed hypersensitivity response	100	3.0E-03r		Route to route extrapolation	
Phenol*					6.0E-01 i	Low	Reduced fetal body weight in rats	100	6.0E-01 r		Route to route extrapolation	
4-Nitrophenol (paranitrophenol)					8.0E-03 n		Region 9		8.0E-03 n		Route to route extrapolation	
Pentachlorophenol	1.2E-01 i	1.2E-01 r	B2	Hepatocellular adenoma/carcinoma, pheochromocytoma/ malignant pheochromocytomoa,								

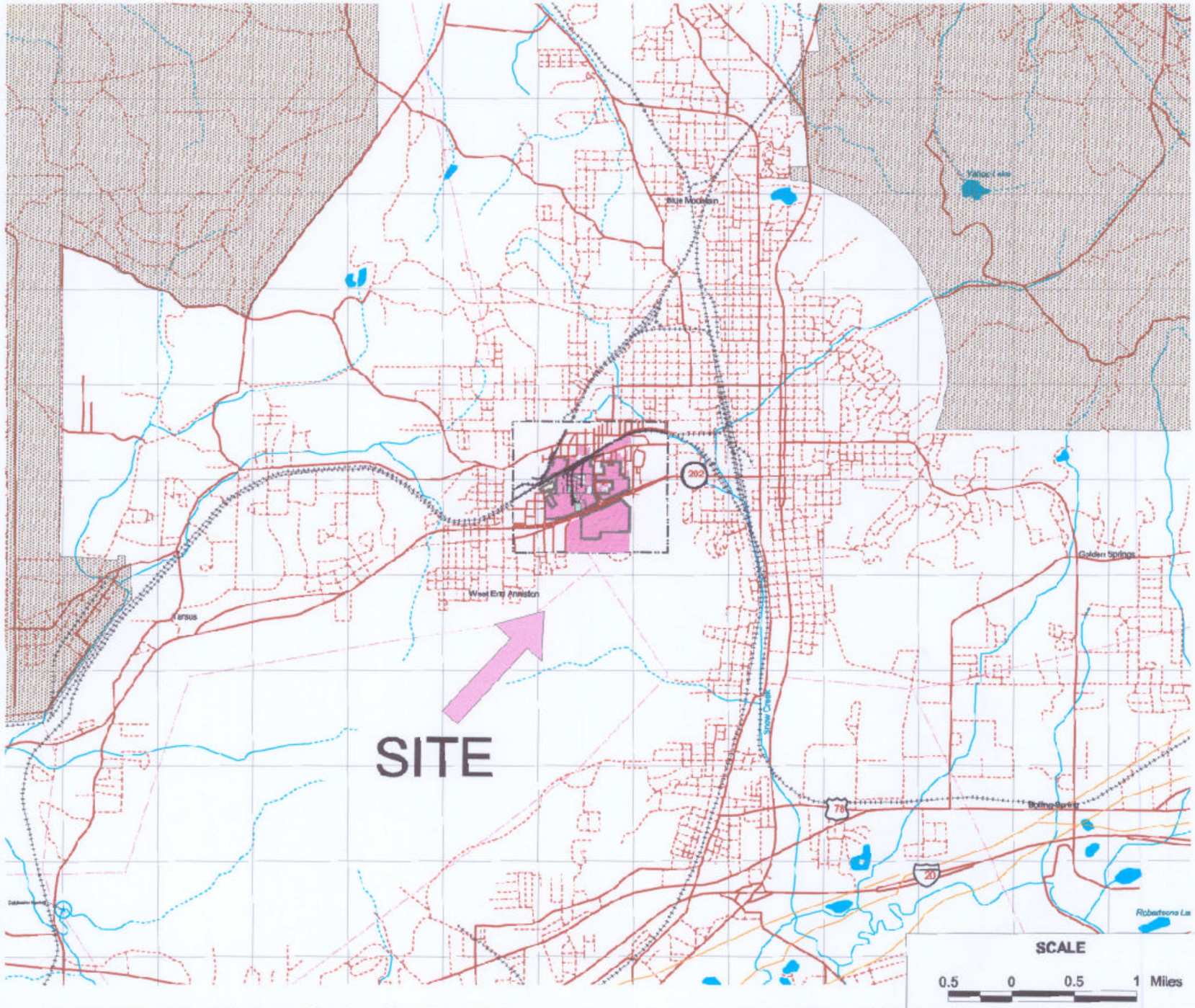
TABLE 22
Toxicity Values Used in the Derivation of Tier 1 Screening Criteria

Chemical	Slope Factor (mg/kg-day)$^{-1}$				Reference Dose (mg/kg-day)				Reference Dose (mg/kg-day)			
	Oral	Inhalation	WOE	Tumor Type	Oral	Confidence Level	Critical Effect	UF/MF	Inhalation	Confidence Level	Critical Effect	UF/MF
				hemangiosarcoma/ hemangioma in mice								
o,o,o-Triethylphosphoro-thioate												
Polychlorinated Biphenyl Analysis												
Total PCBs	2.0E+00 i	2.0E+00 i	B2	Liver hepatocellular adenomas, carcinomas, chlangiomas, or cholangiocarcinomas								
Inorganic Analysis												
Arsenic	1.5E+00 i	1.5E+01	A	Skin cancer in humans; Lung cancer in humans								
Barium					7.0E-02 i	Medium	NOAEL	3	1.4E-04 h		Fetotoxicity	1000
Beryllium		8.4E+00 i	B1	Lung cancer in humans	2.0E-03 i	Low/ Medium	Small intestine lesions	300	5.7E-06 i	Medium	Beryllium sensitization and progression to CBD	10
Cadmium					5.0E-04 i	High	Significant proteinuria	10				
Chromium (Total)		4.2E+01 i	A inhalation	Lung cancer in humans								
Cobalt					6.0E-02 n		Region 9					
Lead					IEUBK Model							
Manganese					2.4E-02 i	Medium	CNS Effects	1	1.4E-05 i	Medium	CNS Effects	1000
Mercury					3.0E-04 i	High	Autoimmune effects	1000				
Nickel					2.0E-02 i	Medium	Decreased body and organ weights	300				
Vanadium					7.0E-03 h		NOAEL (rats)	100				

Sources for toxicity information: i=IRIS (USEPA, 2002c); h=HEAST (USEPA, 1997); n=NCEA (adapted from Region 9, USEPA, 2002b); r=route extrapolation (USEPA, 2002b)

*The reference dose (RfD) has been revised in the IRIS database (9/30/02), this change is not yet reflected in the derivation of the PRG values by Region 9

FIGURES



Site Location

On-Site RFI/CS Program
Solutia Inc., Anniston, Alabama

LEGEND

- Military Reservation
- Property Line
- Alabama Power
- Solutia Inc.
- On-site boundary
- Pipeline
- Powerline
- Railroad - Active
- Railroad - Abandoned
- Major Road
- Minor Road
- River
- Lakes
- Intermittent Stream
- Perennial Stream

NOTES

ZONE	SOURCE
Alabama East 101	Golder Associates (On Site Base Map) United States Geological Survey (USGS) 1:100,000 Scale Digital Line Graph (DLG) data (1981).

MAP PROJECTION	DATUM
US State Plane	NAD83

LOCATION MAP



N

SCALE

0.5 0 0.5 1 Miles

SOLUTIA
Applied Chemistry, Creative Solutions

Golder Associates

DATE:	PRODUCED BY:	PROJECT/FILE No:	FIGURE No:
October 2002	JES	983-3223 G:\...\rfi-gisldlg-24k.apr	1

SWMUs, AOCs, WMAs and Corrective Action Systems

On-Site RFI/CS Program
Solutia Inc., Anniston, Alabama

Old Limestone Bed
SWMU-08, -08A
SWMU-09
SWMU-46
WMA II (SWMU 11 - New Limestone Bed)
AOC-C
SWMU-34
SWMU-17
SWMU-31
SWMU-12
SWMU-12
SWMU-41
SWMU-43
SWMU-44
Plant
AOC-A
SWMU-06
SWMU-42
SWMU-07
SWMU-25
Northern Landfill
WMA I
SWMU-47
SWMU-27
SWMU-01
Western Landfill
AOC-B

LEGEND

- Major Roads
- Minor Roads
- Drainage Basin
- Railroads
- Property Line
- Buildings
- Paved

RFI/CS Actions

- Confirmatory Sampling
- Groundwater Corrective Action
- Additional RFI
- Waste Management Area

NOTES

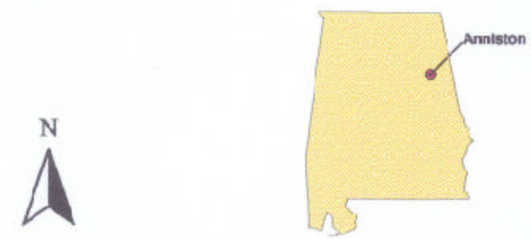
SWMU-37A is located throughout the facility; therefore, it is not shown.
SWMU-02 is located within WMA I and SWMU-01; therefore, it is not shown.
Only the portion of AOC B adjacent to the site is shown.
Other SWMUs not requiring further investigation are not shown.

Refer to RFI/CS text for full explanation of corrective actions.

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps

MAP PROJECTION	DATUM
US State Plane	NAD83

LOCATION MAP



N

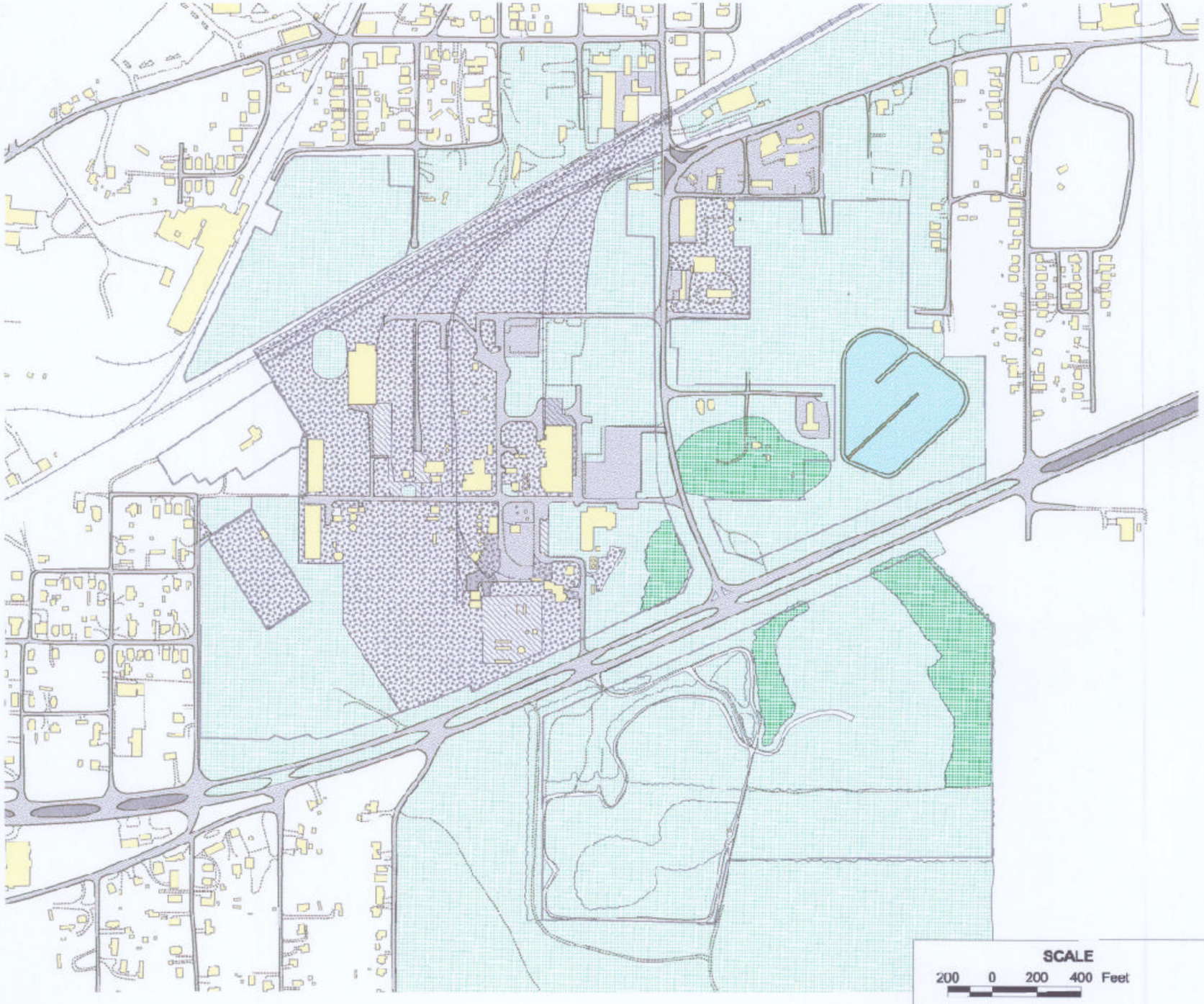
SCALE

200 0 200 400 600 Feet

SOLUTIA
Applied Chemistry, Creative Solutions

Golder Associates

DATE:	PRODUCED BY:	PROJECT/FILE No:	FIGURE No:
October 2002	JES	983-3223 D:\...\rfi-gis\rfi-base.apr	2



Existing Surface Types

On-Site RFI/CS Program
Solutia Inc., Anniston, Alabama

LEGEND

- Major Roads
- Minor Roads
- Drainage Basin
- Railroads
- Property Line
- Buildings
- Concrete
- Gravel
- Gravel-covered asphalt
- Paved
- Grass
- Trees
- Water

NOTES

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps

MAP PROJECTION	DATUM
US State Plane	NAD83

LOCATION MAP



N

SCALE
200 0 200 400 Feet

SOLUTIA
Applied Chemistry, Creative Solutions

Golder Associates

DATE:	PRODUCED BY:	PROJECT/FILE No:	FIGURE No:
October 2002	JES	983-3223 Q:\...rfi-gis\rfi-base.apr	3



Storm Water Outfalls

On-Site RFI/CS Program
Solutia Inc., Anniston, Alabama

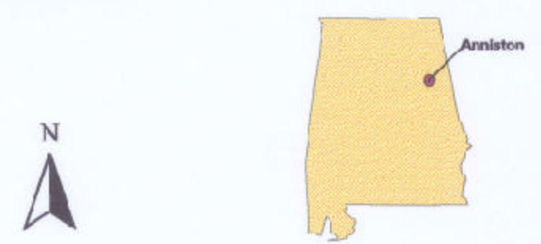
LEGEND

- Railroad
- Major Roads
- Minor Roads
- Basins
- Property Line
- Buildings
- Alabama Power
- Solutia Inc.
- Paved
- Outfalls

NOTES

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps
MAP PROJECTION	**DATUM**
US State Plane	NAD83

LOCATION MAP



SOLUTIA
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Golder Associates

DATE:	PRODUCED BY:	PROJECT/FILE No:	FIGURE No:
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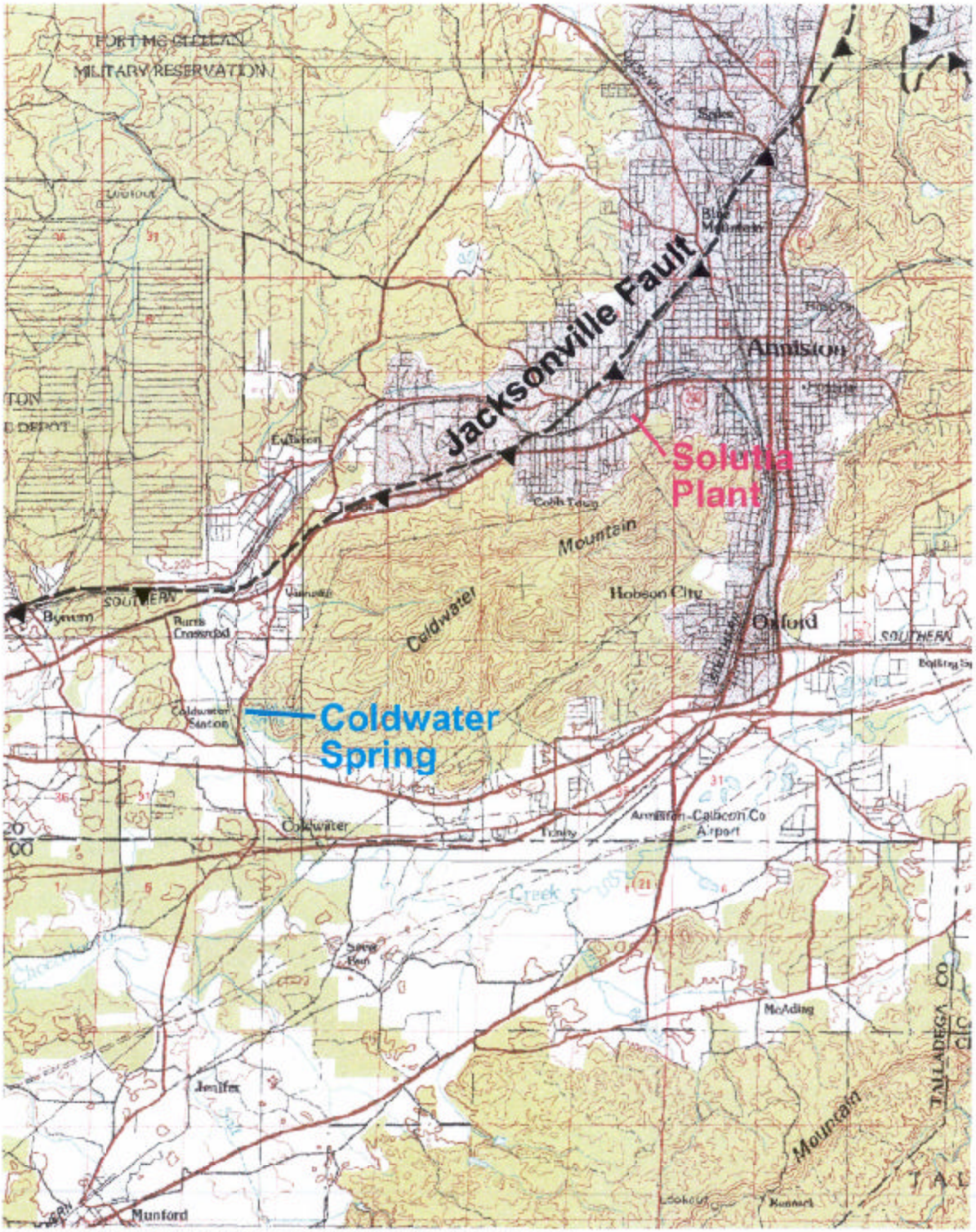
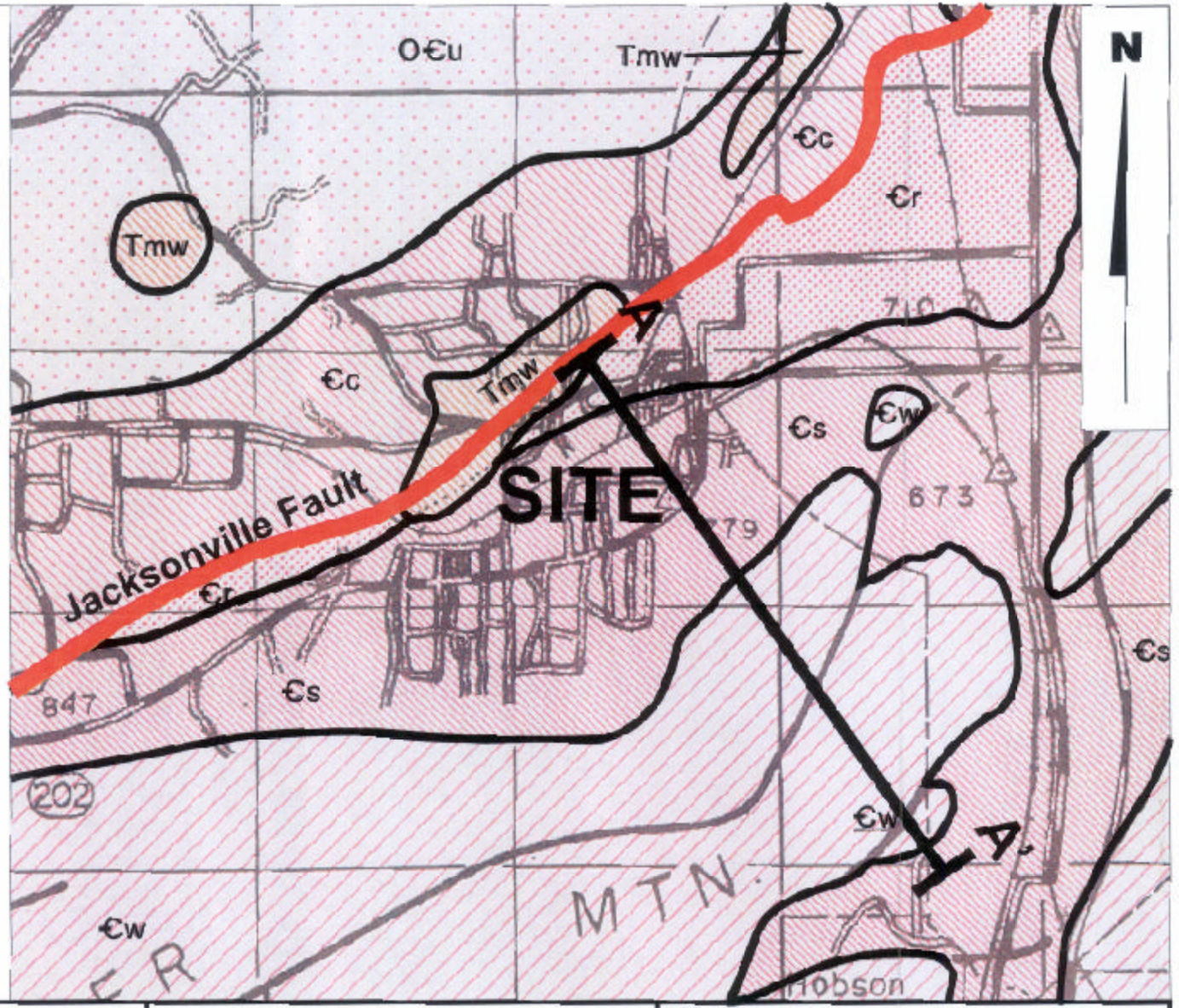


Source: USGS 1:100,000 DRG, Anniston, Calhoun County, Alabama

Golder Associates Atlanta, Georgia	TITLE: Location of Jacksonville Fault Line				
CLIENT/PROJECT: On-Site RFI/CS Program	DRAWN: JES	DATE: October 2002	JOB NO: 943-3680043		
	CHECKED: CDH	SCALE: NTS	DWG NO.	REV. NO.	
	REVIEWED: SM	FILE NO.: 2 cold.cdr	SUBTITLE	FIGURE NO.: 5	



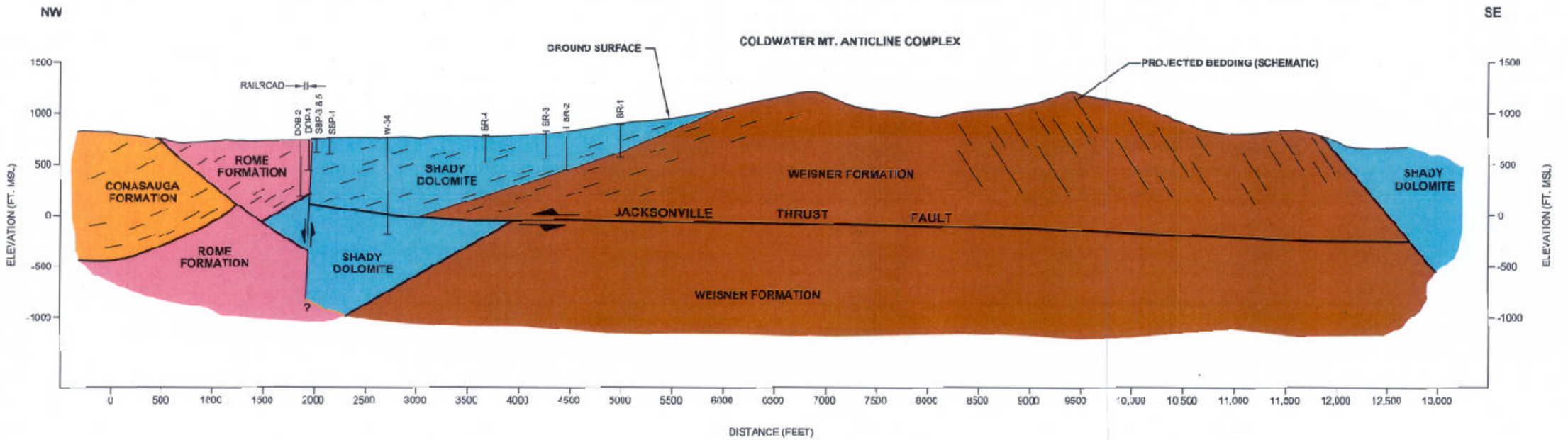
System	Symbol	Stratigraphic Unit
Tertiary	Tmw	Deposits of Midway or Wilcox age and younger deposits
Cambrian	OCu	Chepultepec Dolomite, Copper Ridge Dolomite, and Ketona Dolomite, undifferentiated
	Cc	Conasauga Formation
	Cr	Rome Formation
	Cs	Shady Dolomite
	Cw	Weisner Formation

Scale in Miles

0 1/2 1 2

Ref. Warman and Causey, 1962

CLIENT/PROJECT						TITLE		
On-Site RFI/CS Program			Golder Associates Atlanta, Georgia			Excerpt from Geologic Map of Calhoun County with Regional Geologic Cross-Section Location		
DRAWN	CHECKED	REVIEWED	DATE	SCALE	FILE NO.	JOB NO.	DWG NO./REV NO.	FIGURE
JES	SM	COH	October 2002	As Shown		943-3680043	2_discont.cdr	6



NOTES:

1.) TOPOGRAPHY FROM ANNISTON USGS 7.5 MINUTE QUADRANGLE (1956 - PHOTOREVISED 1972).

2.) SURFACE GEOLOGIC CONTACTS TAKEN FROM WARMAN & CAUSEY (1962), MODIFIED BY GAI WHERE SUBSURFACE DATA DICTATES.

3.) ATTITUDE AND AMOUNT OF OFFSET ALONG JACKSONVILLE FAULT IS UNKNOWN. INFERRED IN THIS SECTION TO BE A LOW ANGLE THRUST FAULT (Pers. comm. ED OSBORNE) WITH MINIMAL OFFSET.

4.) ATTITUDES OF ALL STRATIGRAPHIC CONTACTS SHOWN ON THIS SECTION ARE INFERRED. ATTITUDE OF BEDDING IN THE ROME FORMATION AND SHADY DOLOMITE SHOWN ON THIS SECTION IS ALSO INFERRED DUE TO SURFACE CONCEALMENT BY UP TO 100 FT. OF RESIDUAL AND/OR COLLUVIAL SOILS. BEDDING DEPICTED IN THE WEISNER FORMATION IS A SIMPLIFICATION OF PRELIMINARY GEOLOGIC SURVEY OF ALABAMA MAPPING DATA (ED OSBORNE).

5.) THICKNESS OF ROME FORMATION AND SHADY DOLOMITE ASSUMED TO BE 1000 FEET (WARMAN & CAUSEY, 1962).

6.) DETAILED DRILLING LOG FOR DOB-2 NOT AVAILABLE, USED SCHEMATIC CROSS SECTION FROM GERAGHTY & MILLER, 1995.

7.) NORMAL FAULT CONTACT INFERRED, BASED ON PRESENCE OF ROME FORMATION AND SHADY DOLOMITE IN DCP-1 AND DOB-2 (ROME) AND SBP-3 AND SBP-5 (SHADY).

8.) BOREHOLES PROJECTED ALONG GEOLOGIC STRIKE INTO SECTION LINE.

SCALE IN FEET

0 1000 2000

Golder Associates — Atlanta, Georgia

CLIENT/PROJECT: ON-SITE RFI/CS PROGRAM

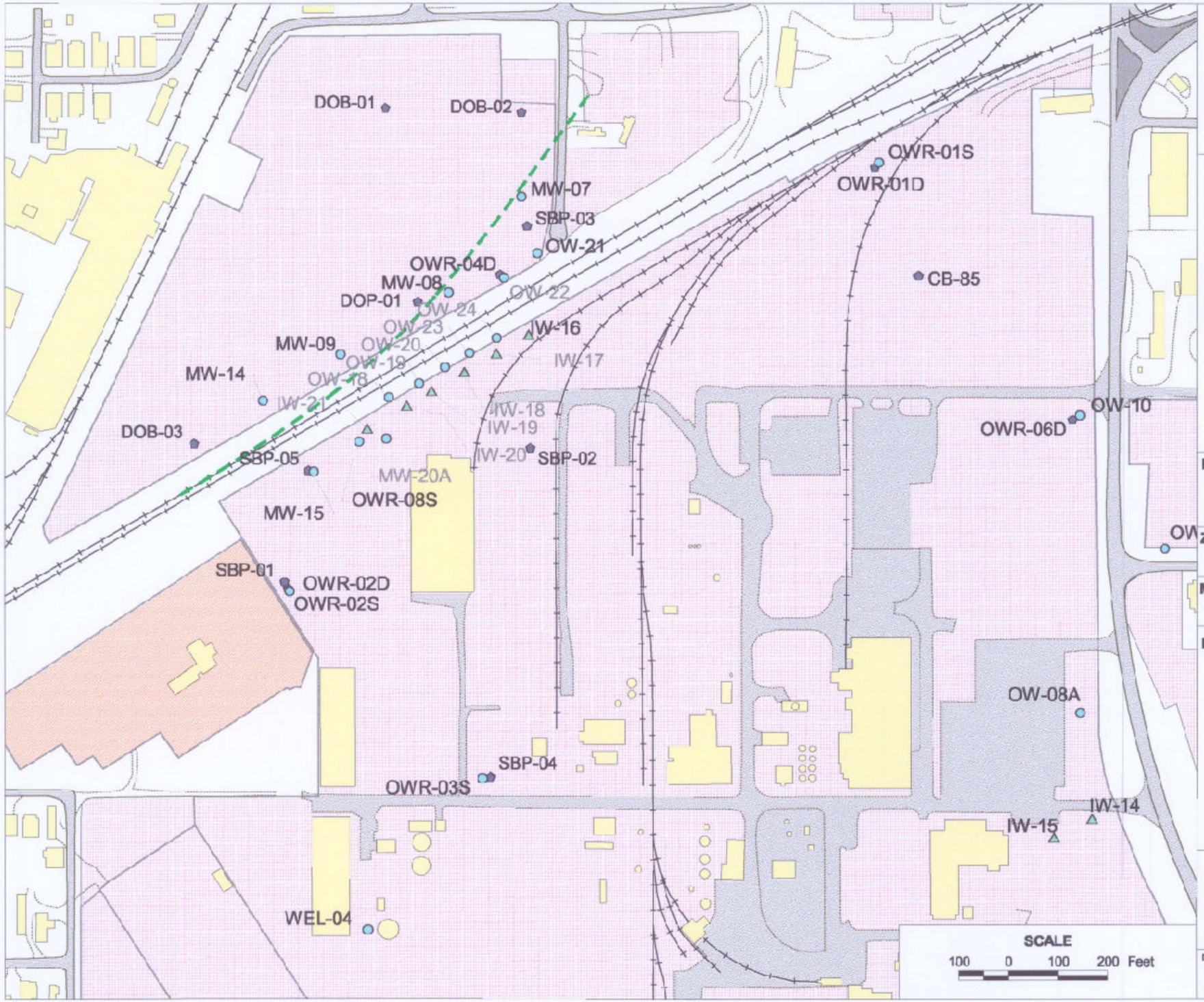
TITLE: GEOLOGIC CROSS SECTION

DRAWN	RJC	DATE	10/02	JOB NO.	943-3680
CHECKED	CJH	SCALE	AS SHOWN	DWG. NO.	geosec 2
REVIEWED	SM	FILE NO.	943-3680	SUBTITLE	
REV. NO.		FIGURE NO.	7		

Discontinuity Location

On-Site RFI/CS Program

Solutia Inc.
Anniston, Alabama



LEGEND

- On-Site Boundary
- Major Roads
- Minor Roads
- Drainage Basin
- Powerlines
- Railroads
- Buildings
- Alabama Power
- Solutia Inc.
- Shallow Residuum Monitoring/ Observation Well
- Bedrock Monitoring Well
- Interceptor Well
- Deep Residuum Monitoring/ Observation Well
- Approximate Discontinuity Location

NOTES

Geologic discontinuity location obtained from Geraghty and Miller, Inc. Bedrock Investigation, 1992

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps

MAP PROJECTION	DATUM
US State Plane	NAD83

LOCATION MAP



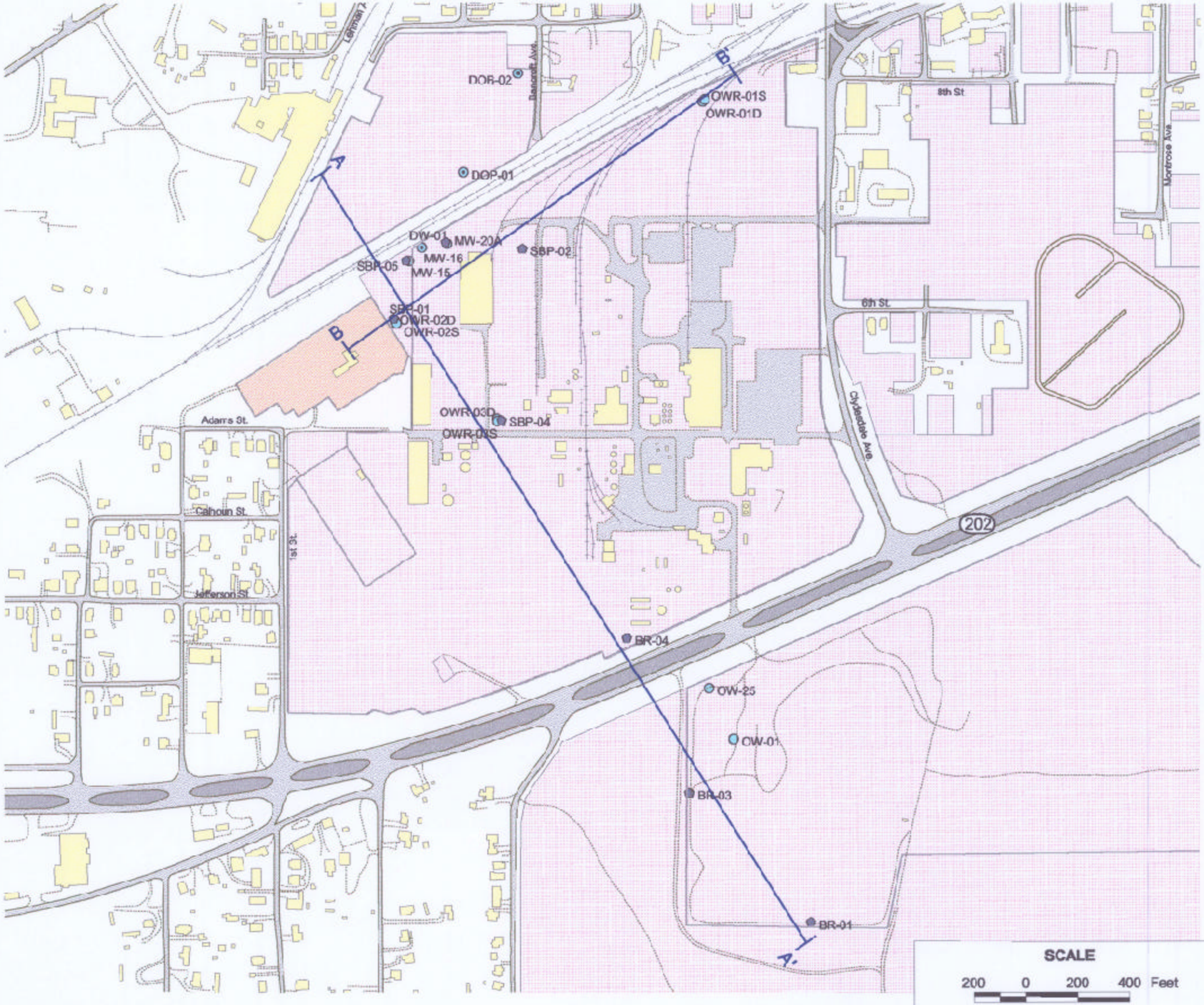
SOLUTIA
Applied Chemistry, Creative Solutions

Golder Associates

DATE:	PRODUCED BY:	PROJECT/FILE No:	FIGURE NO.
October 2002	JES	983-3223 Q:\...\rfi-gis\rfi-swmu.apr	8

Hydrogeologic Cross-Sections A-A' and B-B'

On-Site RFI/CS Program
Solutia Inc., Anniston, Alabama



LEGEND

- Railroad
- On-site Boundary
- Major Roads
- Minor Roads
- Basin
- Property Line
- Buildings
- Alabama Power
- Solutia Inc.
- Paved
- Shallow Residuum Monitoring/ Observation Well
- Deep Residuum Monitoring/ Observation Well
- Bedrock Monitoring Well

NOTES

SBP-03, W-34, & BR-02 are not used in the A-A' cross-section.

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps
MAP PROJECTION	**DATUM**
US State Plane	NAD83

LOCATION MAP



SCALE

200 0 200 400 Feet

SOLUTIA
Applied Chemistry, Creative Solutions

Golder Associates

DATE:	PRODUCED BY:	PROJECT/FILE No:	FIGURE No:
October 2002	JES	983-3223 Q:\...\rfi-gs\rfi-bssf.apr	9

A (NW)

A' (SE)

ELEVATION (FT. MSL)

900
850
800
750
700
650
600
550
500
450
200

DOP-1 OFF. 456'NE
DOB-2 OFF. 835'NE
MW-15 OFF. 100'NE
SBP-05 OFF. 103'NE
SBP-01 OFF. 70'SW
OWR-2D OFF. 70'SW
OWR-2S OFF. 70'SW
OWR-3D OFF. 50'NE
OWR-3S OFF. 50'NE
SBP-04 OFF. 50'NE
BR-04 OFF. 20'NE
OW-01 OFF. 160'NE
OW-2S OFF. 185'NE
BR-03 OFF. 30'NE
BR-01 OFF. 30'NE

EXISTING GROUND SURFACE

DRY

CONTACT(?)

ROME FORMATION

SHADY DOLOMITE

WEISNER FORMATION

CONTACT

LEGEND

- DOLOSTONE
- HIGHLY WEATHERED SHALE/SILTSTONE
- QUARTZITE/ SANDSTONE
- WEATHERED DOLOSTONE
- RESIDUAL CLAYEY/ SILTY SOIL
- FILL

WELL DESIGNATION SBP-04

WATER LEVEL 8/11/98

SCREENED INTERVAL

SCALE IN FEET

0 300 600

VERTICAL EXAGGERATION = 6X

NOTES:
1. GROUND SURFACE PROFILE ESTIMATED FROM BORING ELEVATIONS.
2. WATER LEVEL DATA MEASURED CONCURRENTLY ON 8/11/98.
3. LITHOLOGIC CONTACTS ARE INTERPOLATED BETWEEN BORINGS AND ARE APPROXIMATE.
4. CONTACT INFORMATION TAKEN FROM WARMAN AND CAUSEY 1962.

Golder Associates Atlanta, Georgia

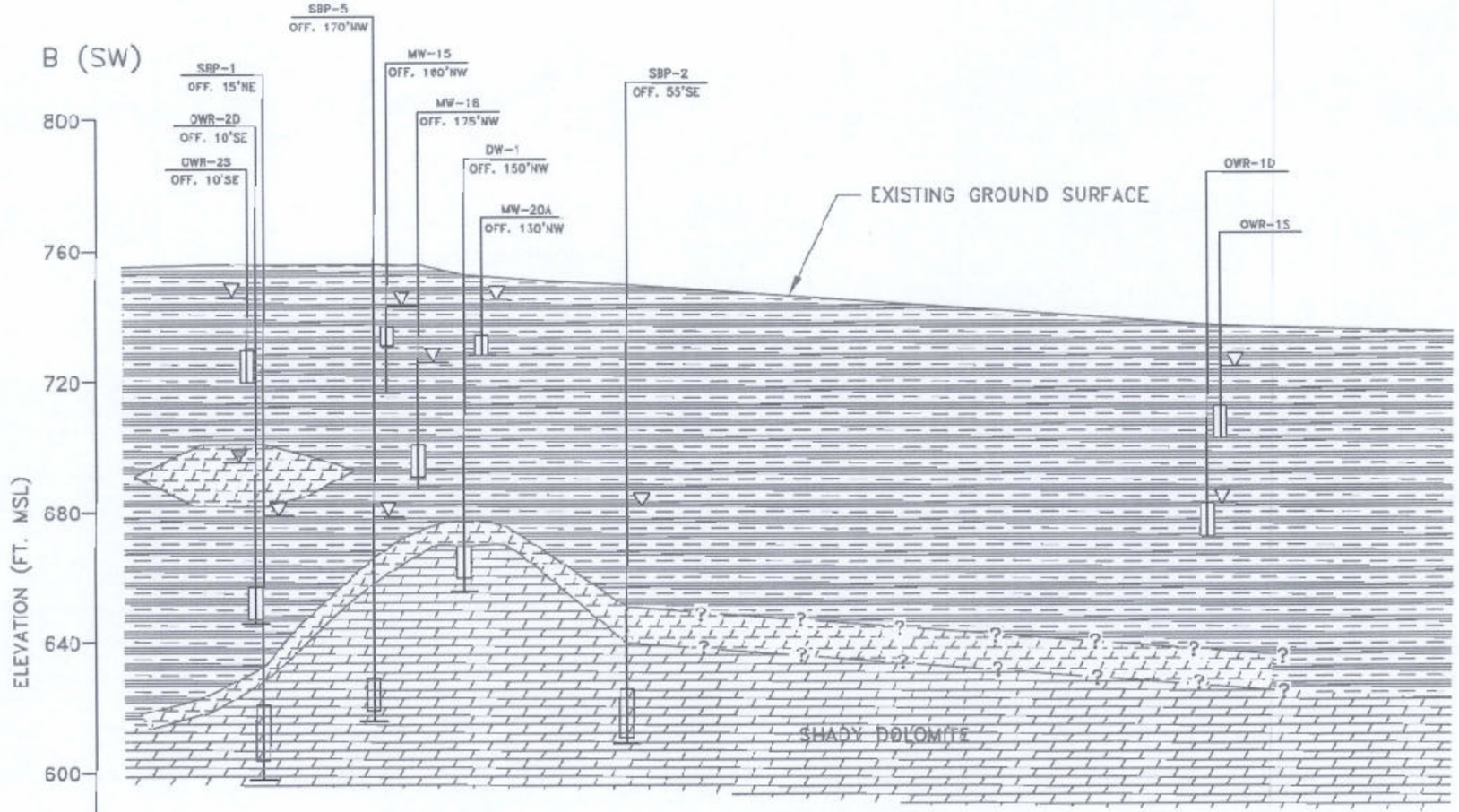
CLIENT/PROJECT
ON-SITE RFI/CS PROGRAM

TITLE
HYDROGEOLOGIC CROSS SECTION A-A'

DRAWN	JLW	DATE	10/02	JOB NO.	943-3680
CHECKED	COH	SCALE	AS SHOWN	DWG. NO.	REV. NO.
REVIEWED	SM	FILE NO.	943-3680	SUBTITLE	FIGURE NO.

368

10



LEGEND

- DOLOSTONE
- HIGHLY WEATHERED SHALE/SILTSTONE
- QUARTZITE/ SANDSTONE
- WEATHERED DOLOSTONE
- RESIDUAL CLAYEY/ SILTY SOIL
- FILL

WELL DESIGNATION SBP-04

WATER LEVEL 8/11/98

SCREENED INTERVAL

SCALE IN FEET

0 200 400

VERTICAL EXAGGERATION = 5X

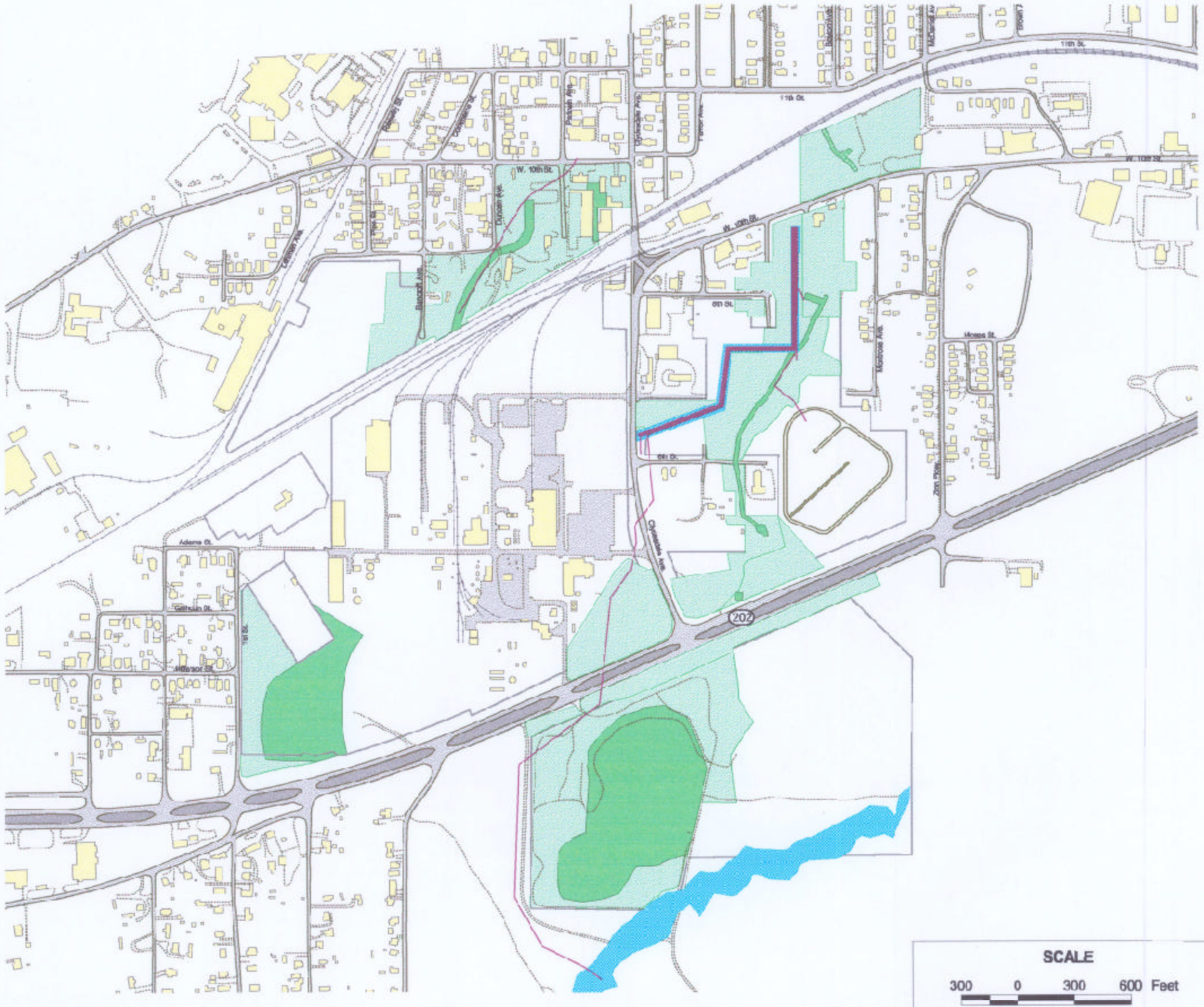
NOTES:
1. GROUND SURFACE PROFILE ESTIMATED FROM BORING ELEVATIONS.
2. WATER LEVEL DATA MEASURED CONCURRENTLY ON 8/11/98.
3. LITHOLOGIC CONTACTS ARE INTERPOLATED BETWEEN BORINGS AND ARE APPROXIMATE.
4. CONTACT INFORMATION TAKEN FROM WARMAN AND CAUSEY 1962.

Golder Associates — Atlanta, Georgia

CLIENT/PROJECT: ON-SITE RFI/CS PROGRAM

TITLE: HYDROGEOLOGIC CROSS SECTION B-B'

DRAWN	JLW	DATE	10/02	JOB NO.	943-3680
CHECKED	COH	SCALE	AS SHOWN	DWG. NO.	369
REVIEWED	SM	FILE NO.	943-3680	REV. NO.	
		SUBTITLE		FIGURE NO.	11



Interim Measures

On-Site RFI/CS Program
Soluti a Inc., Anniston, Alabama

LEGEND

- Railroads
- Major Roads
- Minor Roads
- Basins
- Property Line
- Buildings
- Paved
- Sewer Main Line
- Other Sewer Line
- Pipe Line
- Berm
- Landfill Cover
- HDPE Liner

NOTES

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps
MAP PROJECTION	**DATUM**
US State Plane	NAD83

LOCATION MAP



SCALE

300 0 300 600 Feet

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Applied Chemistry, Creative Solutions

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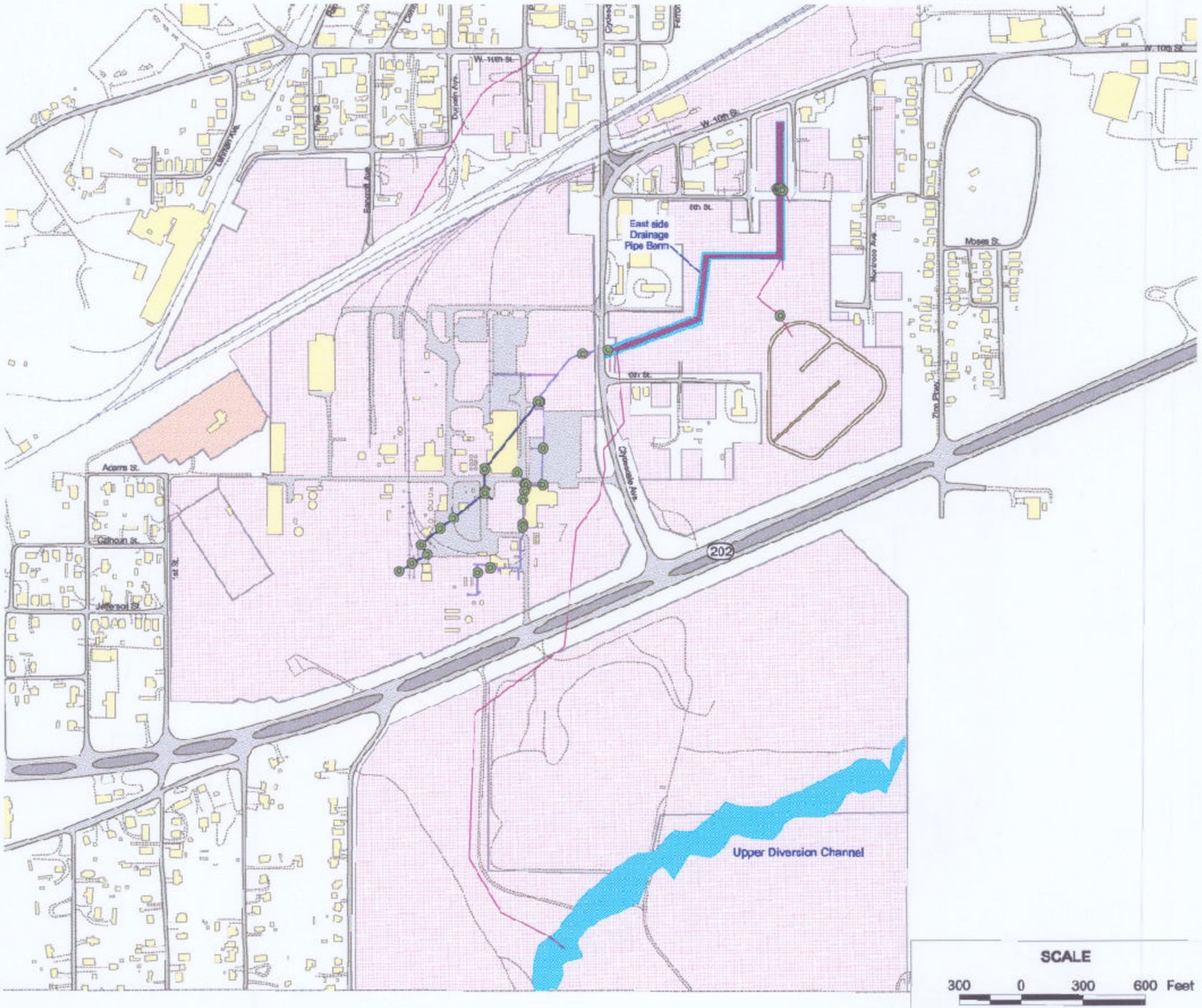
DATE:	PRODUCED BY:	PROJECT/FILE No:	FIGURE No:
October 2002	JES	983-3223 C:\...rfi-gis\rfi-basf.apr	12

Sewer System and On-Site Storm Water Management System

On-Site RFI/CS Program
Solutia Inc., Anniston, Alabama



LEGEND

- Add-rail.shp
- Major Roads
- Minor Roads
- Basins
- Property Line
- Buildings
- Paved
- Manhole
- Lined Sewer Main
- Other Sewer Line
- Pipe Line
- Berm

NOTES

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps

MAP PROJECTION	DATUM
US State Plane	NAD83

LOCATION MAP



SCALE
300 0 300 600 Feet

SOLUTIA
Applied Chemistry, Creative Solutions

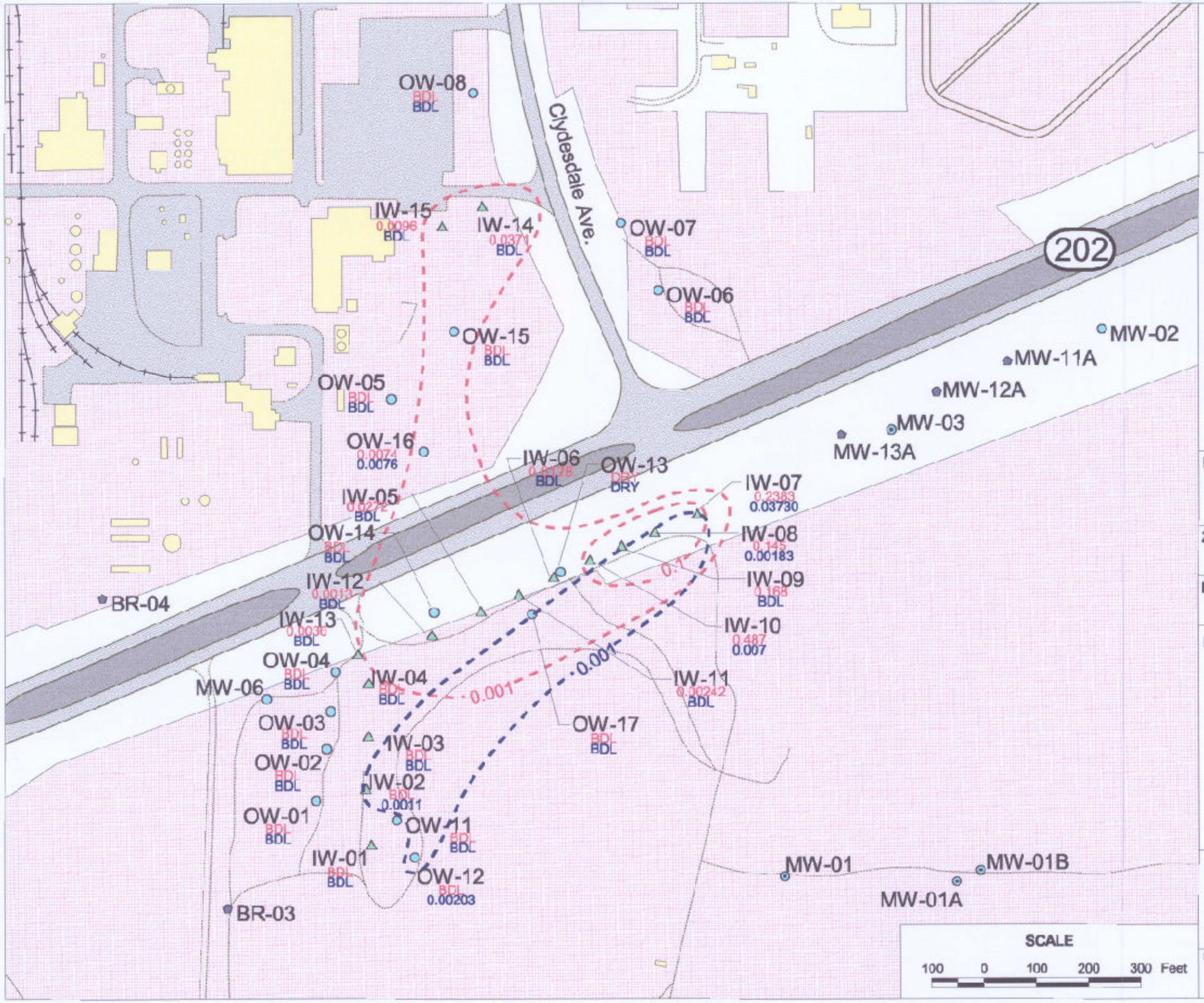
Golder Associates

DATE:	PRODUCED BY:	PROJECT/FILE No:	FIGURE No:
October 2002	JES	983-3223 G:\...\rfi-gis\rfi-base.apr	13

Parathion Isoconcentrations in South Landfill and Plant Site

On-Site RFI/CS Program

Solutia Inc.
Anniston, Alabama



LEGEND

- On-Site Boundary
- Major Roads
- Minor Roads
- Drainage Basin
- Powerlines
- Railroads
- Buildings
- Alabama Power
- Solutia Inc.
- Paved Surface
- Interceptor Well
- Shallow Residuum Monitoring/ Observation Well
- Deep Residuum Monitoring/ Observation Well
- Bedrock Monitoring Well
- Line of Equal Concentration (mg/l) March/April 1989
- Line of Equal Concentration (mg/l) March 1996
- 0.350 Concentration (mg/l) March/April 1989
- 0.0147 Concentration (mg/l) March 1996

NOTES

BDL = Concentration below detection limit or not detected.

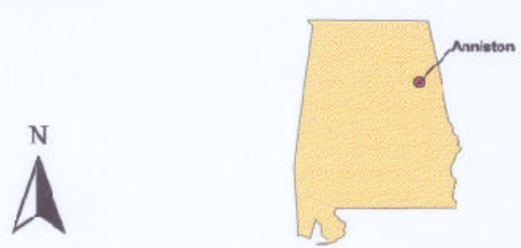
DRY = Well dry during sampling event.

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps
MAP PROJECTION	**DATUM**
US State Plane	NAD83

SCALE

100 0 100 200 300 Feet

LOCATION MAP



SOLUTIA
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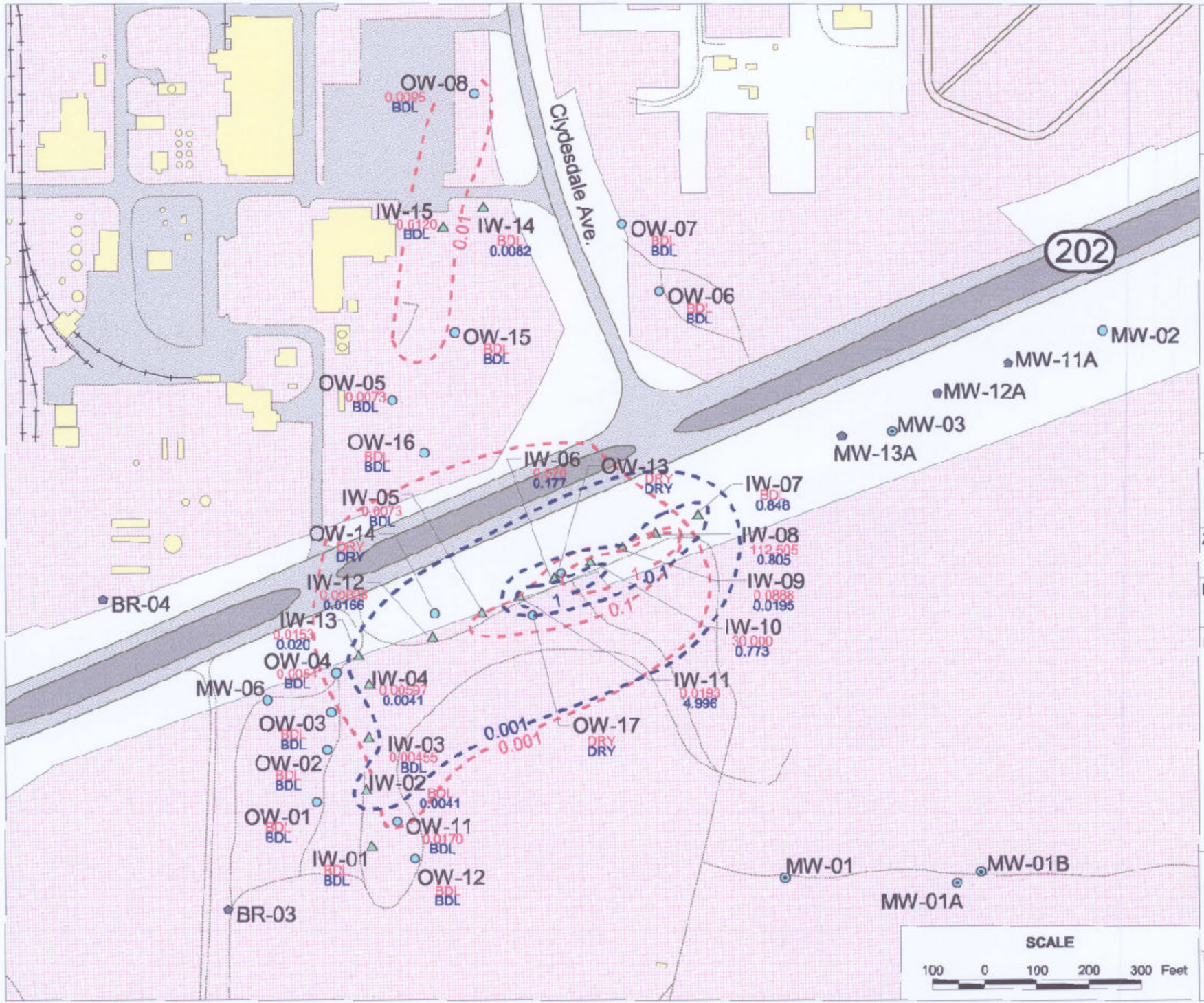
DATE:	PRODUCED BY:	PROJECT/FILE No:	FIGURE NO.
October 2002	JES	983-3223 Q:\...\rfi-gis\rfi-pmp.apr	14

p-Nitrophenol Isoconcentrations in South Landfill and Plant Site

On-Site RFI/CS Program

Solutia Inc.
Anniston, Alabama



LEGEND

- On-Site Boundary
- Major Roads
- Minor Roads
- Drainage Basin
- Powerlines
- Railroads
- Buildings
- Alabama Power
- Solutia Inc.
- Paved Surface
- Interceptor Well
- Shallow Residuum Monitoring/ Observation Well
- Deep Residuum Monitoring/ Observation Well
- Bedrock Monitoring Well
- Line of Equal Concentration (mg/l) March/April 1989
- Line of Equal Concentration (mg/l) March 1996
- 0.350 Concentration (mg/l) March/April 1989
- 0.0147 Concentration (mg/l) March 1996

NOTES

BDL = Concentration below detection limit or not detected.

DRY = Well dry during sampling event.

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps

MAP PROJECTION	DATUM
US State Plane	NAD83

LOCATION MAP



SCALE

100 0 100 200 300 Feet

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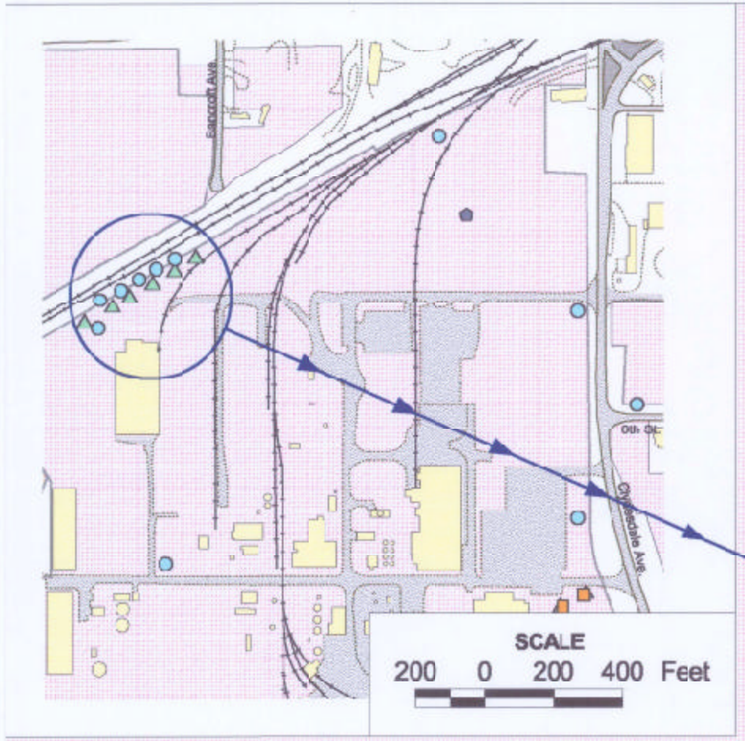
DATE:	PRODUCED BY:	PROJECT/FILE No:	FIGURE NO.
October 2002	JES	063-3223 Q:\...\rfi-gis\rfi-pnp.apr	15



Parathion Isoconcentrations in OLBSI

On-Site RFI/CS Program

Solutia Inc.
Anniston, Alabama

LEGEND

- On-Site Boundary
- Major Roads
- Minor Roads
- Drainage Basin
- Powerlines
- Railroads
- Buildings
- Alabama Power
- Solutia Inc.
- Paved Surface
- Interceptor Well
- Shallow Residuum Monitoring/ Observation Well
- Deep Residuum Monitoring/ Observation Well
- Bedrock Monitoring Well
- Line of Equal Concentration (mg/l) March/April 1989
- Line of Equal Concentration (mg/l) March 1996
- 0.350 Concentration (mg/l) March/April 1989
- 0.0147 Concentration (mg/l) March 1996
- 0.0035 Concentration (mg/l) April 2000

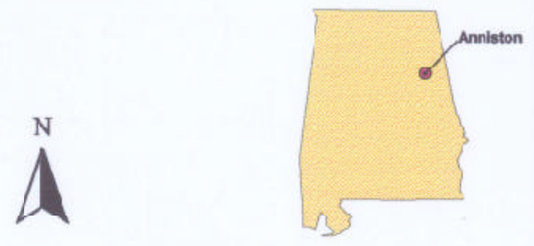
NOTES

BDL = Concentration below detection limit (0.0011 mg/l)

* Data from May 1989 (no March / April data)

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps
MAP PROJECTION	**DATUM**
US State Plane	NAD83

LOCATION MAP



SOLUTIA
Applied Chemistry, Creative Solutions

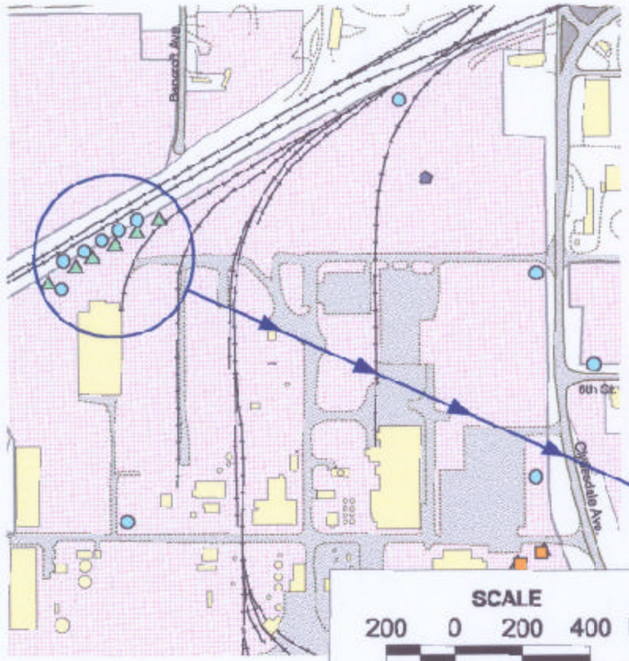
Golder Associates

DATE:	PRODUCED BY:	PROJECT/FILE No:	FIGURE NO.
October 2002	JES	083-3223 Q:\...\rfi-gis\rfi-parathion.apr	16

p-Nitrophenol Isoconcentrations in OLBSI

On-Site RFI/CS Program

Solutia Inc.
Anniston, Alabama



SCALE
200 0 200 400 Feet

MW-07
OW-21 BDL BDL
OW-22 BDL BDL
MW-08
OW-24 BDL BDL
OW-23 BDL BDL
OW-20 BDL BDL
IW-16 0.350 0.0147
MW-09
OW-19 142.527 BDL
IW-17 1.050 0.0052
OW-18 BDL BDL
MW-14
IW-18 330.000 137.383
IW-19 440.000 258.598
IW-21 3.500 91.770
IW-20 238.000 14.928
MW-20A
MW-16
DW-01
MW-15

100
10
1
0.1
0.1

SCALE
40 0 40 80 Feet

LEGEND

- On-Site Boundary
- Major Roads
- Minor Roads
- Drainage Basin
- Powerlines
- Railroads
- Buildings
- Alabama Power
- Solutia Inc.
- Paved Surface
- Interceptor Well
- Shallow Residuum Monitoring/ Observation Well
- Deep Residuum Monitoring/ Observation Well
- Bedrock Monitoring Well
- Line of Equal Concentration (mg/l) March/April 1989
- Line of Equal Concentration (mg/l) March 1996
- 0.350 Concentration (mg/l) March/April 1989
- 0.0147 Concentration (mg/l) March 1996

NOTES

BDL = Concentration below detection limit (0.0011 mg/l)

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps
MAP PROJECTION	**DATUM**
US State Plane	NAD83

LOCATION MAP



N

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DATE:	PRODUCED BY:	PROJECT/FILE No:	FIGURE NO.
October 2002	JFS	983-3223 Q:\...\rfi-gis\rfi-para.apr	17

On-Site Area for RFI

On-Site RFI/CS Program
Solutia Inc., Anniston, Alabama

LEGEND

- Major Roads
- Minor Roads
- Drainage Basin
- Railroads
- Property Line
- Buildings
- Paved
- On-site area for RFI

NOTES

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps
MAP PROJECTION	**DATUM**
US State Plane	NAD83

LOCATION MAP



N

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Golder Associates

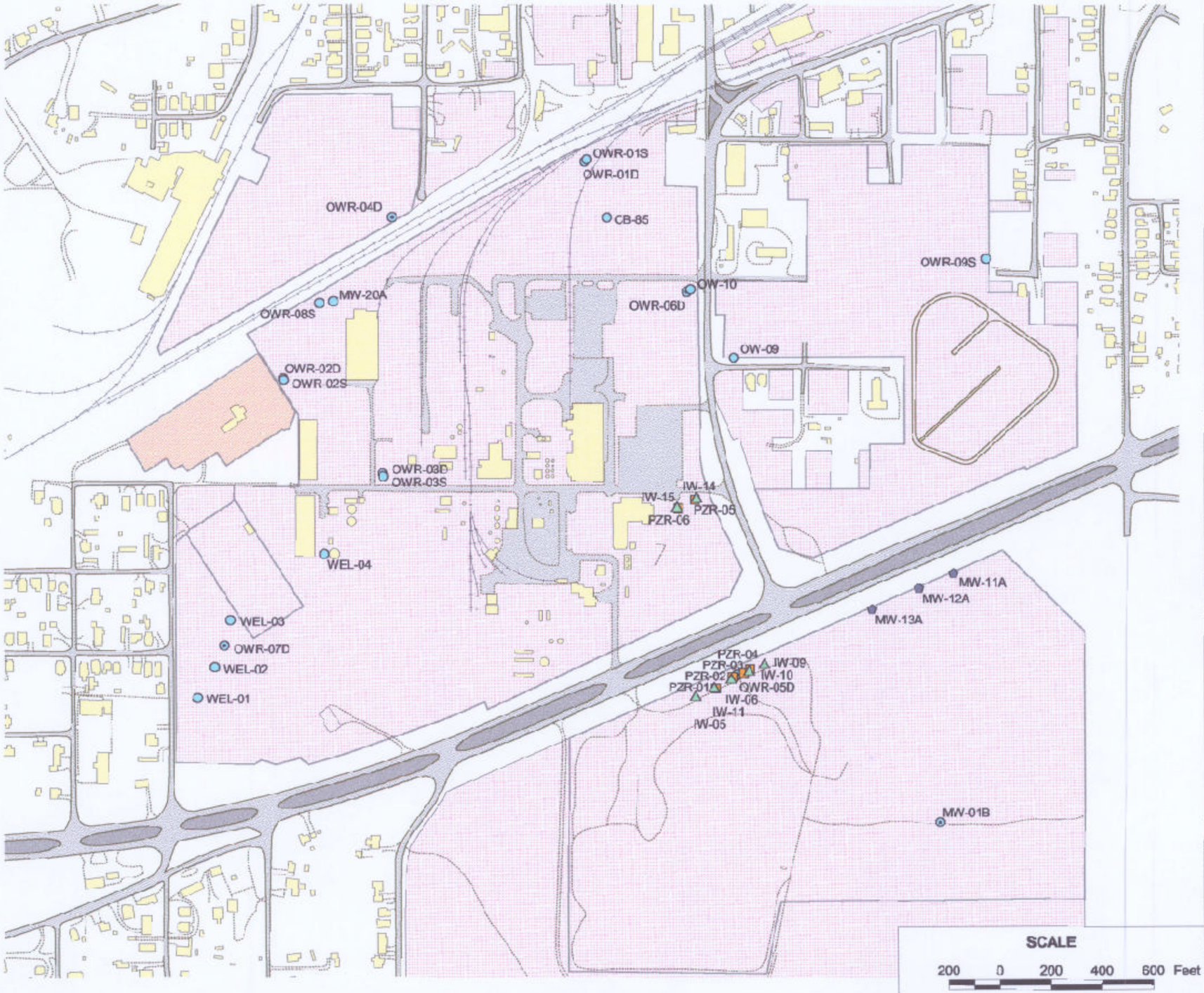
SCALE

200 0 200 400 600 Feet

DATE:	PRODUCED BY:	PROJECT/FILE No:	FIGURE No:
October 2002	JES	#83-3223 G:\...\rfi-gis\rfi-base.apr	18

RFI Well Locations

On-Site RFI/CS Program
Solutia Inc., Anniston, Alabama



LEGEND

- Major Roads
- Minor Roads
- Drainage Basin
- Railroads
- Property Line
- Buildings
- Alabama Power
- Solutia Inc.
- Paved
- Bedrock Monitoring Well
- Interceptor Well
- Piezometer
- Deep Residuum Monitoring/ Observation Well
- Shallow Residuum Monitoring/ Observation Well

NOTES

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps
MAP PROJECTION	**DATUM**
US State Plane	NAD83

LOCATION MAP



N

SCALE

200 0 200 400 600 Feet

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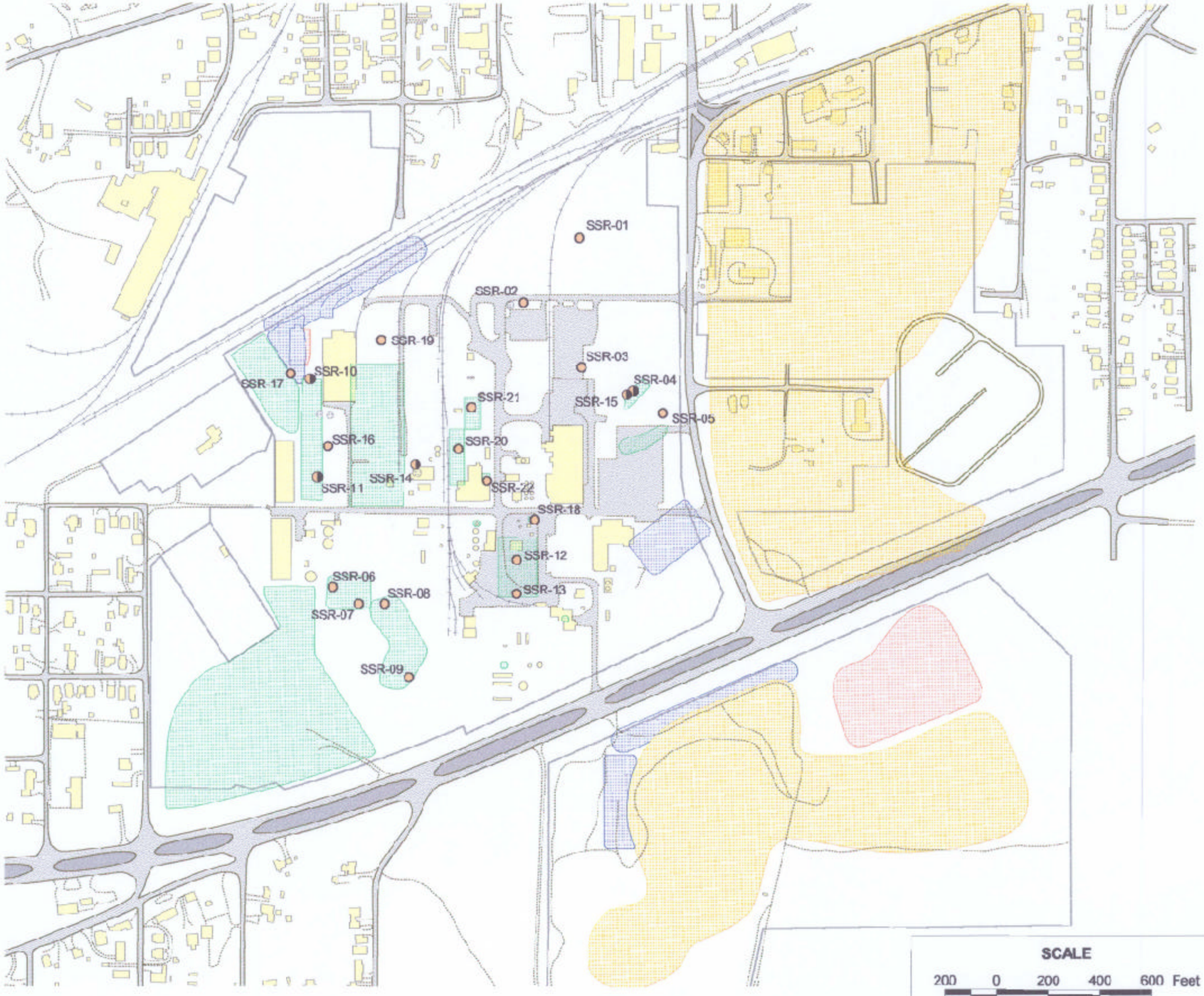
Golder Associates

DATE:	PRODUCED BY:	FILE No:	FIGURE No:
October 2002	JES	Q:\...\rfi-gis\rfi-base.apr	19



Soil Sampling Locations

On-Site RFI/CS Program
Solutia Inc., Anniston, Alabama

LEGEND

- Major Roads
- Minor Roads
- Drainage Basin
- Railroads
- Property Line
- Buildings
- Paved
- Subsurface Soil Sample
- Surface (or near surface) Soil Sample

RFI/CS Actions

- Confirmatory Sampling
- Groundwater Corrective Action
- Additional RFI
- Waste Management Area

NOTES

For SWMU locations see Figure 2

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps
MAP PROJECTION	**DATUM**
US State Plane	NAD83

LOCATION MAP



N

SCALE

200 0 200 400 600 Feet

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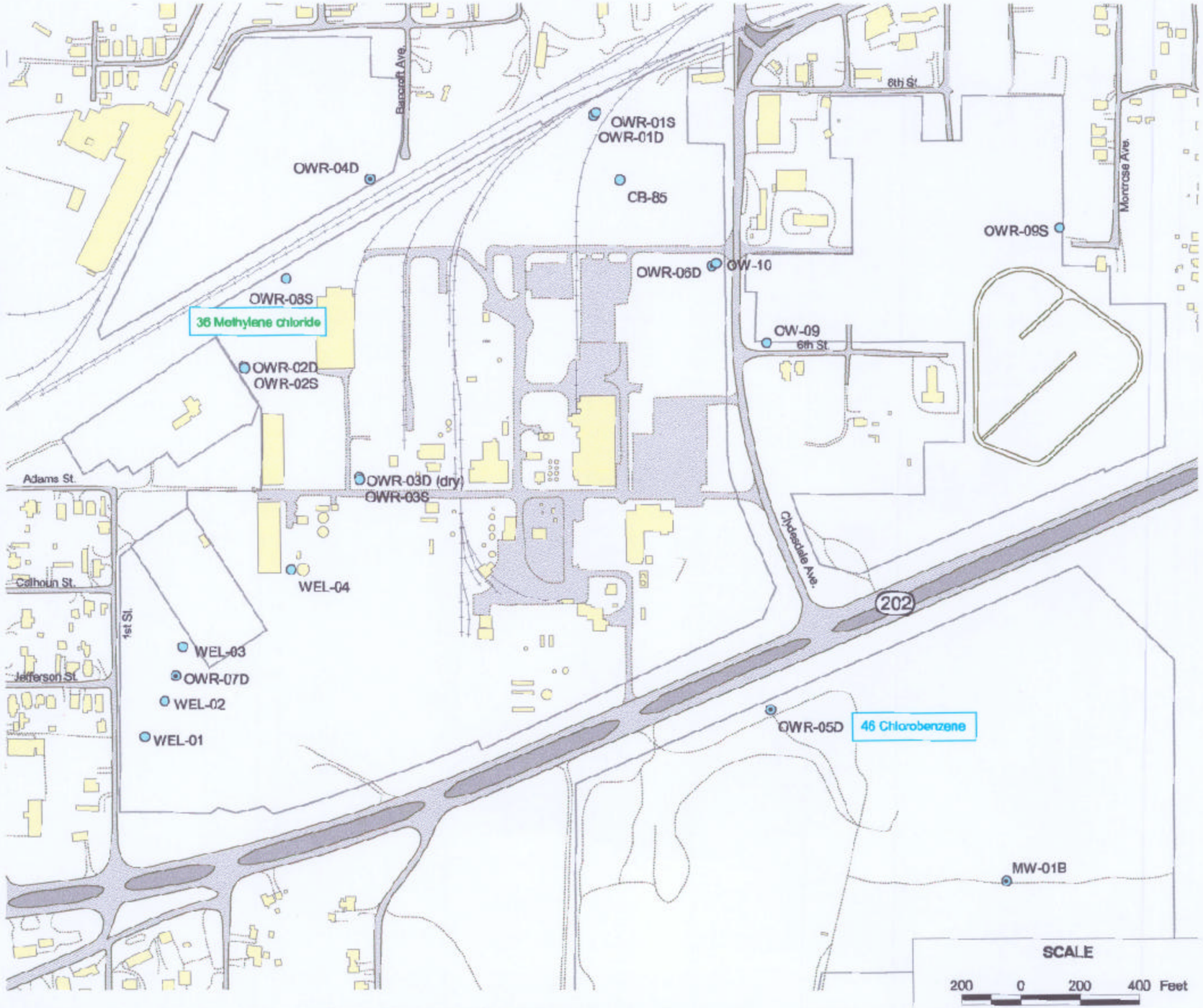
DATE:	PRODUCED BY:	PROJECT/FILE No:	FIGURE No:
October 2002	JES	983-3223 Q:\...\rfi-gis\rfi-base.apr	20

Volatile Organic Compound Concentrations in Groundwater

On-Site RFI/CS Program

Solutia Inc., Anniston, Alabama



LEGEND

- Railroads
- Major Roads
- Minor Roads
- Drainage Basin
- Property Line
- Paved
- Buildings
- Deep Residuum Monitoring/ Observation Well
- Shallow Residuum Monitoring/ Observation Well

NOTES

All wells shown were analyzed. Only detections are shown (in µg/L).

Only target analyte detections are reported.

Target Analytes:
1,1,2,2-Tetrachloroethane
Chlorobenzene
Isopropylbenzene
Methylene chloride (dichloromethane)

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps

MAP PROJECTION	DATUM
US State Plane	NAD83

LOCATION MAP



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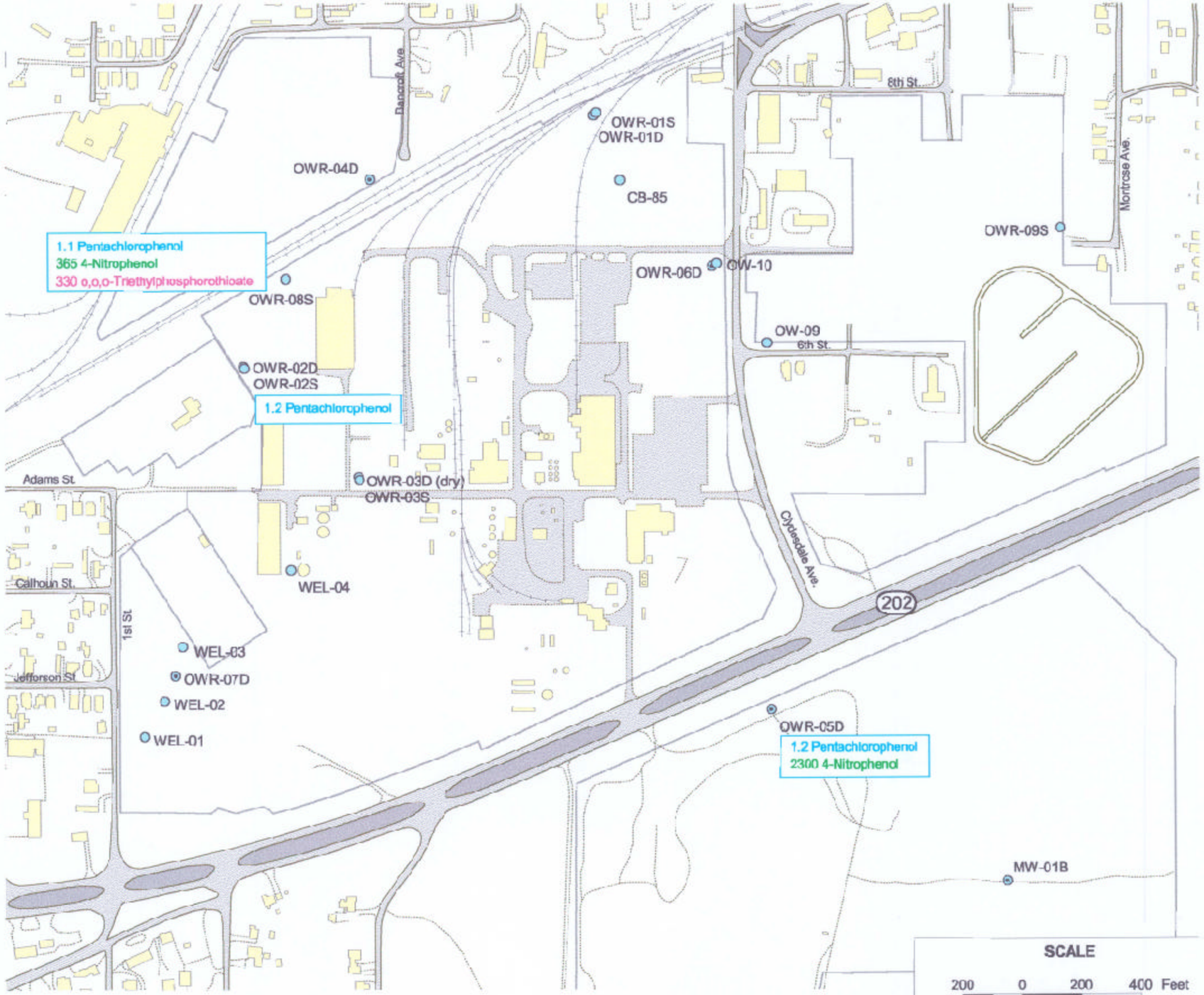
Golder Associates

DATE:	PRODUCED BY:	PROJECT/FILE No:	FIGURE No:
October 2002	JES	983-3223 O:\...\rfi-gis\rfi-chem.apr	21

Semi-Volatile Organic Compound Concentrations in Groundwater

On-Site RFI/CS Program

Solutia Inc., Anniston, Alabama



LEGEND

- Railroads
- Major Roads
- Minor Roads
- Drainage Basin
- Property Line
- Paved
- Buildings
- Deep Residuum Monitoring/ Observation Well
- Shallow Residuum Monitoring/ Observation Well

NOTES

All wells shown were analyzed. Only detections are shown (in µg/L).

Only target analyte detections are reported.

Target Analytes:
- Pentachlorophenol
- 4-Nitrophenol
- 2,4,5-Trichlorophenol
- o,o,o-Triethylphosphorothioate
- 1,4-Dichlorobenzene
- 1,2-Dichlorobenzene
- Phenol
- 2,4-Dichlorophenol
- 2,4,6-Trichlorophenol

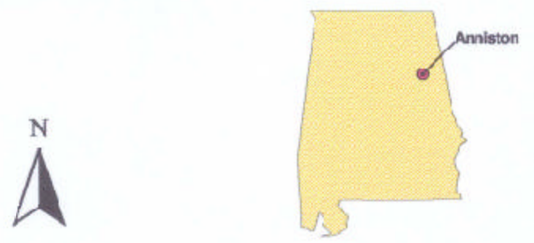
ZONE
Alabama East 101

SOURCE
Golder Associates (on-site base map)
USGS 1:2400 Quad Maps

MAP PROJECTION
US State Plane

DATUM
NAD83

LOCATION MAP



SCALE

200 0 200 400 Feet

SOLUTIA
Applied Chemistry, Creative Solutions

Golder Associates

DATE:	PRODUCED BY:	PROJECT/FILE No:	FIGURE No:
October 2002	JES	983-3223 G:\...\fs-gis\fs-chem.apr	22

Organophosphorus Pesticide Concentrations in Groundwater

On-Site RFI/CS Program

Soutia Inc., Anniston, Alabama



LEGEND

- Railroads
- Major Roads
- Minor Roads
- Drainage Basin
- Property Line
- Paved
- Buildings
- Deep Residuum Monitoring/ Observation Well
- Shallow Residuum Monitoring/ Observation Well

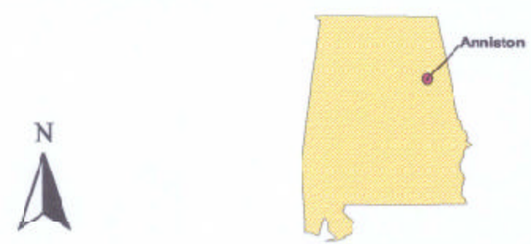
NOTES

All wells shown were analyzed. Only detections are shown (in µg/L).
Only target analyte detections are reported.
Target Analytes:
Methyl Parathion
Ethyl Parathion
Tetraethyl dithiopyrophosphate (sulfotepp)

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps

MAP PROJECTION	DATUM
US State Plane	NAD83

LOCATION MAP



SCALE

200 0 200 400 Feet

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DATE:	PRODUCED BY:	PROJECT/FILE No:	FIGURE No:
October 2002	JES	383-3223 Q:...\rfi-gis\rfi-chem.spr	23

Total PCB Concentrations in Groundwater

On-Site RFI/CS Program

Solutia Inc., Anniston, Alabama



LEGEND

- Railroads
- Major Roads
- Minor Roads
- Drainage Basin
- Property Line
- Paved
- Buildings
- Deep Residuum Monitoring/ Observation Well
- Shallow Residuum Monitoring/ Observation Well
- 210 / BDL — unfiltered concentration (µg/L) / filtered concentration (µg/L)

NOTES

All wells shown were analyzed. Only detections are shown.

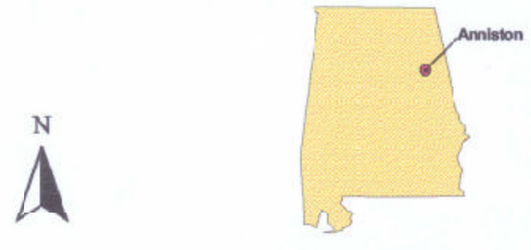
All other wells were below detection limit for Total PCBs in both unfiltered and filtered samples.

BDL = Below Detection Limit

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps

MAP PROJECTION	DATUM
US State Plane	NAD83

LOCATION MAP



SCALE

200 0 200 400 Feet

SOLUTIA — Applied Chemistry, Creative Solutions

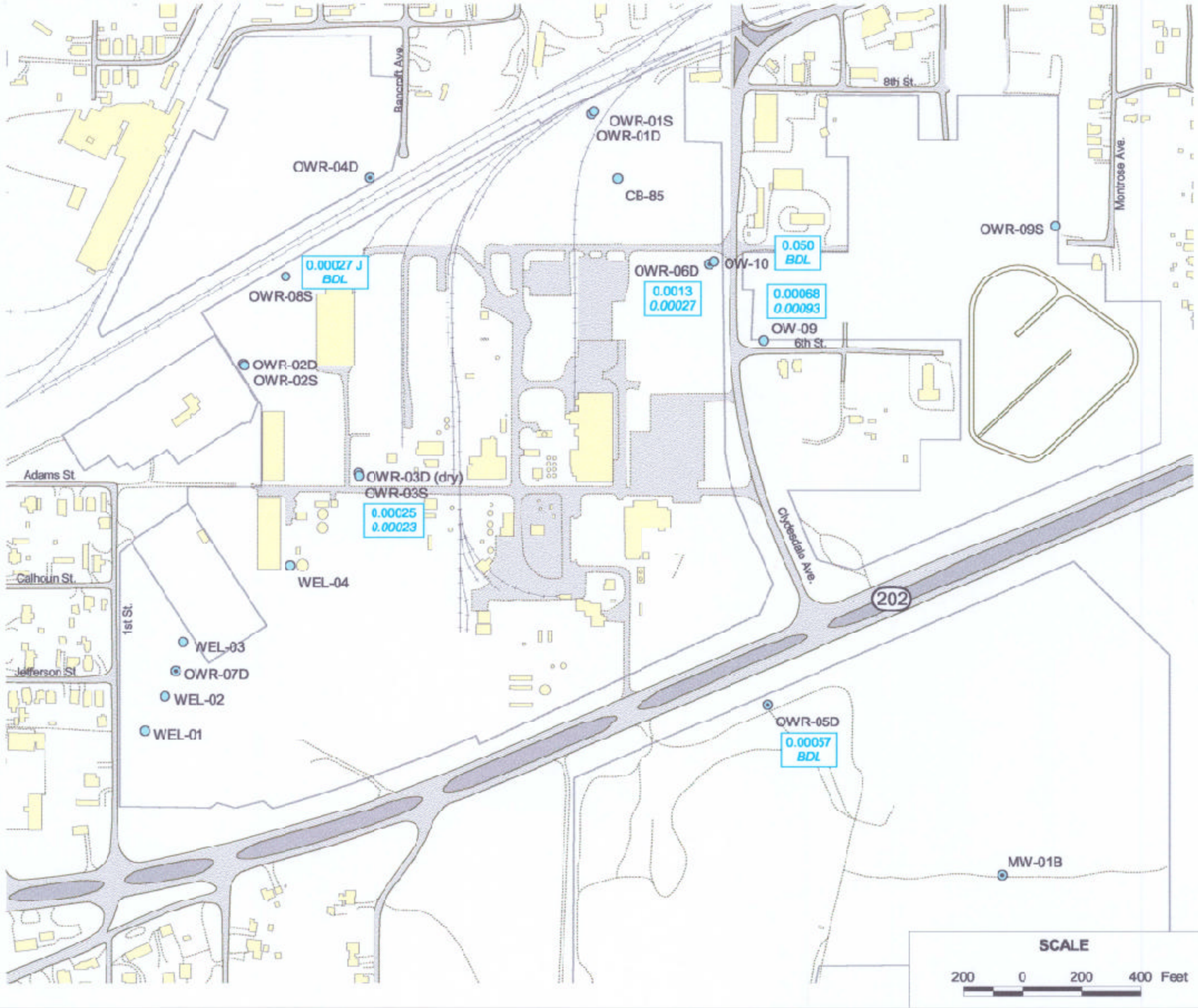
Golder Associates

DATE:	PRODUCED BY:	PROJECT/FILE No:	FIGURE No:
October 2002	JES	903-0220 Q:\...\rfi-gis\rfi-chem.apr	24

Mercury Concentrations in Groundwater

On-Site RFI/CS Program

Soulia Inc., Anniston, Alabama



LEGEND

- Railroads
- Major Roads
- Minor Roads
- Drainage Basin
- Property Lire
- Paved
- Buildings
- Deep Residuum Monitoring/ Observation Well
- Shallow Residuum Monitoring/ Observation Well

0.00068 J — unfiltered concentration (mg/L)
0.00093 — filtered concentration (mg/L)

NOTES

All wells shown were analyzed. Only detections are shown.

All other wells were below detection limit for mercury in both unfiltered and filtered samples.

BDL = Below Detection Limit

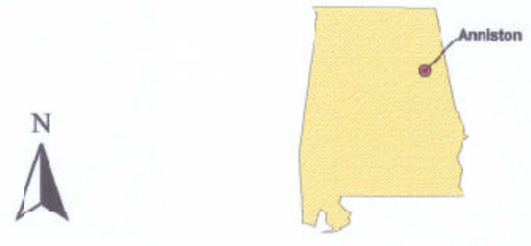
J = Estimated

SCALE

200 0 200 400 Feet

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps
MAP PROJECTION	**DATUM**
US State Plane	NAD83

LOCATION MAP



SOLUTIA
Applied Chemistry, Creative Solutions

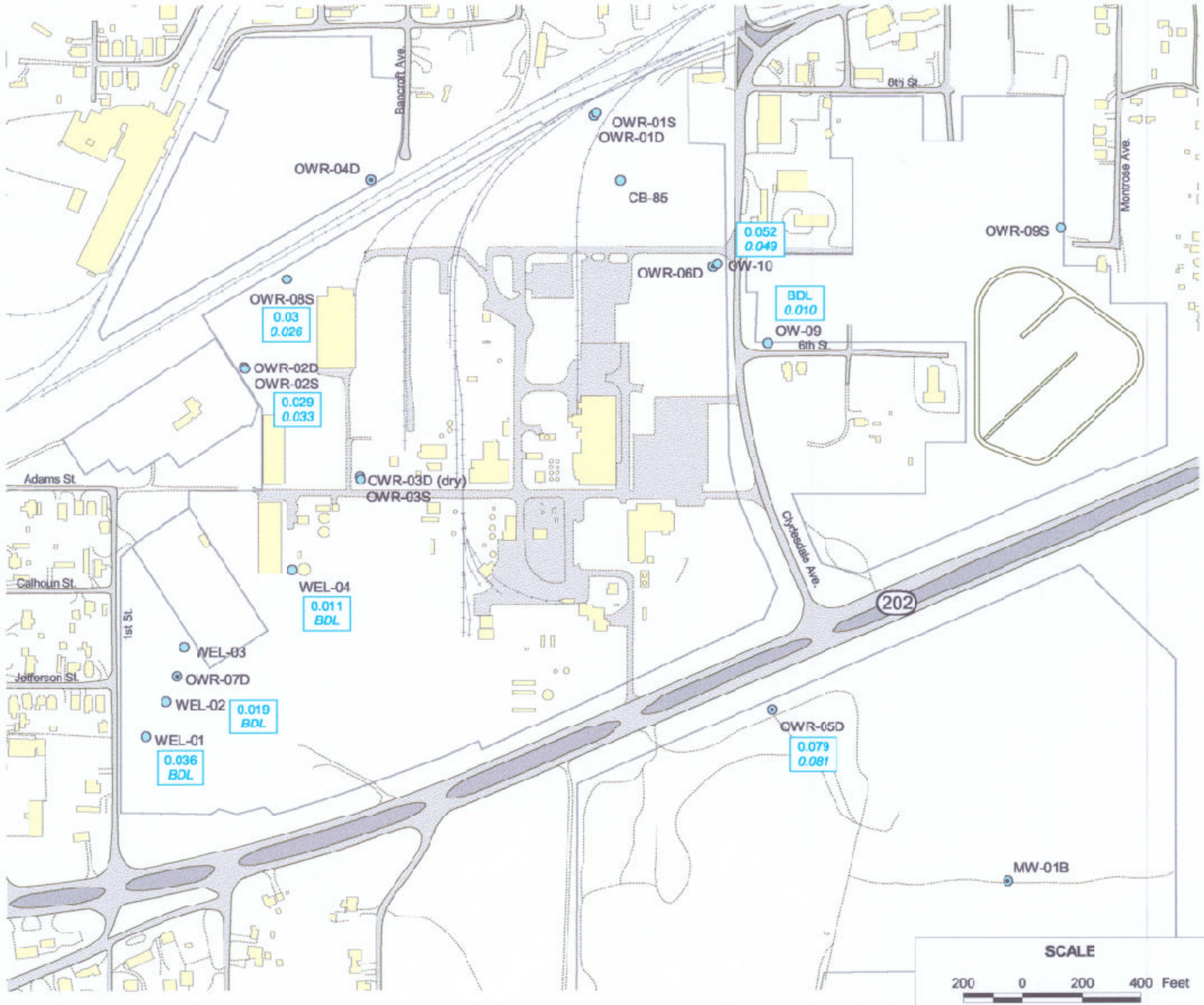
Golder Associates

DATE:	PRODUCED BY:	PROJECT/FILE No:	FIGURE No:
October 2002	JFS	983-3223 G:\...\rfi-gis\rfi-chem.apr	25

Cobalt Concentrations in Groundwater

On-Site RFI/CS Program

Solutia Inc., Anniston, Alabama



LEGEND

- Railroads
- Major Roads
- Minor Roads
- Drainage Basin
- Property Line
- Paved
- Buildings
- Deep Residuum Monitoring/ Observation Well
- Shallow Residuum Monitoring/ Observation Well
- 0.052 / *0.049* unfiltered concentration (mg/L) / filtered concentration (mg/L)

NOTES

All wells shown were analyzed. Only detections are shown.
All other wells were below detection limit for cobalt in both unfiltered and filtered samples.
BDL = Below Detection Limit

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps
MAP PROJECTION	**DATUM**
US State Plane	NAD83

LOCATION MAP



SCALE

200 0 200 400 Feet

SOLUTIA Applied Chemistry, Creative Solutions

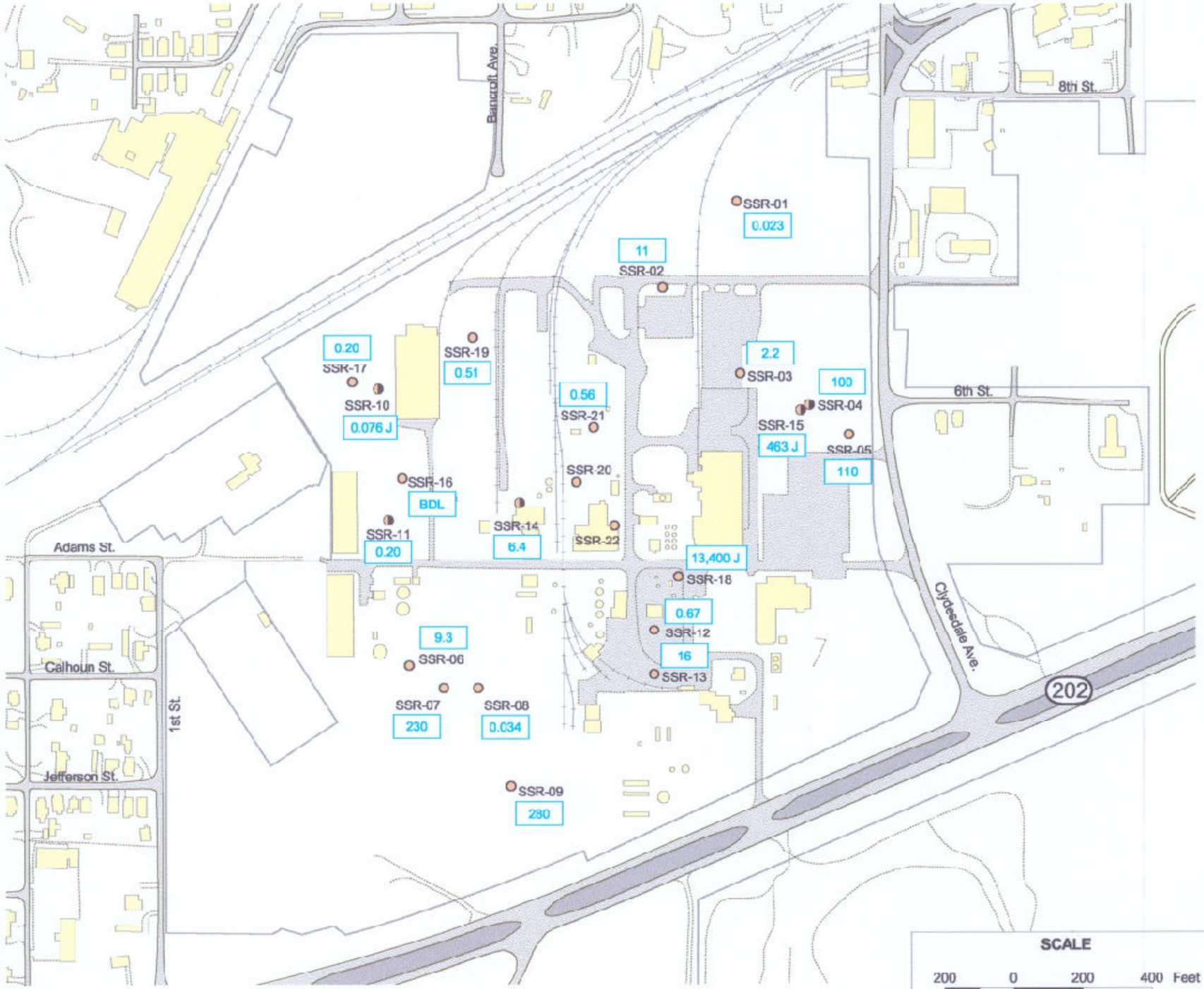
Golder Associates

DATE:	PRODUCED BY:	PROJECT/FILE No:	FIGURE No:
October 2002	JFS	983-3223 Q:\...\rfi-gis\rfi-chem.apr	26

Total PCB Concentrations in Soil

On-Site RFI/CS Program

Solutia Inc., Anniston, Alabama



LEGEND

- Railroads
- Major Roads
- Minor Roads
- Drainage Basin
- Property Line
- Paved
- Buildings
- Subsurface soil sample
- Surface (or near surface) soil sample
- 110 — Total PCB concentration (mg/kg)

NOTES

SSR-20 and SSR-22 were not analyzed for Total PCB.

BDL = Below Detection Limit
J = Estimated Value

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps
MAP PROJECTION	**DATUM**
US State Plane	NAD83

LOCATION MAP



N

SCALE

200 0 200 400 Feet

SOLUTIA
Applied Chemistry, Creative Solutions

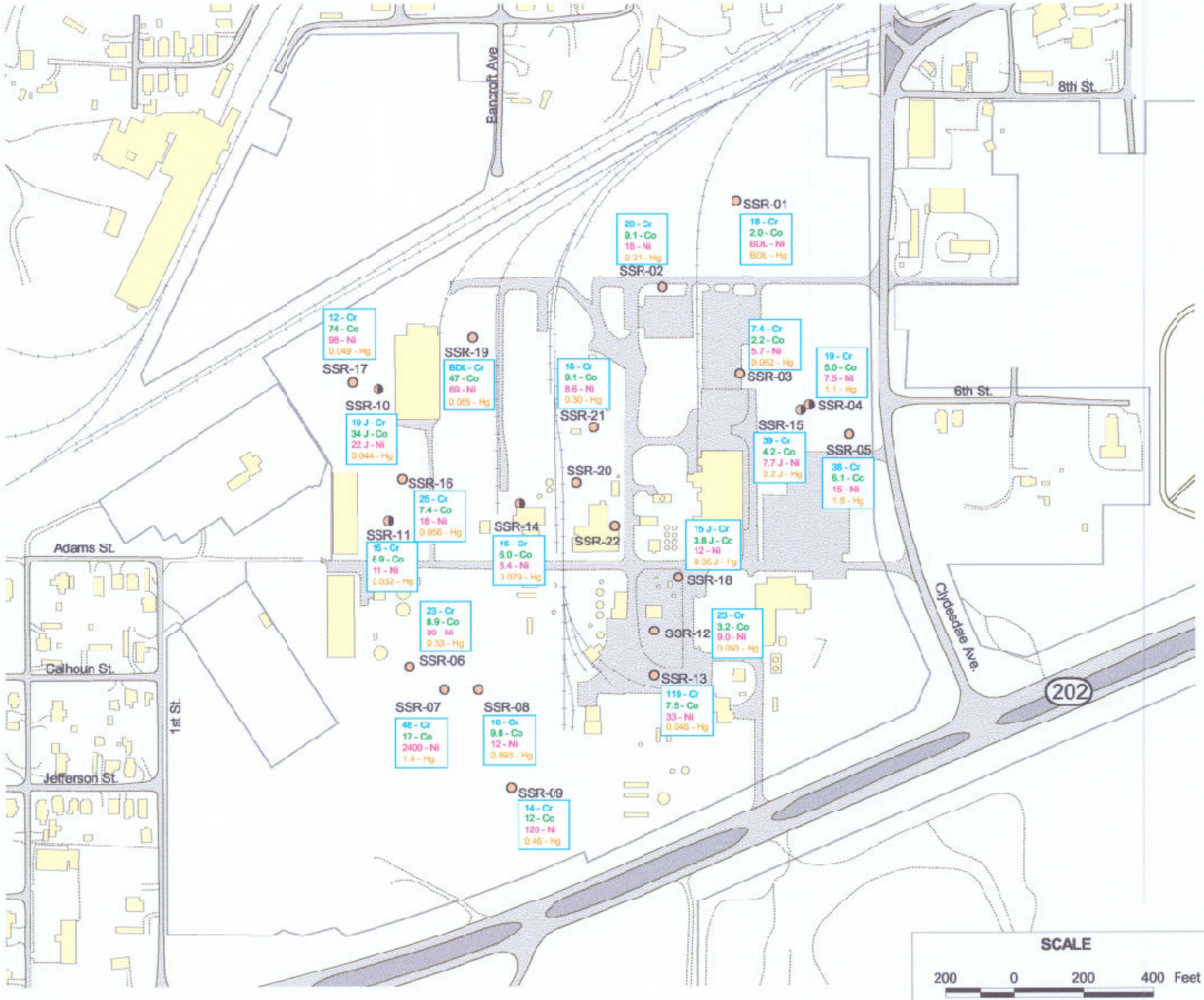
Golder Associates

DATE:	PRODUCED BY:	PROJECT/FILE No:	FIGURE No:
October 2002	JES	963-3223 Q:\...rfi-gis\rfi-chem.apr	27

Metal Concentrations in Soil

On-Site RFI/CS Program

Solutia Inc., Anniston, Alabama



LEGEND

- Railroads
- Major Roads
- Minor Roads
- Drainage Basin
- Property Line
- Paved
- Buildings
- Subsurface soil sample
- Surface (or near surface) soil sample
- 19 - Cr / 50 - Co / 75 - Ni / 1.1 - Hg — Target Analyte Concentrations (in mg/kg)

NOTES

SSR-20 and SSR-22 were not analyzed for metals.
BDL = Below Detection Limit
J = Estimated Value
Target Analytes:
Cr - Chromium
Co - Cobalt
Ni - Nickel
Hg - Mercury

ZONE	SOURCE
Alabama East '01	Golder Associates (on-site base map) USGS 1:2400 Quad Maps

MAP PROJECTION	DATUM
US State Plane	NAD83

LOCATION MAP



N

SCALE

200 0 200 400 Feet

SOLUTIA
Applied Chemistry Creative Solutions

Golder Associates

DATE:	PRODUCED BY:	PROJECT/FILE No:	FIGURE No:
October 2002	JFS	963-3223 Q:\...\rfi-gissfi-chem.apr	28

PCBs in Soil and Sediment

On-Site RFI/CS Program
Solutia Inc., Anniston, Alabama



LEGEND

- Railroad
- On-site Boundary
- Major Roads
- Minor Roads
- Basin
- Property Line
- Buildings
- Alabama Power
- Solutia Inc.
- Paved

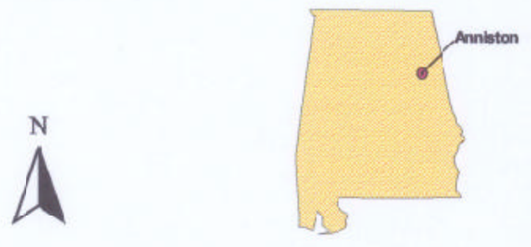
- Sample locations where PCBs were below screening levels
- Sample locations where PCBs were above screening levels

NOTES

Sample results include immunoassay tests, laboratory results, or both.

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps
MAP PROJECTION	**DATUM**
US State Plane	NAD83

LOCATION MAP



SCALE

200 0 200 400 600 800 Feet

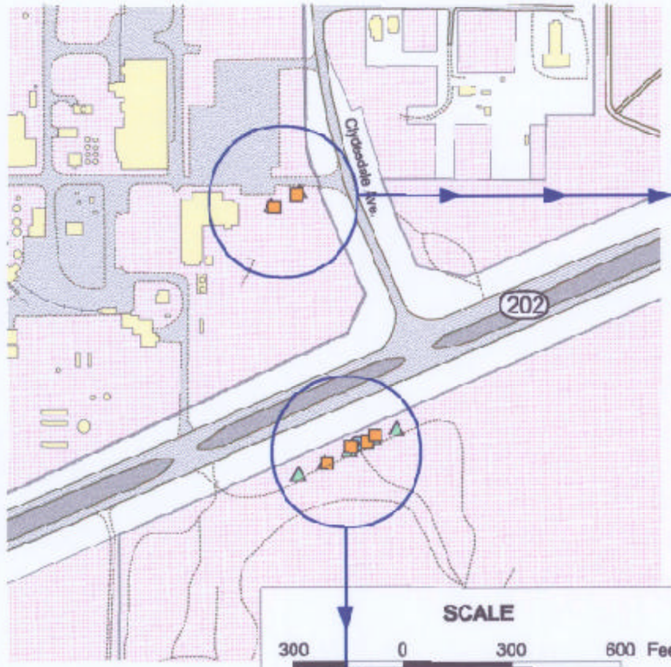
SOLUTIA
Applied Chemistry, Creative Solutions

Golder Associates

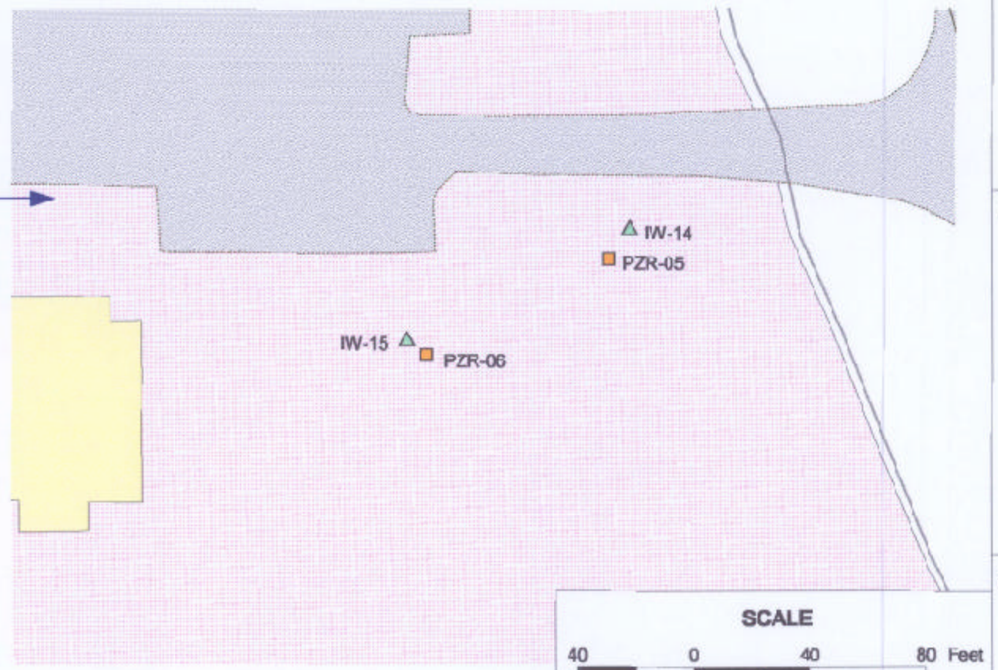
DATE:	PRODUCED BY:	PROJECT/FILE No:	FIGURE No:
October 2002	JES	983-3223 Q:\...\rfi-gis\rfi-east.apr	29

South Landfill and Plant Site
Pumping Test Wells and Piezometers

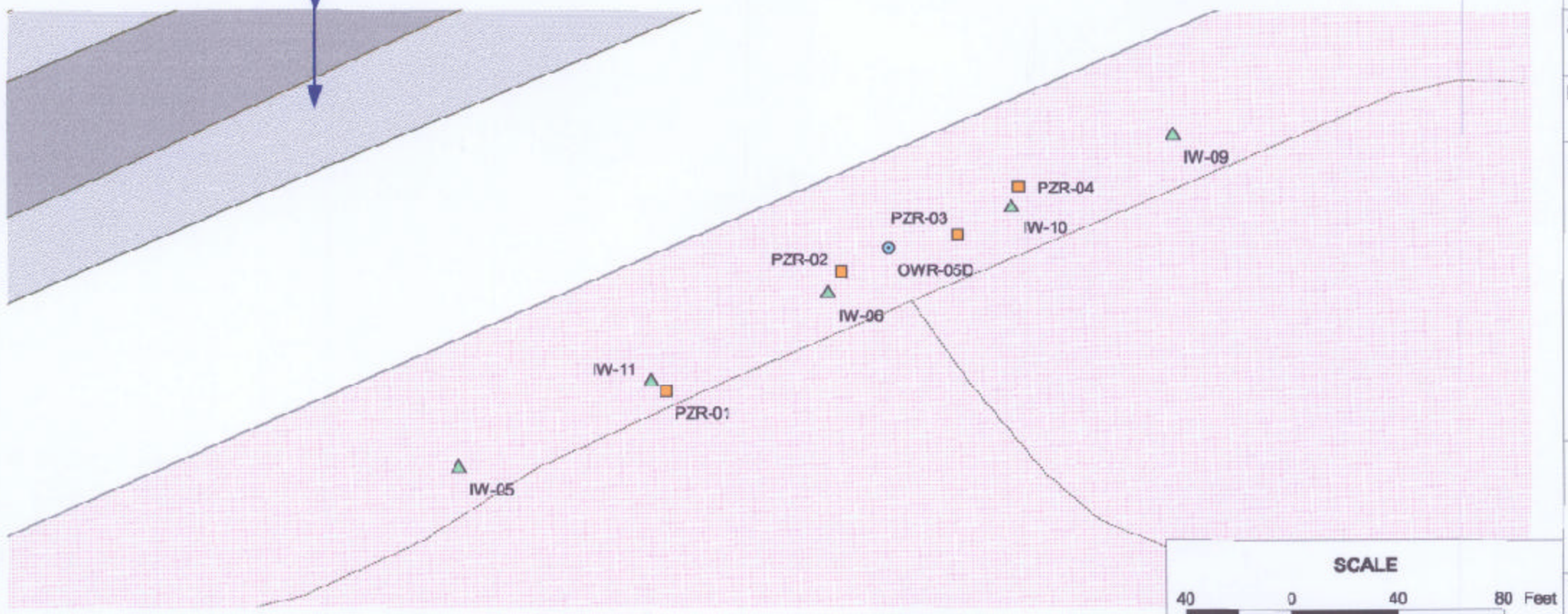
On-Site RFI/CS Region
Solutia Inc., Anniston, Alabama



SCALE
300 0 300 600 Feet



SCALE
40 0 40 80 Feet



SCALE
40 0 40 80 Feet

LEGEND

- Railroad
- Major Roads
- Minor Roads
- Basins
- Property Line
- Buildings
- Solutia Inc.
- Paved
- Interceptor Well
- Deep Residuum Monitoring/ Observation Well
- Piezometer

NOTES

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps
MAP PROJECTION	**DATUM**
US State Plane	NAD83

LOCATION MAP

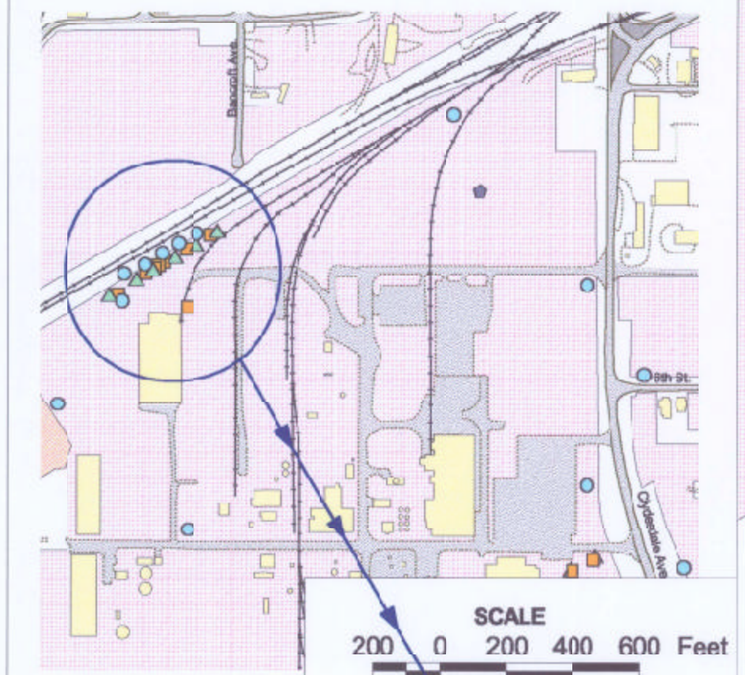


N

SOLUTIA
Applied Chemistry, Creative Solutions

Golder Associates

DATE:	PRODUCED BY:	PROJECT/FILE No:	FIGURE No:
October 2002	JES	083-3223 G:\...\rfi-gis\rfi-bas1.apr	30



OLESI Pumping Test Wells and Piezometers

On-Site RFI/CS Program

Solutia Inc.
Anniston, Alabama

LEGEND

- On-Site Boundary
- Major Roads
- Minor Roads
- Drainage Basin
- Powerlines
- Railroads
- Buildings
- Alabama Power
- Solutia Inc.
- Paved Surface
- Interceptor Well
- Piezometer
- Shallow Residuum Monitoring/ Observation Well

NOTES

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps

MAP PROJECTION	DATUM
US State Plane	NAD83

LOCATION MAP



N

SOLUTIA
Applied Chemistry, Creative Solutions

Golder Associates

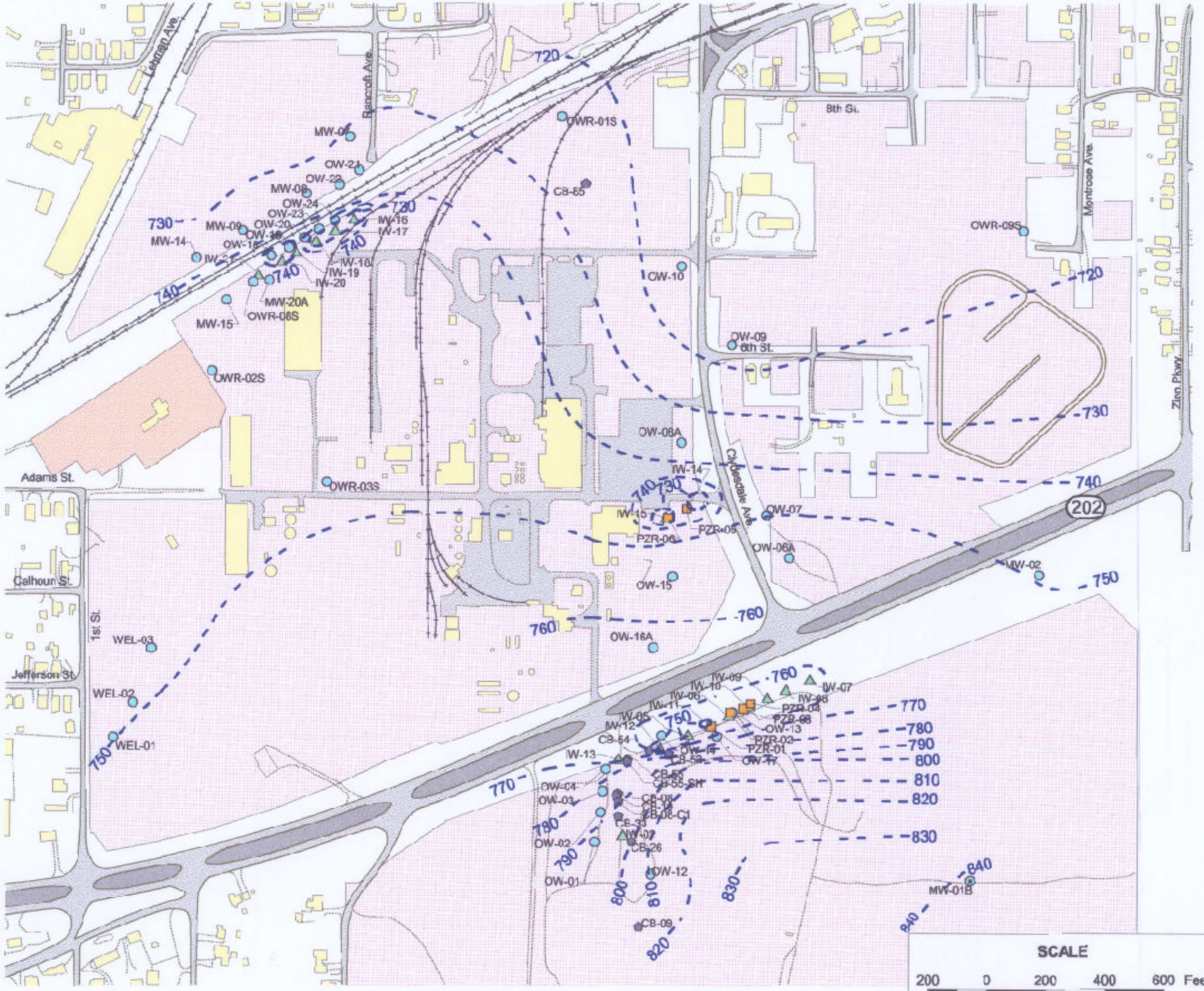
DATE:	PRODUCED BY:	PROJECT/FILE No:	FIGURE NO.
October 2002	JES	983-3223 Q:\...\rfi-gis\rfi-lin4.apr	31

SCALE
20 0 20 40 60 Feet

Shallow Residuum Potentiometric Surface for August 1998

On-Site RFI/CS Program

Solutia Inc.
Anniston, Alabama



LEGEND

- On-Site Boundary
- Major Roads
- Minor Roads
- Drainage Basin
- Powerlines
- Railroads
- Buildings
- Alabama Power
- Solutia Inc.
- Paved Surface
- Shallow Residuum Monitoring/ Observation Well
- Bedrock Monitoring Well
- Interceptor Well
- Deep Residuum Monitoring/ Observation Well
- Piezometer
- Potentiometric Contour (feet above mean sea level)

NOTES

Water levels measured 08/17/98, with groundwater extraction system operating.

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps

MAP PROJECTION	DATUM
US State Plane	NAD83

LOCATION MAP



SCALE

200 0 200 400 600 Feet

SOLUTIA
Applied Chemistry, Creative Solutions

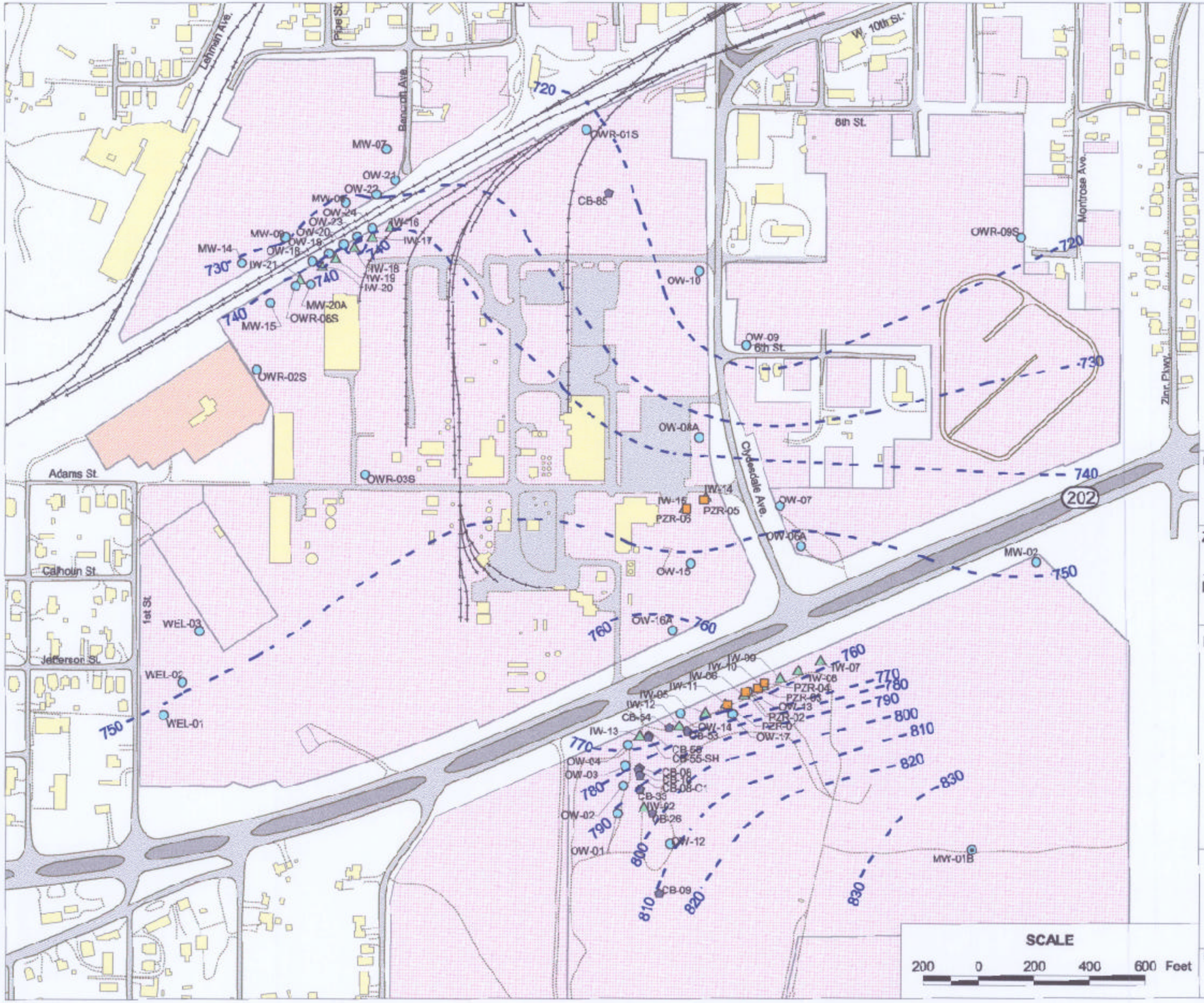
Golder Associates

DATE:	PRODUCED BY:	PROJECT/FILE No:	FIGURE NO.
October 2002	JES	983-3223 Q:\...\vn-gis\vfi-lin1.apr	32

Shallow Residuum Potentiometric Surface for September 1998

On-Site RFI/CS Program

Solutia Inc.
Anniston, Alabama



LEGEND

- On-Site Boundary
- Major Roads
- Minor Roads
- Drainage Basin
- Powerlines
- Railroads
- Buildings
- Alabama Power
- Solutia Inc.
- Production Areas
- Shallow Residuum Monitoring/ Observation Well
- Bedrock Monitoring Well
- Interceptor Well
- Deep Residuum Monitoring/ Observation Well
- Piezometer
- Potentiometric Contour (feet above mean sea level)

NOTES

Water levels measured 09/26/98, with groundwater extraction system not operating.

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps
MAP PROJECTION	**DATUM**
US State Plane	NAD83

LOCATION MAP



SCALE

200 0 200 400 600 Feet

SOLUTIA
Applied Chemistry, Creative Solutions

Golder Associates

DATE:	PRODUCED BY:	PROJECT/FILE No:	FIGURE NO.
October 2002	JES	983-3223 Q:\...\rfi-gis\fi-fin2.apr	33

Ethyl Parathion Concentrations in Groundwater Samples Since 1997

On-Site RFI/CS Program

Solutia Inc., Anniston, Alabama



LEGEND

- Railroads
- Major Roads
- Minor Roads
- Drainage Basin
- Property Lire
- Paved
- Buildings
- Deep Residuum Monitoring/ Observation Well
- Shallow Residuum Monitoring/ Observation Well
- Bedrock Monitoring Well
- BDL 04/97 Sample Result (µg/L)
- BDL 09/97 Sample Result (µg/L)
- BDL 04/98 Sample Result (µg/L)
- BDL 08/98 Sample Result (µg/L)

NOTES

BDL = Below Detection Limit
J = Estimated Value
UJ = Estimated value below practical detection limit but greater than or equal to the instrument detection limit

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps
MAP PROJECTION	**DATUM**
US State Plane	NAD83

LOCATION MAP



N

SCALE
150 0 150 300 Feet

SOLUTIA
Applied Chemistry, Creative Solutions

Golder Associates

DATE:	PRODUCED BY:	PROJECT/FILE No:	FIGURE No:
October 2002	JFS	983-3223 Q:\...\rfi-gis\rfi-chem.apr	34

4-Nitrophenol Concentrations in Groundwater Samples Since 1997

On-Site RFI/CS Program

Solutia Inc., Anniston, Alabama



LEGEND

- Railroads
- Major Roads
- Minor Roads
- Drainage Basin
- Property Line
- Paved
- Buildings
- Deep Residuum Monitoring/ Observation Well
- Shallow Residuum Monitoring/ Observation Well
- Bedrock Monitoring Well
- BDL 04/97 Sample Result (µg/L)
- BDL 09/97 Sample Result (µg/L)
- BDL 04/98 Sample Result (µg/L)
- BDL 08/98 Sample Result (µg/L)

NOTES

BDL = Below Detection Limit

J = Estimated Value

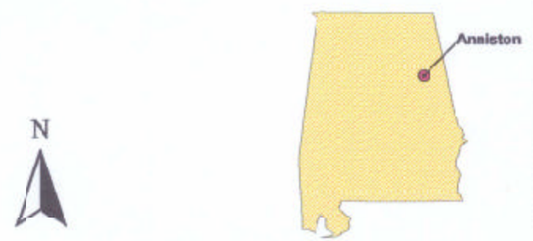
UJ = Estimated value below practical detection limit but greater than or equal to the instrument detection limit

SCALE

150 0 150 300 Feet

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps
MAP PROJECTION	**DATUM**
US State Plane	NAD83

LOCATION MAP



SOLUTIA
Applied Chemistry, Creative Solutions

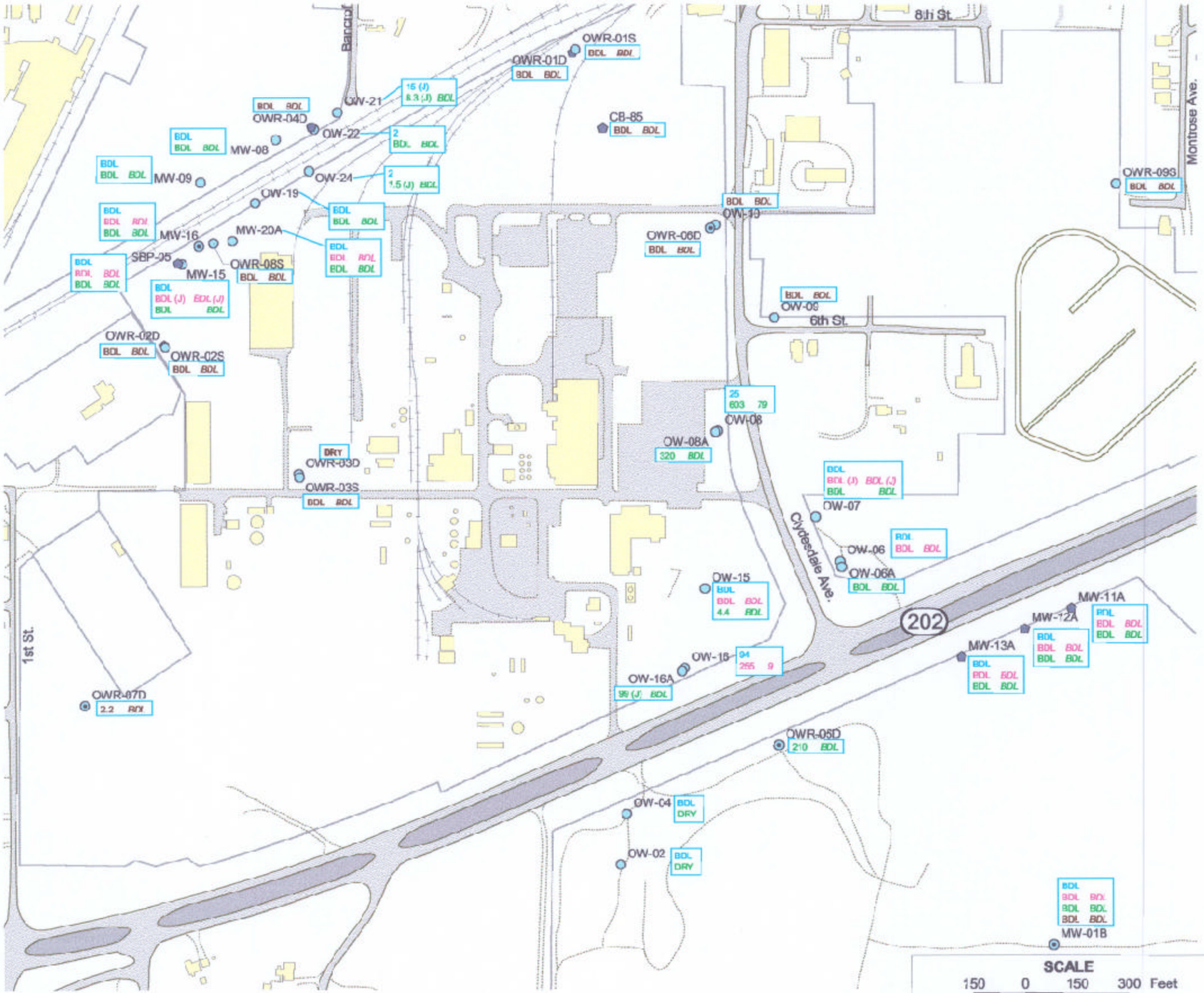
Golder Associates

DATE:	PRODUCED BY:	PROJECT/FILE No:	FIGURE No:
October 2002	JES	083-3223 Q:\...\rfi-gis\rfi-chem.apr	35

Total PCB Concentrations in Groundwater Samples Since 1997

On-Site RFI/CS Program

Solutia Inc., Anniston, Alabama



LEGEND

- Railroads
- Major Roads
- Minor Roads
- Drainage Basin
- Property Line
- Paved
- Buildings
- Deep Residuum Monitoring/ Observation Well
- Shallow Residuum Monitoring/ Observation Well
- Bedrock Monitoring Well

BDL BDL 04/97 Sample Result (µg/L)
BDL BDL 09/97 Sample Result (µg/L)
BDL BDL 04/98 Sample Result (µg/L)
BDL BDL 08/98 Sample Result (µg/L)
BDL unfiltered concentration (µg/L)
BDL filtered concentration (µg/L)

NOTES

BDL = Below Detection Limit
J = Estimated Value

ZONE
Alabama East 101

SOURCE
Golder Associates (on-site base map)
USGS 1:2400 Quad Maps

MAP PROJECTION
US State Plane

DATUM
NAD83

LOCATION MAP



N

SCALE
150 0 150 300 Feet

SOLUTIA
Applied Chemistry, Creative Solutions

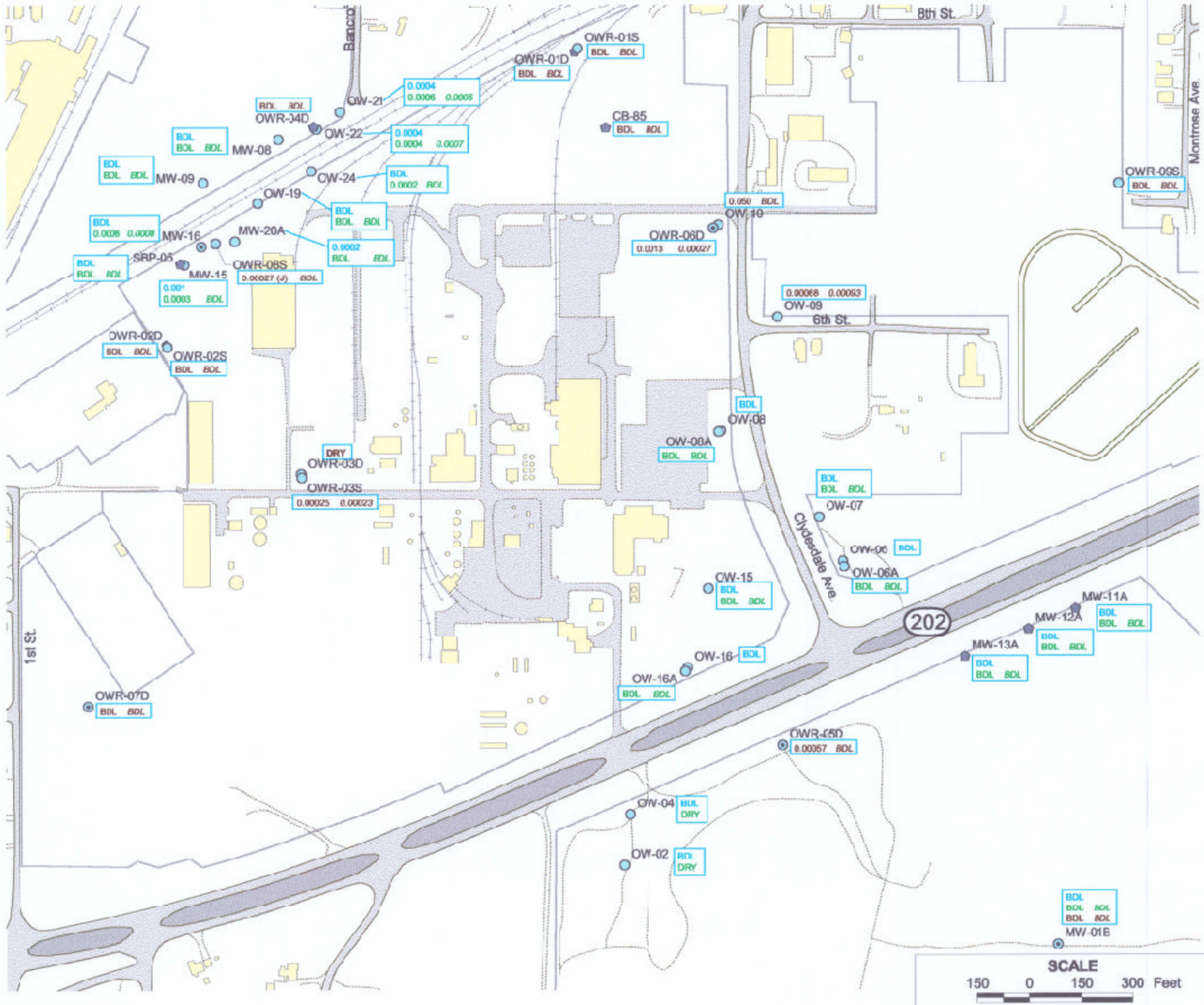
Golder Associates

DATE:	PRODUCED BY:	PROJECT/FILE No:	FIGURE No:
October 2002	JES	063-3223 G:\...\r6-gis\rfi-chem.apr	36

Mercury Concentrations in Groundwater Samples Since 1997

On-Site RFI/CS Program

Solutia Inc., Anniston, Alabama



LEGEND

- Railroads
- Major Roads
- Minor Roads
- Drainage Basin
- Property Line
- Paved
- Buildings
- Deep Residuum Monitoring/ Observation Well
- Shallow Residuum Monitoring/ Observation Well
- Bedrock Monitoring Well

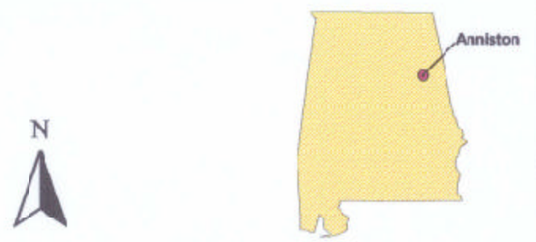
BDL BDL 04/97 Sample Result (µg/L)
BDL BDL 04/98 Sample Result (µg/L)
BDL BDL 08/98 Sample Result (µg/L)
BDL unfiltered concentration (µg/L)
BDL filtered concentration (µg/L)

NOTES

BDL = Below Detection Limit
J = Estimated Value

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps
MAP PROJECTION	**DATUM**
US State Plane	NAD83

LOCATION MAP



SOLUTIA
Applied Chemistry, Creative Solutions

Golder Associates

DATE:	PRODUCED BY:	PROJECT/FILE No:	FIGURE No:
October 2002	JES	983-3223 Q:\...\rfi-gis\rfi-chem.apr	37

Cobalt Concentrations in Groundwater Samples Since 1997

On-Site RFI/CS Program

Solutia Inc., Anniston, Alabama



NOTES

BDL = Below Detection Limit

J = Estimated Value

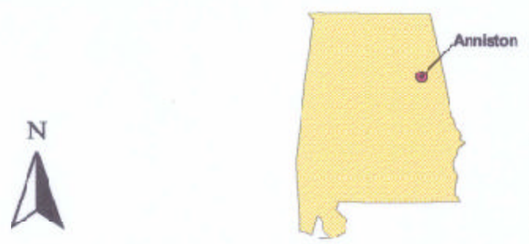
UJ = Estimated value below practical detection limit but greater than or equal to the instrument detection limit

JB = Estimated value above detection limit, analyte found in method blank

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps

MAP PROJECTION	DATUM
US State Plane	NAD83

LOCATION MAP

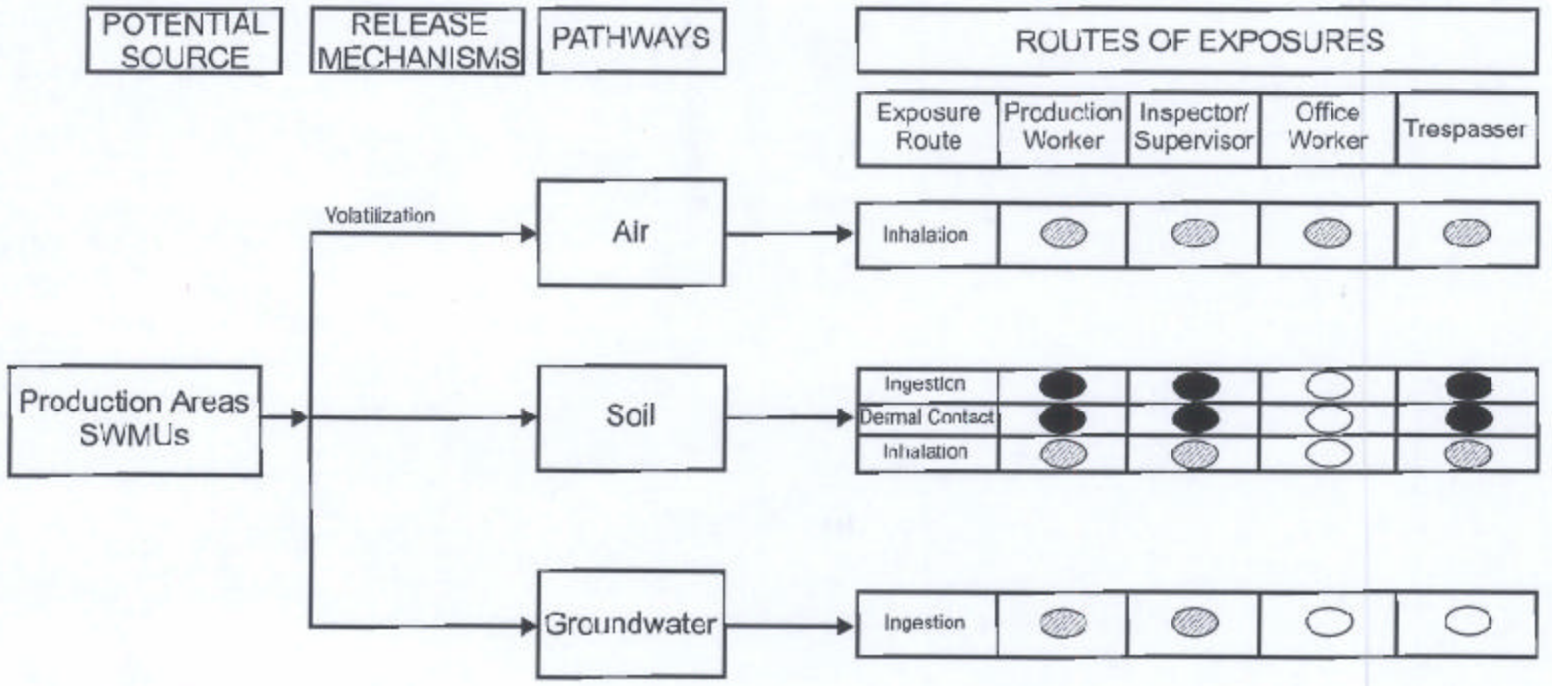


SOLUTIA

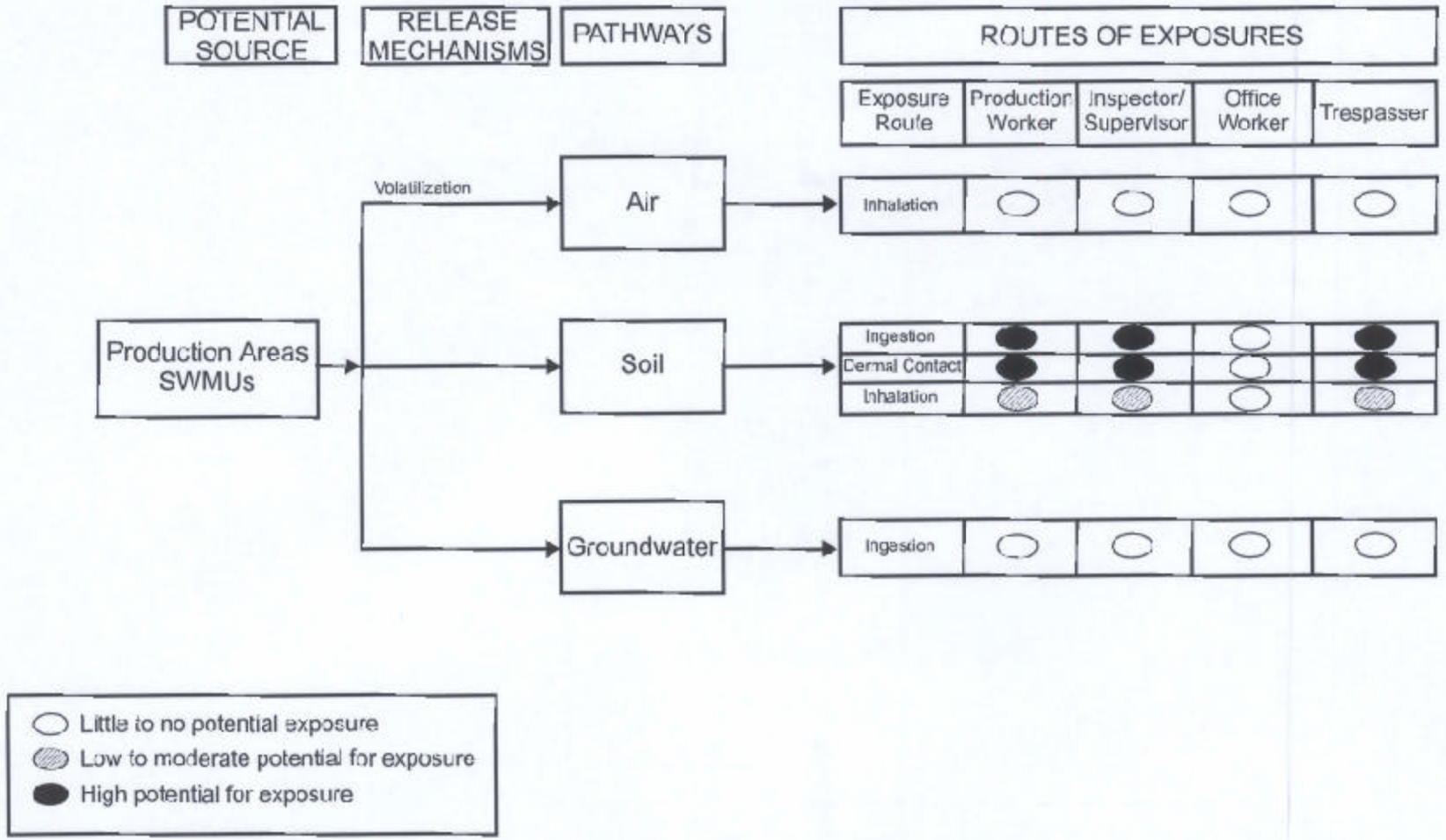
Applied Chemistry, Creative Solutions

Golder Associates

DATE:	PRODUCED BY:	PROJECT/FILE No:	FIGURE No:
October 2002	JES	983-3225 Q:\...\rfi-gis\rfi-chem.apr	38



CLIENT/PROJECT: On-Site RFI/CS Program			Golder Associates Atlanta, Georgia			TITLE: Preliminary Site Exposure Model		
DRAWN: JES	CHECKED: SM	REVIEWED: SM	DATE: October 2002	SCALE: NA	FILE NO: 943-3680	JOB NO: 943-3680	DWG NO./REV NO: prelim.cdr	FIGURE: 39

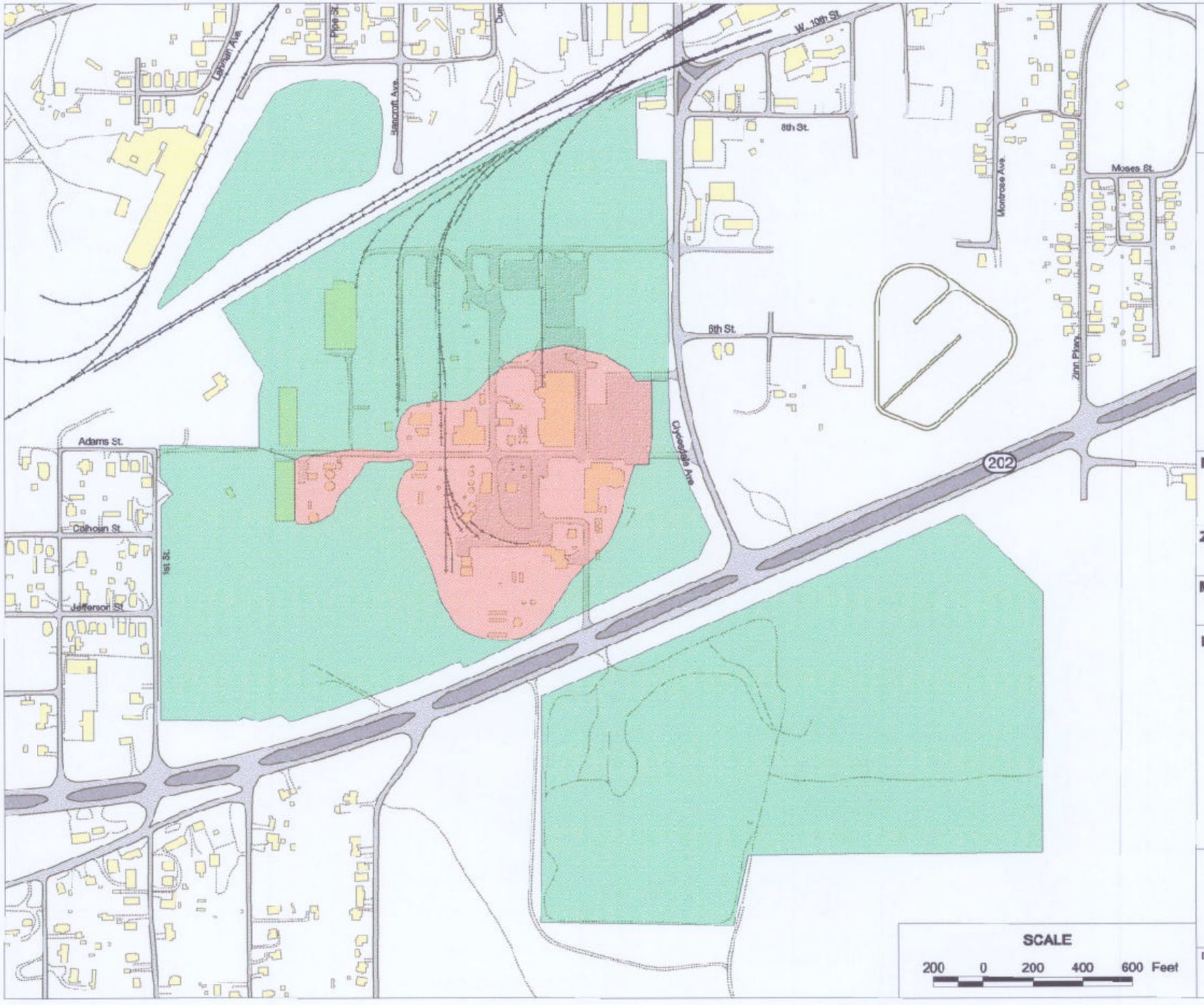


CLIENT/PROJECT						TITLE		
On-Site RFI/CS Program			Golder Associates Atlanta, Georgia			Revised and Updated Site Exposure Model		
DRAWN	CHECKED	REVIEWED	DATE	SCALE	FILE NO.	JOB NO	DWG NO. REV NO.	FIGURE
JES	SM	SM	October 2002	NA	943-3680	943-3680	revisec.cdr	40

High and Low Site Contact Areas

On-Site RFI/CS Program

Solutia Inc.
Anniston, Alabama



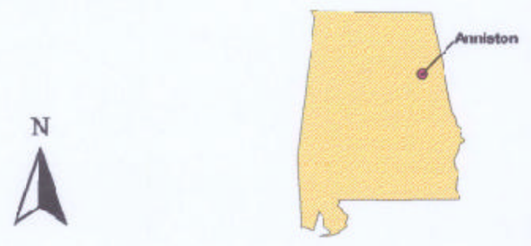
LEGEND

- On-Site Boundary
- Major Roads
- Minor Roads
- Drainage Basin
- Railroads
- Buildings
- Paved Surface
- High Contact Areas (HCA)
- Low Contact Area (LCA)

NOTES

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps
MAP PROJECTION	**DATUM**
US State Plane	NAD83

LOCATION MAP



SOLUTIA
Applied Chemistry, Creative Solutions

Golder Associates

SCALE

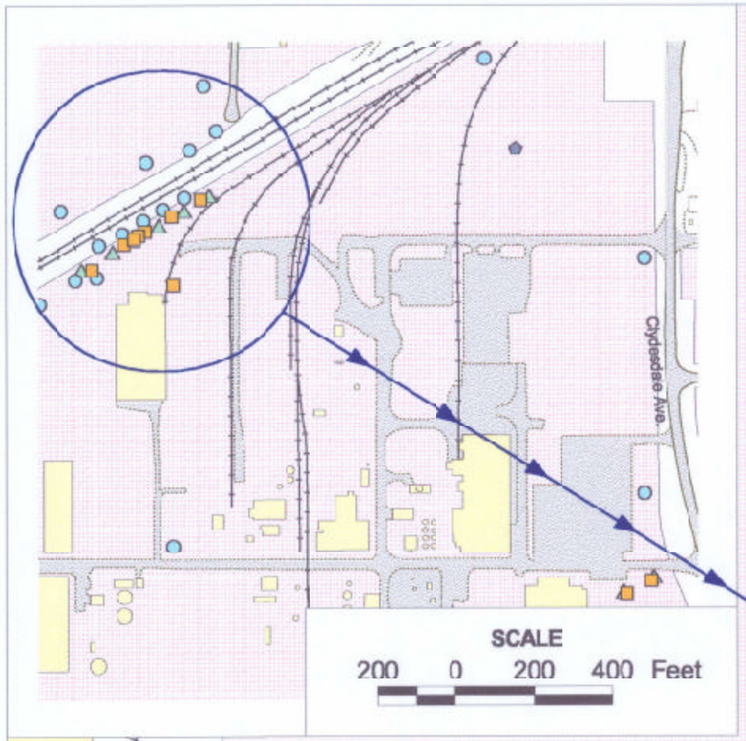
200 0 200 400 600 Feet

DATE:	PRODUCED BY:	FILE No:	FIGURE NO.
October 2002	JES	Q:\...\rfi-gis\rfi-traf.apr	41

OLBSI Groundwater Corrective Action System
Potentiometric Surface for December 1997

On-Site RFI/CS Program

Solutia Inc.
Anniston, Alabama



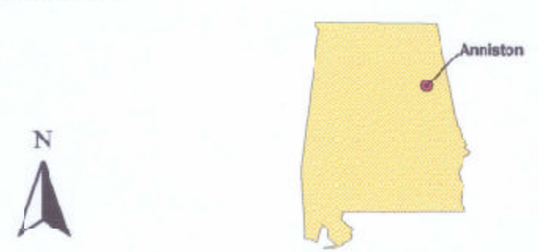
LEGEND

- On-Site Boundary
- Major Roads
- Minor Roads
- Drainage Basin
- Powerlines
- Railroads
- Buildings
- Alabama Power
- Solutia Inc.
- Paved Surface
- Interceptor Well
- Shallow Residuum Monitoring/ Observation Well
- Piezometer
- Potentiometric Contour (feet above mean sea level)

NOTES

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps
MAP PROJECTION	**DATUM**
US State Plane	NAD83

LOCATION MAP



SOLUTIA
Applied Chemistry, Creative Solutions

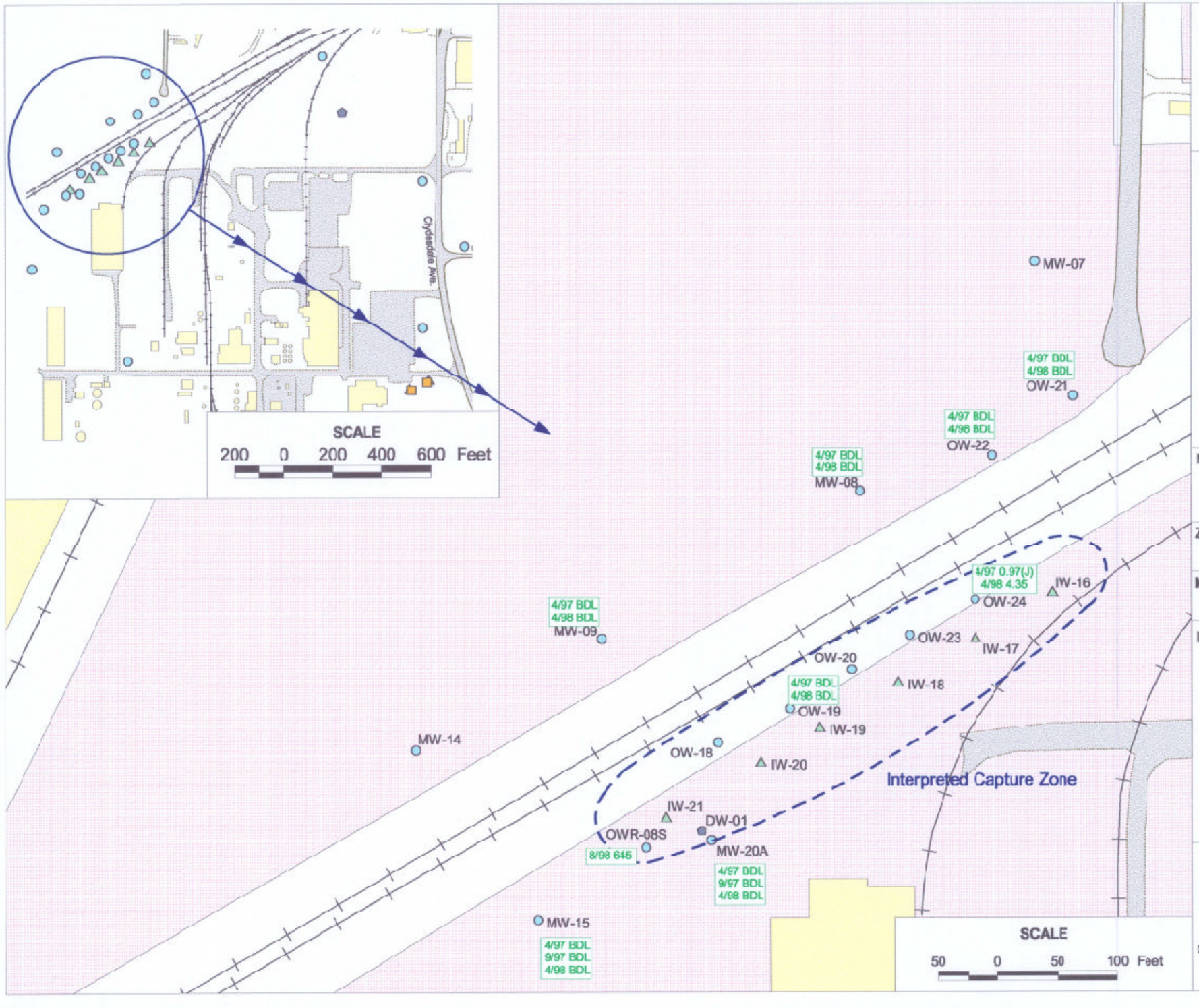
Golder Associates

DATE:	PRODUCED BY:	PROJECT/FILE No:	FIGURE NO.
October 2002	JES	983-3223 Q:\...\vfi-glo\vf-lin3.apr	42

OLBSI Groundwater Corrective Action System Effectiveness Ethyl Parathion Concentrations

On-Site RFI/CS Program

Solutia Inc.
Anniston, Alabama



LEGEND

- On-Site Boundary
- Major Roads
- Minor Roads
- Drainage Basin
- Powerlines
- Railroads
- Buildings
- Alabama Power
- Solutia Inc.
- Paved Surface
- Interceptor Well
- Shallow Residuum Monitoring/ Observation Well
- Bedrock Monitoring Well
- 8/98 560 — Date Sampled and Total Concentration (µg/L)

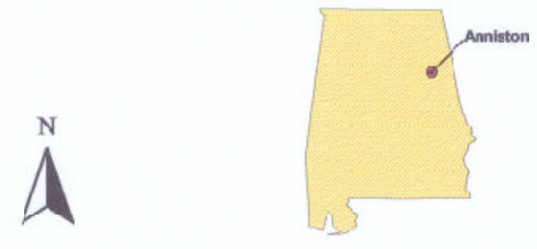
NOTES

BDL = Below Detection Limit
J = Estimated

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps

MAP PROJECTION	DATUM
US State Plane	NAD83

LOCATION MAP



SOLUTIA
Applied Chemistry Creative Solutions

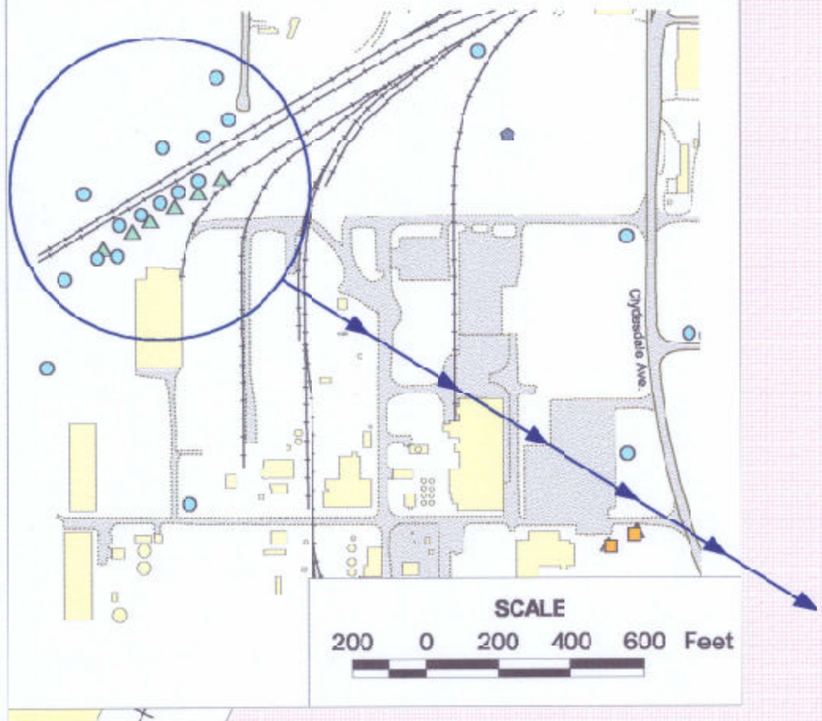
Golder Associates

DATE:	PRODUCED BY:	PROJECT/FILE No:	FIGURE NO.
October 2002	JES	903-3223 C:\...\rfi-gis\rfi-olbs.apr	43

OLBSI Groundwater Corrective Action System Effectiveness 4-Nitrophenol Concentrations

On-Site RFI/CS Program

Solutia Inc.
Anniston, Alabama



LEGEND

- On-Site Boundary
- Major Roads
- Minor Roads
- Drainage Basin
- Powerlines
- Railroads
- Buildings
- Alabama Power
- Solutia Inc.
- Paved Surface
- Interceptor Well
- Shallow Residuum Monitoring/ Observation Well
- Bedrock Monitoring Well
- 8/98 560 — Date Sampled and Total Concentration (µg/L)

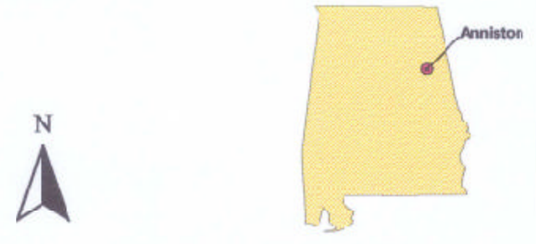
NOTES

BDL = Below Detection Limit
J = Estimated

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps

MAP PROJECTION	DATUM
US State Plane	NAD83

LOCATION MAP



SOLUTIA
Applied Chemistry, Creative Solutions

Golder Associates

DATE:	PRODUCED BY:	PROJECT/FILE No:	FIGURE NO.
Octber 2002	JES	963-3223 0:\...\rfi-gis\rfi-olbs.apr	44

APPENDIX A

Borehole/Monitoring Well Logs and Air Monitoring Forms

PROJECT: SOLUTIA

PROJECT LOCATION: ALABAMA

PROJECT NUMBER: 983-3223

RECORD OF BOREHOLE OWR-4D

BORING DATE: 5/27/98

BORING LOCATION:

SHEET: 1 OF 3

DATUM: FT-MSL

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE DESCRIPTION	USCS	GRAPHIC LOG	ELEV / DEPTH	SAMPLES NUMBER	TYPE	BLOWS / 6 in	N	REC/ATT	NOTE
0	HSA 4 1/4, 12 1/4	Fill and concrete, no sample taken until 3' BGS			0.00						
		Soft, moist, dark brown, CLAYEY SILT, fine-medium sand, little gravels (topsoil)	ML		3.00	1	DO	1,1,2,3	3	2.0/2.0	
5						2	DO	1,2,1,3	3	2.0/2.0	
		Soft to firm, light brown-tan-red, SILTY CLAY, little to some fine-medium sand (weathered residuum)			7.00	3	DO	1,3,5,5	8	2.0/2.0	
10						4	DO	4,5,5,12	10	2.0/2.0	
						5	DO	10,11,13,17	24	1.0/2.0	
			CL			6	DO	8,11,13,15	24	1.75/2	
15						7	DO	5,7,9,10	16	1.5/2.0	
						8	DO	4,5,7,7	12	1.75/2	
20						9	SH	-	NA		
		Firm to stiff, damp to moist, light brown-red-orange, SILTY CLAY, little to some fine-coarse sand, trace to little fine-medium chert gravels, black (Mn) staining			21.00	10	DO	3,4,3,6	7	2.0/2.0	
						11	DO	3,4,5,7	9	1.75/2	
25						12	DO	2,1,5,7	6	2.0/2.0	
						13	DO	3,5,7,11	12	2.0/2.0	
30			CL			14	DO	2,3,8,11	11	1.75/2	
						15	DO	8,11,12,13	23	1.75/2	
						16	DO	14,14,8,13	22	2.0/2.0	
35						17	CME	-	NA	4.5/5.0	
40											

DRILL RIG: CME-75

DRILLING CONTRACTOR: EEI

DRILLER: E. FULLER

Golder Associates

LOGGED: CDH

CHECKED: SFR

DATE: 10/7/98

PROJECT: SOLUTIA

PROJECT LOCATION: ALABAMA

PROJECT NUMBER: 983-3223

RECORD OF BOREHOLE OWR-4D

BORING DATE: 5/27/98

BORING LOCATION:

SHEET: 2 OF 3

DATUM: FT-MSL

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE DESCRIPTION	USCS	GRAPHIC LOG	ELEV / DEPTH	SAMPLES NUMBER	TYPE	BLOWS / 6 in	N	REC/ATT	NOTE
40	HSA 4 1/4, 12 1/4	See previous page	CL			18	SH	-	NA	2.0/2.0	
						19	CME	-	NA	3.0/5.0	
45						20	CME	-	NA	5.0/5.0	
50						21	CME		NA	5.0/5.0	
55		Soft, moist to wet, yellow-tan, CLAYEY SILT, trace fine-medium sand, slickensided fractures with Mn and Fe staining (weathered residuum)	MH		54.00	22	CME	-	NA	5.0/5.0	
60						23	SH	-	NA	2.0/2.0	
						24	CME	-	NA	3.0/3.0	
65						25	CME	-	NA	5.0/5.0	
70		Soft to firm, moist, brown-med. brown, SILTY CLAY, some highly weathered rock zones, trace fine-medium sand (weathered residuum)	CL		67.00	26	CME		NA	5.0/5.0	
75						27	CME	-	NA	5.0/5.0	
80											

DRILL RIG: CME-75

DRILLING CONTRACTOR: EEI

DRILLER: E. FULLER

Golder Associates

LOGGED: CDH

CHECKED: SFR

DATE: 10/7/98

PROJECT: SOLUTIA

PROJECT LOCATION: ALABAMA

PROJECT NUMBER: 983-3223

RECORD OF BOREHOLE OWR-4D

BORING DATE: 5/27/98

BORING LOCATION:

SHEET: 3 OF 3

DATUM: FT-MSL

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE: DESCRIPTION	USCS	GRAPHIC LOG	ELEV / DEPTH	SAMPLES: NUMBER	TYPE	BLOWS / 6 in	N	REC/ATT	NOTE
80	HSA 4 1/4, 12 1/4		CL			28	SH	-	NA	2.0/2.0	
		Boring completed @ 80' BGS, pushed shelby additional 2' to 82' BGS			82.00						
85											
90											
95											
100											
105											
110											
115											
120											

DRILL RIG: CME-75

DRILLING CONTRACTOR: EEI

DRILLER: E. FULLER

Golder Associates

LOGGED: CDH

CHECKED: SFR

DATE: 10/7/98

PROJECT: SOLUTIA

PROJECT LOCATION: ALABAMA

PROJECT NUMBER: 983-3223

RECORD OF BOREHOLE OWR-5D

BORING DATE: 6/5/98

BORING LOCATION:

SHEET: 1 OF 2

DATUM: FT-MSL

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE: DESCRIPTION	USCS	GRAPHIC LOG	ELEV / DEPTH	SAMPLES: NUMBER	TYPE	BLOWS / 6 in	N	REC/ATT	NOTE
0	HSA 4 1/4, 12 1/4	Soft, damp to moist, reddish brown, SILTY CLAY, trace to some fine-coarse sand and gravel (weathered residuum) Below 2' chemical odor present	CL		0.00	1	SS	1,3,2,1	5	0.5/2.0	
						2	SS	1,2,3,2	5	2.0/2.0	
6		4' - 10' occasional sandstone fragments				3	SS	6,10,20,10	40	1.0/2.0	
						4	SS	11,14,21,19	35	1.0/2.0	
						5	SS	11,7,9,10	16	2.0/2.0	
10						6	SS	9,8,10,15	18	2.0/2.0	
		Firm to very stiff, damp to moist, purplish red, white-yellow-tan, mottled, SILTY CLAY, trace to some fine-coarse sand and gravel, few slickensides (weathered residuum)			12.00	7	SS	5,4,8,9	12	1.5/2.0	
16						8	SS	4,6,7,10	13	2.0/2.0	
						9	SS	4,6,8,10	14	1.0/2.0	
							SH	-	NA	0/0	
20						10	SH	-	NA	1.0/2.0	
		22' - 57' Few microfractures filled with silty sand and silt				11	SS	6,8,14,17	20	2.0/2.0	
26						12	SS	4,6,5,6	11	2.0/2.0	
			CL			13	SS	2,4,6,7	10	2.0/2.0	
						14	SS	5,8,8,8	16	1.0/2.0	
30						15	SS	6,10,12,15	22	2.0/2.0	
						16	SS	1,1,1,2	2	2.0/2.0	
36											
						17	SH	-	NA		
						18	CME	-	NA	5.0/5.0	
40											

DRILL RIG: CME-75

DRILLING CONTRACTOR: EEI

DRILLER: E. FULLER

Golder Associates

LOGGED: CDH/MNH

CHECKED: SFR

DATE: 10/7/98

PROJECT: SOLUTIA

PROJECT LOCATION: ALABAMA

PROJECT NUMBER: 983-3223

RECORD OF BOREHOLE OWR-5D

BORING DATE: 6/5/98

BORING LOCATION:

SHEET: 2 OF 2

DATUM: FT-MSL

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE DESCRIPTION	USCS	GRAPHIC LOG	ELEV / DEPTH	SAMPLES NUMBER	TYPE	BLOWS / 6 in	N	REC/ATT	NOTE
40	HSA 4 1/4, 12 1/4					18	CME	-	NA	5.0/5.0	
45						19	CME	-	NA	5.0/5.0	
		46' - 57' Vertical microfractures filled with silty fine sand, fractures increasing with depth	CL			20	CME	-	NA	4.0/5.0	
50		52' - 57' Very stiff				21	CME	-	NA	4.5/5.0	
55		Very stiff, damp to moist, purple, red-brown, tan, marbled, SILTY CLAY AND CLAYEY SILT, trace to little coarse-fine sand and fine gravel, thin vertical fractures filled with fine sand (weathered residuum)	CL-ML		57.00	22	SS	11,13,23,37	36	1.0/2.0	
60						23	SS	9,10,23,36	33	1.5/2.0	
						24	SS	8,16,34,40	50	1.5/2.0	
65						25	SS	7,22,23,22	45	1.5/2.0	
		Boring completed @ 65' BGS			65.00						
70											
75											
80											

DRILL RIG: CME-75

DRILLING CONTRACTOR: EEI

DRILLER: E. FULLER

Golder Associates

LOGGED: CDH/MNH

CHECKED: SFR

DATE: 10/7/98

PROJECT: SOLUTIA

PROJECT LOCATION: ALABAMA

PROJECT NUMBER: 983-3223

RECORD OF BOREHOLE OWR-6D

BORING DATE: 6/3/98

BORING LOCATION:

SHEET: 1 OF 2

DATUM: FT-MSL

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE DESCRIPTION	USCS	GRAPHIC LOG	ELEV / DEPTH	SAMPLES NUMBER	TYPE	BLOWS / 6 in	N	REC/ATT	NOTE
0	HSA 4 1/4, 12 1/4										
		(FILL) Soft, dry, light brown to dark brown, CLAYEY SILT, little fine-coarse sand, trace fine-coarse gravel	ML		0.00						
						1	SS	1,2,1,2	3	1.0/2.0	
5		Soft to firm, dry to moist, light brown and reddish brown and tan, mottled, SILTY CLAY, little to some fine-coarse sand and fine-coarse gravel, weathered sandstone gravel (weathered residuum)	CL		4.00	2	SS	1,3,5,4	7	1.0/2.0	
						3	SS	7,9,12,14	21	2.0/2.0	
						4	SS	5,12,12,9	24	1.0/2.0	
10						5	SS	2,5,2,4	7	1.0/2.0	
						6	SS	3,5,5,4	10	1.0/2.0	
15		14' - 18' same as above except soft, wet				7	SS	4,5,3,3	8	2.0/2.0	
						8	SS	3,3,4,5	7	0.5/2.0	
		Stiff, damp to very moist, red-brown-tan, mottled, SILTY CLAY, trace to some fine-coarse sand and gravels, weathered sandstone common (weathered residuum)	CL		18.00	9	SS	5,7,11,12	18	2.0/2.0	
20						10	SH	-	NA		
						11	SS	4,7,7,10	14	1.75/2	
25						12	SS	3,4,7,7	11	1.75/2	
						13	SS	7,9,10,9	19	1.0/2.0	
						14	SS	4,4,8,10	12	0.5/2.0	
30						15	SS	5,7,7,9	14	2.0/2.0	
						16	SS	7,9,6,6	15	2.0/2.0	
35											34' - 65' BGS sample recovery poor. Samples remolded by wood fragments during drilling. Soft, wet conditions likely due to remolding. Intact, undisturbed samples indicate stiff, moist silty clay
						17	CME	-	NA		
40											

DRILL RIG: CME-75

DRILLING CONTRACTOR: EEI

DRILLER: E. FULLER

Golder Associates

LOGGED: CDH/MNH

CHECKED: SFR

DATE: 10/7/98

PROJECT: SOLUTIA

PROJECT LOCATION: ALABAMA

PROJECT NUMBER: 983-3223

RECORD OF BOREHOLE OWR-6D

BORING DATE: 6/3/98

BORING LOCATION:

SHEET: 2 OF 2

DATUM: FT-MSL

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE: DESCRIPTION	USCS	GRAPHIC LOG	ELEV / DEPTH	SAMPLES: NUMBER	TYPE	BLOWS / 6 in	N	REC/ATT	NOTE
45	HSA 4 1/4, 12 1/4	See previous page	CL			18	SH	-	NA		
						19	CME	-	NA	1.0/5.0	
						20	SH	-	NA		
						21	SS	4,4,6,8	10	0.2/2.0	
50						22	CME	-	NA	0.5/3.0	
						23	CME	-	NA	1.0/5.0	
55						24	CME	-	NA		
60						25	SH	-	NA	0.6/2.0	
						26	SS	2,3,3,4	6	1.5/2.0	
65		Boring completed @ 65' BGS			60.0	27	SS	4,3,4,4	7	1.5/2.0	
70											
75											
80											

DRILL RIG: CME-75

DRILLING CONTRACTOR: EEI

DRILLER: E. FULLER

Golder Associates

LOGGED: CDH/MNH

CHECKED: SFR

DATE: 10/7/98

PROJECT: SOLUTIA
PROJECT LOCATION: ALABAMA
PROJECT NUMBER: 983-3223

RECORD OF BOREHOLE OWR-7D

BORING DATE: 5/28/98
BORING LOCATION:

SHEET: 1 OF 2
DATUM: FT-MSL

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE DESCRIPTION	USCS	GRAPHIC LOG	ELEV / DEPTH	SAMPLES NUMBER	TYPE	BLOWS / 6 in	N	REC/ATT	NOTE
0	HSA 4 1/4, 12 1/4										
		(FILL) Soft, red-brown, SILTY CLAY, little to some fine-medium gravel	CL		0.00						
						1	DO	2,3,8,11	11	1.0/2.0	
						2	DO	6,10,8,14	18	2.0/2.0	
						3	DO	10,30,29,10	59	2.0/2.0	
		Soft to firm, moist, red-brown-orange, SILTY CLAY, little to some fine-coarse sand, little to trace gravels, intermittent sand zones (weathered residuum)			7.00	4	DO	2,10,12,5	22	2.0/2.0	
10						5	DO	3,8,5,6	13	1.0/2.0	
		Clayey sand zone				6	DO	4,5,8,7	13	1.0/2.0	
			CL			7	DO	6,9,11,16	14	2.0/2.0	
15						8	DO	11,15,13,13	28	2.0/2.0	
						9	DO	5,6,9,9	17	1.0/2.0	
20						10	DO	3,4,4,6	8	1.0/2.0	
						11	DO	3,5,4,5	9	1.0/2.0	
		Gravelly zone			24.00						
25			CL								
						12	SH	-	NA	1.5/2.0	
30		Soft to firm, moist to wet, red-brown-orange, SILTY CLAY, little fine-coarse sand, trace gravels (chert) to nodules, slickenslided silt/sand filled fractures (weathered residuum)			30.00	13	DO	10,10,3,3	13	1.0/2.0	
						14	DO	3,7,10,11	17	1.0/2.0	
35			CL			15	DO	9,11	20	1.0/1.0	
						16	CME	-	NA	4.0/5.0	
40											

DRILL RIG: CME-75
DRILLING CONTRACTOR: EEI
DRILLER: E. FULLER

Golder Associates

LOGGED: CDH
CHECKED: SFR
DATE: 10/7/98

PROJECT: SOLUTIA
PROJECT LOCATION: ALABAMA
PROJECT NUMBER: 983-3223

RECORD OF BOREHOLE OWR-7D

BORING DATE: 5/28/98
BORING LOCATION:

SHEET: 2 OF 2
DATUM: FT-MSL

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE: DESCRIPTION	USCS	GRAPHIC LOG	ELEV / DEPTH	SAMPLES: NUMBER	TYPE	BLOWS / 6 in	N	REC/ATT	NOTE
40	HSA 4 1/4, 12 1/4	See previous page	CL			17	SH	-	NA	1.5/2.0	
						18	CME	-	NA	3.0/3.0	
45						19	CME	-	NA	4.0/5.0	
50						20	CME	-	NA	4.0/5.0	
55		Clayey sand zone				21	CME	-	NA	4.0/5.0	
60						22	SH	-	NA	1.7/2.0	
65						23	CME	-	NA	3.0/3.0	
		Boring completed @ 65' BGS			65.00						
70											
75											
80											

DRILL RIG: CME-75
DRILLING CONTRACTOR: EEI
DRILLER: E. FULLER

Golder Associates

LOGGED: CDH
CHECKED: SFR
DATE: 10/7/98

PROJECT: SOLUTIA

PROJECT LOCATION: ALABAMA

PROJECT NUMBER: 963-3223

RECORD OF BOREHOLE OWR-8S

BORING DATE: 6/12/98

BORING LOCATION:

SHEET: 1 OF 1

DATUM: FT-MSL

DEPTH SCALE FEET	BORING METHOD	DESCRIPTION	USCS	GRAPHIC LOG	ELEV / DEPTH	NUMBER	TYPE	BLOWS / 6 in	N	REC/ATT	NOTE
0	HSA 4 1/4, 12 1/4	Gravel fill			0.00						
		Soft, dry to damp, light brown-orange brown, CLAYEY SILT, some to and fine-medium sand and fine gravel, fractured	ML		2.00	1	SS	3,6,5,9	11	0.0/2.0	
5						2	SS	3,3,4,7	7	2.0/2.0	
		Soft, light brown to orange brown, moist to very moist, SILTY CLAY, some to and fine-coarse sand and fine gravel 8.5' - 9' Roof shingle-like material 9' - 10' Clayey silt	CL		6.00	3	SS	4,4,3,3	7	.75/2.0	
						4	SS	2,7,2,2	9	1.5/2.0	
10		Soft, moist to wet, light brown-orange brown, SILTY CLAY, trace to and fine-coarse sand, little fine gravel			10.00	5	SS	1,1,2,4	3	2.0/2.0	
						6	SS	4,2,4,2	6	2.0/2.0	
15			CL			7	SS	2,2,2,2	4	2.0/2.0	
		Compact to firm, wet, red-brown, SANDY SILT AND SILTY FINE SAND	ML-SM		18.00						
		Firm, damp to moist, red-brown-tan-balck, mottled, SILTY CLAY, trace to some coarse fine sand and fine gravel, chert gravel present and Fe nodules			18.50	8	SS	5,9,4,10	13	1.5/2.0	
20						9	SH	-	NA	2.0/2.0	
						10	CME	-	NA		
25			CL			11	CME	-	NA	3.0/3.0	
		28' - 32' Silty sand and sandy silt thin (< 1 cm) seams present, wet in seams				12	SS	4,6,7,13	13	1.5/2.0	
30						13	SH	-	NA	1.5/2.0	
		32' - 35' No seams				14	SS	5,6,8,11	14	2.0/2.0	
35						15	SS	7,8	15	1.0/1.0	
		Boring completed @ 35' BGS			35.00						
40											

DRILL RIG: CME-75

DRILLING CONTRACTOR: EEI

DRILLER: E. FULLER

Golder Associates

LOGGED: MNH

CHECKED: SFR

DATE: 10/7/98

PROJECT: SOLUTIA

PROJECT LOCATION: ALABAMA

PROJECT NUMBER: 983-3223

RECORD OF BOREHOLE OWR-9S

BORING DATE: 6/21/98

BORING LOCATION:

SHEET: 1 OF 2

DATUM: FT-MSL

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE DESCRIPTION	USCS	GRAPHIC LOG	ELEV / DEPTH	SAMPLES NUMBER	TYPE	BLOWS / 6 in	N	REC/ATT	NOTE
0	HSA 4 1/4, 12 1/4	Firm, damp to moist, light brown, orange, reddish brown, SILTY CLAY, little to some fine-coarse sand and gravel, (meta-sandstone) and (chert), fe, Mn nodules, some slickensided fractures with clay or silty sand infilling	CL		0.00	1	SS	3,4,8,9	12	2.0/2.0	
						2	SS	2,4,7,8	11	2.0/2.0	
5						3	SS	14,16,16,10	31	1.75/2	
						4	SS	3,5,8,11	13	2.0/2.0	
10						5	SS	3,6,8,11	14	2.0/2.0	
						6	SS	10,9,8,13	17	1.0/2.0	
15											
						7	CME	-	NA	5.0/5.0	
20						8	SH	-	NA	1.2/2.0	
		24' - 27' Cobble/gravel zone				9	CME	-	NA	3.0/3.0	
25						10	CME	-	NA	5.0/5.0	
30						11	CME	-	NA	5.0/5.0	
35		35' - 37' Highly weathered chert and meta-sandstone				12	CME	-	NA	5.0/5.0	
40											

DRILL RIG: CME-75

DRILLING CONTRACTOR: EEI

DRILLER: E. FULLER

Golder Associates

LOGGED: CDH

CHECKED: SFR

DATE: 10/7/98

PROJECT: SOLUTIA

PROJECT LOCATION: ALABAMA

PROJECT NUMBER: 983-3223

RECORD OF BOREHOLE OWR-9S

BORING DATE: 6/21/98

BORING LOCATION:

SHEET: 2 OF

DATUM: FT-MSL

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE: DESCRIPTION	USCS	GRAPHIC LOG	ELEV / DEPTH	SAMPLES: NUMBER	TYPE	BLOWS / 6 in	N	REC/ATT	NOTE
40	HSA 4 1/4,12 1/4	See previous page	CL			13	SH	-	NA	1.8/2.0	
						14	CME	-	NA	3.0/3.0	
45											
						15	CME	-	NA	5.0/5.0	
50		Boring completed @ 50' BGS			50.00						
55											
60											
65											
70											
75											
80											

DRILL RIG: CME-75

DRILLING CONTRACTOR: EEI

DRILLER: E. FULLER

Golder Associates

LOGGED: CDH

CHECKED: SFR

DATE: 10/7/98

MONITORING WELL INSTALLATION LOG

JOB NO. 983-3223 PROJECT SOLUTIA/RFI/AL WELL NO. PZR-1 SHEET 1 of 1

GA INSP. CDH DRILLING METHOD HSA (4 1/4, 12 1/4) GROUND ELEV. 804.40 WATER DEPTH 50.94

WEATHER SUNNY DRILLING COMPANY EEI TOC ELEV. 806.91 DATE/TIME 8-11-98

TEMP 96 DRILL RIG CME 75 DRILLER L. FULLER STARTED 14:30/6-18-98 COMPLETED 17:00/6-18-98

LOCATION / COORDINATES N/A TIME / DATE TIME / DATE

MATERIALS INVENTORY

WELL CASING 2 in. dia. 50 l.f. WELL SCREEN 2 in. dia. 10 l.f. BENTONITE SEAL PELLETS

CASING TYPE PVC SREEN TYPE PVC INSTALLATION METHOD POURED

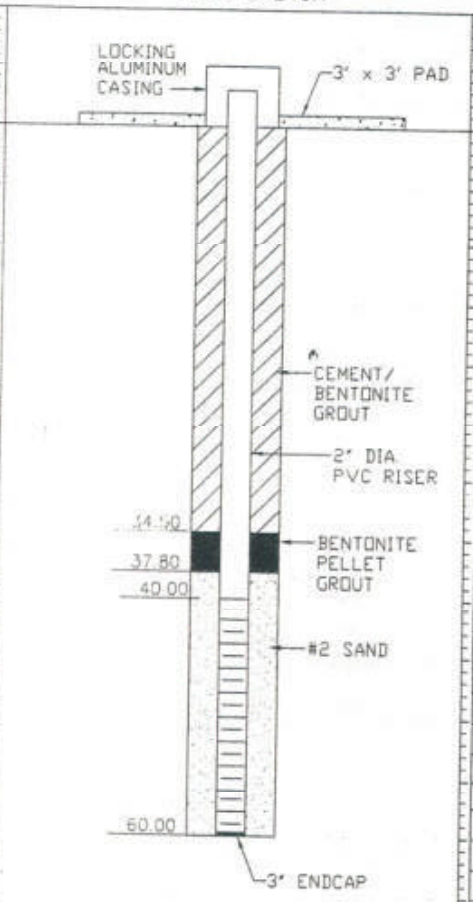
JOINT TYPE FLUSH SLOT SIZE 0.008 FILTER PACK QTY. 14 1/2 BAGS

GROUT QUANTITY 10 BAGS CENTRALIZERS N/A FILTER PACK TYPE GRADE 2 SILICA SAND

GROUT TYPE CEMENT/BENTONITE DRILLING MUD TYPE N/A INSTALLATION METHOD TREMMIED

ELEV./DEPTH	SOIL/ROCK DESCRIPTION
GROUND SURFACE	
0.0	REFER TO RECORD OF BOREHOLE PZR-1 FOR LITHOLOGIC DISCRIPTION
10.0	
20.0	
30.0	
40.0	
50.0	
60.0	
70.0	
80.0	
90.0	
100.0	

WELL SKETCH



INSTALLATION NOTES

Advanced 4 1/4" dia. augers to 60' BGS. Installed 20' of 2" dia., 0.008 slot PVC screen and 50' of 2" dia. PVC riser to 60' BGS. Tremmied 14 1/2 bags of sand to ~37.8' BGS. Poured (1) 5 gal. buckets of bentonite pellets to ~34.5' BGS. Grouted remainder of open annulus with 95%-5% cement bentonite grout mixture. Installed locking aluminum protective casing, 3' x 3' concrete pad and bumper posts for surface finish.

WELL DEVELOPMENT NOTES

Pumped and surged over 3 week period until turbidity improved.

MONITORING WELL INSTALLATION LOG

JOB NO 983-3223 PROJECT SOLUTIA/RFI/AL WELL NO. PZR-2 SHEET 1 of 1

GA INSP. CDH DRILLING METHOD HSA (4 1/4, 12 1/4) GROUND ELEV. 803.50 WATER DEPTH 50.72

WEATHER SUNNY DRILLING COMPANY EEI TOC ELEV. 805.86 DATE/TIME 8-11-98

TEMP. 96 DRILL RIG CME 75 DRILLER E. FULLER STARTED 1200/6-16-98 COMPLETED 1900/6-16-98
TIME / DATE TIME / DATE

LOCATION / COORDINATES N/A

MATERIALS INVENTORY

WELL CASING 2 in. dia 45 l.f. WELL SCREEN 2 in. dia. 20 l.f. BENTONITE SEAL PELLETS

CASING TYPE PVC SREEN TYPE PVC INSTALLATION METHOD POURED

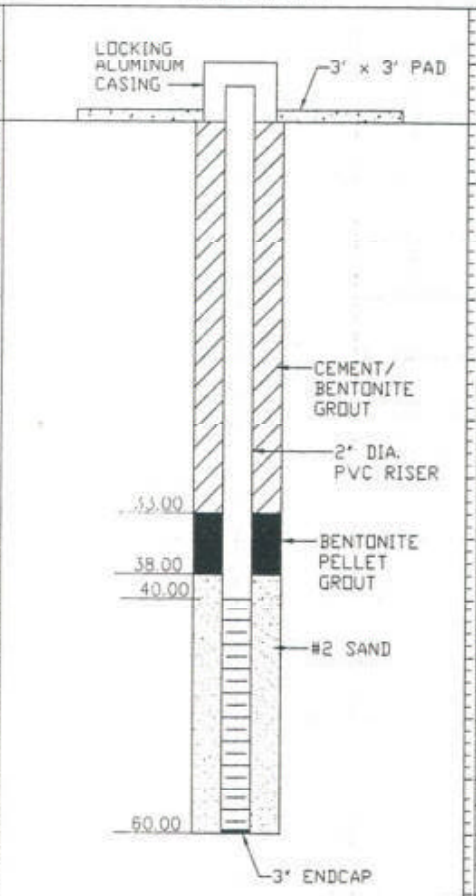
JOINT TYPE FLUSH SLOT SIZE 0.008 FILTER PACK QTY. 14 BAGS

GROUT QUANTITY 8.5 BAGS CENTRALIZERS N/A FILTER PACK TYPE GRADE 2 SILICA SAND

GROUT TYPE CEMENT/BENTONITE DRILLING MUD TYPE N/A INSTALLATION METHOD TREMMIED

ELEV /DEPTH	SOIL/ROCK DESCRIPTION
	GROUND SURFACE
0.0	REFER TO RECORD OF BOREHOLE PZR-2 FOR LITHOLOGIC DISCRIPTION
10.0	
20.0	
30.0	
40.0	
50.0	
60.0	
70.0	
80.0	
90.0	
100.0	

WELL SKETCH



INSTALLATION NOTES

Advanced 4 1/4" dia. augers to ~60' BGS. Installed 20' of 2" dia., 0.008 slot PVC screen and 45' of 2" dia. PVC riser to 60' BGS. Tremmied 14 bags of sand to ~38' BGS. Poured (2) 5 gal. buckets of bentonite pellets to ~33' BGS. Grouted remainder of open annulus with 95%-5% cement bentonite grout mixture. Installed locking aluminum protective casing, 3' x 3' concrete pad and bumper posts for surface finish.

WELL DEVELOPMENT NOTES

Pumped and surged over 3 week period until turbidity improved.

Golder Associates

MONITORING WELL INSTALLATION LOG

JOB NO. 983-3223 PROJECT SOLUTIA/RFI/AL WELL NO. PZR-3 SHEET 1 of 1
GA INSP. CDH DRILLING METHOD HSA (4 1/4, 12 1/4) GROUND ELEV. 802.40 WATER DEPTH 45.06
WEATHER SUNNY DRILLING COMPANY ECI TOC ELEV. 805.05 DATE/TIME 8-11-98
TEMP. 96 DRILL RIG CME-75 DRILLER E. FULLER STARTED 10:30/6-9-98 (TIME / DATE) COMPLETED 12:15/6-10-98 (TIME / DATE)
LOCATION / COORDINATES N/A

MATERIALS INVENTORY

WELL CASING 2 in. dia. 50 l.f. WELL SCREEN 2 in. dia. 20 l.f. BENTONITE SEAL PELLETS
CASING TYPE PVC SREEN TYPE PVC INSTALLATION METHOD POURED
JOINT TYPE FLUSH SLOT SIZE 0.008 FILTER PACK QTY. 15 BAGS
GROUT QUANTITY 10 BAGS CENTRALIZERS N/A FILTER PACK TYPE GRADE 2 SILICA SAND
GROUT TYPE CEMENT/BENTONITE DRILLING MUD TYPE N/A INSTALLATION METHOD TREMMIED

ELEV./DEPTH	SOIL/ROCK DESCRIPTION	WELL SKETCH	INSTALLATION NOTES
	GROUND SURFACE	LOCKING ALUMINUM CASING; 3' x 3' PAD	Advanced 4 1/4" dia. augers to ~61' BGS. Installed 20' of 2" dia., 0.008 slot PVC screen and 50' of 2" dia. PVC riser to 61' BGS. Tremmied 15 bags of sand to ~37.5' BGS. Poured (2) 5 gal. buckets of bentonite pellets to ~33' BGS. Grouted remainder of open annulus with 95%-5% cement bentonite grout mixture. Installed locking aluminum protective casing, 3' x 3' concrete pad and bumper posts for surface finish.
0.0	REFER TO RECORD OF BOREHOLE PZR-3 FOR LITHOLOGIC DISCRIPTION		
10.0			
20.0		CEMENT/ BENTONITE GROUT	
30.0		2" DIA. PVC RISER	
		33.00	
		BENTONITE PELLET GROUT	
		37.50	
40.0		41.00	
		#2 SAND	
50.0			
			WELL DEVELOPMENT NOTES
60.0		61.00	Pumped and surged over 3 week period until turbidity improved.
		4" ENDCAP	
70.0			
80.0			
90.0			
100.0			

MONITORING WELL INSTALLATION LOG

JOB NO. 983-3223 PROJECT SOLUTIA/RFI/AL WELL NO. PZR-4 SHEET 1 of 1

GA INSP. CDH DRILLING METHOD HSA (4 1/4, 12 1/4) GROUND ELEV. 801.50 WATER DEPTH 44.00

WEATHER SUNNY DRILLING COMPANY EEI TOC ELEV. 803.94 DATE/TIME 8-11-98

TEMP. 96 DRILL RIG CME-75 DRILLER E. FULLER STARTED 10:00/6-15-98 (TIME / DATE) COMPLETED 8:00/6-17-98 (TIME / DATE)

LOCATION / COORDINATES N/A

MATERIALS INVENTORY

WELL CASING 2 in. dia. 45 l.f. WELL SCREEN 2 in. dia. 20 l.f. BENTONITE SEAL PELLETS

CASING TYPE PVC SREEN TYPE PVC INSTALLATION METHOD POURED

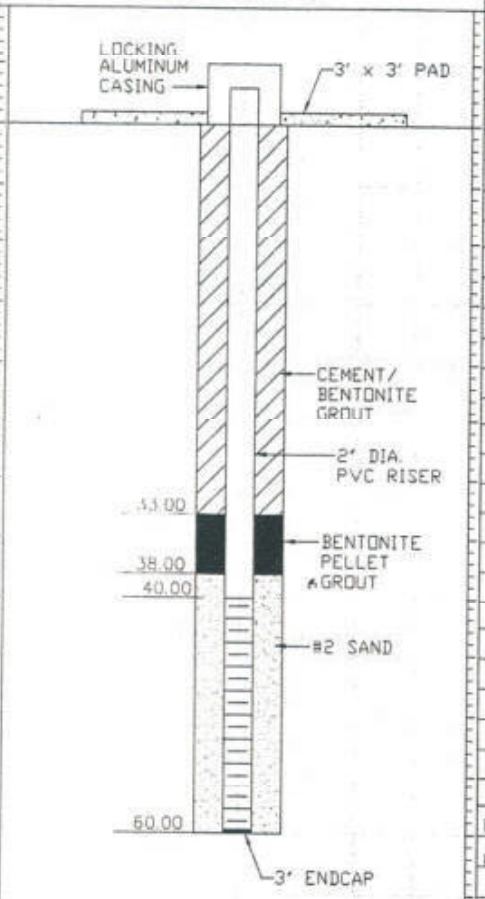
JOINT TYPE FLUSH SLOT SIZE 0.008 FILTER PACK QTY. 14 BAGS

GROUT QUANTITY 9.5 BAGS CENTRALIZERS N/A FILTER PACK TYPE GRADE 2 SILICA SAND

GROUT TYPE CEMENT/BENTONITE DRILLING MUD TYPE N/A INSTALLATION METHOD TREMMIED

ELEV./DEPTH	SOIL/ROCK DESCRIPTION
GROUND SURFACE	
0.0	REFER TO RECORD OF BOREHOLE PZR-4 FOR LITHOLOGIC DISCRIPTION
10.0	
20.0	
30.0	
40.0	
50.0	
60.0	
70.0	
80.0	
90.0	
100.0	

WELL SKETCH



INSTALLATION NOTES

Advanced 4 1/4" dia. augers to -60' BGS. Installed 20' of 2" dia., 0.008 slot PVC screen and 45' of 2" dia. PVC riser to 60' BGS. Tremmied 14 bags of sand to -38' BGS. Poured (2) 5 gal. buckets of bentonite pellets to -33' BGS. Grouted remainder of open annulus with 95%-5% cement bentonite grout mixture. Installed locking aluminum protective casing, 3' x 3' concrete pad and bumper posts for surface finish.

WELL DEVELOPMENT NOTES

Pumped and surged over 3 week period until turbidity improved.

MONITORING WELL INSTALLATION LOG

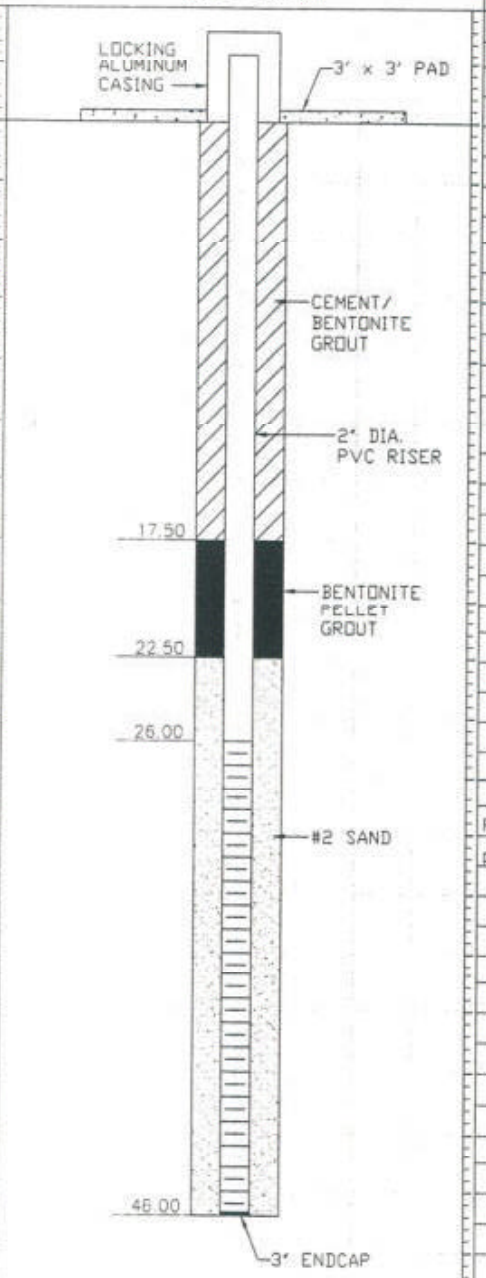
JOB NO. 983-3223 PROJECT SOLUTIA/RFI/AL WELL NO. PZR-5 SHEET 1 of 1
GA INSP. CDH DRILLING METHOD HSA (4 1/4, 12 1/4) GROUND ELEV. 753.30 WATER DEPTH 22.44
WEATHER SUNNY DRILLING COMPANY EEI TOC ELEV. 755.73 DATE/TIME B-11-98
TEMP. 75 DRILL RIG CME-75 DRILLER E. FULLER STARTED 15:00/6-17-98 (TIME / DATE) COMPLETED 17:00/6-17-98 (TIME / DATE)
LOCATION / COORDINATES N/A

MATERIALS INVENTORY

WELL CASING 2 in. dia 30 l.f. WELL SCREEN 2 in. dia 20 l.f. BENTONITE SEAL PELLETS
CASING TYPE PVC SREEN TYPE PVC INSTALLATION METHOD POURED
JOINT TYPE FLUSH SLOT SIZE 0.008 FILTER PACK QTY. 14 BAGS
GROUT QUANTITY N/A CENTRALIZERS N/A FILTER PACK TYPE GRADE 2 SILICA SAND
GROUT TYPE N/A DRILLING MUD TYPE N/A INSTALLATION METHOD TREMMIED

ELEV./DEPTH	SOIL/ROCK DESCRIPTION
GROUND SURFACE	
0.0	REFER TO RECORD OF BOREHOLE PZR-5 FOR LITHOLOGIC DISCRIPTION
5.0	
10.0	
15.0	
20.0	
25.0	
30.0	
35.0	
40.0	
45.0	
50.0	

WELL SKETCH



INSTALLATION NOTES

Augered with 4 1/4" dia. augers to -46' BGS. Installed 20' of 2" dia. PVC, 0.008 slot screen and and 30' of 2" dia. PVC riser to -46' BGS. Tremmied 14 bags of sand to -22.5' BGS. Poured (2) 5 gal. buckets of bentonite pellets to -17.5' BGS. Grouted remaining annulus with cement bentonite grout mixture. Installed locking aluminum protective casing, 3' x 3' concrete pad and bumper posts for surface finish.

WELL DEVELOPMENT NOTES

Pumped and surged over 3 week period until turbidity improved.

MONITORING WELL INSTALLATION LOG

JOB NO. 983-3223 PROJECT SOLUTIA/RFI/AL WELL NO. PZR-6 SHEET 1 of 1

GA INSP. CDH DRILLING METHOD HSA (4 1/4, 12 1/4) GROUND ELEV. 754.90 WATER DEPTH 28.98

WEATHER SUNNY DRILLING COMPANY EEI TOC ELEV. 757.09 DATE/TIME 8-11-98

TEMP. 95 DRILL RIG CME-75 DRILLER E. FULLER STARTED 8:00/6-18-98 (TIME / DATE) COMPLETED 11:00/6-18-98 (TIME / DATE)

LOCATION / COORDINATES N/A

MATERIALS INVENTORY

WELL CASING 2 in. dia 30 l.f. WELL SCREEN 2 in. dia 20 l.f. BENTONITE SEAL PELLETS

CASING TYPE PVC SREEN TYPE PVC INSTALLATION METHOD POURED

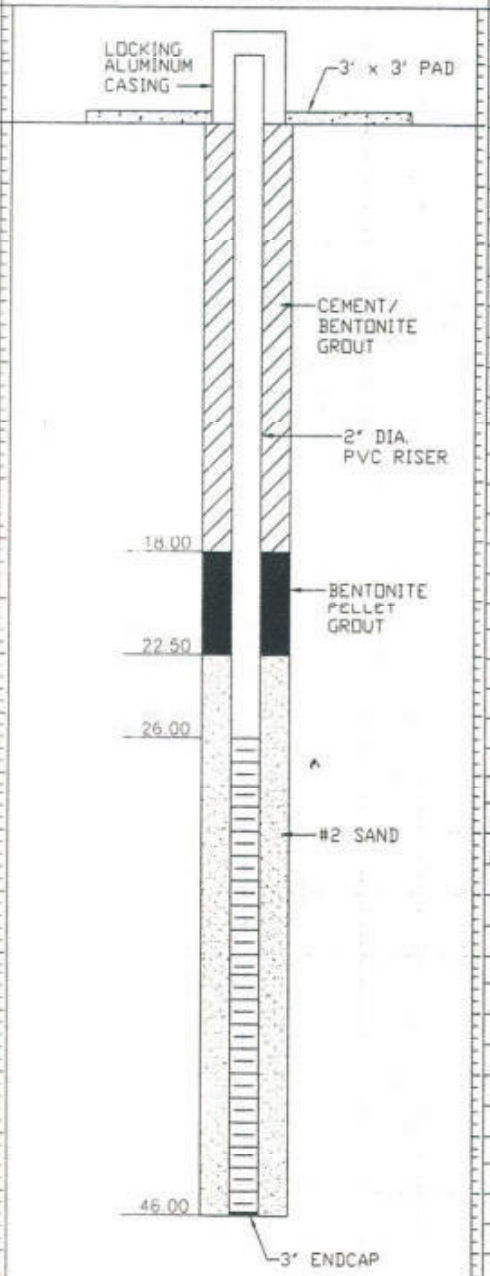
JOINT TYPE FLUSH SLOT SIZE 0.008 FILTER PACK QTY. 14 BAGS

GROUT QUANTITY 35 BAGS CENTRALIZERS N/A FILTER PACK TYPE GRADE 2 SILICA SAND

GROUT TYPE N/A DRILLING MUD TYPE N/A INSTALLATION METHOD TREMMIED

ELEV./DEPTH	SOIL/ROCK DESCRIPTION
GROUND SURFACE	
0.0	REFER TO RECORD OF BOREHOLE PZR-6 FOR LITHOLOGIC DISCRIPTION
5.0	
10.0	
15.0	
20.0	
25.0	
30.0	
35.0	
40.0	
45.0	
50.0	

WELL SKETCH



INSTALLATION NOTES

Augered with 4 1/4" dia. augers to ~46' BGS. Installed 20' of 2" dia. PVC, 0.008 slot screen and and 30' of 2" dia. PVC riser to ~46' BGS. Tremmied 14 bags of sand to ~22.5' BGS. Poured (2) 5 gal. buckets of bentonite pellets to ~18' BGS. Grouted remaining annulus with cement bentonite grout mixture. Installed locking aluminum protective casing, 3' x 3' concrete pad and bumper posts for surface finish.

WELL DEVELOPMENT NOTES

Pumped and surged over 3 week period until turbidity improved.

MONITORING WELL INSTALLATION LOG

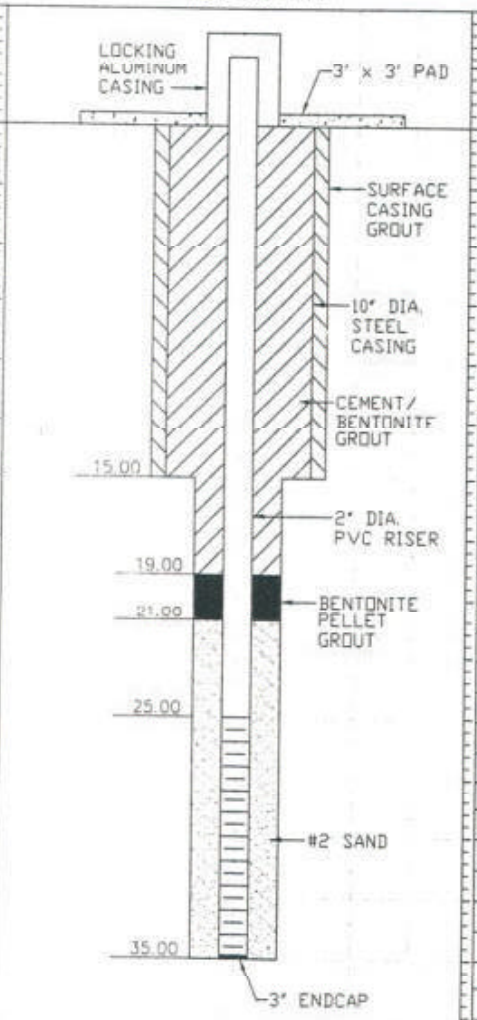
JOB NO. 983-3223 PROJECT SOLUTIA/RFI/AL WELL NO. DWR-1S SHEET 1 of 1
GA INSP. CDH DRILLING METHOD HSA (4 1/4, 12 1/4) GROUND ELEV. 736.60 WATER DEPTH 13.64
WEATHER SUNNY DRILLING COMPANY EEI TOC ELEV. 738.89 DATE/TIME 8-11-98
TEMP. 85 DRILL RIG CME-75 DRILLER E. FULLER STARTED 1140/5-22-98 COMPLETED 1000/6-2-98
LOCATION / COORDINATES N/A TIME / DATE TIME / DATE

MATERIALS INVENTORY

WELL CASING 2 in. dia 30 l.f. WELL SCREEN 2 in. dia 10 l.f. BENTONITE SEAL PELLETS
CASING TYPE PVC SREEN TYPE PVC INSTALLATION METHOD POURED
JOINT TYPE FLUSH SLOT SIZE 0.008 FILTER PACK QTY. 10 BAGS
GROUT QUANTITY 6.5 BAGS CENTRALIZERS N/A FILTER PACK TYPE GRADE 2 SILICA SAND
GROUT TYPE CEMENT/BENTONITE DRILLING MUD TYPE N/A INSTALLATION METHOD TREMMIED

ELEV./DEPTH	SOIL/ROCK DESCRIPTION
	GROUND SURFACE
0.0	REFER TO RECORD OF BOREHOLE DWR-1S FOR LITHOLOGIC DISCRIPTION
5.0	
10.0	
15.0	
20.0	
25.0	
30.0	
35.0	
40.0	
45.0	
50.0	

WELL SKETCH



INSTALLATION NOTES

Installed and grouted 10" dia. steel surface casing to 15' BGS with 12 1/4" dia. augers. Resumed boring with 4 1/4" dia. augers to 35' BGS. Installed 10' of 2" dia., 0.008 slot PVC screen and 30' of 2" dia. PVC riser to 35' BGS. Tremmied 10 bags of sand to ~21' BGS. (Installed extra 2' of sand pack to intersect saturated zone @ 22' - 24' BGS). Poured (1) 5 gal. bucket of bentonite pellets to ~19' BGS. Grouted remainder of open annulus with 95%-5% cement bentonite grout mixture. Installed locking aluminum protective casing, 3' x 3' concrete pad and bumper posts for surface finish.

WELL DEVELOPMENT NOTES

Pumped and surged over 3 week period until turbidity improved. Minimum of 6 well volumes removed.

MONITORING WELL INSTALLATION LOG

JOB NO. 983-3223 PROJECT SOLUTIA/RFI/AL WELL NO. DWR-1D SHEET 1 of 1

GA INSP. CDH/MNH DRILLING METHOD HSA (4 1/4, 12 1/4) GROUND ELEV. 737.59 WATER DEPTH 57.78

WEATHER SUNNY DRILLING COMPANY EEI TOC ELEV. 739.59 DATE/TIME 8-11-98

TEMP. 95 DRILL RIG CME-75 DRILLER E. FULLER STARTED 10:50/6 1 98 COMPLETED 02:00/6 2 98

LOCATION / COORDINATES N/A

MATERIALS INVENTORY

WELL CASING 2 in. dia. 60 l.f. WELL SCREEN 2 in. dia. 10 l.f. BENTONITE SEAL PELLETS

CASING TYPE PVC SREEN TYPE PVC INSTALLATION METHOD POURED

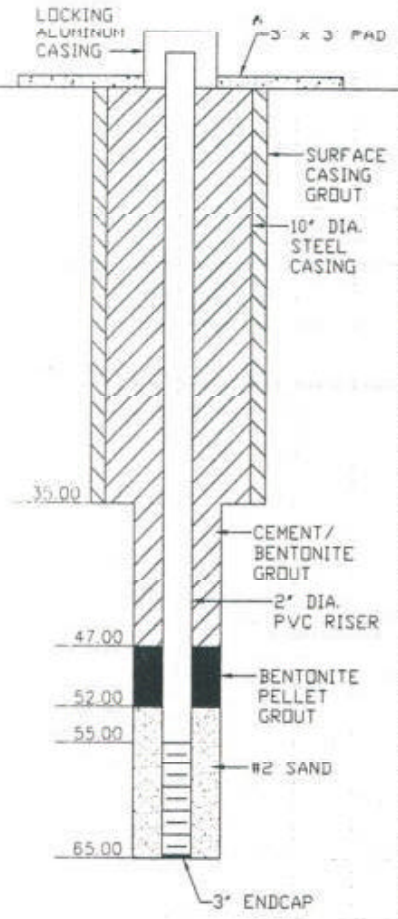
JOINT TYPE FLUSH SLOT SIZE 0.008 FILTER PACK QTY. 9 BAGS

GROUT QUANTITY 12 BAGS CENTRALIZERS N/A FILTER PACK TYPE GRADE 2 SILICA SAND

GROUT TYPE CEMENT/BENTONITE DRILLING MUD TYPE N/A INSTALLATION METHOD TREMMIED

ELEV./DEPTH	SOIL/ROCK DESCRIPTION
GROUND SURFACE	
0.0	REFER TO RECORD OF BOREHOLE DWR-1D FOR LITHOLOGIC DISCRIPTION
10.0	
20.0	
30.0	
40.0	
50.0	
60.0	
70.0	
80.0	
90.0	
100.0	

WELL SKETCH



INSTALLATION NOTES

Installed and grouted 10" dia. steel surface casing to 35' BGS with 12 1/4" dia. augers. Resumed boring with 4 1/4" dia. augers to 65' BGS. Installed 10' of 2" dia., 0.008 slot PVC screen and 60' of 2" dia. PVC riser to 65' BGS. Tremmied 9 bags of sand to ~52' BGS. Poured (2) 5 gal. buckets of bentonite pellets to ~47' BGS. Grouted remainder of open annulus with 95%-5% cement bentonite grout mixture. Installed locking aluminum protective casing, 3' x 3' concrete pad and bumper posts for surface finish.

WELL DEVELOPMENT NOTES

Well made very little water and recovered slowly. Surged and pumped as recovery allowed over 3 week period. Minimum of 6 well volumes removed.

MONITORING WELL INSTALLATION LOG

JOB NO. 983-3223 PROJECT SOLUTIA/RFI/AL WELL NO. DWR-2S SHEET 1 of 1

GA INSP. CDH DRILLING METHOD HSA (4 1/4, 12 1/4) GROUND ELEV. 754.90 WATER DEPTH 10.47

WEATHER SUNNY DRILLING COMPANY FET TOC ELEV. 757.46 DATE/TIME 8-11-98

TEMP. 90 DRILL RIG CME-75 DRILLER E. FULLER STARTED 15:30/6-11-98 (TIME / DATE) COMPLETED 17:00/6-16-98 (TIME / DATE)

LOCATION / COORDINATES N/A

MATERIALS INVENTORY

WELL CASING 2 in. dia 30 l.f. WELL SCREEN 2 in. dia. 10 l.f. BENTONITE SEAL PELLETS

CASING TYPE PVC SREEN TYPE PVC INSTALLATION METHOD POURED

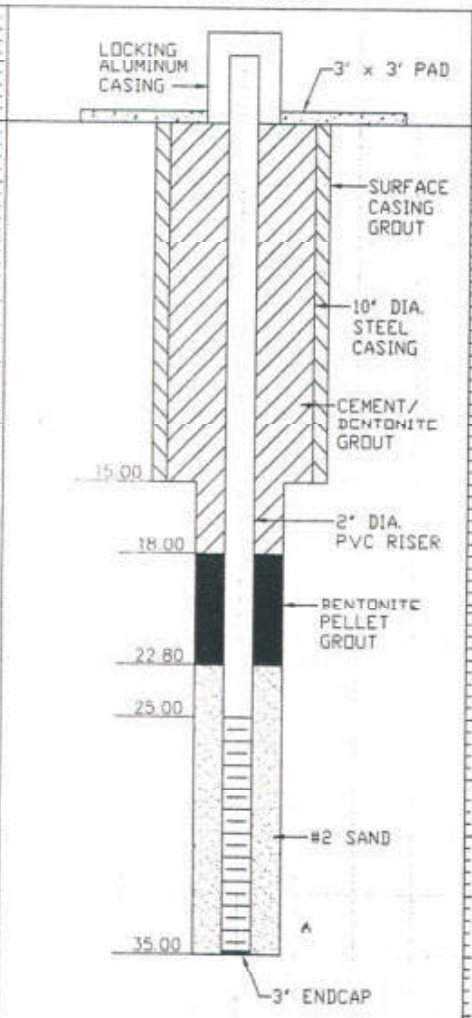
JOINT TYPE FLUSH SLOT SIZE 0.008 FILTER PACK QTY. 7.5 BAGS

GROUT QUANTITY 7 BAGS CENTRALIZERS N/A FILTER PACK TYPE GRADE 2 SILICA SAND

GROUT TYPE CEMENT/BENTONITE DRILLING MUD TYPE N/A INSTALLATION METHOD TREMMIED

ELEV./DEPTH	SOIL/ROCK DESCRIPTION
GROUND SURFACE	
0.0	REFER TO RECORD OF BOREHOLE DWR-2S FOR LITHOLOGIC DISCRIPTION
5.0	
10.0	
15.0	
20.0	
25.0	
30.0	
35.0	
40.0	
45.0	
50.0	

WELL SKETCH



INSTALLATION NOTES

Installed and grouted 10" dia. steel surface casing to 15' BGS with 12 1/4" dia. augers. Resumed boring with 4 1/4" dia. augers to 35' BGS. Installed 10' of 2" dia., 0.008 slot PVC screen and 30' of 2" dia. PVC riser to 35' BGS. Tremmied 7.5 bags of sand to ~22.8' BGS. Poured (2) 5 gal. buckets of bentonite pellets to ~18' BGS. Grouted remainder of open annulus with 95%-5% cement bentonite grout mixture. Installed locking aluminum protective casing, 3' x 3' concrete pad and bumper posts for surface finish.

WELL DEVELOPMENT NOTES

Pumped and surged over 3 week period until turbidity improved. Minimum of 6 well volumes removed.

MONITORING WELL INSTALLATION LOG

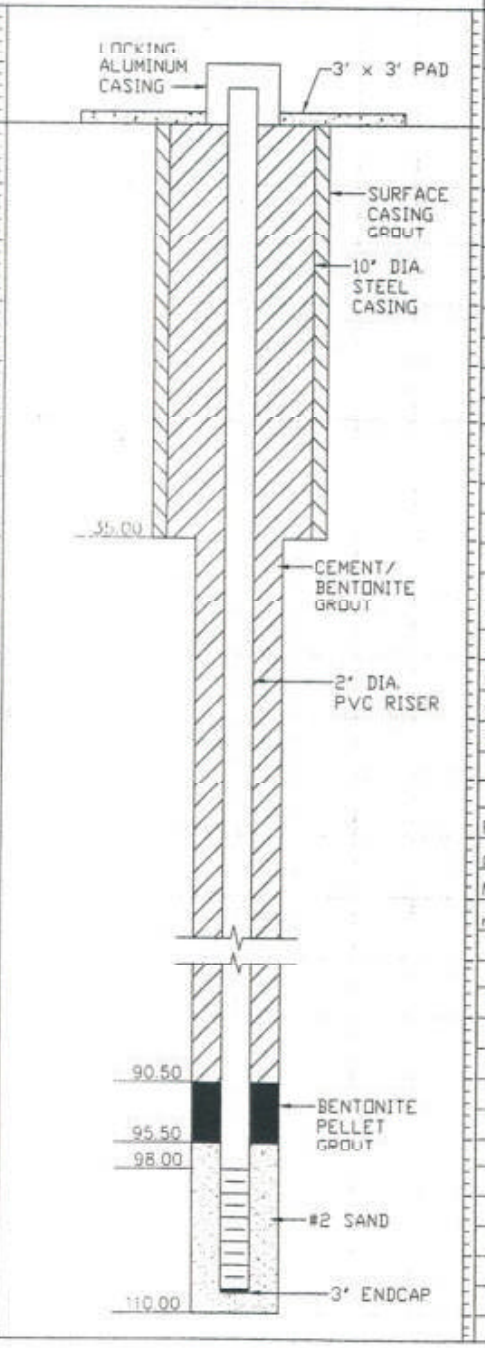
JOB NO. 983-3223 PROJECT SOLUTIA/RFI/AL WELL NO. OWR-2D SHEET 1 of 1
GA INSP. CDH DRILLING METHOD HSA (4 1/4, 12 1/4) GROUND ELEV. 754.70 WATER DEPTH 62.31
WEATHER SUNNY DRILLING COMPANY CEI TOC ELEV. 756.99 DATE/TIME 8-11-98
TEMP 95 DRILL RIG CME-75 DRILLER E. FULLER STARTED 16:00/6-10-98 COMPLETED 16:00/6-23-98
LOCATION / COORDINATES N/A TIME / DATE TIME / DATE

MATERIALS INVENTORY

WELL CASING 2 in. dia. 100 l.f. WELL SCREEN 2 in. dia. 10 l.f. BENTONITE SEAL PELLETS
CASING TYPE PVC SREEN TYPE PVC INSTALLATION METHOD POURED
JOINT TYPE FLUSH SLOT SIZE 0.008 FILTER PACK QTY. 16 BAGS
GROUT QUANTITY 47 BAGS CENTRALIZERS N/A FILTER PACK TYPE GRADE 2 SILICA SAND
GROUT TYPE CEMENT/BENTONITE DRILLING MUD TYPE N/A INSTALLATION METHOD TREMMIED

ELEV./DEPTH	SOIL/ROCK DESCRIPTION
GROUND SURFACE	
0.0	REFER TO RECORD OF BOREHOLE OWR-2D FOR LITHOLOGIC DISCRIPTION
10.0	
20.0	
30.0	
40.0	
50.0	
60.0	
90.0	
100.0	
110.0	

WELL SKETCH



INSTALLATION NOTES

Installed and grouted 10" dia. steel surface casing to 35' BGS with 12 1/4" dia. augers. Resumed boring with 4 1/4" dia. augers to 59' BGS. Met refusal and tooled out to air rotary and advanced to ~75' BGS (intermittent rock and soil in this zone). Readvanced 4 1/4" dia. augers ro ~110' BGS (refusal). Installed 10' of 2" dia. 0.008 slot PVC screen and 100' of 2" dia. PVC riser to ~108' BGS. Tremmied 16 bags grade 2 sand to ~95.5' BGS (lost some in fracture zone and used extra to fill bottom of boring). Poured (3) 5 gal. buckets bentonite pellets to ~90.5' BGS. Grouted remainder of annulus with 95%-5% cement bentonite mix. Installed locking aluminum protective casing, 3' x 3' pad and bumper posts for surface finish.

WELL DEVELOPMENT NOTES

Pumped and surged over 3 week period until turbidity improved. Minimum of 6 well volumes removed.

MONITORING WELL INSTALLATION LOG

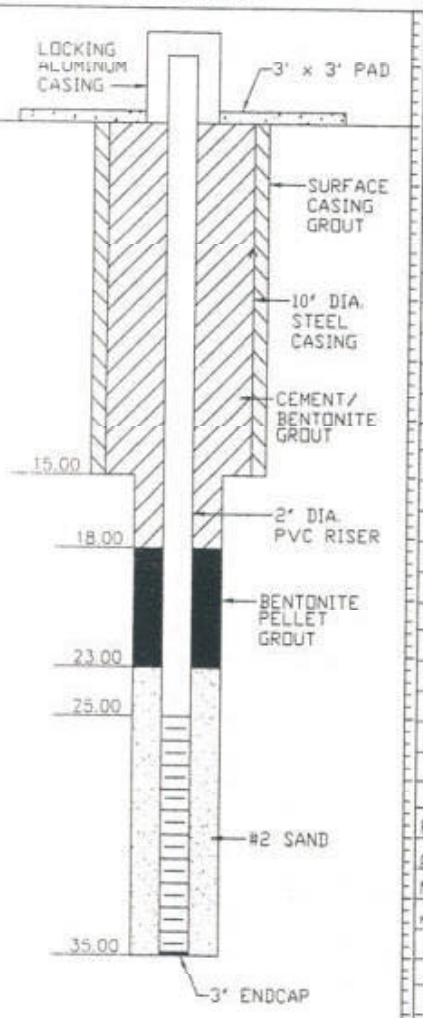
JOB NO. 983-3223 PROJECT SOLUTIA/RFI/AL WELL NO. OWR-3S SHEET 1 of 1
GA INSP. CDH DRILLING METHOD HSA (4 1/4, 12 1/4) GROUND ELEV. 758.30 WATER DEPTH 10.85
WEATHER SUNNY DRILLING COMPANY EEI TOC ELEV. 760.48 DATE/TIME 8-11-98
TEMP. 95 DRILL RIG CME-75 DRILLER E. FULLER STARTED 14:10/8-3-98 (TIME / DATE) COMPLETED 18:00/8-9-98 (TIME / DATE)
LOCATION / COORDINATES N/A

MATERIALS INVENTORY

WELL CASING 2 in. dia. 30 l.f. WELL SCREEN 2 in. dia. 10 l.f. BENTONITE SEAL PELLETS
CASING TYPE PVC SREEN TYPE PVC INSTALLATION METHOD POURED
JOINT TYPE FLUSH SLOT SIZE 0.008 FILTER PACK QTY. 8 BAGS
GROUT QUANTITY 7 BAGS CENTRALIZERS N/A FILTER PACK TYPE GRADE 2 SILICA SAND
GROUT TYPE CEMENT/BENTONITE DRILLING MUD TYPE N/A INSTALLATION METHOD TREMMIED

ELEV./DEPTH	SOIL/ROCK DESCRIPTION
GROUND SURFACE	
0.0	REFER TO RECORD OF BOREHOLE OWR-3S FOR LITHOLOGIC DISCRIPTION
5.0	
10.0	
15.0	
20.0	
25.0	
30.0	
35.0	
40.0	
45.0	
50.0	

WELL SKETCH



INSTALLATION NOTES

Installed and grouted 10" dia. steel surface casing to 15' BGS with 12 1/4" dia. augers. Resumed boring with 4 1/4" dia. augers to 35' BGS. Installed 10' of 2" dia., 0.008 slot PVC screen and 27' of 2" dia. PVC riser to 35' BGS. Tremmied 8 bags of sand to ~23' BGS. Poured (2) 5 gal. buckets of bentonite pellets to ~18' BGS. Grouted remainder of open annulus with 95%-5% cement bentonite grout mixture. Installed locking aluminum protective casing, 3' x 3' concrete pad and bumper posts for surface finish.

WELL DEVELOPMENT NOTES

Pumped and surged over 3 week period until turbidity improved. Minimum of 6 well volumes removed.

MONITORING WELL INSTALLATION LOG

JOB NO. 983-3223 PROJECT SOLUTIA/RFI/AL WELL NO. DWR-3D SHEET 1 of 1

CA INSP. CDH DRILLING METHOD HSA (4 1/4, 12 1/4) GROUND ELEV. 757.50 WATER DEPTH DRY

WEATHER P CLOUDY DRILLING COMPANY EEI TOC ELEV. 759.76 DATE/TIME 8-11-98

TEMP. 90 DRILL RIG CME-75 DRILLER E FULLER STARTED 1700/8-3-98 (TIME / DATE) COMPLETED 1600/8-10-98 (TIME / DATE)

LOCATION / COORDINATES N/A

MATERIALS INVENTORY

WELL CASING 2 in. dia 60 l.f. WELL SCREEN 2 in. dia. 10 l.f. BENTONITE SEAL PELLETS

CASING TYPE PVC SREEN TYPE PVC INSTALLATION METHOD POURED

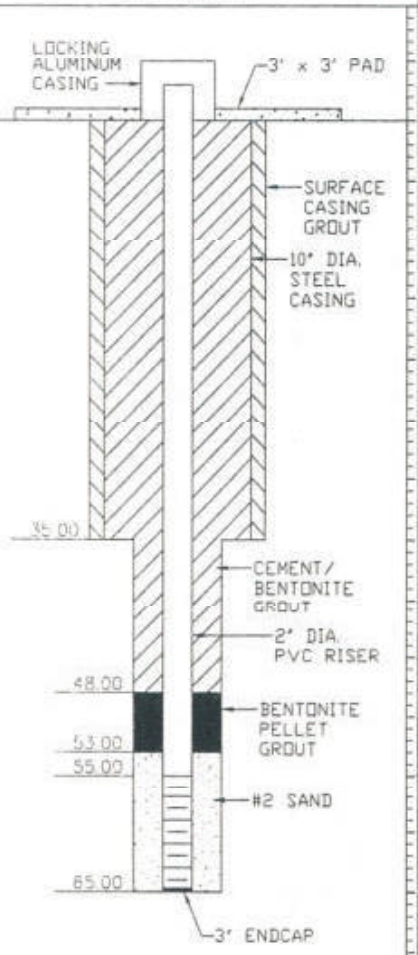
JOINT TYPE FLUSH SLOT SIZE 0.008 FILTER PACK QTY. 8 BAGS

GROUT QUANTITY 9 BAGS CENTRALIZERS N/A FILTER PACK TYPE GRADE 2 SILICA SAND

GROUT TYPE CEMENT-BENTONITE DRILLING MUD TYPE N/A INSTALLATION METHOD TREMMIED

ELEV./DEPTH	SOIL/ROCK DESCRIPTION
GROUND SURFACE	
0.0	REFER TO RECORD OF BOREHOLE DWR-3D FOR LITHOLOGIC DISCRIPTION
10.0	
20.0	
30.0	
40.0	
50.0	
60.0	
70.0	
80.0	
90.0	
100.0	

WELL SKETCH



INSTALLATION NOTES

Installed and grouted 10" dia. steel surface casing to 35' BGS with 12 1/4" dia. augers. Resumed boring with 4 1/4" dia. augers to 65' BGS. Installed 10' of 2" dia. PVC, 0.008 slot screen and 60' of 2" dia. PVC riser to ~65' BGS. Tremmied 8 bags grade 2 silica sand to ~53' BGS. Poured (2) 5. gal. buckets of bentonite pellets to ~48' BGS. Grouted remainder of open annulus with 95%-5% bentonite mix. Installed locking aluminum protective casing, 3' x 3' concrete pad and bumper posts for surface finish.

WELL DEVELOPMENT NOTES

Dry

MONITORING WELL INSTALLATION LOG

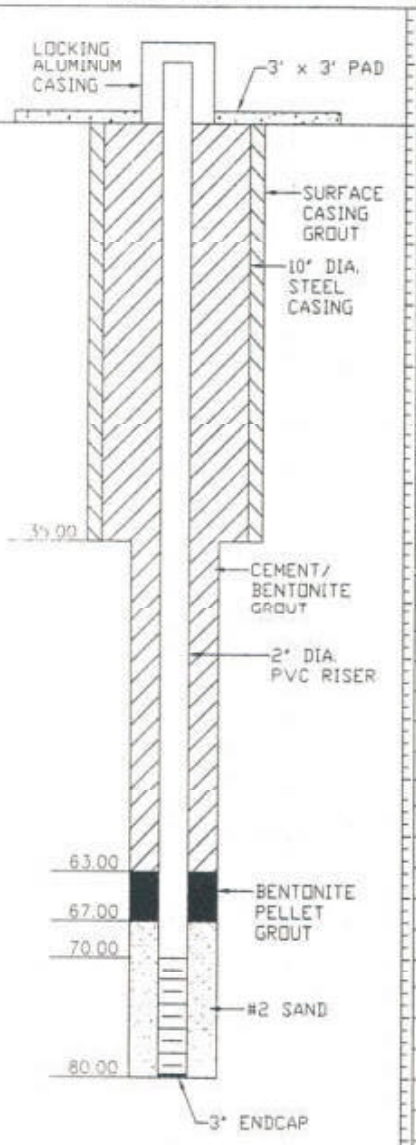
JOB NO. 983-3823 PROJECT SOLUTIA/RFI/AL WELL NO. DWR-4D SHEET 1 of 1
GA INSP. CDH DRILLING METHOD HSA (4 1/4, 12 1/4) GROUND ELEV. 741.90 WATER DEPTH 67.33
WEATHER SUNNY DRILLING COMPANY EEI TOC ELEV. 746.03 DATE/TIME 8-11-98
TEMP. 95 DRILL RIG CME-75 DRILLER E. FULLER STARTED 1510/5-20-98 COMPLETED 1530/5/27/98
LOCATION / COORDINATES N/A TIME / DATE TIME / DATE

MATERIALS INVENTORY

WELL CASING 2 in. dia. 80 l.f. WELL SCREEN 2 in. dia. 10 l.f. BENTONITE SEAL PELLETS
CASING TYPE PVC SREEN TYPE PVC INSTALLATION METHOD POURED
JOINT TYPE FLUSH SLOT SIZE 0.008 FILTER PACK QTY. 10 BAGS
GROUT QUANTITY 10.5 BAGS CENTRALIZERS N/A FILTER PACK TYPE GRADE 2 SILICA SAND
GROUT TYPE CEMENT/BENTONITE DRILLING MUD TYPE N/A INSTALLATION METHOD TREMMIED

ELEV./DEPTH	SOIL/ROCK DESCRIPTION
GROUND SURFACE	
0.0	REFER TO RECORD OF BOREHOLE DWR-4D FOR LITHOLOGIC DISCRIPTION
10.0	
20.0	
30.0	
40.0	
50.0	
60.0	
70.0	
80.0	
90.0	
100.0	

WELL SKETCH



INSTALLATION NOTES

Installed and grouted 10" dia. steel surface casing to 35' BGS with 12 1/4" dia. augers. Resumed boring with 4 1/4" dia. augers to 80' BGS. Installed 10' of 2" dia. PVC, 0.008 slot screen and 80' of 2" dia. PVC riser to ~80' BGS. Tremmied 10 bags grade 2 silica sand to ~67' BGS. Poured (1) 5 gal. buckets of bentonite pellets to ~63' BGS. Grouted remainder of open annulus with 95%-5% bentonite mix. Installed locking aluminum protective casing, 3' x 3' concrete pad and bumper posts for surface finish. Stick-up ~5' AGS to accomodate future grade.

WELL DEVELOPMENT NOTES

Pumped and surged over 3 week period until turbidity improved. Minimum of 6 well volumes removed.

MONITORING WELL INSTALLATION LOG

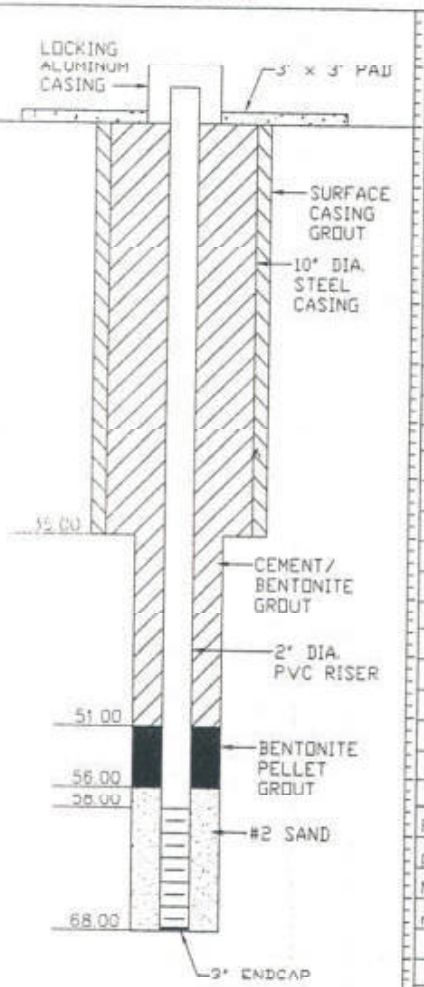
JOB NO. 983-3223 PROJECT SOLUTIA/REFAL — WELL NO. OWR-5D — SHEET 1 of 1
GA INSP. CDH — DRILLING METHOD HSA (4 1/4, 12 1/4) — GROUND ELEV. 802.40 — WATER DEPTH 48.84
WEATHER SUNNY — DRILLING COMPANY EET — TOC ELEV. 804.93 — DATE/TIME 8-11-98
TEMP 95 — DRILL RIG CME-75 — DRILLER E. FULLER — STARTED 11:00/8-10-98 (TIME / DATE) — COMPLETED 16:00/8-5-98 (TIME / DATE)
LOCATION / COORDINATES N/A

MATERIALS INVENTORY

WELL CASING 2 in. dia. 60 l.f. — WELL SCREEN 2 in. dia. 10 l.f. — BENTONITE SEAL PELLETS
CASING TYPE PVC — SCREEN TYPE PVC — INSTALLATION METHOD POURED
JOINT TYPE FLUSH — SLOT SIZE 0.008 — FILTER PACK QTY. 9 BAGS
GROUT QUANTITY 12 BAGS — CENTRALIZERS N/A — FILTER PACK TYPE GRADE 2 SILICA SAND
GROUT TYPE CEMENT/BENTONITE — DRILLING MUD TYPE N/A — INSTALLATION METHOD TREMMIED

ELEV./DEPTH	SOIL/ROCK DESCRIPTION
	GROUND SURFACE
0.0	REFER TO RECORD OF BOREHOLE OWR-5D FOR LITHOLOGIC DISCRIPTION
10.0	
20.0	
30.0	
40.0	
50.0	
60.0	
70.0	
80.0	
90.0	
100.0	

WELL SKETCH



INSTALLATION NOTES

Installed and grouted 10" dia. steel surface casing to 25' BGS with 12 1/4" dia. augers. Resumed boring with 4 1/4" dia. augers to 68' BGS. Installed 10' of 2" dia. PVC, 0.008 slot screen and 60' of 2" dia. PVC riser to ~68' BGS. Tremmied 9 bags grade 2 silica sand to ~56' BGS. Poured (2) 5 gal. buckets of bentonite pellets to ~51' BGS. Grouted remainder of open annulus with 95%-5% bentonite' mix. Installed locking aluminum protective casing and 3' x 3' concrete pad for surface finish.

WELL DEVELOPMENT NOTES

Pumped and surged over 3 week period until turbidity improved. Minimum of 6 well volumes removed.

MONITORING WELL INSTALLATION LOG

JOB NO. 983-3223 PROJECT SOLUTIA/RFI/AL WELL NO. OWR-6D SHEET 1 of 1

GA INSP. CDH/MNH DRILLING METHOD HSA (4 1/4, 12 1/4) GROUND ELEV. 734.50 WATER DEPTH 52.16

WEATHER SUNNY DRILLING COMPANY EEI TOC ELEV. 736.79 DATE/TIME 8-11-98

TEMP. 95 DRILL RIG CME-75 DRILLER C. FULLER STARTED 1003/8-12-98 (TIME / DATE) COMPLETED 1600/8-3-98 (TIME / DATE)

LOCATION / COORDINATES N/A

MATERIALS INVENTORY

WELL CASING 2 in. dia. 70 l.f. WELL SCREEN 2 in. dia. 10 l.f. BENTONITE SEAL PELLETS

CASING TYPE PVC SREEN TYPE PVC INSTALLATION METHOD POURED

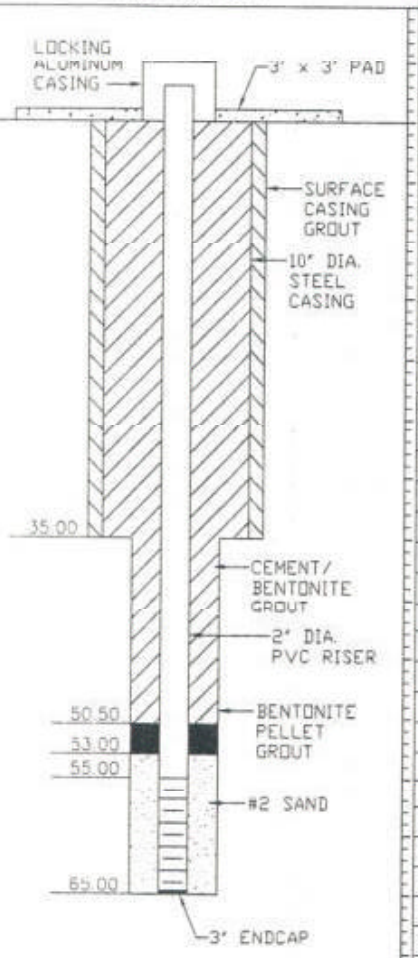
JOINT TYPE FLUSH SLOT SIZE 0.008 FILTER PACK QTY. 9 BAGS

GROUT QUANTITY 12 BAGS CENTRALIZERS N/A FILTER PACK TYPE GRADE 2 SILICA SAND

GROUT TYPE CEMENT/BENTONITE DRILLING MUD TYPE N/A INSTALLATION METHOD TREMMIED

ELEV./DEPTH	SOIL/ROCK DESCRIPTION
GROUND SURFACE	
0.0	REFER TO RECORD OF BOREHOLE OWR-6D FOR LITHOLOGIC DISCRIPTION
10.0	
20.0	
30.0	
40.0	
50.0	
60.0	
70.0	
80.0	
90.0	
100.0	

WELL SKETCH



INSTALLATION NOTES

Installed and grouted 10" dia. steel surface casing to 35' BGS with 12 1/4" dia. augers. Resumed boring with 4 1/4" dia. augers to 65' BGS. Installed 10' of 2" dia., 0.008 slot PVC screen and 60' of 2" dia. PVC riser to 65' BGS. Tremmied 9 bags of sand to ~53' BGS. Poured (1) 5 gal. buckets of bentonite pellets to ~50.5' BGS. Grouted remainder of open annulus with 95%-5% cement bentonite grout mixture. Installed locking aluminum protective casing and 3' x 3' concrete pad for surface finish.

WELL DEVELOPMENT NOTES

Well made very little water and recovered slowly. Surged and pumped as recovery allowed over 3 week period. Minimum of 6 well volumes removed.

MONITORING WELL INSTALLATION LOG

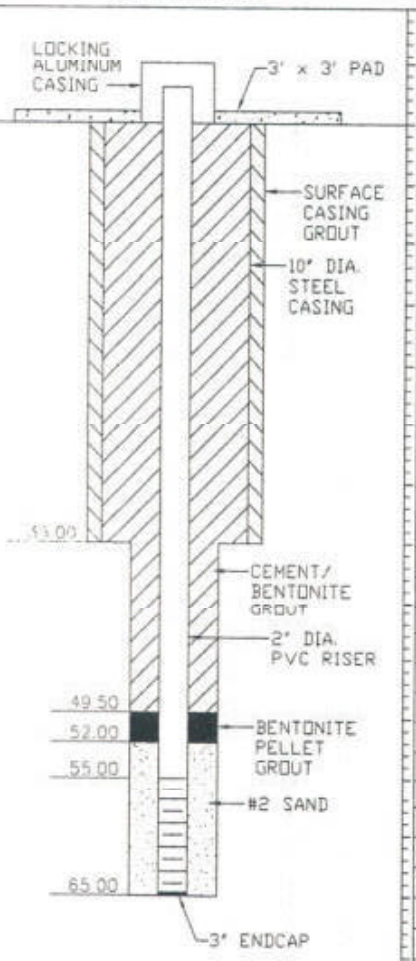
JOB NO. 983-3223 PROJECT SOLUTIA/RFI/AL WELL NO. OWR-7D SHEET 1 of 1
QA INSP. CDH/MNH DRILLING METHOD HSA (4 1/4, 12 1/4) GROUND ELEV. 772.10 WATER DEPTH 60.83
WEATHER SUNNY DRILLING COMPANY EEI TOC ELEV. 774.49 DATE/TIME 8-11-98
TEMP. 90 DRILL RIG CME-75 DRILLER E. FULLER STARTED 14:30/5-13-98 COMPLETED 15:30/5-28-98
LOCATION / COORDINATES N/A TIME / DATE TIME / DATE

MATERIALS INVENTORY

WELL CASING 2 in. dia. 60 l.f. WELL SCREEN 2 in. dia. 10 l.f. BENTONITE SEAL PELLETS
CASING TYPE PVC SREEN TYPE PVC INSTALLATION METHOD POURED
JOINT TYPE FLUSH SLOT SIZE 0.008 FILTER PACK QTY. 9 BAGS
GROUT QUANTITY 10 BAGS CENTRALIZERS N/A FILTER PACK TYPE GRADE 2 SILICA SAND
GROUT TYPE CEMENT/BENTONITE DRILLING MUD TYPE N/A INSTALLATION METHOD TREMMIED

ELEV./DEPTH	SOIL/ROCK DESCRIPTION
GROUND SURFACE	
0.0	REFER TO RECORD OF BOREHOLE OWR-7D FOR LITHOLOGIC DISCRIPTION
10.0	
20.0	
30.0	
40.0	
50.0	
60.0	
70.0	
80.0	
90.0	
100.0	

WELL SKETCH



INSTALLATION NOTES

Installed and grouted 10" dia. steel surface casing to 35' BGS with 12 1/4" dia. augers. Resumed boring with 4 1/4" dia. augers to 65' BGS. Installed 10' of 2" dia., 0.008 slot PVC screen and 60' of 2" dia. PVC riser to 65' BGS. Tremmied 9 bags of sand to ~52' BGS. Poured (1) 5 gal. buckets of bentonite pellets to ~49.5' BGS. Grouted remainder of open annulus with 95%-5% cement bentonite grout mixture. Installed locking aluminum protective casing, 3' x 3' and concrete pad for surface finish.

WELL DEVELOPMENT NOTES

Pumped and surged over 3 week period until turbidity improved. Minimum of 6 well volumes removed.

MONITORING WELL INSTALLATION LOG

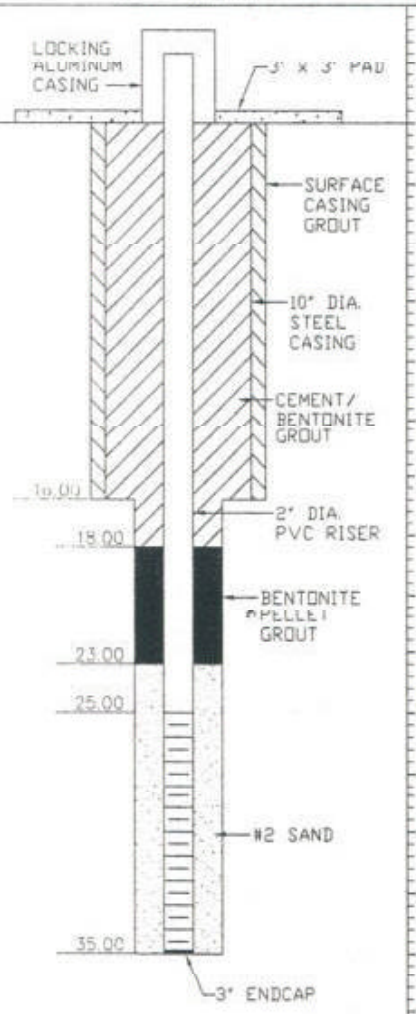
JOB NO. 983-3223 PROJECT SOLUTIA/RFI/AL WELL NO. DWR-8S SHEET 1 of 1
QA INSP. CDH/MNH DRILLING METHOD HSA (4 1/4, 12 1/4) GROUND ELEV. 752.90 WATER DEPTH 13.76
WEATHER SUNNY DRILLING COMPANY EEI TOC ELEV. 755.17 DATE/TIME 8-11-98
TEMP. 95 DRILL RIG CME 75 DRILLER E. FULLER STARTED 1600/6-8-98 COMPLETED 1600/6-10-98
LOCATION / COORDINATES N/A (TIME / DATE) (TIME / DATE)

MATERIALS INVENTORY

WELL CASING 2 in. dia. 30 l.f. WELL SCREEN 2 in. dia. 10 l.f. BENTONITE SEAL PELLETS
CASING TYPE PVC SREEN TYPE PVC INSTALLATION METHOD POURED
JOINT TYPE FLUSH SLOT SIZE 0.008 FILTER PACK QTY. 8 BAGS
GROUT QUANTITY 7 BAGS CENTRALIZERS N/A FILTER PACK TYPE GRADE 2 SILICA SAND
GROUT TYPE CEMENT/BENTONITE DRILLING MUD TYPE N/A INSTALLATION METHOD TREMMIED

ELEV./DEPTH	SOIL/ROCK DESCRIPTION
	GROUND SURFACE
0.0	REFER TO RECORD OF BOREHOLE DWR-8S FOR LITHOLOGIC DISCRIPTION
5.0	
10.0	
15.0	
20.0	
25.0	
30.0	
35.0	
40.0	
45.0	
50.0	

WELL SKETCH



INSTALLATION NOTES

Installed and grouted 10" dia. steel surface casing to 16' BGS with 12 1/4" dia. augers. Resumed boring with 4 1/4" dia. augers to 35' BGS. Installed 10' of 2" dia., 0.008 slot PVC screen and 30' of 2" dia. PVC riser to 35' BGS. Tremmied 8 bags of sand to ~23' BGS. Poured (2) 5 gal. buckets of bentonite pellets to ~18' BGS. Grouted remainder of open annulus with 95%-5% cement bentonite grout mixture. Installed locking aluminum protective casing, 3' x 3' concrete pad and bumper posts for surface finish.

WELL DEVELOPMENT NOTES

Pumped and surged over 3 week period until turbidity improved. Minimum of 6 well volumes removed.

MONITORING WELL INSTALLATION LOG

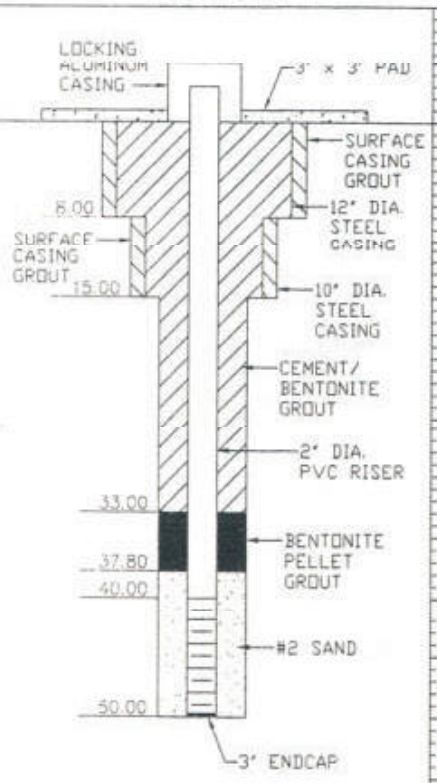
JOB NO 983-3223 PROJECT SOLUTIA/RFI/AL WELL NO. DWR-9S SHEET 1 of 1
GA INSP. CDH DRILLING METHOD HSA (4 1/4, 12 1/4) GROUND ELEV. 750.70 WATER DEPTH 37.67
WEATHER SUNNY DRILLING COMPANY EEI TOC ELEV. 753.09 DATE/TIME 8-11-98
TEMP. 90 DRILL RIG CME-75 DRILLER E. FULLER STARTED 15:00/8 Cl 98 COMPLETED 11:00/9 Cl-98
TIME / DATE TIME / DATE
LOCATION / COORDINATES N/A

MATERIALS INVENTORY

WELL CASING 2 in. dia. 50 l.f. WELL SCREEN 2 in. dia. 10 l.f. BENTONITE SEAL PELLETS
CASING TYPE PVC SREEN TYPE PVC INSTALLATION METHOD POURED
JOINT TYPE FLUSH SLOT SIZE 0.008 FILTER PACK QTY. 8 BAGS
GROUT QUANTITY 7 BAGS CENTRALIZERS N/A FILTER PACK TYPE GRADE 2 SILICA SAND
GROUT TYPE CEMENT/BENTONITE DRILLING MUD TYPE N/A INSTALLATION METHOD TREMMIED

ELEV./DEPTH	SOIL/ROCK DESCRIPTION
GROUND SURFACE	
0.0	REFER TO RECORD OF BOREHOLE DWR-9S FOR LITHOLOGIC DISCRIPTION
10.0	
20.0	
30.0	
40.0	
50.0	
60.0	
70.0	
80.0	
90.0	
100.0	

WELL SKETCH



INSTALLATION NOTES

Installed and grouted 12" dia. steel surface casing to ~8' BGS. Allowed to cure, then installed 10" dia. steel casing to ~15' BGS. Resumed boring with 4 1/4" dia. augers to 50' BGS. Installed 10' of 2" dia., 0.008 slot PVC screen and 50' of 2" dia. PVC riser to 50' BGS. Tremmied 8 bags of sand to ~37.8' BGS. Poured (2) 5 gal. buckets of bentonite pellets to ~33' BGS. Grouted remainder of open annulus with 95%-5% cement bentonite grout mixture. Installed locking aluminum protective casing and 3' x 3' concrete pad for surface finish.

WELL DEVELOPMENT NOTES

Pumped and surged over 3 week period until turbidity improved. Minimum of 6 well volumes removed.

PROJECT: SOLUTIA
PROJECT LOCATION: ALABAMA
PROJECT NUMBER: 983-3223

RECORD OF BOREHOLE PZR-1

BORING DATE: 6/18/98
BORING LOCATION:

SHEET: 1 OF 2
DATUM: FT-MSL

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE DESCRIPTION	USCS	GRAPHIC LOG	ELEV / DEPTH	SAMPLES NUMBER	TYPE	BLOWS / 6 in	N	REC/ATT	NOTE
0	HSA 4 1/4	Firm, damp, tan-brown, SILTY CLAY, some fine-coarse sand and gravel (FILL)	CL		0.00						
5						1	SS	5.11.4.9	15	1.0/2.0	
10						2	SS	6.5.4.5	9	2.0/2.0	
15						3	SS	5.8.9.15	17	1.5/2.0	
20		Soft to firm, purple-red-brown, mottled, SILTY CLAY, fine-coarse sand, infilling of slickensided fractures (weathered residuum)	CL		18.00	4	SS				
25						5	SS	4.7.8.12	15	2.0/2.0	
30						6	SS	6.11.14.16	25	1.0/2.0	
35						7	SS	10.12.11.12	23	2.0/2.0	
40						8	SH	-	NA	1.0/2.0	

DRILL RIG: CME-75
DRILLING CONTRACTOR: EEI
DRILLER: E. FULLER

Golder Associates

LOGGED: CDH
CHECKED: SFR
DATE: 10/7/98

PROJECT: SOLUTIA
PROJECT LOCATION: ALABAMA
PROJECT NUMBER: 983-3223

RECORD OF BOREHOLE PZR-1

BORING DATE: 6/18/98
BORING LOCATION:

SHEET: 2 OF
DATUM: FT-MSL

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE: DESCRIPTION	USCS	GRAPHIC LOG	ELEV / DEPTH	SAMPLES: NUMBER	TYPE	BLOWS / 6 in	N	REC/ATT	NOTE
40	HSA 4 1/4	See previous page				8	SH	-	NA	1.0/2.0	
45						9	SS	7.10.15.15	25	2.0/2.0	
		Becomes saturated @ approx. 48' BGS									
50			CL			10	SS	6,4,5,3	9	1.0/2.0	
55						11	SS	1,2,3,4	5	2.0/2.0	
60		Boring completed @ 60' BGS			60.00						
65											
70											
75											
80											

DRILL RIG: CME-75
DRILLING CONTRACTOR: EEI
DRILLER: E. FULLER

Golder Associates

LOGGED: CDH
CHECKED: SFR
DATE: 10/7/98

PROJECT: SOLUTIA

PROJECT LOCATION: ALABAMA

PROJECT NUMBER: 983-3223

RECORD OF BOREHOLE PZR-2

BORING DATE: 6/16/98

BORING LOCATION:

SHEET: 1 OF 2

DATUM: FT-MSL

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE: DESCRIPTION	USCS	GRAPHIC LOG	ELEV / DEPTH	SAMPLES: NUMBER	TYPE	BLOWS / 6 in	N	REC/ATT	NOTE
0	HSA 4 1/4	Firm, damp, red-brown-tan-black, mottled, SILTY CLAY, some coarse-fine sand and gravel, trace cobbles (FILL)	CL		0.00						
5						1	SS	5,4,5,4	9	1.0/2.0	
10		Below 10' red-brown				2	SS	10,7,9,9	16	2.0/2.0	
15		15' Trace asphalt and bituminous concrete				3	SS	10,5,9,10	14	1.5/2.0	
20		Firm, damp to moist, purple with white-gray marbling, SILTY CLAY, trace coarse-fine sand (weathered residuum)	CL		18.00	4	SH	-	NA	1.0/2.0	
						5	SS	7,9,5,9	14	2.0/2.0	
25						6	SS	4,4,7,11	11	2.0/2.0	
30						7	SS	10,8,8,11	14	2.0/2.0	
35						8	SS	6,9,12,19	21	2.0/2.0	
40											

DRILL RIG: CME-75

DRILLING CONTRACTOR: EEI

DRILLER: E. FULLER

Golder Associates

LOGGED: MNH

CHECKED: SFR

DATE: 10/7/98

PROJECT: SOLUTIA

PROJECT LOCATION: ALABAMA

PROJECT NUMBER: 983-3223

RECORD OF BOREHOLE PZR-2

BORING DATE: 6/16/98

BORING LOCATION:

SHEET: 2 OF 2

DATUM: FT-MSL

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE DESCRIPTION	USCS	GRAPHIC LOG	ELEV / DEPTH	SAMPLES NUMBER	TYPE	BLOWS / 6 in	N	REC/ATT	NOTE
40	HSA 4 1/4		CL								
		Firm, damp to moist, purple with white-gray marbling, SILTY CLAY, trace coarse-fine sand, occasional thin (1cm), medium brown silt filled seams (weathered residuum)			41.00	9	SH	-	NA	2.0/2.0	
						10	SS	4,7,5,6	12	1.5/2.0	
45						11	SS	4,7,8,9	15	2.0/2.0	
50		Below 50' trace to little sandy silt in thin seams	CL			12	SS	9,11,10,10	21	2.0/2.0	
55						13	SS	7,9,13,16	22	2.0/2.0	
						14	SH	-	NA	1.0/2.0	
60		Boring completed @ 60' BGS			60.00						
65											
70											
75											
80											

DRILL RIG: CME-75

DRILLING CONTRACTOR: EEI

DRILLER: E. FULLER

Golder Associates

LOGGED: MNH

CHECKED: SFR

DATE: 10/7/98

PROJECT: SOLUTIA

PROJECT LOCATION: ALABAMA

PROJECT NUMBER: 983-3223

RECORD OF BOREHOLE PZR-3

BORING DATE: 6/10/98

BORING LOCATION:

SHEET: 1 OF 2

DATUM: FT-MSL

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE DESCRIPTION	USCS	GRAPHIC LOG	ELEV / DEPTH	NUMBER	TYPE	BLOWS / 6 in	N	REC/ATT	NOTE
0	HSA 4 1/4	FILL			0.00						
		Soft, damp, light brown, CLAYEY SILT, little fine-coarse gravel (FILL)			3.00	1	CME	-	NA	1.0/2.0	
5		Soft, moist, red-orange-brown, SILTY CLAY, little fine-coarse sand, some to and fine gravel (FILL)	CL		3.00						
10						2	SS	6,16,16,20	32	1.0/2.0	
						3	SS	30,14,10,13	24	1.5/2.0	
15						4	SS	5,8,10,15	18	2.0/2.0	
		Firm, moist, red-brown-purple, mottled, SILTY CLAY, trace coarse-fine sand, sandy silt infilling along fracture planes (weathered residuum)			16.00	5	SS	10,21,19,25	40	2.0/2.0	
20						6	SS	8,8,12,17	20	2.0/2.0	
						7	SH	-	NA	1.3/2.0	
						8	CME	-	NA	3.0/3.0	
25			CL			9	CME	-	NA	5.0/5.0	
30						10	CME	-	NA	5.0/5.0	
35						11	CME	-	NA	5.0/5.0	
40											

DRILL RIG: CME-75

DRILLING CONTRACTOR: EEI

DRILLER: E. FULLER

Golder Associates

LOGGED: CDH

CHECKED: SFR

DATE: 10/7/98

PROJECT: SOLUTIA

PROJECT LOCATION: ALABAMA

PROJECT NUMBER: 983-3223

RECORD OF BOREHOLE PZR-3

BORING DATE: 6/10/98

BORING LOCATION:

SHEET: 2 OF 2

DATUM: FT-MSL

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE DESCRIPTION	USCS	GRAPHIC LOG	ELEV / DEPTH	SAMPLES NUMBER	TYPE	BLOWS / 6 in	N	REC/ATT	NOTE
40	HSA 4 1/4		CL			12	SH	-	NA	1.5/2.0	
		Same as above, but soft and saturated (weathered residuum)	CL		42.00	13	CME	-	NA	3.0/3.0	
45						14	CME	-	NA	5.0/5.0	
50		Same as above, but firm and moist (not saturated) (weathered residuum)	CL		58.00	15	CME	-	NA	5.0/5.0	
55						16	SH	-	NA	2.0/2.0	
60		Boring completed @ 60' BGS			60.00						
65											
70											
75											
80											

DRILL RIG: CME-75

DRILLING CONTRACTOR: EEI

DRILLER: E. FULLER

Golder Associates

LOGGED: CDH

CHECKED: SFR

DATE: 10/7/98

PROJECT: SOLUTIA

PROJECT LOCATION: ALABAMA

PROJECT NUMBER: 983-3223

RECORD OF BOREHOLE PZR-4

BORING DATE: 6/15/98

BORING LOCATION:

DATUM: FT-MSL

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE DESCRIPTION	USCS	GRAPHIC LOG	ELEV / DEPTH	SAMPLES NUMBER	TYPE	BLOWS / 6 in	N	REC/ATT	NOTE
0	HSA 4 1/4	Soft to firm, damp, red-brown-medium brown, SILTY CLAY, trace to and coarse-fine sand and gravel (FILL)	CL		0.00						
5						1	SS	4,3,5,8	8	0.5/2.0	
10		Trace cobbles, trace organics				2	SS	10,6,12,18	18	2.0/2.0	
15		Below 15' moist, occasional sandstone and quartzite fragments				3	SS	7,4,9,10	13	2.0/2.0	
20		Stiff, damp to moist, light brown-red brown-tan, mottled, SILTY CLAY, trace coarse-fine sand and fine gravel (weathered residuum)	CL		18.00	4	SH	-	NA	1.0/2.0	
						5	SS	15,17,18,23	35	2.0/2.0	
25						6	SS	5,6,7,12	13	0/0	
						7	SS	13,18,18,23	36	2.0/2.0	
30						8	SS	8,14,16,16	30	2.0/2.0	
35		Firm, moist to very moist, purple and light medium brown, trace white-gray, mottled, SILTY CLAY AND SILT, trace coarse-fine sand, very thin (<1cm) silt filled fractures, chemical odor (weathered residuum)	CL-ML		36.00	9	SS	3,4,4,9	8	2.0/2.0	
40											

DRILL RIG: CME-75

DRILLING CONTRACTOR: EEI

DRILLER: E. FULLER

Golder Associates

LOGGED: MNH

CHECKED: SFR

DATE: 10/7/98

PROJECT: SOLUTIA

PROJECT LOCATION: ALABAMA

PROJECT NUMBER: 983-3223

RECORD OF BOREHOLE PZR-4

BORING DATE: 6/15/98

BORING LOCATION:

SHEET: 2 OF 2

DATUM: FT-MSL

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE DESCRIPTION	USCS	GRAPHIC LOG	ELEV / DEPTH	SAMPLES NUMBER	TYPE	BLOWS / 6 in	N	REC/ATT	NOTE
40	HSA 4 1/4										
						10	SH	-	NA	2.0/2.0	
		Below 42' purple with white-gray marbling				11	SS	5,5,6,10	11	2.0/2.0	
45			CL-ML								
						12	SS	2,4,4,6	8	1.0/2.0	
		Below 49' soft, moist to wet									
50		Firm, moist to very moist, light brown and tan with white-gray marbling, SILTY CLAY AND CLAYEY SILT, trace fine sand, thin silt filled vertical fractures present (weathered residuum)			50.00	13	SS	3,4,4,5	8	2.0/2.0	
			CL-ML								
55						14	SS	3,4,6,7	10	2.0/2.0	
						15	SH	-	NA	2.0/2.0	
60		Boring completed @ 60' BGS			60.00						
65											
70											
75											
80											

DRILL RIG: CME-75

DRILLING CONTRACTOR: EEI

DRILLER: E. FULLER

Golder Associates

LOGGED: MNH

CHECKED: SFR

DATE: 10/7/98

PROJECT: SOLUTIA

PROJECT LOCATION: ALABAMA

PROJECT NUMBER: 983-3223

RECORD OF BOREHOLE PZR-5

BORING DATE: 6/17/98

BORING LOCATION:

SHEET: 1 OF 2

DATUM: FT-MSL

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE DESCRIPTION	USCS	GRAPHIC LOG	ELEV / DEPTH	SAMPLES NUMBER	TYPE	BLOWS / 6 in	N	REC/ATT	NOTE
0	HSA 4 1/4	Soft, damp, medium-dark brown, CLAYEY SILT, some fine-coarse sand and gravel	CL		0.00						
5						1	SS	5,12,4,5	16	2.0/2.0	
		Soft, damp, purple-white-gray, mottled, SILTY CLAY, sand infilled fractures, trace gravel (weathered residuum)	CL		6.00	2	SS	5,6,9,10	15	0.5/2.0	
10						3	SS	4,4,6,2	10	2.0/2.0	
						4	SS	3,6,5,11	11	2.0/2.0	
		Firm, dry to damp, purple-white-gray, mottled, SILTY CLAY, some fine-medium sand, infilling of slickensided fractures, intermittent saturation (weathered residuum)	CL		12.00	5	SS	39,33,34,50	67	0.5/2.0	
15						6	SS	6,9,18,20	27	2.0/2.0	
						7	SS	12,20,24,22	44	2.0/2.0	
						8	SS	12,43,44,30	87	0.5/2.0	
20						9	SH	-	NA	1.0/2.0	
						10	SS	18,23,29,23	52	2.0/2.0	
25						11	SS	6,6,9,12	15	2.0/2.0	
						12	SS	6,6,14,14	22	2.0/2.0	
						13	SS	4,5,6,9	11	2.0/2.0	
30						14	SS	9,12,10,15	22	1.5/2.0	
						15	SS	20,26,38,36	66	1.0/2.0	
35						16	SS	12,22,29,45	51	1.8/2.0	
		Same as above, but saturated				17	SS	12,26,22,39	48	2.0/2.0	
		Same as above, but damp				18	SS	18,16,23,20	41	2.0/2.0	
40											

DRILL RIG: CME-75

DRILLING CONTRACTOR: EEI

DRILLER: E. FULLER

Golder Associates

LOGGED: CDH

CHECKED: SFR

DATE: 10/7/98

PROJECT: SOLUTIA

PROJECT LOCATION: ALABAMA

PROJECT NUMBER: 983-3223

RECORD OF BOREHOLE PZR-5

BORING DATE: 6/17/98

BORING LOCATION:

SHEET: 2 OF 2

DATUM: FT-MSL

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE: DESCRIPTION	USCS	GRAPHIC LOG	ELEV / DEPTH	SAMPLES: NUMBER	TYPE	BLOWS / 6 in	N	REC/ATT	NOTE
40	HSA 4 1/4	See previous page	CL			19	SH	-	NA	1.0/2.0	
						20	SS	17,26,25,29	51	1.5/2.0	
45		Boring completed @ 45' BGS			45.00						
50											
55											
60											
65											
70											
75											
80											

DRILL RIG: CME-75

DRILLING CONTRACTOR: EEI

DRILLER: E. FULLER

Golder Associates

LOGGED: CDH

CHECKED: SFR

DATE: 10/7/98

PROJECT: SOLUTIA

PROJECT LOCATION: ALABAMA

PROJECT NUMBER: 983-3223

RECORD OF BOREHOLE PZR-6

BORING DATE: 6/18/98

BORING LOCATION:

SHEET: 1 OF 2

DATUM: FT-MSL

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE DESCRIPTION	USCS	GRAPHIC LOG	ELEV / DEPTH	SAMPLES NUMBER	TYPE	BLOWS / 6 in	N	REC/ATT	NOTE
0	HSA 4 1/4	Soft, dry, medium dark brown, CLAYEY SILT, trace fine-medium sand, little fine gravel			0.00	1	SS	3,11,9,5	20	1.0/2.0	
5		Firm, dry, purple-gray-white, mottled, SILTY CLAY, little fine-medium sand, infilling of fractures (weathered residuum)	CL		5.00	2	SS	8,11,14,18	25	2.0/2.0	
10						3	SS	5,5,7,12	25	1.0/2.0	
15						4	SS	6,7,7,12	14	2.0/2.0	
20		(Saturated)				5	SH	-	NA	1.2/2.0	
25		Moist to wet, yellow, CLAYEY SAND			26.00	6	SS	7,11,9,13	20	2.0/2.0	
		Firm, damp to moist, purple-white-gray, mottled SILTY CLAY, fine-medium sand, infilling of fractures (weathered residuum)			28.00	7	SS	18,18,18,18	36	1.0/2.0	
30						8	SS	9,19,21,23	40	1.0/2.0	
		33' - 35' Wet	CL			9	SS	32,17,50/4	50/4	1.5/2.0	
35						10	SS	21,17,18,50/3	50/3	1.5/2.0	
						11	SS	7,9,12,12	23	2.0/2.0	
		37' - 37.5' Wet				12	SS	13,39,45,50/2	50/2	1.0/2.0	
40						13	SH	-	NA		

DRILL RIG: CME-75

DRILLING CONTRACTOR: EEI

DRILLER: E. FULLER

Golder Associates

LOGGED: CDH

CHECKED: SFR

DATE: 10/7/98

PROJECT: SOLUTIA

PROJECT LOCATION: ALABAMA

PROJECT NUMBER: 983-3223

RECORD OF BOREHOLE PZR-6

BORING DATE: 6/18/98

BORING LOCATION:

SHEET: 2 OF 2

DATUM: FT-MSL

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE: DESCRIPTION	USCS	GRAPHIC LOG	ELEV / DEPTH	SAMPLES: NUMBER	TYPE	BLOWS / 6 in	N	REC/ATT	NOTE
40	HSA 4 1/4		CL			13	SH	-	NA		
						14	SS	18,17,25,30	42	2.0/2.0	
45		Boring completed @ 45' BGS			45.00						
50											
55											
60											
65											
70											
75											
80											

DRILL RIG: CME-75

DRILLING CONTRACTOR: EEI

DRILLER: E. FULLER

Golder Associates

LOGGED: CDH

CHECKED: SFR

DATE: 10/7/98

PROJECT: SOLUTIA

PROJECT LOCATION: ALABAMA

PROJECT NUMBER: 983-3223

RECORD OF BOREHOLE OWR-1D

BORING DATE: 6/9/98

BORING LOCATION:

SHEET: 1 OF 2

DATUM: FT-MSL

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE DESCRIPTION	USCS	GRAPHIC LOG	ELEV / DEPTH	SAMPLES NUMBER	TYPE	BLOWS / 6 in	N	REC/ATT	NOTE
0	HSA 4 1/4, 12 1/4	Gravel fill			0.00						
		Soft to stiff, damp to moist, orange-brown to red brown, SILTY CLAY, trace to little fine sand, trace fine gravel (weathered residuum) 3' - 4' Dark staining	CL		1.00	1	SS	2,3,4,4	7	0.5/2.0	
5						2	SS	1,1,2,4	3	1.5/2.0	
						3	SS	6,5,12,19	17	2.0/2.0	
						4	SS	8,12,13,13	25	2.0/2.0	
10		Loose, moist to very moist, white-orange-tan, mottled CLAYEY F-C SAND, seams of silty sands	SC-SM		10.00	5	SS	3,6,7,7	13	1.5/2.0	
						6	SS	7,8,11,12	19	2.0/2.0	
15		Soft to firm, moist to wet, purple-gray-white-brown, mottled, SILTY CLAY, little to some silt and sand seams, trace quartzite gravel	CL		14.00	7	SS	3,3,4,4	8	2.0/2.0	
		Firm, damp to moist, purple-white-tan, mottled, SILTY CLAY, little to some silt and sand seams, trace coarse-fine gravel (weathered residuum)	CL		16.00	8	SS	5,6,8,11	14	1.0/2.0	
20						9	SS	2,3,4,5	7	1.5/2.0	
						10	SH	-	NA	0.5/2.0	
						11	SS	4,5,7,8	12	1.5/2.0	
25						12	SS	3,6,8,8	14	2.0/2.0	
		Soft to stiff, damp to moist, red-brown-orange, SILTY CLAY, little coarse-fine sand and gravel	CL		26.00	13	SS	3,6,7,14	13	1.75/2	
		29' Tan-brown, trace to little coarse-fine sand, and fine gravel				14	SS	7,10,15,21	25	2.0/2.0	
30						15	SS	3,4,9,12	13	1.0/2.0	
		Slickensides				16	SS	2,10,13,45	23	2.0/2.0	
35											
						17	CME	-	NA	3.0/4.0	
40											

DRILL RIG: CME-75

DRILLING CONTRACTOR: EEI

DRILLER: E. FULLER

Golder Associates

LOGGED: CDH/MNH

CHECKED: SFR

DATE: 10/7/98

PROJECT: SOLUTIA

PROJECT LOCATION: ALABAMA

PROJECT NUMBER: 983-3223

RECORD OF BOREHOLE OWR-1D

BORING DATE: 6/9/98

BORING LOCATION:

SHEET: 2 OF

DATUM: FT-MSL

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE DESCRIPTION	USCS	GRAPHIC LOG	ELEV / DEPTH	SAMPLES NUMBER	TYPE	BLOWS / 6 in	N	REC/ATT	NOTE
40	HSA 4 1/4, 12 1/4	See previous page	CL			18	SH	-	NA	0/0	
						19	CME	-	NA	3.0/3.0	
45						20	SH	-	NA	0/0	
						21	CME	-	NA	3.0/3.0	
50						22	SH	-	NA	1.0/2.0	
		Stiff to very stiff, moist, red-brown-tan, trace white-gray, SILTY CLAY, trace to little coarse-fine sand and fine gravel, silt in places (weathered residuum) Below 55' shale fragments common	CL-ML		52.00	23	CME	-	NA	3.0/3.0	
55						24	CME	-	NA	5.0/5.0	
60						25	SH	-	NA	1.0/2.0	
		Stiff to very stiff, damp to very moist, red-brown-tan and black, SILTY CLAY AND CLAYEY F GRAVEL, trace to some coarse-fine sand (weathered residuum)	CL-GC		62.00	26	SS	47,23,19,22	42	2.0/2.0	
65						27	SS	11/16	27	1.0/1.0	
		Boring completed @ 65' BGS			65.00						
70											
75											
80											

DRILL RIG: CME-75

DRILLING CONTRACTOR: EEI

DRILLER: E. FULLER

Golder Associates

LOGGED: CDH/MNH

CHECKED: SFR

DATE: 10/7/98

PROJECT: SOLUTIA

PROJECT LOCATION: ALABAMA

PROJECT NUMBER: 983-3223

RECORD OF BOREHOLE OWR-1S

BORING DATE: 6/2/98

BORING LOCATION:

SHEET: 1 OF 1

DATUM: FT-MSL

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE DESCRIPTION	USCS	GRAPHIC LOG	ELEV / DEPTH	SAMPLES NUMBER	TYPE	BLOWS / 6 in	N	REC/ATT	NOTE
0	HSA 4 1/4, 12 1/4	Gravel fill			0.00						
		Soft to stiff, moist to wet, red-orange-brown, SILTY CLAY, little to and fine-coarse (weathered residuum)	CL		2.00	1	SS	2,4,4,4	8	1.75/2	
5						2	SS	2,1,2,3	3	1.75/2	
						3	SS	4,11,14,17	25	2.0/2.0	
		Below 8' Fine chert gravel				4	SS	4,11,14,17	25	1.0/2.0	
10		Soft, moist to wet, red-white-tan, mottled, SILTY CLAY AND CLAYEY F-C SAND, (weathered residuum)	CL-SC		10.00	5	SS	2,5,7,9	12	2.0/2.0	
						6	SS	5,7,6,11	13	2.0/2.0	
15		Firm to stiff, damp, orange-tan-brown-gray, mottled, SILTY CLAY, trace coarse-fine sand and fine gravel, occasional thin silty sand filled fractures (weathered residuum)	CL		15.00	7	CME	-	NA	3.5/4.0	
20						8	SH	-	NA	2.0/2.0	
		Stiff to very stiff, damp to wet, tan-brown with purple mottling, SILTY CLAY AND CLAYEY GRAVEL (weathered residuum)	CL-GC		22.00	9	CME	-	NA	3.0/3.0	
25		Stiff, damp to moist, tan-brown, trace white-gray marbling, SILTY CLAY, trace to little coarse-fine sand and coarse-fine gravel, thin wet, silt filled fractures present (weathered residuum)	CL		26.00	10	CME	-	NA	5.0/5.0	
30						11	SH	-	NA	1.5/2.0	
						12	CME	-	NA	3.0/3.0	
35		Boring completed @ 35' BGS			35.00						
40											

DRILL RIG: CME-75

DRILLING CONTRACTOR: EEI

DRILLER: E. FULLER

Golder Associates

LOGGED: CDH/MNH

CHECKED: SFR

DATE: 10/7/98

PROJECT: SOLUTIA

PROJECT LOCATION: ALABAMA

PROJECT NUMBER: 983-3223

RECORD OF BOREHOLE OWR-2D

BORING DATE: 6/23/98

BORING LOCATION:

SHEET: 1 OF 3

DATUM: FT-MSL

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE DESCRIPTION	USCS	GRAPHIC LOG	ELEV / DEPTH	SAMPLES NUMBER	TYPE	BLOWS / 6 in	N	REC/ATT	NOTE
0	HSA 4 1/4, 12 1/4	(FILL) Soft, moist, light brown-medium brown, SILTY CLAY, some fine-coarse sand and gravels	CL		0.00						
						1	SS	2,1,2,3	3	1.0/2.0	
5		(Saturated)				2	SS	1,1,1,1	2	1.0/2.0	
						3	SS	1,1,3,6	4	1.0/2.0	
						4	SS	1,4,1,2	5	1.0/2.0	
10		Dark staining @ approx. 10' BGS				5	SS	(1for12)1,1	2	0.5/2.0	
						6	ss	1,1,3,2	4	1.0/2.0	
15						7	ss	5,13,6,8	19	2.0/2.0	
						8	SS	6,5,4,6	9	2.0/2.0	
		Soft, wet, light brown-orange-red, CLAYEY SAND; SILT, fine-coarse sand, little to trace gravels (weathered residuum)	CL-MH		18.00	9	SS	2,3,2,4	5	1.8/2.0	
20						10	SS	2,3,5,6	8	2.0/2.0	
						11	SS	1,2,3,4	5	1.5/2.0	
25						12	SS	1,1,3,3	4	1.0/2.0	
		Soft, moist-wet, red-brown-orange, SILTY CLAY, intermittent layers of clayey sand and infilling of fractures, trace gravels (weathered residuum)			26.00	13	SS	1,2,3,4	5	2.0/2.0	
						14	SS	(1for12)2,2	2	2.0/2.0	
30						15	SS	1,2,2,2	4	2.0/2.0	
			CL			16	SS	1,1,1,1	2	2.0/2.0	
35						17	CME	-	NA	3.5/5.0	
40											

DRILL RIG: CME-75

DRILLING CONTRACTOR: EEI

DRILLER: E. FULLER

Golder Associates

LOGGED: CDH

CHECKED: SFR

DATE: 10/7/98

PROJECT: SOLUTIA

PROJECT LOCATION: ALABAMA

PROJECT NUMBER: 983-3223

RECORD OF BOREHOLE OWR-2D

BORING DATE: 6/23/98

BORING LOCATION:

SHEET: 2 OF 3

DATUM: FT-MSL

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE DESCRIPTION	USCS	GRAPHIC LOG	ELEV / DEPTH	SAMPLES NUMBER	TYPE	BLOWS / 6 in	N	REC/ATT	NOTE
40	HSA 4 1/4, 12 1/4	See previous page	CL			-	SH	-	NA	0.0/0.0	
						18	CME	-	NA	3.0/3.0	
45						19	SH	-	NA	1.8/2.0	
						20	CME	-	NA	3.0/3.0	
50						21	CME	-	NA	4.0/5.0	
55	Air Rotary	Air rotary, intermittent rock and soil mix. Cuttings indicate reworked quartzite and cherty limestone fragments intermixed with soil type as described previous			65.00						Hard drilling @ approx. 58' BGS - auger refusal @ 59' BGS left augers in hole and will return next week with air rotary equipment.
60											
65											
70											Resumed drilling 6/23/98 @ 8:00 Intermittent rock and max. 6" soil layers to approx. 69' BGS. cuttings show quartzite (reworked) and limestone, continued with air rotary to 75' BGS, soft drilling indicates soil, washed hole to blow up cuttings, lost all water (void zone?), tremors felt @ ground surface while blowing air
75	HSA 4 1/4, 12 1/4	Soft, wet to moist, light brown-red-orange, SILTY CLAY, trace to little fine-coarse sand, trace to little gravels, including chert, intermittent thin (2" max.) sand (fine-medium) layers (weathered residuum)	CL		74.00	22	SS	1.2.2.1	4	0.5/2.0	
80											

DRILL RIG: CME-75

DRILLING CONTRACTOR: EEI

DRILLER: E. FULLER

Golder Associates

LOGGED: CDH

CHECKED: SFR

DATE: 10/7/98

PROJECT: SOLUTIA
PROJECT LOCATION: ALABAMA
PROJECT NUMBER: 983-3223

RECORD OF BOREHOLE OWR-2D

BORING DATE: 6/23/98
BORING LOCATION:

SHEET: 3 OF 3
DATUM: FT-MSL

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE: DESCRIPTION	USCS	GRAPHIC LOG	ELEV / DEPTH	SAMPLES: NUMBER	TYPE	BLOWS / 6 in	N	REC/ATT	NOTE
80	HSA 4 1/4, 12 1/4	See previous page	CL			23	SH	-	NA	2.0/2.0	
85						24	SS	2.2.3.5	5	1.5/2.0	
90						25	SS	2.3.5.7	8	2.0/2.0	
95		Same as above, no sandy zones				26	SS	5.7.9.11	16	1.8/2.0	
100						27	SH	-	NA	2.0/2.0	
105						28	SS	8,8,3,3	11	2.0/2.0	
110		Boring completed @ 110' BGS			110.00	29	SS	10,50/3	50/3	1.5/2.0	
115											
120											

DRILL RIG: CME-75
DRILLING CONTRACTOR: EEI
DRILLER: E. FULLER

Golder Associates

LOGGED: CDH
CHECKED: SFR
DATE: 10/7/98

PROJECT: SOLUTIA

PROJECT LOCATION: ALABAMA

PROJECT NUMBER: 983-3223

RECORD OF BOREHOLE OWR-2S

BORING DATE: 6/16/98

BORING LOCATION:

SHEET: 1 OF 1

DATUM: FT-MSL

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE: DESCRIPTION	USCS	GRAPHIC LOG	ELEV / DEPTH	SAMPLES: NUMBER	TYPE	BLOWS / 6 in	N	REC/ATT	NOTE
0	HSA 4 1/4, 12 1/4	(FILL) Soft, moist, light brown-red-orange, SILTY CLAY, some fine-coarse sand and gravel	CL		0.00						See OWR-2D for full sample descriptions
18.00		Soft, wet, light brown-orange-red, CLAYEY SAND AND SILT, fine-coarse sand, little to trace gravel (weathered residuum)	CL-ML			1	SH	-	NA	1.8/2.0	
26.00		Soft, moist to wet, red-brown-orange, SILTY CLAY, intermittent layers of clayey sand and sand infilling of fractures, trace gravel (weathered residuum)	CL			2	SH	-	NA	2.0/2.0	
35.00		Boring completed @ 35' BGS									

DRILL RIG: CME-75

DRILLING CONTRACTOR: EEI

DRILLER: E. FULLER

Golder Associates

LOGGED: CDH

CHECKED: SFR

DATE: 10/7/98

PROJECT: SOLUTIA

PROJECT LOCATION: ALABAMA

PROJECT NUMBER: 983-3223

RECORD OF BOREHOLE OWR-3D

BORING DATE: 6/10/98

BORING LOCATION:

SHEET: 1 OF 2

DATUM: FT-MSL

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE DESCRIPTION	USCS	GRAPHIC LOG	ELEV / DEPTH	SAMPLES NUMBER	TYPE	BLOWS / 6 in	N	REC/ATT	NOTE
0	HSA 4 1/4, 12 1/4	Gravel fill			0.00						
		Firm, damp to moist, red-brown, SILTY CLAY, some to and coarse-fine gravel (FILL)	CL		1.00						
5		Soft to firm, damp to moist, reddish brown and gray, mottled, SILTY CLAY, trace to and coarse-fine sand and gravel (weathered residuum)	CL		3.00						
10						1	SS	3,6,7,10	13		
15		15' - 20' Very soft, wet in places				2	SS	2,3,4,7	7	.25/2.0	
						3	SS	2,6,6,8	12	0.0/0.0	
20						4	SH	-	NA	1.0/2.0	
						5	SS	3,5,7,10	12	1.0/2.0	
		23' - 29' Sandstone gravels, clay filled fractures				6	SS	3,5,7,10	12	2.0/2.0	
25						7	SS	3,4,4,8	8	2.0/2.0	
						8	SS	3,3,7,9	10	1.0/2.0	
30		30.5' - 31' Dark staining, red-brown				9	SS	3,3,3,5	6	1.0/2.0	
		31' - 33' Interbedded with soft, wet, yellow brown silt and clayey silt				10	SS	2,2,2,4	4	1.5/2.0	
		33' - 35' Soft, purple, mottled				11	SS	2,2,1,2	3	1.0/2.0	
35		35' Sandstone gravels 35' - 41' Stiff, laminated with silt filled micro-fractures									
						12	CME	-	NA	3.5/4.0	
40											

DRILL RIG: CME-75

DRILLING CONTRACTOR: EEI

DRILLER: E. FULLER

Golder Associates

LOGGED: CDH/MNH

CHECKED: SFR

DATE: 10/7/98

PROJECT: SOLUTIA
PROJECT LOCATION: ALABAMA
PROJECT NUMBER: 983-3223

RECORD OF BOREHOLE OWR-3D

BORING DATE: 6/10/98
BORING LOCATION:

SHEET: 2 OF 2
DATUM: FT-MSL

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE DESCRIPTION	USCS	GRAPHIC LOG	ELEV / DEPTH	SAMPLES NUMBER	TYPE	BLOWS / 6 in	N	REC/ATT	NOTE
40	HSA 4 1/4, 12 1/4		CL								
		Stiff, damp to very moist, medium brown and red-brown, mottled, SILTY CLAY AND SILT, trace to some coarse-fine sand and fine gravel (weathered residuum)	CL-ML		41.00	13	SH	-	NA	0/0	
						14	CME	-	NA	3.0/3.0	
45		Firm to very stiff, moist, medium brown, SILTY CLAY, little coarse-fine sand and fine gravel, sand and gravel composed of chert and shale fragments (weathered residuum)	CL		46.00	15	SH	-	NA	1.5/2.0	
						16	SS	11,5,5,7	10	2.0/2.0	
50						17	SS	8,9	17	1.0/1.0	
						18	CME	-	NA	4.5/5.0	
55		55' - 58' Grades to highly plastic silty clay				19	CME	-	NA	5.0/5.0	
		Dense, damp to moist, light brown and tan, SILTY SAND AND SANDY SILT, thin (<1 cm) silty clay lenses interbedded	SM-ML		58.00	20	SH	-	NA	1.0/2.0	
60						21	CME	-	NA	3.0/3.0	
65		Boring completed @ 65' BGS			65.00						
70											
75											
80											

DRILL RIG: CME-75
DRILLING CONTRACTOR: EEI
DRILLER: E. FULLER

Golder Associates

LOGGED: CDH/MNH
CHECKED: SFR
DATE: 10/7/98

PROJECT: SOLUTIA

PROJECT LOCATION: ALABAMA

PROJECT NUMBER: 983-3223

RECORD OF BOREHOLE OWR-3S

BORING DATE: 6/9/98

BORING LOCATION:

SHEET: 1 OF 1

DATUM: FT-MSL

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE DESCRIPTION	USCS	GRAPHIC LOG	ELEV / DEPTH	SAMPLES NUMBER	TYPE	BLOWS / 6 in	N	REC/ATT	NOTE
0	HSA 4 1/4, 12 1/4	Gravel fill			0.00						
		Firm, damp to moist, red-brown, SILTY CLAY, some to and fine gravel (FILL)	CL		1.00	1	SS	3,9,8,4	17	0.5/2.0	
5		Soft to firm, damp to moist, reddish brown and gray, mottled, SILTY CLAY, trace to and coarse-fine sand and fine gravel (weathered residuum)			3.00	2	SS	2,3,3,5	6	2.0/2.0	
						3	SS	1,1,1,2	2	1.0/2.0	
		7' - 7.5' Wet, Fe nodules									
		Below 8' damp to moist				4	SS	3,4,3,3	7		
10		10' - 25' Occasional weathered sandstone fragments				5	SS	3,7,8,10	15	2.0/2.0	
						6	SS	9,10,10,11	20	2.0/2.0	
			CL			7	SS	17,13,20,14	33	2.0/2.0	
15											
		17' - 20' Trace cobbles				8	CME	-	NA		
20						9	SH	-	NA	2.0/2.0	
						10	CME	-	NA	3.0/3.0	
25		Stiff, damp, red-brown-tan and black, trace purple, mottled SILTY CLAY, trace coarse-fine sand and gravel, occasional cobble sized shale fragments			25.00	11	CME	-	NA	5.0/5.0	
30			CL			12	SH	-	NA	0.5/2.0	
		Below 32' damp to moist, trace to some coarse-fine sand and gravel				13	CME	-	NA	3.0/3.0	
35		Boring completed @ 35' BGS			35.00						
40											

DRILL RIG: CME-75

DRILLING CONTRACTOR: EEI

DRILLER: E. FULLER

Golder Associates

LOGGED: MNH

CHECKED: SFR

DATE: 10/7/98

Golder Associates Inc.

AIR MONITORING DATA SHEET

Date 5-19-98 Sheet 1 of 1

Job Name Solutia / RFI / AL Job Number 983-3223

Location Anniston, AL OWR-6D

Time In 10:40 Time Out 18:00 - see below Weather Sun Temp. 80° Wind D. NNW V 0-5

Instrument Type PID microtip HL 2000 Serial No. PA 910597, ATL 0512

Calibration Gas and Concentration isobutylene 99ppm Instrument Reading 99ppm Span/Gain/RF Setting

* If more than one instrument is used, document calibration procedures and results for each additional instrument in recommendations section below and indicate the instrument used (eg. OVA, 361, OVM, etc.) for each observation.

Time	Station	Instr.*	Reading (ppm)	Procedure/Observations/Comments
10:40	OWR-6D'		0.0	Background - 0.0 ppm
10:55			0.0	Readings taken from breathing space
11:10			0.0	@ hole (4'-6' AGS)
11:25			0.0	
				Drillers to decon, return w/ large
				d augers, commence drilling @ 14:40
14:40	OWR-6D'		0.0	
15:45			0.0	
16:50			0.0	
17:40			0.0	- reached 30' bgs - shut down for
				day
8:00	OWR-6D'		0.0	Resumed drilling @ 8:00, 5-20-98
9:00	" "		0.0	re-calibrated to same settings,
10:20	" "		0.0	same instrument as above -
				Calibration good

Recommendations

Chris Hemingway
Printed Name

Signature

Golder Associates Inc.

AIR MONITORING DATA SHEET

Date 5-20-98 Sheet 1 of 1

Job Name Solutia/RFI/AL Job Number 983-3223

Location Anniston, AL OWR-4D

Time In 15:00 Time Out See below Weather Sun Temp. 90° Wind D. W V 0-5 mph

Instrument Type PID micro tip HL 2000 Serial No. PA 910597, ATC 0512

Calibration Gas and Concentration isobutylene, 99 ppm Instrument Reading 99 ppm Span/Gain/RF Setting

* If more than one instrument is used, document calibration procedures and results for each additional instrument in recommendations section below and indicate the instrument used (eg. OVA, 361, OVM, etc.) for each observation

Time	Station	Instr.*	Reading (ppm)	Procedure/Observations/Comments
15:10	OWR-4D		0.0	Background - 0.0 ppm - Measurements
15:30			0.0	taken from breathing zone (≈
15:45			0.0	4'-6' AGS)
16:00			0.0	
17:00			0.0	
				- offsite, will continue on this
				hole in morning
8:00			0.0	
8:15			0.0	5-21-98 - resume drilling @ OWR-4D
8:50			0.0	Calibration & instrument same as 5-20-98
9:10			0.0	
10:10			0.0	

Recommendations

Chris Hemingway
Printed Name

CH
Signature

Golder Associates Inc.

AIR MONITORING DATA SHEET

Date 5-21-98 Sheet 1 of 1

Job Name Solutia / RFI / AL Job Number 983-3223

Location Anniston, AL OWR-9S

Time In 15:45 Time Out 17:15 Weather SUN Temp. 90° Wind D. W V 0-5 mph

Instrument Type Mini-rae PID Pgm-7613 Serial No. 102419

Calibration Gas isobutylene 99 ppm Instrument Reading 99 ppm Span/Gain/RF Setting _____
and Concentration

* If more than one instrument is used, document calibration procedures and results for each additional instrument in recommendations section below and indicate the instrument used (eg. OVA, 361, OVM, etc.) for each observation.

Time	Station	Instr.*	Reading (ppm)	Procedure/Observations/Comments
15:50	OWR-9S		0.0	Background - 0.0 ppm - Readings
16:10	OWR-9S		0.0	taken from breathing zone
16:25	OWR-9S		0.0	(4'-6' AGS)
16:50	OWR-9S		0.0	
17:10	OWR-9S		0.0	

Recommendations

Chris Hemingway
Printed Name

Signature

Golder Associates Inc.

AIR MONITORING DATA SHEET

Date 5-22-98 Sheet 1 of 1

Job Name Solutia/REL/AL Job Number 983-3223

Location Anniston, AL OWR-15

Time In 7:30 Time Out 10:30 Weather Sun Temp. 85° Wind D. W V slight

Instrument Type PID mini Rae - ppm 7615 Serial No. 102419

Calibration Gas and Concentration isobutylene 99 ppm Instrument Reading 99 ppm Span/Gain/RF Setting

* If more than one instrument is used, document calibration procedures and results for each additional instrument in recommendations section below and indicate the instrument used (eg. OVA, 361, OVM, etc.) for each observation.

Time	Station	Instr.*	Reading (ppm)	Procedure/Observations/Comments
7:30	OWR-15		0.0	Background - 0.0 ppm - Readings
7:50			0.0	taken from breathing space (4'-6' AGS)
8:00			0.0	
8:20			0.0	
9:30			0.0	
10:30			0.0	

Recommendations

Chris Hemingway
Printed Name

Signature

Golder Associates Inc.

AIR MONITORING DATA SHEET

Date 5-27-98 Sheet 1 of 1

Job Name Solutia/RFI/AL Job Number 923-3223

Location Anniston, AL

Time In 9:00 Time Out 15:30 Weather pt. cloudy Temp. 85° Wind D. W V 5-10 mph

Instrument Type Mini-Rae PID Serial No. 102419 - (Pine Road)

Calibration Gas and Concentration isobutylene 99 ppm Instrument Reading 99 ppm Span/Gain/RF Setting

* If more than one instrument is used, document calibration procedures and results for each additional instrument in recommendations section below and indicate the instrument used (eg. OVA, 361, OVM, etc.) for each observation.

Time	Station	Instr.*	Reading (ppm)	Procedure/Observations/Comments
9:00	OWR-4D		0.0	Background - 0.0 ppm - Readings taken
9:15			0.0	@ breathing zone area ± 4'-6'
9:30			0.0	AGS
9:45			0.0	
10:30			0.0	
11:30			0.0	
13:10			0.0	
14:10			0.0	
14:30			0.0	New zone encountered
15:30			0.0	

*Recommendations

Christopher D. Hemingway
Printed Name

Signature

Golder Associates Inc.

AIR MONITORING DATA SHEET

Date 5-28-98 Sheet 1 of 1

Job Name Solutia / RFI / AL Job Number 983-3223

Location Anniston, AL

Time In 11:30 Time Out 16:30 Weather 88°, Pt. Cloudy Temp. 88° Wind D. NW V 0-5 mph

Instrument Type Mini-Rae PID Serial No. 102419

Calibration Gas and Concentration isobutylene, 99ppm Instrument Reading 99 ppm Span/Gain/RF Setting

* If more than one instrument is used, document calibration procedures and results for each additional instrument in recommendations section below and indicate the instrument used (eg. OVA, 361, OVM, etc.) for each observation.

Time	Station	Instr.*	Reading (ppm)	Procedure/Observations/Comments
11:30	OWR-7D		0.0	Background – 0.0 ppm
11:45			0.0	Measurements taken from
12:00			0.0	breathing zone (4'-6' AGS)
12:15			0.0	
13:30			0.0	
14:40			0.0	
15:35			0.0	
16:30			0.0	

Recommendations

Chris Hemingway
Printed Name

Signature

Golder Associates Inc.

AIR MONITORING DATA SHEET

Date 6-1-98 Sheet 1 of 1

Job Name SOLUTIA/RFI/AL Job Number 983-3223

Location ANNISTON AL

Time In _____ Time Out _____ Weather _____ Temp. 90 Wind D. W V 0-10

Instrument Type _____ Serial No. 102417

Calibration Gas and Concentration ISOBUTYLENE Instrument Reading 98 ppm Span/Gain/RF Setting _____

* If more than one instrument is used, document calibration procedures and results for each additional instrument in recommendations section below and indicate the instrument used (eg. OVA, 361, OVM, etc.) for each observation.

Time	Station	Instr.*	Reading (ppm)	Procedure/Observations/Comments
1500	OWR-15	0.0	0.0 ppm	Background = 0.0
1530	OWR-15		0.0	All readings taken from
1600	OWR-15		0.0	breathing zone (~4-6' AGS)
1630			0.0	
1730			0.0	
				Resumed drilling @ 8:00 6-2-98
				Calibration same, background 0.0 ppm
8:00	OWR-15		0.0	
8:15			0.0	
8:30			0.0	
9.00			0.0	
12:00			0.0	
11:15			0.0	

Recommendations

Chris Hemingway
Printed Name

Signature

Golder Associates Inc.

AIR MONITORING DATA SHEET

Date 6-1-98 Sheet 1 of 1

Job Name SOLUTIA/RFI/AL Job Number 983.3223

Location ANNISTON AL

Time In _____ Time Out _____ Weather M. Sunny Temp. 90 Wind D. W V 0-10

Instrument Type MINI-RAE P.I.D. Serial No. 102419

Calibration Gas 100 ppm ISOBUTYLENE Instrument Reading 98 ppm Span/Gain/RF Setting _____

and Concentration * If more than one instrument is used, document calibration procedures and results for each additional instrument in recommendations section below and indicate the instrument used (eg. OVA, 361, OVM, etc.) for each observation.

Time	Station	Instr.*	Reading (ppm)	Procedure/Observations/Comments
13:50	OWR-1D		0.0	[Backgrounds - 0.0 ppm - all readings
14:05	OWR-1D		0.0	taken from breathing zone]
14:20			0.0	
14:40			0.0	
15:40			0.0	
16:40			0.0	
17:30			0.0	
8:00	OWR-1D		0.0	Resumed Drilling @ 8:00 6-2-98 - Calibration
8:15			0.0	same, Background 0.0 ppm
8:30			0.0	
9:30			0.0	
10:00			0.0	
11:00			0.0	

Recommendations

Chris Hemingway
Printed Name

Signature

Golder Associates Inc.

AIR MONITORING DATA SHEET

Date 6-2-98 Sheet 1 of 1

Job Name Solutia - RFI - AL Job Number 983-3223

Location OWR-2D

Time In _____ Time Out _____ Weather _____ Temp. 100° Wind D. W V 10-15-20 mph

Instrument Type Mini Rae PID Serial No. 102419

Calibration Gas 99 ppm isobutylene Instrument Reading 98.5 ppm Span/Gain/RF Setting _____
and Concentration

* If more than one instrument is used, document calibration procedures and results for each additional instrument in recommendations section below and indicate the instrument used (eg. OVA, 361, OVM, etc.) for each observation.

Time	Station	Instr.*	Reading (ppm)	Procedure/Observations/Comments
15:00	OWR-2D		0.0	Background - 0.0 ppm
				all readings taken from breathing
15:30	OWR-2D		0.0	zone - [encountered buried slag, drum
15:45	OWR-2D		0.0	off & resume on new hole @ 15:30]
16:00	OWR-2D		0.0	
16:30	OWR-2D		0.0	

Recommendations

Chris Hemingway
Printed Name

C H
Signature

Golder Associates Inc.

AIR MONITORING DATA SHEET

6/2/98 - 6/3/98

Date _____ Sheet 1 of 1

Job Name SOLUTIA / RFI / AL Job Number 983-3223

Location ANNISTON, AL

Time In _____ Time Out _____ Weather SUNNY Temp. 95° Wind D. W V 0-15

Instrument Type MINI-RAE PID Serial No. 10

Calibration Gas and Concentration 100 ppm ISOBUTYLENE Instrument Reading 98 ppm Span/Gain/RF Setting _____

* If more than one instrument is used, document calibration procedures and results for each additional instrument in recommendations section below and indicate the instrument used (eg. OVA, 361, OVM, etc.) for each observation.

	Time	Station	Instr.*	Reading	Procedure/Observations/Comments
6-2-98	1500	OWR-6D	⊖	0.0	Background = 0.0
	1515			0.0	(Breathing space ~ 4-6' AGS)
	1530			0.0	
	1545			0.1	
	1600			0.0	
	1630			0.0	
	1700			0.0	
	1720			0.0	
6-3-98	0715			0.0	SAT (SAME AS ABOVE)
	0725			0.0	
	0745			0.0	
	0830			0.0	
	0845			0.0	
	0900			0.0	
	0930			0.0	
	1000			0.0	
	1030	↓		0.0	

Recommendations

MARK HADDOCK
Printed Name

Mark Haddock
Signature

Golder Associates Inc.

AIR MONITORING DATA SHEET

6-4-98

Date _____ Sheet 1 of 1

Job Name SOLUTIA / REI / AL Job Number _____

Location ANNISTON, AL

Time In _____ Time Out _____ Weather P. Cloudy Temp. 85-90 Wind D. W V 0-10

Instrument Type MINI-RAE PID Serial No. 102419

Calibration Gas and Concentration _____ Instrument Reading _____ Span/Gain/RF Setting _____

* If more than one instrument is used, document calibration procedures and results for each additional instrument in recommendations section below and indicate the instrument used (eg. OVA, 361, OVM, etc.) for each observation

Time	Station	Instr.*	Reading	Procedure/Observations/Comments
0900	OWR-5D		0.2	BACKGROUND = 0.2 ppm
0915			0.1	Breathing space ~ 4-6' AGS
0930			0.3	
0945			0.7	BACKGROUND = 0.6 ppm
0955			0.1	BACKGROUND = 0.0 ppm
1030			0.0	
1100			0.0	
1130			0.0	
1200			0.0	
1230			0.0	
1300			0.0	
1400			0.0	
1430			0.0	
1500			0.0	
1530			0.0	
1600			0.0	
1630			0.0	
1700			0.0	

Recommendations

MARK HADDOCK
Printed Name

Signature

Golder Associates Inc.

AIR MONITORING DATA SHEET

Date 6-3-98 Sheet 1 of 1

Job Name Solutia/RFI/AL Job Number 783-3223

Location OWR-3S

Time In 14:00 Time Out 16:10 Weather Sun Temp. 95° Wind D. W V 5-15 mph

Instrument Type MiniRae PID Serial No. 102419

Calibration Gas 99 ppm isobutylene Instrument Reading 98.5 ppm Span/Gain/RF Setting _____
and Concentration

* If more than one instrument is used, document calibration procedures and results for each additional instrument in recommendations section below and indicate the instrument used (eg. OVA, 361, OVM, etc.) for each observation.

Time	Station	Instr.*	Reading ppm	Procedure/Observations/Comments
14:10	OWR-3S		0.0	Background - 0.2 ppm
14:25			0.0	All readings taken in breathing zone
14:40			0.0	(≈ 4'-6' AGS)
14:55			0.0	
16:00			0.0	

Recommendations

Printed Name

Chris D Hemingway
Signature

Golder Associates Inc.

AIR MONITORING DATA SHEET

Date 6-3-98 Sheet 1 of 1

Job Name Solutia/RFI/AL Job Number 983-3223

Location OWR-3D

Time In 17:00 Time Out _____ Weather sun Temp. 95° Wind D. W V 15-20 mph

Instrument Type Mini Rae PID Serial No. 102419

Calibration Gas and Concentration isobutylene - 99 ppm Instrument Reading 98.5 ppm Span/Gain/RF Setting _____

* If more than one instrument is used, document calibration procedures and results for each additional instrument in recommendations section below and indicate the instrument used (eg. OVA, 361, OVM, etc.) for each observation

Time	Station	Instr. *	Reading ppm	Procedure/Observations/Comments
17:00	OWR-3D		0.0	Background - 0.0 ppm
17:15			0.0	All readings taken in breathing zone
17:30			0.0	(≈ 4-6' AGS)
				off hole @ 17:30
8:45	OWR-3D		[illegible]	-
9:00			1.5	Resumed drilling 6-4-98 @ 8:30
9:15			1.4	PID recalibrated in down 98.7 - 99 ppm
10:30			0.0	however outdoors [illegible] could be due
11:30			0.0	to humidity & cloudy conditions
12:00			0.0	Background - 2.2 ppm Wind - 15-20 mph
12:30			0.0	All readings taken in breathing space @
15:00			0.0	[illegible]
16:00			0.0	PID [illegible] down - [illegible]
				[illegible]
				(zero's inside [illegible])
				by 10:00 had zeroed out (cleaned out
				filter & tubes)

Recommendations

Chris Hemingway
Printed Name

CH
Signature

Golder Associates Inc.

AIR MONITORING DATA SHEET

Date 6-8-98 Sheet 1 of 1

Job Name SOLUTIA / RFI / AL Job Number 983-3223

Location ANNISTON, AL

Time In _____ Time Out _____ Weather 85°, SUNNY Temp. 85° Wind D. Variable V 0-5

Instrument Type MINI-RAE PID Serial No. 102285

Calibration Gas and Concentration 100 PPM ISOBUTYLENE Instrument Reading 99 ppm Span/Gain/RF Setting _____

* If more than one instrument is used, document calibration procedures and results for each additional instrument in recommendations section below and indicate the instrument used (eg. OVA, 361, OVM, etc.) for each observation.

	Time	Station	Instr.*	Reading	Procedure/Observations/Comments
6-8-98	1300	OWR-1D		0.0	BACKGROUND = 0.0 ppm
	1315			0.0	Breathing Space ~4-6' AGS
	1330			0.0	
	1345			0.0	
	1400			0.0	
	1430			0.0	
	1450			0.0	
	1530			0.0	
	1600			0.0	
	1630			0.0	
	1700				
6-9-98	0745			0.0	Background = 0.0 ppm
	0830			0.0	
	0900	↓		0.0	

Recommendations

MARK HADDOCK
Printed Name

Signature

Golder Associates Inc.

AIR MONITORING DATA SHEET

Date 6-9-98 Sheet 1 of 1

Job Name SOLUTIA/RFI/AL Job Number 983-3223

Location ANNISTON, AL

Time In _____ Time Out _____ Weather M. Cloudy Temp. 90° Wind D. VAR. V 0-10

Instrument Type MINI-RAE P.I.D. Serial No. 102285

Calibration Gas ISOBUTYLENE Instrument Reading 99 ppm Span/Gain/RF Setting _____

and Concentration

* If more than one instrument is used, document calibration procedures and results for each additional instrument in recommendations section below and indicate the instrument used (eg. OVA, 361, OVM, etc.) for each observation.

	Time	Station	Instr.*	Reading	Procedure/Observations/Comments
6-9-98	1400	OWR-35		0.0	BACKGROUND = 0.0 ppm
	1415	↓		0.0	Breathing Space = (4-6' AGS)
	1430			0.0	
	1445			0.0	
	1500			0.0	
	1530			0.0	
	1600			0.0	
	1630			0.0	
	1700			0.0	

Recommendations

MARK HADDOCK
Printed Name

Signature

Golder Associates Inc.

AIR MONITORING DATA SHEET

Date 6-9-98 Sheet 1 of 1

Job Name Solutia/RFI/AL Job Number 983-3223

Location PZR-3

Time In 10:30 Time Out _____ Weather _____ Temp. _____ Wind D. WNW V ≈ 15 mph

Instrument Type Mini Rae PID Serial No. 102285

Calibration Gas isobutylene 99ppm Instrument Reading 99ppm Span/Gain/RF Setting _____

and Concentration

* If more than one instrument is used, document calibration procedures and results for each additional instrument in recommendations section below and indicate the instrument used (eg. OVA, 361, OVM, etc.) for each observation.

Time	Station	Instr. *	Reading ppm	Procedure/Observations/Comments
10:30	PZR-3		0.0	Background - 0.0 - All readings
10:45			0.0	taken in breathing area (≈ 4-6
11:00			0.0	AGS)
11:15			0.0	
12:30			0.0	
				Resumed drilling hole after lunch
14:30			0.0	and after drillers finished errands.
15:30			0.0	
16:30			0.0	
17:30			0.0	
				Resumed drilling @ ≈ 8:30 6-10-98
8:30			0.0	Calibrated PID - 99ppm isobutylene
8:50			0.0	reading 98.9 ppm. Background
9:30			0.0	0.0 ppm All readings taken from
10:30			0.0	breathing zone (4'-6' AGS)

Recommendations

Chris Hemingway
Printed Name

Signature

Golder Associates Inc.

AIR MONITORING DATA SHEET

Date 6-10-98 Sheet 1 of 1

Job Name Solutia / RFI / AL Job Number 983-3223

Location OWR-2D*

Time In 16:00 Time Out 18:10 Weather Sun Temp. 95 Wind D. W V 15-20

Instrument Type Mini Rae PID Serial No. 102285

Calibration Gas and Concentration Isobutylene 99ppm Instrument Reading 99ppm Span/Gain/RF Setting

* If more than one instrument is used, document calibration procedures and results for each additional instrument in recommendations section below and indicate the instrument used (eg. OVA, 361, OVM, etc.) for each observation.

Time	Station	Instr. *	Reading ppm	Procedure/Observations/Comments
16:00	OWR 2D*		0.0	Background - 0.0 ppm - All [illegible]
16:15			0.0	taken in breathing zone (4'-6' BGS)
16:25			0.0	
16:45			0.0	
17:30			0.0	
18:00			0.0	

Recommendations

Chris Hemingway
Printed Name

Signature

Golder Associates Inc.

AIR MONITORING DATA SHEET

Date 6-11-98 Sheet 1 of ___

Job Name Solutia / RFI / AL Job Number 983-3223

Location OWR-25

Time In 15:30 Time Out ___ Weather Sun Temp. 90° Wind D. W V 5-10

Instrument Type Minirae PID Serial No. 102285

Calibration Gas and Concentration isobutylene 99ppm Instrument Reading 99 ppm Span/Gain/RF Setting ___

* If more than one instrument is used, document calibration procedures and results for each additional instrument in recommendations section below and indicate the instrument used (eg. OVA, 361, OVM, etc.) for each observation.

Time	Station	Instr. *	Reading ppm	Procedure/Observations/Comments
15:30	OWR 25		0.0	Background - 0.0 ppm All
15:40			0.0	measurements taken in breathing
15:55			0.0	space (4'-6' AGS)
16:15			0.0	
17:15			0.0	
17:45			0.0	

Recommendations

Chris Hemingway
Printed Name

Signature

Golder Associates Inc.

AIR MONITORING DATA SHEET

Date 6-10-98 6-11-98 Sheet 1 of 1

Job Name SOLUTIA / RFI / AL Job Number 983-3223

Location ANNISTON AL

Time In _____ Time Out _____ Weather P. cloudy Temp. 90 Wind D. W. V 0-10

Instrument Type MINI-RAE PID Serial No. 102285

Calibration Gas ISOBUTYLENE Instrument Reading 99 ppm Span/Gain/RF Setting _____
and Concentration

* If more than one instrument is used, document calibration procedures and results for each additional instrument in recommendations section below and indicate the instrument used (eg. OVA, 361, OVM, etc.) for each observation.

	Time	Station	Instr.*	Reading	Procedure/Observations/Comments
6-10-98	1345	OWR-3D		0.0	BACKGROUND = 0.0 ppm
	1400			0.0	Breathing Space = ~4-6' AGS
	1415			0.0	
	1430			0.0	
	1500			0.0	
	1530			0.0	
	1600			0.0	
	1630			0.0	
	1700			0.0	
	1730			0.0	
	1800			0.0	
6-11-98	0730			0.0	
	0800			0.0	

Recommendations

MARK HADDOCK
Printed Name

Signature

Golder Associates Inc.

AIR MONITORING DATA SHEET

Date 6-11-98 / 6-12-98 Sheet 1 of 1

Job Name SOLUTIA/RFI/AL Job Number 983-3223

Location ANNISTON AL

Time In _____ Time Out _____ Weather P. Cloudy Temp. 90° Wind D. Var. V 0-10

Instrument Type MINI-RAE P.I.D Serial No. 102285

Calibration Gas ISOBUTYLENE and Concentration Instrument Reading 99 ppm Span/Gain/RF Setting _____

* If more than one instrument is used, document calibration procedures and results for each additional instrument in recommendations section below and indicate the instrument used (eg. OVA, 361, OVM, etc.) for each observation.

	Time	Station	Instr.*	Reading	Procedure/Observations/Comments
6-11-98	1700	OWR-8S		0.0	BACKGROUND = 0.0 PPM
	1715			0.0	BREATHING SPACE = 4-6' AGS
	1730			0.0	
	1745			0.0	
	1800			0.0	
6-12-98	0700			0.0	SHA
	0730			0.0	
	0800			0.0	

Recommendations

MARK HANNOCK
Printed Name

Signature

Golder Associates Inc.

AIR MONITORING DATA SHEET

Date 6-15-18 Sheet 1 of 1

Job Name SOLUTIA /RFI / AL Job Number 983-3223

Location ANNISTON, AL

Time In _____ Time Out _____ Weather P. SUNNY Temp. 90 Wind D. SW V. 0-10

Instrument Type MINI-RAE P.I.D. Serial No. 102285

Calibration Gas 100 ppm ISOBUTYLENE Instrument Reading 99 ppm Span/Gain/RF Setting _____

and Concentration * If more than one instrument is used, document calibration procedures and results for each additional instrument in recommendations section below and indicate the instrument used (eg. OVA, 361, OVM, etc.) for each observation.

Time	Station	Instr.*	Reading	Procedure/Observations/Comments
1030	PZR-4		0.0	BACKGROUND = 0.0 ppm
1045			0.0	Breathing Space = 4-6' AGS
1100			0.0	
1115			0.0	
1130			0.0	
1200			0.0	
1230			0.0	
1330			0.0	
1400			0.0	
1430			0.0	
1500			0.0	

Recommendations

MARK HADDOCK
Printed Name

Signature

Golder Associates Inc.

AIR MONITORING DATA SHEET

6-16-98

Date 6-15-98 Sheet 1 of 1

Job Name SOLUTIA /RFI/AL Job Number 983-3223

Location ANNISTON AL

Time In _____ Time Out _____ Weather P. SUNNY Temp. 90 Wind D. W V 0-5

Instrument Type MINI-RAE P.I.D. Serial No. 102285

Calibration Gas 100 ppm ISOBUTYLENE Instrument Reading 99 ppm Span/Gain/RF Setting _____

and Concentration

* If more than one instrument is used, document calibration procedures and results for each additional instrument in recommendations section below and indicate the instrument used (eg. OVA, 361, OVM, etc.) for each observation.

	Time	Station	Instr.*	Reading	Procedure/Observations/Comments
6-15-98	1700	PZR-2		0.0	BACKGROUND = 0.0 ppm
	1715			0.0	BREATHING SPACE ~4-6' AGS
	1730			0.0	
	1745			0.0	
	1800			0.0	
	1830			0.0	
6-16-98	0900			0.0	
	0930			0.0	
	1000			0.0	
	1030			0.0	
	1100	↓		0.0	

Recommendations

MARK HADDOCK
Printed Name

Signature

Golder Associates Inc.

AIR MONITORING DATA SHEET

Date 6-15-98 Sheet 1 of 1

Job Name Solutia/RFI/AL Job Number 983-3223

Location Anniston AL OWR-95

Time In 1600 Time Out _____ Weather SUN Temp. 98 Wind D. WNW V 15-25

Instrument Type MiniRae PID Serial No. 102285

Calibration Gas and Concentration isobutylene 99ppm Instrument Reading 99ppm Span/Gain/RF Setting _____

* If more than one instrument is used, document calibration procedures and results for each additional instrument in recommendations section below and indicate the instrument used (eg. OVA, 361, OVM, etc.) for each observation.

Time	Station	Instr.*	Reading	Procedure/Observations/Comments
1600	OWR-95		0.0	Background - 0.0 ppm
1615	OWR-95		0.0	All readings taken above ground surface
1630			0.0	4'-6' - breathing zone
1645			0.0	
1700			0.0	
1730			0.0	
				Resumed drilling @ 7:15
715			0.0	
730			0.0	
745			0.0	
				rain delays, drilling completed

Recommendations

Chris Hemingway
Printed Name

Signature

Golder Associates Inc.

AIR MONITORING DATA SHEET

Date 6-16-98 Sheet 1 of 1

Job Name Solutia/RFI/AL Job Number 983-3223

Location Anniston, AL OWR-25

Time In _____ Time Out _____ Weather pt. cloudy Temp. 88° Wind D. WNW V 15-20 mph

Instrument Type mini rae PID Serial No. 102285

Calibration Gas Isobutylene 99ppm Instrument Reading 299ppm Span/Gain/RF Setting _____

and Concentration

* If more than one instrument is used, document calibration procedures and results for each additional instrument in recommendations section below and indicate the instrument used (eg. OVA, 361, OVM, etc.) for each observation.

Time	Station	Instr.*	Reading	Procedure/Observations/Comments
15:45 ~~OWR-25~~	OWR-25		0.0	Background -0.0 ppm
16:00	OWR-25		0.0	All readings taken at breathing
16:15	OWR-25		0.0	zone (≈4'-6' AGS)
16:35	OWR-25		0.0	
17:10	OWR-25		0.0	

Recommendations

Chris Hemingway
Printed Name

Signature

Golder Associates Inc.

AIR MONITORING DATA SHEET

Date 6-17-98 Sheet 1 of 1

Job Name Solvay/RFI/AL Job Number 923-3223

Location PZR-5

Time In 15:00 Time Out _____ Weather Sun Temp. 100 Wind D. WSW V. 0-5

Instrument Type Mini Rae PID Serial No. 102285

Calibration Gas and Concentration 150 butylene 99ppm Instrument Reading ≈ 99ppm Span/Gain/RF Setting _____

* If more than one instrument is used, document calibration procedures and results for each additional instrument in recommendations section below and indicate the instrument used (eg. OVA, 361, OVM, etc.) for each observation.

Time	Station	Instr.*	Reading	Procedure/Observations/Comments
15:00	PZR-5		0.0	Background - 0.0 ppm
15:15			0.0	All readings taken in breathing
15:30			0.0	zone (4'-6' AGS)
15:45			0.0	
16:30			0.0	
17:30			0.0	

Recommendations

Chris Hennessey
Printed Name

Signature

Golder Associates Inc.

AIR MONITORING DATA SHEET

Date 6-18-98 Sheet 1 of 1

Job Name Solutia/RFI/AL Job Number 983-3223

Location Anniston, AL PZR-6

Time In 8:00 Time Out 11:30 Weather Sun Temp. 95 Wind D. WNW V. 5-10

Instrument Type MiniRae PID Serial No. 102285

Calibration Gas Isobutylene 99ppm Instrument Reading 99ppm Span/Gain/RF Setting

and Concentration * If more than one instrument is used, document calibration procedures and results for each additional instrument in recommendations section below and indicate the instrument used (eg. OVA, 361, OVM, etc.) for each observation.

Time	Station	Instr.*	Reading ppm	Procedure/Observations/Comments
8:00	PZR-6		0.0	Background - 0.0 ppm
8:20			0.0	All readings taken from breathing
8:35			0.0	zone (4'-6' AGS)
8:50			0.0	
10:00			0.0	
11:00			0.0	
11:30			0.0	

Recommendations

Note - continuous monitoring w/ Alarm in breathing zone - no detections, intervals of time noted above

Chris Hemingway
Printed Name

Signature

Golder Associates Inc.

AIR MONITORING DATA SHEET

Date 6-18-98 Sheet 1 of 1

Job Name Solutia/RFI/AL Job Number 983-3223

Location Anniston AL PZR-1

Time In 14:30 Time Out 17:30 Weather Sun Temp. 95 Wind D. W V. 5-10

Instrument Type MiniRae PID Serial No. 102285

Calibration Gas and Concentration Isobutylene 99ppm Instrument Reading 99ppm Span/Gain/RF Setting

* If more than one instrument is used, document calibration procedures and results for each additional instrument in recommendations section below and indicate the instrument used (eg. OVA, 361, OVM, etc.) for each observation.

Time	Station	Instr. *	Reading	Procedure/Observations/Comments
14:30	PZR-1		0.0	Background - ~~[illegible]~~ 0.0 ppm
14:45			0.0	All readings taken (4-6' AGS)
15:05			0.0	in breathing zone - Monitored
15:20			0.0	continuously w/ Alarm setting -
16:30			0.0	noted times as shown @ left
17:30			0.0	

Recommendations

Chris Hemingway
Printed Name

Signature

Golder Associates Inc.

AIR MONITORING DATA SHEET

Date 6-10-98 Sheet 1 of 1

Job Name Solutia / RFI / AL Job Number 983-3223

Location OWR-2D*

Time In 16:00 Time Out 18:10 Weather Sun Temp. 95 Wind D. W V 15-20

Instrument Type Mini Rae PID Serial No. 102285

Calibration Gas 100 butylene 99ppm Instrument Reading 99ppm Span/Gain/RF Setting

and Concentration

* If more than one instrument is used, document calibration procedures and results for each additional instrument in recommendations section below and indicate the instrument used (eg. OVA, 361, OVM, etc.) for each observation.

Time	Station	Instr. *	Reading ppm	Procedure/Observations/Comments
16:00	OWR 2D*		0.0	Background - 0.0 ppm - All [illegible]
16:15			0.0	taken in breathing zone (4'-6' BGS)
16:25			0.0	
16:45			0.0	
17:30			0.0	
18:00			0.0	

Recommendations

Chris Hemingway
Printed Name

Signature

Golder Associates Inc.

AIR MONITORING DATA SHEET

Date 6-11-98 Sheet 1 of ___

Job Name Solutia / RFI / AL Job Number 983-3223

Location OWR-25

Time In 13:30 Time Out ___ Weather Sun Temp. 90° Wind D. W V 5-10

Instrument Type MiniRae PID Serial No. 102285

Calibration Gas and Concentration isobutylene 99ppm Instrument Reading 99 ppm Span/Gain/RF Setting ___

* If more than one instrument is used, document calibration procedures and results for each additional instrument in recommendations section below and indicate the instrument used (eg. OVA, 361, OVM, etc.) for each observation.

Time	Station	Instr. *	Reading ppm	Procedure/Observations/Comments
15:30	OWR 25		0.0	Background - 0.0 ppm All
15:40			0.0	measurements taken in breathing
15:55			0.0	space (4'-6' AGS)
16:15			0.0	
17:15			0.0	
17:45			0.0	

Recommendations

Chris Hemingway
Printed Name

Signature

Golder Associates Inc.

AIR MONITORING DATA SHEET

Date 6-10-98 / 6-11-98 Sheet 1 of 1

Job Name SOLUTIA / RFI / AL Job Number 983-3223

Location ANNISTON AL

Time In _____ Time Out _____ Weather P. Cloudy Temp. 90 Wind D. W. V 0-10

Instrument Type MINI-RAE PID Serial No. 10285

Calibration Gas ISOBUTYLENE Instrument Reading 99 ppm Span/Gain/RF Setting _____

and Concentration

* If more than one instrument is used, document calibration procedures and results for each additional instrument in recommendations section below and indicate the instrument used (eg. OVA, 361, OVM, etc.) for each observation.

	Time	Station	Instr.*	Reading	Procedure/Observations/Comments
6-10-98	1345	OWR-3D		0.0	BACKGROUND = 0.0 ppm
	1400			0.0	Breathing Space = 0.4-6' AGS
	1415			0.0	
	1430			0.0	
	1500			0.0	
	1530			0.0	
	1600			0.0	
	1630			0.0	
	1700			0.0	
	1730			0.0	
	1800			0.0	
6-11-98	0730			0.0	
	0800			0.0	

Recommendations

MARK HADDOCK
Printed Name

Mark Haddock
Signature

Golder Associates Inc.

AIR MONITORING DATA SHEET

6-11-98
Date 6-12-98 Sheet 1 of 1

Job Name SOLUTIA/RFI/AL Job Number 983-3223

Location ANNISTON AL

Time In _____ Time Out _____ Weather P. Cloudy Temp. 90° Wind D. var. V 0-10

Instrument Type MINI-RAE P.I.D. Serial No. 102285

Calibration Gas ISOBUTYLENE Instrument Reading 99 ppm Span/Gain/RF Setting _____

and Concentration

*If more than one instrument is used, document calibration procedures and results for each additional instrument in recommendations section below and indicate the instrument used (eg. OVA, 361, OVM, etc.) for each observation.

	Time	Station	Instr.*	Reading	Procedure/Observations/Comments
6-11-98	1700	OWR-25		0.0	BACKGROUND = 0.0 ppm
	1715			0.0	BREATHING SPACE = 4-6' AGS
	1730			0.0	
	1745			0.0	
	1800			0.0	
6-12-98	0700			0.0	SMA
	0730			0.0	
	0800			0.0	

Recommendations

MARK HANNOCK
Printed Name

Signature

Golder Associates Inc.

AIR MONITORING DATA SHEET

Date 6-15-98 Sheet 1 of 1

Job Name SOLUTIA / RFI / AL Job Number 983-3223

Location ANNISTON, AL

Time In _____ Time Out _____ Weather P. SUNNY Temp. 90 Wind D. SW V 0-10

Instrument Type MINI-RAE P.I.D. Serial No. 102285

Calibration Gas 100 ppm ISOBUTYLENE Instrument Reading 99 ppm Span/Gain/RF Setting _____

and Concentration * If more than one instrument is used, document calibration procedures and results for each additional instrument in recommendations section below and indicate the instrument used (eg. OVA, 361, OVM, etc.) for each observation.

Time	Station	Instr.*	Reading	Procedure/Observations/Comments
1030	PZR-4		0.0	BACKGROUND = 0.0 ppm
1045			0.0	Breathing Zone = 4-6' AGS
1100			0.0	
1115			0.0	
1130			0.0	
1200			0.0	
1230			0.0	
1330			0.0	
1400			0.0	
1430			0.0	
1500			0.0	

Recommendations

MARK HADDOCK
Printed Name

Signature

Golder Associates Inc.

AIR MONITORING DATA SHEET

6-16-98

Date 6-15-98 Sheet 1 of 1

Job Name SOLUTIA / RFI / AL Job Number 983-3223

Location ANNISTON, AL

Time In _____ Time Out _____ Weather P. SUNNY Temp. 90 Wind D. W V 0-5

Instrument Type MINI-RAE P.I.D. Serial No. 102085

Calibration Gas 100 ppm ISOBUTYLENE Instrument Reading 99 ppm Span/Gain/RF Setting _____

and Concentration * If more than one instrument is used, document calibration procedures and results for each additional instrument in recommendations section below and indicate the instrument used (eg. OVA, 361, OVM, etc.) for each observation.

	Time	Station	Instr.*	Reading	Procedure/Observations/Comments
6-15-98	1700	PZR-2		0.0	BACKGROUND = 0.0 ppm
	1715			0.0	BREATHING SPACE ~ 4-6' AGS
	1730			0.0	
	1745			0.0	
	1800			0.0	
	1830			0.0	
6-16-98	0900			0.0	
	0930			0.0	
	1000			0.0	
	1030			0.0	
	1100	↓		0.0	

Recommendations

MARK HADDOCK
Printed Name

Signature

Golder Associates Inc.

AIR MONITORING DATA SHEET

Date 6-15-98 Sheet 1 of 1

Job Name Solutia/REI/AL Job Number 983-3223

Location Anniston AL OWR-95

Time In 16:00 Time Out _____ Weather SUN Temp. 98 Wind D. WNW V 15-25

Instrument Type Minirae PID Serial No. 102285

Calibration Gas and Concentration isobutylene 99ppm Instrument Reading 99ppm Span/Gain/RF Setting _____

* If more than one instrument is used, document calibration procedures and results for each additional instrument in recommendations section below and indicate the instrument used (eg. OVA, 361, OVM, etc.) for each observation.

Time	Station	Instr.*	Reading	Procedure/Observations/Comments
16:00	OWR-95		0.0	Background - 0.0 ppm
16:15	OWR-95		0.0	All readings taken above ground surface
16:30			0.0	4'-6' - Breathing zone
16:45			0.0	
17:00			0.0	
17:30			0.0	
				Resumed drilling @ 7:15
9:15			0.0	
7:30			0.0	
7:45			0.0	
				rain delay, drilling complete

Recommendations

Chris Hemingway
Printed Name

CH
Signature

Golder Associates Inc.

AIR MONITORING DATA SHEET

Date 6-16-98 Sheet 1 of 1

Job Name Solutia/RFI/AL Job Number 983-3223

Location Anniston, AL OWR-25

Time In _____ Time Out _____ Weather pt. cloudy Temp. 88° Wind D. WNW V 15-20 mph

Instrument Type mini rae PID Serial No. 102285

Calibration Gas Isobutylene 99ppm Instrument Reading 299ppm Span/Gain/RF Setting _____
and Concentration

* If more than one instrument is used, document calibration procedures and results for each additional instrument in recommendations section below and indicate the instrument used (eg. OVA, 361, OVM, etc.) for each observation.

Time	Station	Instr.*	Reading	Procedure/Observations/Comments
15:45 ~~OWR-25~~	OWR-25		0.0	Background -0.0 ppm
16:00	OWR-25		0.0	All readings taken at breathing
16:15	OWR-25		0.0	Zone (≈ 4'-6' AGS)
16:35	OWR-25		0.0	
17:10	OWR-25		0.0	

Recommendations

Chris Hemingway
Printed Name

Signature

Golder Associates Inc.

AIR MONITORING DATA SHEET

Date 6-17-98 Sheet 1 of 1

Job Name Solutia/RFI/AL Job Number 983-3223

Location PZR-5

Time In 15:00 Time Out _____ Weather Sun Temp. 100 Wind D. WSW V. 0-5

Instrument Type Mini Rae PID Serial No. 102285

Calibration Gas and Concentration 150 butylene 99ppm Instrument Reading ≥ 99ppm Span/Gain/RF Setting _____

* If more than one instrument is used, document calibration procedures and results for each additional instrument in recommendations section below and indicate the instrument used (eg. OVA, 361, OVM, etc.) for each observation.

Time	Station	Instr.*	Reading	Procedure/Observations/Comments
15:00	PZR-5		0.0	Background - 0.0 ppm
15:15			0.0	All readings taken in breathing
15:30			0.0	zone (4'-6' AGS)
15:45			0.0	
16:30			0.0	
17:30			0.0	

Recommendations

Chris Hemingway
Printed Name

Signature

Golder Associates Inc.

AIR MONITORING DATA SHEET

Date 6-18-08 Sheet 1 of 1

Job Name Solutia/RFI/AL Job Number 983-3223

Location Anniston, AL PZR-6

Time In 8:00 Time Out 11:30 Weather Sun Temp. 95 Wind D. WNW V. 5-10

Instrument Type Mini Rae PID Serial No. 102285

Calibration Gas Isobutylene 99ppm Instrument Reading 99ppm Span/Gain/RF Setting

and Concentration

* If more than one instrument is used, document calibration procedures and results for each additional instrument in recommendations section below and indicate the instrument used (eg. OVA, 361, OVM, etc.) for each observation.

Time	Station	Instr.*	Reading ppm	Procedure/Observations/Comments
8:00	PZR-6		0.0	Background - 0.0 ppm
8:20			0.0	All readings taken from breathing
8:35			0.0	zone (4'-6' AGS)
8:50			0.0	
10:00			0.0	
11:00			0.0	
11:30			0.0	

Recommendations

Note - continuous monitoring w/ Alarm in breathing zone - no detections, intervals of time noted above

Chris Hemingway
Printed Name

Signature

Golder Associates Inc.

AIR MONITORING DATA SHEET

Date 6-18-98 Sheet 1 of 1

Job Name Solutia/RFI/AL Job Number 983-3223

Location Anniston AL PZR-1

Time In 14:30 Time Out 17:30 Weather Sun Temp. 95 Wind D. W V. 5-10

Instrument Type MiniRae PID Serial No. 102285

Calibration Gas and Concentration Isobutylene 99ppm Instrument Reading 9.9ppm Span/Gain/RF Setting

* If more than one instrument is used, document calibration procedures and results for each additional instrument in recommendations section below and indicate the instrument used (eg. OVA, 361, OVM, etc.) for each observation.

Time	Station	Instr.*	Reading	Procedure/Observations/Comments
14:30	PZR-1		0.0	Background - ~~N~~ 0.0 ppm
14:45			0.0	All readings taken (4-6' AGS)
15:05			0.0	in breathing zone - Monitored
15:20			0.0	continuously w/ Alarm setting -
16:30			0.0	noted times as shown @ left
17:30			0.0	

Recommendations

Chris Hemingway
Printed Name

Signature

APPENDIX B

Well Development Forms

WELL DEVELOPMENT FIELD RECORD

JOB NAME Solutia/RFI/AL JOB NO. — WELL NO. OWK-15

DEVELOPED BY Golder Associates DATE OF INSTALLATION ____ SHEET 1 OF 1

STARTED DEVEL. 7-9-98 / — (DATE / TIME) COMPLETED DEVEL. 7-15-98 / — (DATE / TIME)

W.L. BEFORE DEVEL. (BTOC) 17.02' / 7-9-98 / — (DEPTH / DATE / TIME) AFTER DEVEL 16.62' / 9-22-98 / (DEPTH / DATE / TIME)

WELL DEPTH: BEFORE DEVEL. (BGS) 35.0' AFTER DEVEL ___ 35.0' WELL DIA 2 in.

STANDING WATER COLUMN (FT.) 20.27' STANDING WELL VOLUME 3.2 gal.

SCREEN LENGTH 10' DRILLING WATER LOSS N/A gal.

DATE/TIME	VOLUME REMOVED (GALS)	FIELD PARAMETERS SPEC. COND. (µmhos/cm)	TEMP (C)	pH (S.U.)	Appearance	REMARKS
7-9-98 /	30				turbid	Well makes good water
7-10-98 /	25				sl. turbid	
7-13-98 /	30	0.183	21.1	5.39	nearly clear	
7-14-98 /	30	0.172	20.9	5.46	clear	
7-15-98 /	10	0.177	20.7	5.42	clear	
/						
/						
/						
/						
/						
/						
/						
/						
/						
	125	= TOTAL VOLUME REMOVED (gal.)				

DEVELOPMENT METHOD: Continual cycles of surging (Teflon surge block) and evacuation w/a submersible pump.

NOTES:

WELL DEVELOPMENT FIELD RECORD

JOB NAME: Solutia/RFI/AL | JOB NO.: — | WELL NO.: OWR-1D

DEVELOPED BY: Golder Associates | DATE OF INSTALLATION: 6-9-98 | SHEET: 1 OF 1

STARTED DEVEL.: 7-16-98 / — (DATE / TIME) | COMPLETED DEVEL.: 7-21-98 / — (DATE / TIME)

W.L. BEFORE DEVEL. (BTOC): 56.97' / 7-16-98 / — (DEPTH / DATE / TIME) | AFTER DEVEL: 58.84' / 7-30-98 / — (DEPTH / DATE / TIME)

WELL DEPTH: BEFORE DEVEL. (BGS): — / 65.0' | AFTER DEVEL: — / 65.0' | WELL DIA: 2 in.

STANDING WATER COLUMN (FT.): 10.03' | STANDING WELL VOLUME: 1.6 gal.

SCREEN LENGTH: 10' | DRILLING WATER LOSS: — gal.

DATE/TIME	VOLUME REMOVED (GALS)	FIELD PARAMETERS SPEC. COND. (mS/cm)	TEMP (C)	pH (s.u.)	Appearance	REMARKS
7-16-98 /	3				turbid	Little water available,
7-17-98 /	3				Sl. turbid improving	goes dry quickly.
7-20-98 /	2	0.49	23.9	6.87	Sl. turbid	
7-21-98 /	2	0.43	24.1	6.92	clear	
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	10	= TOTAL VOLUME REMOVED (gal.)				

DEVELOPMENT METHOD: Continual cycles of surging w/a teflon surge block and evacuation w/a submersible pump or stainless steel bailer

NOTES: Developed hard for first 2 days (approximately 8 cycles ± recovered fairly quickly at first and then not as well)

WELL DEVELOPMENT FIELD RECORD

JOB NAME: Solutia/RFI/AC | JOB NO.: — | WELL NO.: OWR-25

DEVELOPED BY: Golder Associates | DATE OF INSTALLATION: 6-16-98 | SHEET: 1 OF 1

STARTED DEVEL.: 7-13-98 / — (DATE / TIME) | COMPLETED DEVEL.: 7-15-98 / — (DATE / TIME)

W.L. BEFORE DEVEL. (BTOC): 11.06' / 7-13-98 / — (DEPTH / DATE / TIME) | AFTER DEVEL: 4.44' / 7-30-98 / — (DEPTH / DATE / TIME)

WELL DEPTH: BEFORE DEVEL. (BGS): 35.0' | AFTER DEVEL: 35.0' | WELL DIA: 2 in.

STANDING WATER COLUMN (FT.): 26.50' | STANDING WELL VOLUME: 4.2 gal.

SCREEN LENGTH: 10ft. | DRILLING WATER LOSS: — gal.

DATE/TIME	VOLUME REMOVED (GALS)	FIELD PARAMETERS SPEC. COND. (mS/cm)	TEMP (C)	pH (s.u.)	Appearance	REMARKS
7-13-98 /	30				turbid	Well makes a lot of
7-14-98 /	40	0.43, 0.46	22.7	5.83	slightly turbid to clear	water - cleared up quickly
7-15-98 /	40	0.44, 0.42	22.4	5.85	clear	
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	110	= TOTAL VOLUME REMOVED (gal.)				

DEVELOPMENT METHOD: Continual cycles of surging w/ a teflon surge block and evacuation using a submersible pump.

NOTES:

WELL DEVELOPMENT FIELD RECORD

JOB NAME: Solutia/RFI/AL | JOB NO.: — | WELL NO.: OWK-2D

DEVELOPED BY: Golder Associates | DATE OF INSTALLATION: 6-23-98 | SHEET: 1 OF 1

STARTED DEVEL.: 7-14-98 / — (DATE / TIME) | COMPLETED DEVEL.: 7-16-98 / — (DATE / TIME)

W.L. BEFORE DEVEL. (BTOC): 78.24' / 7-14-98 / — (DEPTH / DATE / TIME) | AFTER DEVEL: 77.13' / 7-23-98 / — (DEPTH / DATE / TIME)

WELL DEPTH: BEFORE DEVEL. (BGS): — 110.0' | AFTER DEVEL: 110.0' | WELL DIA: 2 in.

STANDING WATER COLUMN (FT.): 34.05' | STANDING WELL VOLUME: 5.4 gal.

SCREEN LENGTH: 10' | DRILLING WATER LOSS: Lost grout btw. 70 & 90'. no water used in drilling

DATE/TIME	VOLUME REMOVED (GALS)	FIELD PARAMETERS SPEC. COND. (umhos/cm)	TEMP (C)	pH (S.U.)	Appearance	REMARKS
7-14-98 /	50				sl. turbid	makes good water.
7-15-98 /	50	0.302	25.1	8.24	sl. turbid improving	
7-16-98 /	40	0.289	24.9	7.99	clear	
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	140	= TOTAL VOLUME REMOVED (gal.)				

DEVELOPMENT METHOD: Continual cycles of surging w/ a teflon surge block and evacuation using a submersible pump.

NOTES:

WELL DEVELOPMENT FIELD RECORD

IOB NAME Solutia/RFI/AL JOB NO. — WELL NO. OWR-35

DEVELOPED BY Golder Associates DATE OF INSTALLATION 6-9-98 SHEET 1 OF 1

STARTED DEVEL. 7-14-98 / — (DATE / TIME) COMPLETED DEVEL. 7-17-98 / — (DATE / TIME)

W.L. BEFORE DEVEL. (BTOC) 10.69' / 7-14-98 / — (DEPTH / DATE / TIME) AFTER DEVEL 10.74' / 7-23-98 / — (DEPTH / DATE / TIME)

WELL DEPTH: BEFORE DEVEL. (BGS) — 35.0' AFTER DEVEL 35.0' WELL DIA 2 in.

STANDING WATER COLUMN (FT.) 26.50' STANDING WELL VOLUME 4.2 gal.

SCREEN LENGTH 10' DRILLING WATER LOSS — gal.

DATE/TIME	VOLUME REMOVED (GALS)	FIELD PARAMETERS SPEC. COND. (mS/cm)	TEMP (C)	pH (S.U.)	Appearance	REMARKS
7-14-98 /	20				Sl. turb.	
7-15-98 /	20				Sl. turb. improving	
7-16-98 /	20	0.162	23.8	5.22	Sl. turb. to clear	
7-17-98 /	15	0.163	23.5	5.31	clear	
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	75	= TOTAL VOLUME REMOVED (gal.)				

DEVELOPMENT METHOD: Continual cycles of surging w/ a teflon surge block and evacuation w/ a submersible pump.

NOTES:

WELL DEVELOPMENT FIELD RECORD

JOB NAME: Solutia/RFI/AL | JOB NO.: — | WELL NO.: OWR-40

DEVELOPED BY: Golder Associates | DATE OF INSTALLATION: 5-27-98 | SHEET: 1 OF 1

STARTED DEVEL.: 6-24-98 / — (DATE / TIME) | COMPLETED DEVEL.: 7-7-98 / — (DATE / TIME)

W.L. BEFORE DEVEL. (TOC): 62.08 / 6-24-98 / — (DEPTH / DATE / TIME) | AFTER DEVEL: 66.12 / 7-23-98 / — (DEPTH / DATE / TIME)

WELL DEPTH: BEFORE DEVEL. (BGS): — — 80.0' | AFTER DEVEL: 80.0' | WELL DIA: 2 in.

STANDING WATER COLUMN (FT.): 22.05' | STANDING WELL VOLUME: 3.5 gal

SCREEN LENGTH: 10ft | DRILLING WATER LOSS: NA gal.

DATE/TIME	VOLUME REMOVED (GALS)	FIELD PARAMETERS SPEC. COND. (mS/cm)	TEMP (C)	pH (S.U.)	Appearance	REMARKS
6-24-98	~4				turbid	Pumped dry repeatedly
6-25-98	~4				turbid	
6-26-98	~4				improving turbid	
6-29-98	~4	0.21	23.3	8.9	sl. turbid	
6-30-98	~4	0.18	23.0	9.2	sl. turbid	
7-7-98	~3	0.18	22.8	8.7	clear - sl. turbid	
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	~23	= TOTAL VOLUME REMOVED (gal.)				

DEVELOPMENT METHOD: Continual cycles of surging w/a teflon surge block and evacuation w/ a submersible pump or stainless steel bailer.

NOTES:

WELL DEVELOPMENT FIELD RECORD

JOB NAME: Solutia/RFI/AL | JOB NO.: — | WELL NO.: OWR-5D

DEVELOPED BY: Golder Associates | DATE OF INSTALLATION: 6-5-98 | SHEET: 1 OF 1

STARTED DEVEL.: 7-20-98 / — (DATE / TIME) | COMPLETED DEVEL.: 7-21-98 / — (DATE / TIME)

W.L. BEFORE DEVEL. (BTOC): 47.87' / 7-20-98 / — (DEPTH / DATE / TIME) | AFTER DEVEL: 48.33' / 8-18-98 / — (DEPTH / DATE / TIME)

WELL DEPTH: BEFORE DEVEL. (BGS): 68.0' | AFTER DEVEL: 68.0' | WELL DIA: 2 in.

STANDING WATER COLUMN (FT.): 22.66' | STANDING WELL VOLUME: 3.6 gal.

SCREEN LENGTH: 10' | DRILLING WATER LOSS: — gal.

DATE/TIME	VOLUME REMOVED (GALS)	FIELD PARAMETERS SPEC. COND. (mS/cm)	TEMP (C)	pH (s.u.)	Appearance	REMARKS
7-20-98 / —	25	1.62	22.6	4.48	V. Sl. turbid to clear	Fairly clear @ start -
7-21-98 /	20	1.64	22.1	4.64	clear	Sl. yel. septic odor
/	>					Make good water
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	45	= TOTAL VOLUME REMOVED (gal.)				

DEVELOPMENT METHOD: Continual cycles of surging w/ a teflon surge block and evacuation using a submersible pump or stainless steel bailer.

NOTES:

WELL DEVELOPMENT FIELD RECORD

JOB NAME: Solutia/RFI/AL | JOB NO.: — | WELL NO.: OWR-6D

DEVELOPED BY: Golder Associates | DATE OF INSTALLATION: 6-3-98 | SHEET: 1 OF 1

STARTED DEVEL.: 6-24-98 (DATE) / — (TIME) | COMPLETED DEVEL.: 7-8-98 (DATE) / — (TIME)

W.L. BEFORE DEVEL. (BTOC): 48.76' (DEPTH) / 6-24-98 (DATE) / — (TIME) | AFTER DEVEL: 50.54' (DEPTH) / 7-24-98 (DATE) / — (TIME)

WELL DEPTH (BGS) BEFORE DEVEL.: — 65.0' | AFTER DEVEL: — 65.' | WELL DIA: 2 in.

STANDING WATER COLUMN (FT.): 14.46' | STANDING WELL VOLUME: 2.31 gal.

SCREEN LENGTH: 10 ft. | DRILLING WATER LOSS: — gal.

DATE/TIME	≈ VOLUME REMOVED (GALS)	FIELD PARAMETERS SPEC. COND. (~~umhos~~/cm)	TEMP (C)	pH (s.u.)	Appearance	REMARKS
6-24-98 / —	4				turbid - v. silty	
6-25-98 / —	4				turbid	
6-26-98 / —	3				turbid	Pumped dry repeatedly
6-29-98 / —	3	1.43	21.7	6.5	turbid	
6-30-98 / —	3	1.36	22.0	6.2	improving	
7-7-98 /	3	1.38	22.6	6.4	clear	
7-8-98 /	3	1.42	22.2	6.2	clear	
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	≈ 23	= TOTAL VOLUME REMOVED (gal.)				

DEVELOPMENT METHOD: Continual cycles of surging (Teflon surge block) and evacuation using a submersible pump or stainless steel bailer

NOTES:

WELL DEVELOPMENT FIELD RECORD

JOB NAME: Solutia/RFI/AL | JOB NO. | WELL NO. OWR-9D

DEVELOPED BY: Golder Associates | DATE OF INSTALLATION: 5-28-98 | SHEET: 1 OF 1

STARTED DEVEL.: 7-8-98 / — (DATE / TIME) | COMPLETED DEVEL.: 7-17-981 / — (DATE / TIME)

W.L. BEFORE DEVEL. (TOC): 59.31' / 7-8-98 / — (DEPTH / DATE / TIME) | AFTER DEVEL: 59.76' / 1730-98 / — (DEPTH / DATE / TIME)

WELL DEPTH: BEFORE DEVEL. (BGS): : 65.0' | AFTER DEVEL: 65.0' | WELL DIA: 2 in.

STANDING WATER COLUMN (FT.): 8.08' | STANDING WELL VOLUME: 1.3 gal.

SCREEN LENGTH: 10' | DRILLING WATER LOSS: — gal.

DATE/TIME	VOLUME REMOVED (GALS)	FIELD PARAMETERS SPEC. COND. (mS/cm)	TEMP (C)	pH (S.U.)	Appearance	REMARKS
7-8-981	~3				silty - v. turb.)	Went dry repeatedly - makes
7-9-98 1	~3				turb.)	very little water
7-14-98 1	~2				turb.)	
7-15-98 1	~2	0.97	25.9	9.86	sl. turb.) improving	
7-16-98 1	~2	0.84	24.5	9.82	sl. turb.) to clear	
7-17-98 1	~2	0.78	24.7	9.78	clear	
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	≈ 14	= TOTAL VOLUME REMOVED (gal.)				

DEVELOPMENT METHOD: Continual cycles of surging with a teflon surge block and evacuation using a submersible pump or stainless steel bailer.

NOTES: Initially recovered quickly - then very slowly after later evacuations.

WELL DEVELOPMENT FIELD RECORD

JOB NAME: Solutia/RFI/AL | JOB NO.: — | WELL NO.: OWR-8S

DEVELOPED BY: Golder Associates | DATE OF INSTALLATION: 6-12-98 | SHEET: 1 OF 1

STARTED DEVEL.: 7-14-98 / — (DATE / TIME) | COMPLETED DEVEL.: 7-21-98 / — (DATE / TIME)

W.L. BEFORE DEVEL. (BTOC): 14.72' / 7-14-98 / — (DEPTH / DATE / TIME) | AFTER DEVEL: 14.89' / 7-30-98 / — (DEPTH / DATE / TIME)

WELL DEPTH: BEFORE DEVEL. (BGS): 35.0' | AFTER DEVEL: 35.0' | WELL DIA: 2 in.

STANDING WATER COLUMN (FT.): 22.55' | STANDING WELL VOLUME: 3.6 gal.

SCREEN LENGTH: 10' | DRILLING WATER LOSS: — gal.

DATE/TIME	VOLUME REMOVED (GALS)	FIELD PARAMETERS SPEC. COND. (mS/cm)	TEMP (C)	pH (s.u.)	Appearance	REMARKS
7-14-98 /	40				turbid	Odor (slightly septic)
7-15-98 /	40				turbid	associated w/ water
7-16-98 /	30	1.13	22.8	4.50	sl. turbid	Slight yellow color also.
7-17-98 /	30	1.14	23.0	4.63	sl. turbid	
7-21-98 /	15	1.21	22.6	4.61	clear	
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	155	= TOTAL VOLUME REMOVED (gal.)				

DEVELOPMENT METHOD: Continual cycles of surging w/ a teflon surge block and evacuation w/ a submersible pump or stainless steel bailer

NOTES: Went dry periodically.

WELL DEVELOPMENT FIELD RECORD

JOB NAME: Solutia/RFI/AL | JOB NO.: — | WELL NO.: OWR-9S

DEVELOPED BY: Golder Associates | DATE OF INSTALLATION: 6-21-98 | SHEET: 1 OF 1

STARTED DEVEL.: 6-24-98 / — (DATE / TIME) | COMPLETED DEVEL.: 7-7-98 / — (DATE / TIME)

W.L. BEFORE DEVEL. (BTOC): 31.7' / 6-22-98 / — (DEPTH / DATE / TIME) | AFTER DEVEL: 34.23' / 7+30-98 / — (DEPTH / DATE / TIME)

WELL DEPTH: BEFORE DEVEL. (BGS): 50.0' | AFTER DEVEL: 50.0' | WELL DIA: 2 in.

STANDING WATER COLUMN (FT.): 20.69' | STANDING WELL VOLUME: 3.3 gal.

SCREEN LENGTH: 10' | DRILLING WATER LOSS: — gal.

DATE/TIME	VOLUME REMOVED (GALS)	FIELD PARAMETERS SPEC. COND. (mS/cm)	TEMP (C)	pH (S.U.)	Appearance	REMARKS
6-24-98 /	<4				turb.J	Well went dry repeatedly
6-25-98 /	<4				turb.J	(recovers slowly)
6-26-98 /	<4				turbid	
6-29-98 /	<4				turbid	
6-30-98 /	<4	0.145	24.9	6.92	improving	
7-1-98 /	<4	0.197	25.1	7.04	improving - sl. turbid	
7-6-98 /	<4	0.224	24.2	6.98	sl. turbid - clear (yellowish)	
7-7-98 /	<4	0.246	24.6	6.96	clear to yellow clear	
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	<32	= TOTAL VOLUME REMOVED (gal.)				

DEVELOPMENT METHOD: Continual cycles of surging w/ a teflon surge block and evacuation using a submersible pump or a stainless steel bailer

NOTES:

WELL DEVELOPMENT FIELD RECORD

JOB NAME: Solutia/RFI/AC | JOB NO.: — | WELL NO.: CB-85

DEVELOPED BY: Golder Associates | DATE OF INSTALLATION: NA | SHEET: 1 OF 1

STARTED DEVEL.: 5-21-98 / 1 (DATE / TIME) | COMPLETED DEVEL.: 7- / 1 (DATE / TIME)

W.L. BEFORE DEVEL. (BTOC): 9.77 / 5-21-98 / 1 (DEPTH / DATE / TIME) | AFTER DEVEL: 9.85 / 7-24-98 / — (DEPTH / DATE / TIME)

WELL DEPTH: BEFORE DEVEL. (BTOC): 39.95' | AFTER DEVEL: 39.95' | WELL DIA: 2 in.

STANDING WATER COLUMN (FT.): 30.1' | STANDING WELL VOLUME: 4.82 gal

SCREEN LENGTH: 5' | DRILLING WATER LOSS: NA gal.

DATE/TIME	VOLUME REMOVED (GALS)	FIELD PARAMETERS SPEC. COND. (mS/cm)	TEMP (C)	pH (s.u.)	Appearance	REMARKS
5-21-98 /	7				turbid	Recovers slowly
5-22-98 /	3.5				turb.	
7-13-98 /	3.5		>		sl. turbid	
7-14-98 /	4	3.6	26.5	6.43	sl. turb.	
7-15-98 /	4	3.8	26.0	5.94	clear	
7-16-98 /	4	3.8	26.3	5.85	clear	
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	26	= TOTAL VOLUME REMOVED (gal.)				

DEVELOPMENT METHOD: Continual cycles of surging w/ a teflon surge block and evacuation using a submersible pump or stainless steel bailer

NOTES:

WELL DEVELOPMENT FIELD RECORD

JOB NAME: Solutia/RFI/AL | JOB NO.: — | WELL NO.: OW-9

DEVELOPED BY: Geo Wer Associates | DATE OF INSTALLATION: NA | SHEET: 1 OF 1

STARTED DEVEL.: 5-26-98 / — (DATE / TIME) | COMPLETED DEVEL.: 5-26-98 / — (DATE / TIME)

W.L. BEFORE DEVEL. (BTOC): 15.1' / 5-26-98 / — (DEPTH / DATE / TIME) | AFTER DEVEL: — / — / — (DEPTH / DATE / TIME)

WELL DEPTH: BEFORE DEVEL. (BGS): — 40.0' | AFTER DEVEL: 40.0' | WELL DIA: 2 in.

STANDING WATER COLUMN (FT.): 27.30' | STANDING WELL VOLUME: 4.3 gal

SCREEN LENGTH: 5' | DRILLING WATER LOSS: NA gal.

DATE/TIME	VOLUME REMOVED (GALS)	FIELD PARAMETERS SPEC. COND. (mS/cm)	TEMP (C)	pH (S.U.)	Appearance	REMARKS
5-26-98 /	12	0.257, 0.245	22.7, 22.3	4.82, 4.84	clear	Removed 12 gal → DRY
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	12	= TOTAL VOLUME REMOVED (gal.)				

DEVELOPMENT METHOD: Existing well - could not remove bladder pump system, therefore purged using system - Took turbidity readings - collected 3 consecutive readings (3.7, 3.0, 2.9) of turbidity (NTU) ≤ below 5m - therefore considered the well developed. Well went dry after ≈ 12 gal removed

NOTES:

WELL DEVELOPMENT FIELD RECORD

JOB NAME: Solutia/RFI/AL | JOB NO.: — | WELL NO.: OW-10

DEVELOPED BY: Golder Associates | DATE OF INSTALLATION: NA | SHEET: 1 OF 1

STARTED DEVEL.: 5-21-98 / — (DATE / TIME) | COMPLETED DEVEL.: 5-27-98 / — (DATE / TIME)

W.L. BEFORE DEVEL. (BTOC): 19.01' / 5-21-98 / — (DEPTH / DATE / TIME) | AFTER DEVEL: 19.86' / 12-24-98 / — (DEPTH / DATE / TIME)

WELL DEPTH: BEFORE DEVEL. (BGS): 40.0' | AFTER DEVEL: 40.0' | WELL DIA: 2 in.

STANDING WATER COLUMN (FT.): 23.15' | STANDING WELL VOLUME: 3.7 gal.

SCREEN LENGTH: 5' | DRILLING WATER LOSS: NA gal.

DATE/TIME	VOLUME REMOVED (GALS)	FIELD PARAMETERS SPEC. COND. (mS/cm)	TEMP (C)	pH (s.u.)	Appearance	REMARKS
5-21-98 /	8	1.65	26.3	5.33	Sl. turbid	
5-22-98 /	5	1.67	26.7	4.76	Sl. turbid	
5-26-98 /	8	1.72	16.9	4.88	Clear	
5-27-98 /	5	1.65	26.4	4.91	Clear	
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	26	= TOTAL VOLUME REMOVED (gal.)				

DEVELOPMENT METHOD: Existing well - removed bladder pump assembly and performed continual cycles of surging w/ a teflon surge block and evacuation w/ a submersible pump.

NOTES:

WELL DEVELOPMENT FIELD RECORD

JOB NAME: Solutia/KFI/AL — JOB NO.: - — WELL NO.: PZR-1

DEVELOPED BY: GeoVor Associates — DATE OF INSTALLATION: 6-18-98 — SHEET: 1 OF 1

STARTED DEVEL.: 7-8-98 (DATE) / - (TIME) — COMPLETED DEVEL.: 7-9-98 (DATE) / - (TIME)

W.L. BEFORE DEVEL. (BTOC): 50.48' (DEPTH) / 7-8-98 (DATE) / - (TIME) — AFTER DEVEL: 51.05' (DEPTH) / 8-20-98 (DATE) / - (TIME)

WELL DEPTH (BGS): BEFORE DEVEL. 60.0' — AFTER DEVEL 60.0' — WELL DIA 2 in.

STANDING WATER COLUMN (FT.): 12.03' — STANDING WELL VOLUME 1.9 gal.

SCREEN LENGTH: 20' — DRILLING WATER LOSS: - gal.

DATE/TIME	VOLUME REMOVED (GALS)	FIELD PARAMETERS SPEC. COND. (umhos/cm)	TEMP (C)	pH (s.u.)	Appearance	REMARKS
7-8-98 /	10	-	-	-	-	Non-sampled well
7-9-98 /	5	-	-	-	clear	(observation piezo.)
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	15	= TOTAL VOLUME REMOVED (gal.)				

DEVELOPMENT METHOD: Continual surging w/a teflon surge block and evacuation w/ a submersible pump.

NOTES: Developed to decrease turbidity.

WELL DEVELOPMENT FIELD RECORD

JOB NAME: Solution/RFI/AL | JOB NO.: - | WELL NO.: PZR-2

DEVELOPED BY: Golder Associates | DATE OF INSTALLATION: 6-16-98 | SHEET: 1 OF 1

STARTED DEVEL.: 7-8-98 / - (DATE / TIME) | COMPLETED DEVEL.: 7-9-98 / - (DATE / TIME)

W.L. BEFORE DEVEL. (BTOC): 51.05' / 7-8-98 / - (DEPTH / DATE / TIME) | AFTER DEVEL: 50.10' / 8-18-98 / - (DEPTH / DATE / TIME)

WELL DEPTH: BEFORE DEVEL. (BGS): 60.0' | AFTER DEVEL: 60.0' | WELL DIA: 2 in.

STANDING WATER COLUMN (FT.): 11.31' | STANDING WELL VOLUME: 1.8 gal.

SCREEN LENGTH: 20' | DRILLING WATER LOSS: - gal.

DATE/TIME	VOLUME REMOVED (GALS)	FIELD PARAMETERS SPEC. COND. (umhos/cm)	TEMP (C)	pH (S.U.)	Appearance	REMARKS
7-8-98 /	6	-	-	-	-	Non-sampled well
7-9-98 /	6	-	-	-	clear	(observation piezo)
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	12	= TOTAL VOLUME REMOVED (gal.)				

DEVELOPMENT METHOD: Continual cycles of surging w/a teflon surge block & evacuation w/ a submersible pump

NOTES:

WELL DEVELOPMENT FIELD RECORD

JOB NAME: Solutia/RFI/AL | JOB NO.: — | WELL NO.: PZR-3

DEVELOPED BY: Golder Associates | DATE OF INSTALLATION: 6-10-98 | SHEET: 1 OF 1

STARTED DEVEL.: 7-8-98 / — (DATE / TIME) | COMPLETED DEVEL.: 7-8-98 / — (DATE / TIME)

W.L. BEFORE DEVEL. (BTOC): 45.27' / 7-8-98 / — (DEPTH / DATE / TIME) | AFTER DEVEL: 45.35' / 8-20-98 / — (DEPTH / DATE / TIME)

WELL DEPTH: BEFORE DEVEL. (BGS): — 60.0' | AFTER DEVEL: — 60.0' | WELL DIA: 2 in.

STANDING WATER COLUMN (FT.): 17.38' | STANDING WELL VOLUME: 2.7 gal.

SCREEN LENGTH: 20' | DRILLING WATER LOSS: — gal.

DATE/TIME	VOLUME REMOVED (GALS)	FIELD PARAMETERS SPEC. COND. (umhos/cm)	TEMP (C)	pH (s.u.)	Appearance	REMARKS
7-8-98 /	8	-	-	-	Clear	Clean to start - Non-
/						sampled well (obs. piezo)
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	8	= TOTAL VOLUME REMOVED (gal.)				

DEVELOPMENT METHOD: Cycles of surging w/ a teflon surge block and evacuation using a submersible pump

NOTES:

WELL DEVELOPMENT FIELD RECORD

JOB NAME: Solutia/REI/AL | JOB NO.: — | WELL NO.: PZR-4

DEVELOPED BY: Golder Associates | DATE OF INSTALLATION: 6-17-98 | SHEET: 1 OF 1

STARTED DEVEL.: 7-8-98 / — (DATE / TIME) | COMPLETED DEVEL.: 7-8-98 / — (DATE / TIME)

W.L. BEFORE DEVEL. (BTOC): 45.07' / 7-8-98 / — (DEPTH / DATE / TIME) | AFTER DEVEL: 45.19' / 8-18-98 / — (DEPTH / DATE / TIME)

WELL DEPTH: BEFORE DEVEL. (BGS): 60' | AFTER DEVEL: 60' | WELL DIA: 2 in.

STANDING WATER COLUMN (FT.): 17.37' | STANDING WELL VOLUME: 2.8 gal.

SCREEN LENGTH: 20' | DRILLING WATER LOSS: — gal.

DATE/TIME	VOLUME REMOVED (GALS)	FIELD PARAMETERS SPEC. COND. (umhos/cm)	TEMP (C)	pH (s.u.)	Appearance	REMARKS
7-8-98 1	16.5	-	-	-	clear	Makes good water
1						Num - sampled well
1						Nearly clear @ start.
1						
1						
1						
1						
1						
1						
1						
1						
1						
1						
1						
	16.5	= TOTAL VOLUME REMOVED (gal.)				

DEVELOPMENT METHOD: Cycles of surging with a teflon surge block and evacuation using submersible pump

NOTES:

WELL DEVELOPMENT FIELD RECORD

JOB NAME: Solutia/RFI/AL | JOB NO.: – | WELL NO.: PZR-5

DEVELOPED BY: Golder Associates | DATE OF INSTALLATION: 6-17-98 | SHEET: 1 OF 1

STARTED DEVEL.: 7-16-98 / – (DATE / TIME) | COMPLETED DEVEL.: 7-16-98 / – (DATE / TIME)

W.L. BEFORE DEVEL. (BTOC): 21.86' / / / (DEPTH / DATE / TIME) | AFTER DEVEL: 22.17' / 8-18-98 / – (DEPTH / DATE / TIME)

WELL DEPTH: BEFORE DEVEL. (BGS): 46.0' | AFTER DEVEL: 46.0' | WELL DIA: 2 in.

STANDING WATER COLUMN (FT.): 26.57' | STANDING WELL VOLUME: 4.2 gal.

SCREEN LENGTH: 20' | DRILLING WATER LOSS: – gal.

DATE/TIME	VOLUME REMOVED (GALS)	FIELD PARAMETERS SPEC. COND. (umhos/cm)	TEMP (C)	pH (s.u.)	Appearance	REMARKS
7-16-98	15	–	–	–	clear	makes good water –
/						non-sampling well
/						nearly clear @ start
/						
/						
/						
/						
/						
/						
/						
/						
/						
/						
/						
	15	= TOTAL VOLUME REMOVED (gal.)				

DEVELOPMENT METHOD: Cycles of surging & pumping using a teflon surge block and evacuation using a submersible pump or stainless steel bailer

NOTES:

WELL DEVELOPMENT FIELD RECORD

JOB NAME: Solutia/RFI/AL | JOB NO.: — | WELL NO.: PZR-6

DEVELOPED BY: Golder Associates | DATE OF INSTALLATION: 6-18-98 | SHEET: 1 OF 1

STARTED DEVEL.: 7-16-98 / — (DATE / TIME) | COMPLETED DEVEL.: 7-16-98 / — (DATE / TIME)

W.L. BEFORE DEVEL. (BTOC): 24.21' / 7-16-98 / — (DEPTH / DATE / TIME) | AFTER DEVEL: 24.56' / 8-18-98 / — (DEPTH / DATE / TIME)

WELL DEPTH: BEFORE DEVEL. (BGS): — 46.0' | AFTER DEVEL: — 46.0' | WELL DIA: 2 in.

STANDING WATER COLUMN (FT.): 23.98' | STANDING WELL VOLUME: 3.8 gal.

SCREEN LENGTH: 20' | DRILLING WATER LOSS: — gal.

DATE/TIME	VOLUME REMOVED (GALS)	FIELD PARAMETERS SPEC. COND. (umhos/cm)	TEMP (C)	pH (s.u.)	Appearance	REMARKS
7-16-98 /	19				Slt. turb.)	Makes good water -
/						nearly clear w start -
/	>					Non-sampled well
/						
/						
/						
/						
/						
/						
/						
/						
/						
/						
/						
	19	= TOTAL VOLUME REMOVED (gal.)				

DEVELOPMENT METHOD: Continual cycles of surging w/a teflon surge block and evacuation w/a submersible pump or stainless steel bailer

NOTES:

APPENDIX C

Well Inspection and Water Level Data

TABLE C-1
Well Inspection Data

Well I.D.	Date	Depth to Water (ft BTOC)	Approximate Measured Well Depth (ft BTOC)	Constructed Well Depth (ft BGS)	Well Properly Locked	Condition of Surface Completion	Comments	Well Suitable For W.L. Measurement
LANDFILL WELLS								
CB-09	6/25/1998	21.51	48.41	46.00*	Yes	no pad - good	1.25" well, needs gravel	Yes
OW-12	6/25/1998	26.44	NA	34.50*	Yes	no pad - good	1.25" well, needs gravel - Can't remove ww. - Top of ww. ~ 30.48 BTOC	Yes
P-17-C	6/25/1998	19.93	36.24	31.00*	Yes	no pad - good	1.25" well, needs gravel	Yes
OW-01	6/25/1998	18.42	NA	25.00*	Locked, but crooked	poor - no pad, casing derted and crooked	Top of ww. ~ 19.32 - 1.5" well - Can't remove ww.	Yes
OW-02	6/25/1998	17.61	22.10	24.00	Yes	no pad, rusted	Top of ww. ~ 18.18 - Silt in bottom of well (approx. 4' of 5' screen)	Yes
OW-03	6/25/1998	Dry	27.92	24.00*	Yes	small pad - ok	Top of ww.~20.48 - Silt in bottom of well	Yes, but dry
OW-04	6/25/1998	26.01	29.69	27.00	Yes	no pad, rusted	Top of ww ~ 22.75 - slightly silty	Yes, but must remove ww. to reach water
CB-55SH	6/25/1998	Dry	26.01	24.00	Yes	no pad, casing crooked	needs gravel has bailer (sticks slightly at TOC), silt at bottom	Yes, but dry
CB-55	6/25/1998	NA	NA	45.00*	NA	NA	Appears to have been buried - can't locate	NA
C3-08	6/25/1998	Dry	15.63	14.00*	Yes	no pad - good	1.25" well - needs PVC cap	Yes, but dry
CB-08C1	6/25/1998	31.33	46.09	44.00*	Yes	no pad - good	1.25" well	Yes
C3-33	6/25/1998	29.44	NA	49.00*	Locked, but crooked	no pad - poor	1.25" well - can't remove bailer (crooked at TOC)	Yes
C3-10	6/25/1998	15.96	21.75	34*	Locked, but crooked	no pad - poor	1.25" well - FVC is crooked	Yes
C3-26	6/25/1998	17.24	20.32	19.00*	Yes	no pad - ok	1.25" well - no cap, no gravel	Yes
OW-11	6/25/1998	7.08	NA	14.00*	Yes	no pad - good (short stick-up)	1.25" well w/large cap - Top of ww. ~ 10.28 - no gravel	Yes
OW-25	6/25/1998	21.87	37.50	37.00	Yes	no pad - good	4" well - Top of ww. ~ 30.00 - silt in bottom	Yes
CB-54	6/25/1998	30.28	30.66	29.00	Yes	no pad - good	Top of bailer - 27.58	Yes
CB-53	6/25/1998	42.05	56.50	49.00*	Yes	no pad - good	Has bailer - silty	Yes
OW-14	6/25/1998	45.28	46.30	46.00*	Yes	no pad - ok	Removed bailer (corroded) - silt in bottom	Yes
OW-17	6/25/1998	Dry	45.86	40.00*	Yes	no pad, casing crooked - ok	no gravel	Yes, but dry

TABLE C-1
Well Inspection Data

Well I.D.	Date	Depth to Water (ft BTOC)	Approximate Measured Well Depth (ft BTOC)	Constructed Well Depth (ft BGS)	Well Properly Locked	Condition of Surface Completion	Comments	Well Suitable For W.L. Measurement
OW-13	6/25/1998	Dry	51.70	43.00*	Yes	no pad - ok	4" well - assume bailer is in bottom (PVC cap is broken)	Yes, but dry
SA-06	6/25/1998	33.42	55.34	50.00	no casing	no casing, no cap, no pad - poor	2" well - not PVC	No
MW-01B	6/25/1998	35.80	63.60	63.00	Yes	no pad - good	Top of ww. ~60 - silt in bottom	Yes
MW-01A	6/25/1998	47.55	59.33	56.00	Yes	no pad - good (rusted)	Has bailer - silty - not labeled	Yes
MW-13A	7/9/1998	89.68	115.10	110.50	Yes	no pad - ok	none	Yes
SA(MW)-22	7/9/1998	21.00	25.50	24.00	no casing	no casing, no cap, no pad - poor	1.5" well - silt in bottom	No
MW-03	7/9/1998	68.45	74.50	73.00	Yes	no pad	6" well - 4" rusted bailer	Yes
MW-02	7/9/1998	24.22	45.63	43.00	Yes	no pad - ok	6" well - dedicated ww.	Yes
MW-11A	7/9/1998	91.28	111.40	114.50	Yes	no pad - ok	silty at bottom	Yes
MW-12A	7/9/1998	93.15	115.76	112.50	Yes	no pad - ok	lt. brown film on pump	Yes
BR-01	7/9/1998	270.91	>300	311.00	Yes	good	no gravel	Yes
BR-02	7/9/1998	NA	NA	181.00	Yes	good	no gravel - Bailer is jammed	No
BR-03	7/9/1998	155.40	NA	258.00	Yes	ok	meter and bailer briefly caught on something @155	Yes
FIRE BRIGADE AND OFFSITE WELLS								
SA(NW)-07	6/24/1998	14.78	27.50	24.00*	Yes	good	contains ww.	Yes
SBP-03	6/24/1998	62.58	110.00	102.00*	Yes	good	none	Yes
OW-21	6/24/1998	12.85	38.52	34.00*	Yes	ok - good	Top of ww. ~31.36 - pad cracked (will be covered by soil cap)	Yes
OW-22	6/24/1998	14.32	38.38	36.00*	Yes	good	Top of ww. - 29.48 - at least 10" silt on bottom	Yes
SA(NW)-08	6/25/1998	11.54	30.61	27.00*	Yes	good	Top of ww. ~22.72 (broken)	Yes
DCP-01	6/25/1998	61.20	293.80	300.00*	Yes	good	No ww.	Yes
SA(NW)-09	6/25/1998	16.08	NA	28.00	Yes	good	Top of ww. ~23.16 - can't remove - well is crooked	Yes
SA(NW)-14	6/25/1998	13.98	26.50	28.00	Yes	no pad - good (rusted	Top of ww. ~20.52 - at least 12" silt in bottom	Yes
PZ-11	6/25/1998	18.45	43.88	45.00	Yes	good	silty at bottom	Yes
SA-64	6/25/1998	20.06	26.28	24.00	See comments	no pad - good (rusted	Inner casing locked w/ Dolphin lock - No lock on outer casing	Yes
OW-06A	7/8/1998	37.15	52.82	43.00	Yes	good	Top of ww. ~48.82 - replaced existing well Spring '98	Yes

TABLE C-1
Well Inspection Data

Well I.D.	Date	Depth to Water (ft BTOC)	Approximate Measured Well Depth (ft BTOC)	Constructed Well Depth (ft BGS)	Well Properly Locked	Condition of Surface Completion	Comments	Well Suitable For W.L. Measurement
OW-07	7/8/1998	34.42	47.57	43.00	Yes	no pad - good	Top of ww. ~39.84 - silty at bottom	Yes
OW-09	7/8/1998	20.36	NA	40.00	Yes	poor - no pad, casing crooked -	Top of ww. ~32.35 - unable to remove	Yes
CB-85	7/8/1998	12.10	39.95	42.00	Yes	good - no weep hole	Circular pad from new surface casing - well was cut down	Yes
OW-10	7/8/1998	20.75	39.94	40.00	Yes	no pad - ok	Top of ww. ~32.90 - silty at bottom	Yes
PLANT SITE WELLS								
PZ-08	6/26/1998	25.73	52.68	49.90	Yes	no pad - no gravel - good	none	Yes
SBP-02	6/26/1998	67.58	140.00	140.00	Yes	no pad - no gravel - good	none	Yes
OP-01	6/26/1998	6.74	27.96	27.00	Yes	no pad - no gravel - good	next to SBP-02 - labeled on bailer cap, not surface casing	Yes
PZ-09	6/26/1998	7.18	42.58	40.00	Yes	no pad - no gravel - good	silty at bottom	Yes
PZ-07	6/26/1998	23.83	51.14	50.00	Yes	no pad - no gravel - good	silty at bottom	Yes
PZ-06A	6/26/1998	13.77	31.50	29.00	Yes	no pad - no gravel - ok	rusted - no cap	Yes
PZ-06	6/26/1998	Dry	53.75	50.00	Yes	no pad - no gravel - ok	silty at bottom	Yes, but dry
OW-24	6/26/1998	8.49	30.23	29.00*	Yes	v. good	Top of ww. ~24.44	Yes
OW-23	6/26/1998	7.98	25.90	23.00*	Yes	v. good	Top of ww. ~18.74 - silty at bottom	Yes
OW-20	6/26/1998	7.28	23.40	23.00*	Yes	v. good	Top of ww. ~17.43	Yes
OW-19	6/26/1998	9.61	27.10	32.50*	Yes	v. good	Top of ww. ~19.64 - silty at bottom	Yes
OW-18	6/26/1998	11.72	29.94	27.50	Yes	no pad - ok	Top of ww. ~26.30 - silty at bottom - pinhole leak in tubing directly above pump	Yes
PZ-05A	6/26/1998	10.79	28.19	26.00	Yes	no pad - no gravel - ok	rusted	Yes
PZ-05	6/26/1998	26.98	54.24	50.00	Yes	no pad - no gravel - ok	none	Yes
PZ-04A	6/26/1998	7.96	32.50	30.00	Yes	no pad - no gravel - ok	none	Yes
PZ-04B	6/26/1998	8.73	35.48	33.00	Yes	no pad - no gravel - ok	none	Yes
PZ-04C	6/26/1998	8.68	35.50	33.00	Yes	no pad - no gravel - ok	none	Yes
PZ-04	6/26/1998	22.88	48.70	50.00	Yes	no pad - no gravel - ok	silty at bottom	Yes
PZ-03A	6/26/1998	11.72	36.50	35.00	Yes	no pad - no gravel - ok	none	Yes
PZ-03	6/26/1998	15.23	52.10	48.60	Yes	no pad - no gravel - ok	none	Yes

TABLE C-1
Well Inspection Data

Well I.D.	Date	Depth to Water (ft BTOC)	Approximate Measured Well Depth (ft BTOC)	Constructed Well Depth (ft BGS)	Well Properly Locked	Condition of Surface Completion	Comments	Well Suitable For W.L. Measurement
DMW-20A	6/26/1998	8.95	25.54	24.00	Yes	no pad - no gravel - ok	Top of ww. - 22.07	Yes
PZ-20B	6/26/1998	9.83	25.35	23.00	Yes	no pad - no gravel - ok	none	Yes
PZ-02A	6/26/1998	10.79	35.44	33.00	Yes	no pad - no gravel - ok	rusted - has bailer	Yes
PZ-02	6/26/1998	17.91	48.04	50.00	Yes	no pad - no gravel - ok	silty at bottom	Yes
OW-08A	7/8/1998	14.91	25.31	22.50	Yes	good	Top of ww. - 20.95 - Replaced exsting well Spring '98	Yes
OW-15	7/8/1998	13.31	45.07	40.00	Yes	no pad - ok	Top of ww. - 38.44	Yes
OW-05	7/8/1998	16.50	71.12	65.00	Yes	no pad - ok	Silt film on pump and tubing	Yes
OW-16A	7/8/1998	16.49	35.23	30.00	Yes	good	Top of ww. - 30.00	Yes
WEL-04	7/8/1998	31.25	51.83	50.75	Yes	good	none	Yes
BR-04	7/8/1998	114.01	214.30	220.00	Yes	no gravel - good	none	Yes
BR-05	7/8/1998	77.46	158.00	149.00	Yes	no pad - no gravel - poor - no weephole	silty at bottom	Yes
SBP-04	7/8/1998	77.07	149.90	147.50	Yes	poor - no pad - no gravel	silty at bottom	Yes
SBP-01	7/8/1998	76.43	160.50	157.00	Yes	no pad - no gravel - poor - no weephole	silty at bottom	Yes
MW-15	7/9/1998	11.54	28.12	24.50	Yes	no pad - ok	silty at bottom - orange film on pump	Yes
SBP-05	7/9/1998	75.18	147.00	140.00	Yes	ok - no weephole, pad is cracked	Top of ww. - 139.50	Yes
MW-16	7/9/1998	28.14	70.65	68.50	Yes	no pad - ok	Top of ww. - 64.00 -silty at bottom	Yes
PZ-01	7/9/1998	14.67	53.50	50.00	Yes	poor - no pad, no gravel	none	Yes
PZ-10	7/9/1998	23.19	53.02	50.00	Yes	poor - no pad, no gravel	none	Yes
WEL-01	7/9/1998	23.57	32.20	33.20	Yes	no pad - good	silty at bottom	Yes
WEL-02	7/9/1998	26.58	35.10	35.05	Yes	no pad - good	silty at bottom	Yes
WEL-03	7/9/1998	28.14	38.00	35.02	Yes	no pad - good	silty at bottom	Yes

Notes

Constucted well depths were taken from historical site data.

BTOC -- below top of casing

BGS - below ground surface

W.L. - water level

* -- denotes the casing has been extended since completion of the well.

NA -- data not available

ww. -- well wizard

TOC - top of casing

TABLE C-2
Wells in Need of Repair

Well #	Problem	Well #	Problem
LANDFILL WELLS			
CB-09	Needs gravel	OW-11	Needs gravel
OW-12	Needs gravel - cannot remove ww., it sticks near top	OW-17	Casing crooked - needs gravel
P-17-C	Needs gravel	OW-13	Cap is broken - bailer at the bottom
OW-01	Casing dented and crooked (cannot remove ww.)	SA-06	No casing, no cap
CB-55SH	Casing crooked - needs gravel	MW-01A	Not labeled
CB-55	Appears to have been buried - can't locate	SA(MW)-22	No casing, no cap
CB-08	Needs PVC cap	MW-03	Rusted bailer
CB-33	Casing crooked (cannot remove ww.)	BR-01	Needs gravel
CB-10	PVC is crooked	BR-02	Needs gravel bailer jammed @ 67.57'
CB-26	Needs gravel - needs cap	BR-03	Bailer and w.l. indicator sticks briefly @ 155'
FIRE BRIGADE AND OFFSITE WELLS			
OW-21	Pad cracked (will be covered by soil cap)	SA-64	Needs outer casing lock (inner casing locked)
SA(MW)-08	ww. is broken	OW-09	Casing crooked (cannot remove ww.)
SA(MW)-09	Casing crooked (cannot remove ww.)	CB-85	No weep hole
PLANT SITE WELLS			
PZ-08	Needs gravel	PZ-03A	Needs gravel
SBP-02	Needs gravel	PZ-03	Needs gravel
OP-01	Needs gravel - no label on outer casing	DMW-20A	Needs gravel
PZ-09	Needs gravel	PZ-20B	Needs gravel
PZ-07	Needs gravel	PZ-02A	Needs gravel
PZ-06A	Needs gravel - needs cap	PZ-02	Needs gravel
PZ-06	Needs gravel	BR-04	Needs gravel
OW-18	Pinhole leak in tubing directly above pump	BR-05	Needs gravel - no weep hole
PZ-05A	Needs gravel	SBP-04	Needs gravel
PZ-05	Needs gravel	SBP-01	Needs gravel - no weep hole
PZ-04A	Needs gravel	SBP-05	No weep hole - pad is cracked
PZ-04B	Needs gravel	PZ-01	Needs gravel
PZ-04C	Needs gravel	PZ-10	Needs gravel
PZ-04	Needs gravel		

Notes

ww. -- well wizard

w.l. -- water level

TABLE C-3
Well Characteristics

Wells Without Pads						
LANDFILL WELLS						
CB-09	OW-02	CB-8C1	OW-11	OW-14	MW-01B	MW-03
OW-12	OW-04	CB-33	OW-25	OW-17	MW-01A	MW-02
P-17-C	CB-55SH	CB-10	CB-54	OW-13	MW-13A	MW-11A
OW-01	CB-08	CB-26	CB-53	SA-06	SA(MW)-22	MW-12A
FIRE BRIGADE AND OFFSITE WELLS						
SA(MW)-14	SA-64	OW-07	OW-09	OW-10		
PLANT SITE WELLS						
PZ-08	PZ-06A	PZ-04B	DMW-20A	OW-15	GDP-1	PZ-10
SBP-02	PZ-06	PZ-04C	PZ-20B	OW-05	MW-15	WEL-01
OP-01	PZ-05A	PZ-04	PZ-02A	BR-05	MW-16	WEL-02
PZ-09	PZ-05	PZ-03A	PZ-02	SBP-4	PZ-01	WEL-03
PZ-07	PZ-04A	PZ-03	OW-18			

Dry Wells						
Well I.D.	OW-03	CB-55SH	CB-08	OW-17	OW-13	PZ-06

WW. and Bailers That Cannot be Removed		
Well I.D.	WW. or Bailer	Reason
OW-12	ww.	casing is crooked
OW-01	ww.	casing is crooked
CB-33	bailer	casing is crooked
OW-13	bailer	PVC cap is broken--assume bailer is in bottom of well
BR-02	bailer	stuck @ 67.57'
SA(MW)-09	ww.	casing is crooked
OW-9	ww.	casing is crooked

Wells Not Suitable for W.L. Measurements	
Well I.D.	Problem
CB-55	Appears to have been buried - can't locate
SA-06	No casing, no cap
SA(MW)-22	No casing, no cap
BR-02	Bailer is jammed

Notes

ww. -- well wizard

w.l. -- water level

Groundwater Wells

Date: 8/11/1998

Well #	TOC Elevation (ft.MSL)	Depth to Water (ft.BTOC)	Approximate Stick-up (ft.)	Water Level Elevation (ft.MSL)	Well Depth (ft.BGS)
OW Wells					
1	812.71	18.64	1.25	794.07	25
2	807.69	17.96	1.75	789.73	24
3	805.25	dry	3.20	<778	24
4	798.57	26.40	1.50	772.17	27
5	773.02	17.57	2.33	755.45	65
6A	791.62	38.20	2.75	753.42	43
7	785.81	35.40	4.35	750.41	43
8A	749.16	13.88	2.84	735.28	22
9	738.36	21.27	2.40	717.09	40
10	736.87	20.78	2.16	716.09	40
11	825.36	7.12	1.00	818.24	14
12	835.34	27.00	3.60	808.34	35
13	805.16	dry	1.80	<760	43
14	806.98	dry	3.75	<757	46
15	766.90	13.03	2.84	753.87	40
16A	779.74	16.29	2.00	763.45	30
17	812.29	dry	2.00	<770	40
18	750.47	11.02	2.95	739.45	28
19	748.72	9.32	2.50	739.40	33
20	747.62	6.58	2.48	741.04	23
21	742.83	12.62	3.50	730.21	34
22	745.57	14.64	3.50	730.93	35
23	747.53	7.62	2.83	739.91	23
24	746.15	7.90	2.47	738.25	29
25	800.21	21.87	2.50	778.34	37
BR Wells					
1	897.46	272.48	4.45	624.98	311
2	865.22	bailer @ 67.57	4.20	~680	181
3	827.58	154.60	2.80	672.98	258
4	790.74	116.44	2.00	674.30	220
5	764.10	80.85	0.80	683.25	149
SA Wells					
6	815.56	32.85	2.00	782.71	50
22	792.84	22.46	2.84	770.38	24
64	748.65	23.11	2.42	725.54	24
85 (CB-85)	736.37	10.91	2.75	725.46	30
SBP Wells					
1	758.17	78.82	2.62	679.35	157
2	749.40	68.50	2.33	680.90	140
3	744.41	66.19	3.35	678.22	102
4	761.3	79.17	2.33	682.13	148
5	756.02	77.50	2.33	678.52	140

Groundwater Wells

Date: 8/11/1998

Well #	TOC Elevation (ft.MSL)	Depth to Water (ft.BTOC)	Approximate Stick-up (ft.)	Water Level Elevation (ft.MSL)	Well Depth (ft.BGS)
WEL Wells					
1	778.8	24.29	1.58	754.51	33
2	775.35	27.22	1.67	748.13	35
3	771.73	28.55	2.33	743.18	35
4	765.94	31.11	2.80	734.83	51
DMW Wells					
1B	881.90	40.06	1.50	841.84	63
2	777.05	26.42	2.42	750.63	43
3	791.00	69.35	1.50	721.65	73
7	744.18	13.85	3.17	730.33	24
8	746.80	11.45	3.50	735.35	27
9	749.70	17.98	1.92	731.72	28
11A	784.45	93.20	1.00	691.25	114
12A	786.40	95.16	2.00	691.24	112
13A	782.46	91.92	2.67	690.54	110
14	751.30	15.33	2.16	735.97	28
15	756.19	11.82	3.67	744.37	25
16	756.08	28.26	3.08	727.82	68
20A	753.36	9.08	1.25	744.28	24
CB Wells					
8	805.94	dry	1.20	<790	14
8C1	806.02	31.48	1.90	774.54	44
9	839.05	22.48	2.00	816.57	46
10	810.72	17.28	2.00	793.44	20
26	819.01	18.20	1.75	800.81	19
33	807.20	29.66	1.75	777.54	49
53	800.62	44.85	1.75	<750	49
54	797.26	dry	2.00	<766	29
55	795.40	dry	0.33	<750	45
55SH	797.00	dry	1.50	<772	24
PZ Wells					
1	754.92	12.76	1.84	742.16	50
2	753.46	18.18	2.18	735.28	50
2A	753.05	10.42	1.20	742.63	33
3	750.97	15.46	2.00	735.51	49
3A	750.69	11.48	2.00	739.21	35
4	750.47	23.30	2.67	727.17	50
4A	749.73	8.26	2.00	741.47	30
4B	750.00	8.34	2.00	741.66	33
4C	750.35	7.06	1.82	743.29	33
5	749.00	27.75	2.42	721.25	50
5A	748.22	11.82	2.00	736.40	26
6	747.52	dry	1.67	<696	50
6A	747.20	13.58	1.67	733.62	29
7	746.85	27.58	2.00	719.27	50
8	750.51	26.56	2.67	723.95	50

Groundwater Wells

Date: 8/11/1998

Well #	TOC Elevation (ft.MSL)	Depth to Water (ft.BTOC)	Approximate Stick-up (ft.)	Water Level Elevation (ft.MSL)	Well Depth (ft.BGS)
9	749.71	7.06	2.33	742.65	40
10	756.06	22.52	2.08	733.54	50
11	750.71	21.21	1.62	729.50	45
20B	754.08	9.94	2.21	744.14	23
17c	825.64	20.46	2.50	805.18	34
PZR Wells					
1	806.91	50.94	NM	755.97	60
2	805.86	50.72	NM	755.14	60
3	805.05	45.06	NM	759.99	60
4	803.94	44.00	NM	759.94	60
5	755.73	22.44	NM	733.29	45
6	757.09	28.98	NM	728.11	45
Other Wells					
DOP-1	747.49	64.14	3.71	683.35	270
DW-1	754.09	NM	NM	<661	93
OWR Wells					
1D	739.59	57.78	2.00	681.81	65
1S	738.89	13.64	2.00	725.25	35
2D	756.99	62.31	2.00	694.68	108
2S	757.46	10.47	2.25	746.99	35
3D	759.76	dry	2.00	<693	65
3S	760.48	10.85	1.92	749.63	35
4D	746.03	67.33	4.00	678.70	80
5D	804.93	48.84	2.00	756.09	65
6D	736.79	52.16	2.00	684.63	65
7D	774.49	60.83	2.00	713.66	65
8S	765.17	13.76	2.00	741.41	35
9S	753.09	37.67	2.00	715.42	50

Note: (Silt) denotes that the bottom of the well was silted in
(S.E.) denotes surface elevation measurement, rather than T.O.C.
(NM) denotes not measured
TOC Elevations taken from well survey conducted in April 1997

Interceptor Wells

Date	8/11/1998				
IW Well #	TOC Elevation	Depth to Water (ft.BTOC)	Water Level Elevation (ft.MSL)	Well Depth (ft.BTOC)	Comments
1	821.18	8.22	812.96	26	
2	815.27	24.24	791.03	25	
3	810.59	13.54	797.05	25	
4	799.88	3.14	796.74	25	
5	805.46	57.92	747.54	68	
6	803.84	49.48	754.36	68	
7	794.63	dry	<754	40	
8	798.02	31.54	766.48	40	
9	801.03	45.20	755.83	50	
10	801.93	41.92	760.01	68	
11	804.62	59.50	745.12	68	
12	797.86	48.30	749.56	50	
13	795.74	32.30	763.44	50	
14	754.95	37.00	717.95	46	
15	756.73	34.10	722.63	45	
16	746.95	35.76	711.19	46	
17	746.7	44.32	702.38	48	
18	748.77	46.42	702.35	49	
19	749.45	3.52	745.93	49	
20	750.84	19.34	731.50	50	
21	752.56	10.67	741.89	50	

Groundwater Wells

Date: 9/28/1998

Well #	TOC Elevation (ft.MSL)	Depth to Water (ft.BTOC)	Approximate Stick-up (ft.)	Water Level Elevation (ft.MSL)	Well Depth (ft.BGS)
OW Wells					
1	812.71	19.10	1.25	793.61	25
2	807.69	18.64	1.75	789.05	24
3	805.25	dry	3.20	<778	24
4	798.57	dry	1.50	<770	27
5	773.02	19.73	2.33	753.29	65
6A	791.62	39.90	2.75	751.72	43
7	785.81	37.42	4.35	748.39	43
8A	749.16	16.17	2.84	732.99	22
9	738.36	22.94	2.40	715.42	40
10	736.87	23.03	2.16	713.84	40
11	825.36	5.75	1.00	819.61	14
12	835.34	28.00	3.50	807.20	35
13	805.16	dry	1.80	<760	43
14	806.98	dry	3.75	<757	46
15	766.90	14.74	2.84	752.16	40
16A	779.74	18.09	2.00	761.65	30
17	812.29	dry	2.00	<770	40
18	750.47	12.08	2.95	738.39	28
19	748.72	11.15	2.50	737.57	33
20	747.62	7.98	2.48	739.64	23
21	742.83	13.35	3.50	729.48	34
22	745.57	16.19	3.50	729.38	35
23	747.53	9.46	2.83	738.07	23
24	746.15	9.44	2.47	736.71	29
25	800.21	21.85	2.50	778.36	37
BR Wells					
1	897.46	NM	4.45	<582	311
2	865.22	bailer @ 67.57'	4.20	<680	101
3	827.58	NM	2.80	<567	258
4	790.74	119.47	2.00	<568	220
5	764.10	85.59	0.80	<614	149
SA Wells					
6	815.56	NM	2.00	<763	50
22	792.84	24.66	2.84	768.18	24
64	748.65	25.76	2.42	722.89	24
85 (CB-85)	736.37	12.89	2.75	723.48	30
SBP Wells					
1	758.17	83.66	2.62	674.51	157
2	749.40	75.72	2.33	673.68	140
3	744.41	70.96	3.35	673.45	102
4	761.3	83.26	2.33	678.04	148
5	756.02	82.35	2.33	673.67	140

Groundwater Wells

Date: 9/28/1998

Well #	TOC Elevation (ft.MSL)	Depth to Water (ft.BTOC)	Approximate Stick-up (ft.)	Water Level Elevation (ft.MSL)	Well Depth (ft.BGS)
WEL Wells					
1	778.8	25.47	1.58	753.33	33
2	775.35	29.61	1.67	745.74	35
3	771.73	29.87	2.33	741.86	35
4	765.94	33.18	2.80	732.76	51
DMW Wells					
1B	881.90	43.15	1.50	838.75	63
2	777.05	29.92	2.42	747.13	43
3	791.00	70.81	1.50	720.19	73
7	744.18	14.95	3.17	729.23	24
8	746.80	14.18	3.50	732.62	27
9	749.70	20.32	1.92	729.38	26
11A	784.45	95.88	1.00	688.57	114
12A	786.40	97.97	2.00	688.43	112
13A	782.46	95.07	2.67	687.39	110
14	751.30	17.31	2.16	733.99	28
15	756.19	13.59	3.67	742.60	25
16	756.08	29.75	3.08	726.33	68
20A	753.36	10.54	1.25	742.82	24
CB Wells					
8	805.94	dry	1.20	<790	14
8C1	806.02	32.26	1.90	773.76	44
9	839.05	23.38	2.00	815.67	46
10	810.72	17.84	2.00	792.88	20
26	819.01	19.27	1.75	799.74	19
33	807.20	30.47	1.75	776.73	49
53	800.62	dry	1.75	<750	49
54	797.26	dry	2.00	<766	29
55	795.48	37.74	0.33	757.74	45
55SH	797.00	dry	1.50	<772	24
PZ Wells					
1	754.92	14.00	1.84	740.92	50
2	753.46	18.59	2.18	734.87	50
2A	753.05	11.58	1.20	741.47	33
3	750.97	16.46	2.00	734.51	49
3A	750.69	12.31	2.00	738.38	35
4	750.47	25.27	2.67	725.20	50
4A	749.73	9.16	2.00	740.57	30
4B	750.00	9.67	2.00	740.33	33
4C	750.35	9.35	1.82	741.00	33
5	749.00	dry	2.42	<697	50
5A	748.22	12.70	2.00	735.52	26
6	747.52	dry	1.67	<696	50
6A	747.20	13.50	1.67	733.70	29
7	746.85	32.78	2.00	714.07	50
8	750.51	28.69	2.67	721.82	50

Groundwater Wells

Date: 9/28/1998

Well #	TOC Elevation (ft.MSL)	Depth to Water (ft.BTOC)	Approximate Stick-up (ft.)	Water Level Elevation (ft.MSL)	Well Depth (ft.BGS)
9	749.71	9.97	2.33	739.74	40
10	756.06	24.62	2.08	731.44	50
11	750.71	23.62	1.62	727.09	45
20B	754.08	11.45	2.21	742.63	23
17c	825.64	21.66	2.50	803.98	34
PZR Wells					
1	806.91	48.71	NM	758.20	60
2	805.86	46.14	NM	759.72	60
3	805.05	45.73	NM	759.32	60
4	803.94	45.01	NM	758.93	60
5	755.73	13.84	NM	741.89	45
6	757.09	11.55	NM	745.54	45
Other Wells					
DOP-1	747.49	67.2	3.71	680.29	270
DW-1	754.09	NM	NM	<661	93
OWR Wells					
1D	739.59	48.32	2.00	691.27	65
1S	738.89	17.36	2.00	721.53	35
2D	756.99	83.42	2.00	673.57	108
2S	757.46	13.07	2.25	744.39	35
3D	759.76	dry	2.00	<693	65
3S	760.48	11.96	1.92	748.52	35
4D	746.03	72.12	4.00	673.91	80
5D	804.93	45.15	2.00	759.78	65
6D	736.79	57.98	2.00	678.81	65
7D	774.49	62.37	2.00	712.12	65
8S	755.17	14.31	2.00	740.86	35
9S	753.09	37.55	2.00	715.54	50

Note: (Silt) denotes that the bottom of the well was silted in
(S.E.) denotes surface elevation measurement, rather than T.O.C.
(NM) denotes not measured
TOC Elevations taken from well survey conducted in April 1997

Interceptor Wells

Date	9/28/1998				
IW Well #	TOC Elevation	Depth to Water (ft.BTOC)	Water Level Elevation (ft.MSL)	Well Depth (ft.BTOC)	Comments
1	821.18	9.60	811.58	26	
2	815.27	20.10	795.17	25	
3	810.59	13.90	796.69	25	
4	799.88	4.11	795.77	25	
5	805.46	44.22	761.24	68	
6	803.84	44.11	759.73	68	
7	794.63	dry	<754	40	
8	798.02	39.08	758.94	40	
9	801.03	46.63	754.40	50	
10	801.93	42.90	759.03	68	
11	804.62	47.02	757.60	68	
12	797.86	51.14	746.72	50	
13	795.74	31.10	764.64	50	
14	754.95	11.15	743.80	46	
15	756.73	9.34	747.39	45	measured 9/15/98
16	746.95	12.91	734.04	46	
17	746.7	6.43	740.27	48	
18	748.77	18.74	730.03	49	
19	749.45	7.35	742.10	49	
20	750.84	13.14	737.70	50	
21	752.56	11.24	741.32	50	

APPENDIX D

Groundwater Purging and Sample Collection Forms

Golder Associates

MONITORING WELL PURGING LOG

CB-85

Date	Time	Well #	Depth to Water	Purging Time	Well Wizard Unit
7/24/98	16:10	CB-85	9.85'	on 16:20 (7/24) off 10:00 (7/28)	12811

Well Depth ≃ 40.0 — Volume in Well 4.8 gal

Well Diameter 2" — Evacuation Rate ≃ 40 ml/min

Water Column 30.15 — Volume Removed ≃ 53 gal

CALCULATIONS/NOTES:

40
− 9.85
30.15
× .16
4.824
3
14.47 gal

MW-1B

Date	Time	Well #	Depth to Water	Purging Time	Well Wizard Unit
7/24/98	12:35	MW-1B	35.2	on 7/24 12:35 off 7/28 07:45	12140

Well Depth ≃ 63.0' — Volume in Well 4.45

Well Diameter 2" — Evacuation Rate 20-72 ml/min

Water Column 27.8' — Volume Removed 33 gal

CALCULATIONS/NOTES:

63.0
−35.2
27.8
× .16
4.448
3
13.34

Golder Associates

MONITORING WELL PURGING LOG

WEL-1

Date	Time	Well #	Depth to Water	Purging Time	Well Wizard Unit
10-15-98	10:00	WEL-1	31.82	on NA	NA
				off NA	

Well Depth 34.50 — Volume in Well 0.43 gal

Well Diameter 2" — Evacuation Rate bailed → DRY

Water Column 2.68 — Volume Removed ≈ 4 gal → DRY

CALCULATIONS/NOTES:

34.50
31.82
2.68
1/6
0.428
3
1.29

WEL-2

Date	Time	Well #	Depth to Water	Purging Time	Well Wizard Unit
10-16-98	10:30	WEL-2	29.61	on NA	NA
				off NA	

Well Depth 35.01 — Volume in Well 0.864

Well Diameter 29.61 — Evacuation Rate bailed → DRY

Water Column 5.4 — Volume Removed ≈ 4.5 gal → DRY

CALCULATIONS/NOTES:

35.01
29.61
5.4
1/6
.864
3
2.592

Golder Associates

MONITORING WELL PURGING LOG

WEL-3

Date	Time	Well #	Depth to Water	Purging Time	Well Wizard Unit
10-15-98	0900	WEL-3	29.87	on NA off NA	NA

Well Depth 37.95 — Volume in Well 1.24 gal

Well Diameter 2" — Evacuation Rate bailed → DRY

Water Column 8.08 — Volume Removed ≈ 5 gal → DRY

CALCULATIONS/NOTES:

37.95
29.87
8.08
.16
1.24
3
3.88

WEL-4

Date	Time	Well #	Depth to Water	Purging Time	Well Wizard Unit
10-14-98	10:00	WEL-4	41.95	on 10:10 off	11505

Well Depth 50.82 — Volume in Well 1.42

Well Diameter 41.95 — Evacuation Rate ≈ 7 ml/min

Water Column 8.87 — Volume Removed ≈ 10 gal → DRY

CALCULATIONS/NOTES:

50.82
-41.95
8.87
.16
1.42
3
4.26

Golder Associates

MONITORING WELL PURGING LOG

OWR-9S

Date	Time	Well #	Depth to Water	Purging Time	Well Wizard Unit
8-1-98	11:10	OWR-9S	37.55	on 11:15 (8/1) 3 went dry periodically off 11:30 (8/4)	900121

Well Depth ≃ 52.0 — Volume in Well 2.31

Well Diameter 2" — Evacuation Rate ≃ 70 ml/min

Water Column 14.45 — Volume Removed ≃ 30 gal

CALCULATIONS/NOTES:

52
37.55
14.45
x .16
2.312
x 3
6.94

OWR-1S

Date	Time	Well #	Depth to Water	Purging Time	Well Wizard Unit
8-6-98	10:10	OWR-1S	17.36	on 10:10 (8-6) off 10:15 (8-10)	11505

Well Depth ≃ 37' — Volume in Well 3.14

Well Diameter 2" — Evacuation Rate ≃ 70 ml/min

Water Column 19.64 — Volume Removed ≃ 25 gal

CALCULATIONS/NOTES:

37
- 17.36
19.64
x .16
3.14
x 3
9.43

Golder Associates

MONITORING WELL PURGING LOG

OWR-7D

Date	Time	Well #	Depth to Water	Purging Time	Well Wizard Unit
8-1-98	OWR-7D ←	10:10	62.37	on 10:30 (8/1)	12811
				off 11:00 (8/3)	vent day periodically

Well Depth ≈ 67.0 — Volume in Well .741 gal

Well Diameter 2" — Evacuation Rate ≈ 70ml/min

Water Column 4.63 — Volume Removed ≈ 20 gal

CALCULATIONS/NOTES:

67
- 62.37
4.63
x .16
.741
x 3
2.2

OWR-8S

Date	Time	Well #	Depth to Water	Purging Time	Well Wizard Unit
8-1-98	10:20	OWR-8S	14.31	on 10:35 (8/1)	12140
				off 7:15 (8/3)	

Well Depth ≈ 37' — Volume in Well 363

Well Diameter 2" — Evacuation Rate ≈ 70ml/min

Water Column 22.69 — Volume Removed ≈ 40 gal

CALCULATIONS/NOTES:

37
- 14.31
22.69
x .16
363
x 3
10.89

Golder Associates

MONITORING WELL PURGING LOG

OWR-2D

Date	Time	Well #	Depth to Water	Purging Time	Well Wizard Unit
7-25-98	10:30	OWR-2D	83.42	on 11:00 (7/24)	900121
				off 9:00 (7/25)	

Well Depth ≃ 108'
Well Diameter 2"
Water Column 24.58
Volume in Well 3.9
Evacuation Rate ≃ 70ml/min
Volume Removed ≃ 50gal

CALCULATIONS/NOTES:

108
- 83.42
24.58
× .16
3.9
× 3
11.7

OWR-3S

Date	Time	Well #	Depth to Water	Purging Time	Well Wizard Unit
7-25-98	11:10	OWR-3S	11.96	on 11:30 (7/24)	11505
				off 10:20 (7/25)	

Well Depth ≃ 35'
Well Diameter 2"
Water Column 23.04
Volume in Well 3.68
Evacuation Rate ≃ 70ml/min
Volume Removed ≃ 55gal

CALCULATIONS/NOTES:

35'
- 11.96
23.04
× .16
3.68
× 3
11.05

Golder Associates

MONITORING WELL PURGING LOG

OWR-4D

Date	Time	Well #	Depth to Water	Purging Time	Well Wizard Unit
7-30-98	8:30	OWR-4D	66.68	on 0900	11501
				off 1400 → DRY	

Well Depth ≈ 84 ft. Volume in Well 2.77

Well Diameter 2" Evacuation Rate ≈ 70 ml/min

Water Column 17.32 Volume Removed ≈ 30 gal

CALCULATIONS/NOTES:

84.0
66.68
17.32
x.16
2.77
≈
8.31

OWR-2S

Date	Time	Well #	Depth to Water	Purging Time	Well Wizard Unit
7/30/98	9:00	OWR-2S	13.07	on 10:00 (7/30)	900121
				off 9:00 (8/3)	Clamp

Well Depth ≈ 35' Volume in Well 3.5 gal

Well Diameter 2" Evacuation Rate ≈ 70 ml/min

Water Column 21.93 Volume Removed ≈ 45 gal

CALCULATIONS/NOTES:

35.0
13.07
21.93
.16
3.5
10.5

Golder Associates

MONITORING WELL PURGING LOG

OWR-6D

Date	Time	Well #	Depth to Water	Purging Time	Well Wizard Unit
7/24/98	15:00	OWR-6D	50.54	on 7/25 14:45 off 7/28 14:40	16186

Well Depth ≈ 65.0 — Volume in Well 2.313 gal

Well Diameter 2" — Evacuation Rate 74 ml/min

Water Column 14.46 — Volume Removed ≈ 75 gal

CALCULATIONS/NOTES:

65.00
50.54
14.46
× .16
2.313
× 3
6.939 gal

OWR-10

Date	Time	Well #	Depth to Water	Purging Time	Well Wizard Unit
7/30/98	14:21	OWR-10	57.78	on 7/31 13:30 off 8/1 16:45 (1 day)	12140

Well Depth 58.94 — Volume in Well 0.19 gal

Well Diameter 2" — Evacuation Rate 22 ml/min → Dry

Water Column 1.16' — Volume Removed ≈ 6 gal

CALCULATIONS/NOTES:

58.94
− 57.78
1.16
× .16
0.19
× 3
0.57

8/1 - 15:30
8/2 - 16:04 (1 day)

Golder Associates

MONITORING WELL PURGING LOG

OW-9

Date	Time	Well #	Depth to Water	Purging Time	Well Wizard Unit
7/24/98	9:20	OW-9	19.96	on 14:00 (7/28) off 8:55 (7/28)	10969

Well Depth ≈ 40.0 — Volume in Well 3.21 gal

Well Diameter 2" — Evacuation Rate 65-70 ml/min

Water Column 20.04 — Volume Removed ≈ 70 gal

CALCULATIONS/NOTES:

40.0
19.96
20.04
× .16
3.21
× 3
9.62 gal

OW-10

Date	Time	Well #	Depth to Water	Purging Time	Well Wizard Unit
7/24/98	10:24	OW-10	19.86	on 14:55 7/25 off 13:30 7/29	16186

Well Depth 39.94' — Volume in Well 3.21 gal

Well Diameter 2" — Evacuation Rate 30-71 ml/min

Water Column 20.08 — Volume Removed 33 gal

CALCULATIONS/NOTES:

39.94
19.86
20.08
× .16
3.21
× 3
9.63

Golder Associates

MONITORING WELL PURGING LOG

OWR-5D

Date	Time	Well #	Depth to Water		Purging Time	Well Wizard Unit
8-1-98	10:30	OWR-5D	45.15	on	10:40 (8-1)	10469
				off	11:30 (8-4)	

Well Depth ≈ 67' Volume in Well 3.5

Well Diameter 2" Evacuation Rate ≈ 70 ml/min

Water Column 21.85 Volume Removed ≈ 25 gal

CALCULATIONS/NOTES:

67
- 45.15
21.85
.16
3.5
3
10.5

Date	Time	Well #	Depth to Water		Purging Time	Well Wizard Unit
				on		
				off		

Well Depth _____ Volume in Well _____

Well Diameter _____ Evacuation Rate _____

Water Column _____ Volume Removed _____

CALCULATIONS/NOTES:

Golder Associates Inc.

WATER SAMPLING LOG

Project/No. Solutia/RFI/AL Page i of 1

Site Location Anniston AL

Site/Well No. OWR-1D Coded/Replicated No. _____ Date 8-3-08 — 8-7-08

Weather Sunny, 90° Time Sampling Began 9:58 (8/3) 11:45 (8/6) 11:30 (8/4) 8:30 (8/7) 4:00 (8/5) Time Sampling Completed See remarks

EVACUATION DATA

Description of Measuring Point (MP) —

Height of MP Above/Below Ground Surface _____ MP Elevation _____

Total Sounded Depth of Well Below MP 58.44 Water Level Elevation _____

Held _____ Depth to Water Below MP 57.28 Diameter of Casing 2

Wet _____ Water Column in Well 1.16 Gallons Pumped/Bailed Prior to Sampling 6 gal — Dry

Gallons per Foot .16

Gallons in Well 0.19 Sampling Pump Intake Setting (feet below ground surface) —

Evacuation Method Teflon bladder pump

SAMPLING DATA/FIELD PARAMETERS

Color Clear Odor none Appearance V.sl. turbid Temperature 25.4, 25.4 (8/5) °F/°C 24.0, 24.4, 24.3, 24.5 (8/3) 25.0, 24.2 (8/4) 24.9, 25.0 (8/6) 24.1, 23.6 (8/7)

Other (specify) (PID, FID, etc.) D.O. - 0.63 mg/L Redox - (17.4 mV) (11:10)

Specific Conductance, ~~mS~~ µmhos/cm .295, .324 (8/4) .287, .324 (8/5) .244, .353 (8/6) .351, .310 .492, .465 (8/3) .544, .53 (8/7) 7.01, 7.41 (8/4) 6.97, 7.41 (8/5) 6.88, 7.29 (8/7)

pH 6.87, 7.55, 7.55, 7.48 (8/3) 6.84, 7.02 (8/6) (8/6)

~~Sampling Method and Material~~ Turb (NTU) 14.1, 29.4, 32.9, 32.1 (8/3) 9.51, 6.86 (8/4) 9.17, 6.35 (8/5) 8.13, 6.78 (8/6) 8.33, 11.24 (8/7)

CONTAINER DESCRIPTION

Constituents Sampled (From Lab ✓ or G&M ____)	Preservative
See Tables 1, 2 attached	

Remarks D.O. & Redox resampled (11:10) due to field meter inaccuracy. Very little GW volume, went dry repeatedly, sampled over 5 day period, reduced parameter measurements to save GW.

Sampling Personnel MAC, DLH

Golder Associates Inc.

WATER SAMPLING LOG

Project/No. Solutia/RFI/AL Page 1 of 1

Site Location Anniston AL

Site/Well No. OWR-15 Coded/Replicated No. _____ Date 8-10-98

Weather sun 85° Time Sampling Began 10:15 Time Sampling Completed 16:00

EVACUATION DATA

Description of Measuring Point (MP) Top of casing

Height of MP Above/Below Ground Surface – MP Elevation –

Total Sounded Depth of Well Below MP ≈ 37' Water Level Elevation –

Held ____ Depth to Water Below MP ≈ 17.36 Diameter of Casing 2"

Wet ____ Water Column in Well 19.64 Gallons Pumped/Bailed Prior to Sampling ≈ 25

Gallons per Foot .16

Gallons in Well 3.14 Sampling Pump Intake Setting (feet below ground surface) –

Evacuation Method Teflon bladder pump

SAMPLING DATA/FIELD PARAMETERS

Color none Odor sl. septic Appearance clear Temperature 22.2, 21.1, 20.9, 20.6 °F/°C

Other (specific ion; OVA; HNU; etc.) D.O 0.73 mg/l Redox - (25 mV) (11/10)

Specific Conductance, ~~[illegible]~~ ms/cm 0.183, 0.166, 0.151, 0.152 ph 5.21, 5.34, 5.46, 5.47 Turbidity (NTU) 0.85, 1.05, 0.84, 0.84

Sampling Method and Material _____

CONTAINER DESCRIPTION

Constituents Sampled	From Lab ✓ or G&M ____	Preservative
See Tables 1 & 2 attached		

Remarks D.O. & Redox were resampled due to field meter inaccuracy

Sampling Personnel MAC, DLH

Golder Associates Inc.

WATER SAMPLING LOG

Project/No. Solutia/RFI/AL

Page 1 of 1

Site Location Anniston AL

Site/Well No. OWR-25

Coded/Replicated No. _____

Date 8-3-98

Weather Sun, 90°

Time Sampling Began 9:20

Time Sampling Completed 14:45

EVACUATION DATA

Description of Measuring Point (MP) Top of Casing

Height of MP Above/Below Ground Surface —

MP Elevation —

Total Sounded Depth of Well Below MP ≈ 35'

Water Level Elevation —

Held _____ Depth to Water Below MP 13.07

Diameter of Casing 2"

Wet _____ Water Column in Well 21.93

Gallons Pumped/Bailed Prior to Sampling ≈ 45

Gallons per Foot 0.16

Gallons in Well 3.5

Sampling Pump Intake Setting (feet below ground surface) —

Evacuation Method Teflon bladder pump

SAMPLING DATA/FIELD PARAMETERS

Color Clear Odor none Appearance Clear Temperature 26.0, 22.7 °F/°C 26.0, 23.0

Other (specific ion; OVA; HNU; etc.) Turbidity (NTU) 2.7, 1.16, 1.09, 1.35

Specific Conductance, umhos/cm .425, .425, .425, .425 ph 5.83, 5.85, 5.57, 5.65

~~Sampling Method and Material~~ D.O. 0.79 mg/l Redox - 110 mV (11/10)

CONTAINER DESCRIPTION

Constituents Sampled	From Lab ✓ or G&M _____	Preservative
See Tables 1 & 2 attached		

Remarks D.O. & Redox were resampled due to field meter inaccuracy

Sampling Personnel DLH, MAC

Golder Associates Inc.

WATER SAMPLING LOG

Project/No. Solutia/RFI/AL

Page 1 of 1

Site Location Anniston, AL

Site/Well No. OWR-2D

Coded/Replicated No. _____

Date 7-30-98

Weather Partly Cloudy, 90°

Time Sampling Began 10:50

Time Sampling Completed 16:20

EVACUATION DATA

Description of Measuring Point (MP) Top of casing

Height of MP Above/Below Ground Surface –

MP Elevation –

Total Sounded Depth of Well Below MP ≈ 108'

Water Level Elevation –

Held _____ Depth to Water Below MP > 83.42

Diameter of Casing 2" >

Wet _____ Water Column in Well 24.58

Gallons Pumped/Bailed Prior to Sampling ≈ 50 gal

Gallons per Foot .16

Gallons in Well 39

Sampling Pump Intake Setting (feet below ground surface) –

Evacuation Method Teflon bladder pump

SAMPLING DATA/FIELD PARAMETERS

Color clear Odor none Appearance clear Temperature 25.1, 24.9 25.6, 25.2 °F/°C

Other (specific ion; OVA; HNU; etc.) D.O. 0.6 mg/l Redox (-133 mV) (11/10)

Specific Conductance, ~~ohms~~ mS/cm 0.302, 0.294, 0.292 0.325 ph 8.45, 7.94, 8.20, 7.97

Turbidity (NTU) - 1.58, 1.92, 1.62, 2.01

Sampling Method and Material _____

CONTAINER DESCRIPTION

Constituents Sampled	From Lab ✓ or G&M _____	Preservative
See Tables 1 & 2 attached		

Remarks D.O. & Redox resampled due to field meter inaccuracy

Sampling Personnel MAC, DLH

Golder Associates Inc.

WATER SAMPLING LOG

Project/No. Solutia/RFI/AL

Page 1 of 1

Site Location Anniston, AL

Site/Well No. OWR-35

Coded/Replicated No. _____

Date 7/30/98

Weather Partly cloudy 80°

Time Sampling Began 10:40

Time Sampling Completed 16:30

EVACUATION DATA

Description of Measuring Point (MP) Top of Casing

Height of MP Above/Below Ground Surface _____

MP Elevation —

Total Sounded Depth of Well Below MP ≈ 35

Water Level Elevation —

Held _____ Depth to Water Below MP 11.96

Diameter of Casing 2"

Wet _____ Water Column in Well 23.04

Gallons Pumped/Bailed Prior to Sampling = 55 gal

Gallons per Foot .16

Gallons in Well 3.68

Sampling Pump Intake Setting (feet below ground surface) —

Evacuation Method Teflon Bladder Pump

SAMPLING DATA/FIELD PARAMETERS

Color clear Odor none Appearance ~~[illegible]~~ clear Temperature 23.8 23.5 23.7 23.5 °F/°C

Other (specific ion; OVA; HNU; etc.) D.O. - 0.35 mg/l Redox - (30 mv) 11/10

Specific Conductance, ~~umhos~~ mS/cm 0.162, 0.163, 0.162 ph 5.38, 5.22, 5.31, 5.32

0.34 (11/10) 0.162

Sampling Method and Material [redacted]

CONTAINER DESCRIPTION

Constituents Sampled	From Lab ✓ or G&M _____	Preservative
See Tables 1 & 2 attached		

Remarks D.O. & Redox resampled due to field meter inaccuracy

Sampling Personnel MAC, DLH

Golder Associates Inc.

WATER SAMPLING LOG

Project/No. Solutia/RFI/AL Page 1 of 1

Site Location Anniston, AL

Site/Well No. OWR-4D Coded/Replicated No. _____ Date 7-31-98

Weather Cloudy ~ 80°F Time Sampling Began 10:30 Time Sampling Completed 19:10

EVACUATION DATA

Description of Measuring Point (MP) —

Height of MP Above/Below Ground Surface — MP Elevation —

Total Sounded Depth of Well Below MP 84 Water Level Elevation —

Held ____ Depth to Water Below MP 66.68 Diameter of Casing 2"

Wet ____ Water Column in Well 11.92 Gallons Pumped/Bailed Prior to Sampling ~30 gal

Gallons per Foot .16

Gallons in Well 2.77 Sampling Pump Intake Setting (feet below ground surface) —

Evacuation Method Teflon bladder pump

SAMPLING DATA/FIELD PARAMETERS

Color Clear Odor none Appearance clear Temperature 23.5, 23.0 21.4, 22.4 °F/°C

Other (specific ion, OVA, HNU, etc.) D.O. - 0.74 mg/l Redox -(121 mv) (11/10)

Specific Conductance, ~~umhos~~ mS/cm 0.207, 0.174 (0.311) 11/10 0.181, 0.182 ph 9.28, 8.95, 8.95, 9.00 Turbidity (NTU) 1.60, 2.51, 3.33, 3.17

Sampling Method and Material _____

CONTAINER DESCRIPTION

Constituents Sampled	From Lab ✓ or G&M ____	Preservative
See Tables 1 & 2 attached		

Remarks D.O. & Redox were re-sampled due to field meter inaccuracy

Sampling Personnel MAC, KSD

Golder Associates Inc.

WATER SAMPLING LOG

Project/No. Solutia/RFI/AL — Page 1 of 1

Site Location Anniston, AL

Site/Well No. OWR-5D — Coded/Replicated No. — Date 8-4-98

Weather Sun 80° — Time Sampling Began 11:30 — Time Sampling Completed 16:10

EVACUATION DATA

Description of Measuring Point (MP) Top of Casing

Height of MP Above/Below Ground Surface — — MP Elevation —

Total Sounded Depth of Well Below MP 167 — Water Level Elevation —

Held — Depth to Water Below MP 45.15 — Diameter of Casing 2"

Wet — Water Column in Well 21.85 — Gallons Pumped/Bailed Prior to Sampling ≈ 25

Gallons per Foot .16

Gallons in Well 3.5 — Sampling Pump Intake Setting (feet below ground surface) —

Evacuation Method Teflon bladder pump

SAMPLING DATA/FIELD PARAMETERS

Color yellow/green Odor septic Appearance yellow/clear Temperature 23.1, 23.2, 23.1 °F/(C)

Other (specific ion; OVA; HNU; etc.) D.O. - 0.59 mg/l Redox - 123 mV (11/10)

Specific Conductance, mS/cm 1.53, 1.55, 1.55, 1.55 — ph 4.33, 4.29, 4.30, 4.29, 4.72 (11/10) — Turbidity (NTU) - 0.86, 0.75, 0.48, 0.76

Sampling Method and Material

CONTAINER DESCRIPTION

Constituents Sampled	From Lab ✓ or G&M	Preservative
See Tables 1 & 2 attached		

Remarks D.O. & Redox resampled due to field meter inaccuracy

Sampling Personnel DLH, MAC

Golder Associates Inc.

WATER SAMPLING LOG

Project/No. Solutia/RFI/AL Page 1 of 1

Site Location Anniston, AL

Site/Well No. OWR-6D Coded/Replicated No. _____ Date 7-28-98

Weather Cloudy, 80°F Time Sampling Began 8:20 Time Sampling Completed 14:40

EVACUATION DATA

Description of Measuring Point (MP) Top of Casing

Height of MP Above/Below Ground Surface _____ MP Elevation —

Total Sounded Depth of Well Below MP ≈ 65' Water Level Elevation —

Held _____ Depth to Water Below MP 50.54 Diameter of Casing 2"

Wet _____ Water Column in Well 14.46 Gallons Pumped/Bailed Prior to Sampling ≈ 75 gal

Gallons per Foot .16

Gallons in Well 2.3 Sampling Pump Intake Setting (feet below ground surface) —

Evacuation Method Teflon Bladder pump

SAMPLING DATA/FIELD PARAMETERS

Color none Odor none Appearance clear Temperature 22.0, 22.1, 21.7, 21.7 °F/(C)

Other (specific ion; OVA; HNU; etc.) D.O. - 0.86 mg/l Redox 86 mV (11/14)

Specific Conductance, ~~umhos~~ mS/cm 1.43, 1.38, 1.40, 1.40 ph 6.18, 6.53, 6.70, 6.78 Turbidity (NTU) 2.2, 1.5, 1.6, 1.9

Sampling Method and Material _____

CONTAINER DESCRIPTION

Constituents Sampled	From Lab ✓ or G&M _____	Preservative
See Tables 1 & 2 attached		

Remarks D.O. & Redox resampled due to field meter inaccuracy.

Sampling Personnel CDH, MAC

Golder Associates Inc.

WATER SAMPLING LOG

Project/No. Solutia/RFI/AL

Page 1 of 1

Site Location Anniston AL

Site/Well No. OWR-7D

Coded/Replicated No. _____

Date 8-5-98

Weather clear 95°

Time Sampling Began 11:07 (8/5) 8:45 (8/6)

Time Sampling Completed 18:35 (8/5) 12:20 (8/6)

EVACUATION DATA

Description of Measuring Point (MP) Top of casing

Height of MP Above/Below Ground Surface —

MP Elevation —

Total Sounded Depth of Well Below MP ≈ 67

Water Level Elevation -

Held _____ Depth to Water Below MP 62.37

Diameter of Casing 2"

Wet _____ Water Column in Well 4.63

Gallons Pumped/Bailed Prior to Sampling ≈ 20

Gallons per Foot .16

Gallons in Well 0.75

Sampling Pump Intake Setting (feet below ground surface) —

Evacuation Method Teflon bladder pump

SAMPLING DATA/FIELD PARAMETERS

Color Clear Odor ND Appearance clear Temperature (25.4, 24.5, 24.6, 24.6) → 8/5 °F (23.2, 24.1, 24.2, 23.4) → 8/6

Other (specific ion; OVA, HNU, etc.) D.O. 4.50 mg/l Redox 4 mv (8/5)

Specific Conductance, ~~mS~~/cm 0.77, 0.78, 0.73, 0.62 (8/5) (0.97 + 1/10) 0.72, 0.68, 0.75, 0.86 (8/6)

ph 11.28, 9.82, 9.32, 8.2 (8/5) 9.86, 9.45, 10.01, 9.73 (8/6)

Turb. (NTU) 1.65, 1.78, 1.82, 1.70 (8/5) 1.89, 2.05, 2.20, 1.98 (8/6)

Sampling Method and Material _____

CONTAINER DESCRIPTION

Constituents Sampled	From Lab ✓ or G&M	Preservative
See Tables 1 & 2 attached		

Remarks D.O. & Redox resampled due to field meter inaccuracy - Well went dry periodically - sampled over 2 days

Sampling Personnel DLH

Golder Associates Inc.

WATER SAMPLING LOG

Project/No. Solutia/RFI/AL

Page 1 of 1

Site Location Anniston AL

Site/Well No. OWR-85

Coded/Replicated No. _____

Date 8-3-98

Weather Sun, 90°

Time Sampling Began 9:15

Time Sampling Completed 14:15

EVACUATION DATA

Description of Measuring Point (MP) Top of Casing

Height of MP Above/Below Ground Surface —

MP Elevation —

Total Sounded Depth of Well Below MP ≈ 37'

Water Level Elevation —

Held _____ Depth to Water Below MP 14.31

Diameter of Casing 2"

Wet _____ Water Column in Well 22.64

Gallons Pumped/Bailed Prior to Sampling ≈ 40 gal

Gallons per Foot .16

Gallons in Well 3.63

Sampling Pump Intake Setting (feet below ground surface) —

Evacuation Method Teflon bladder pump

SAMPLING DATA/FIELD PARAMETERS

Color Sl. yellow/green Odor Septic Appearance clear Temperature 26.3, 22.8 23.0, 22.9 °F/°C

Other (specific ion; OVA; HNU; etc.) D.O. - 1.36 mg/l Redox - 43 mol (11/10)

Turb. (NTU) - 2.2, 1.9, 1.6, 1.8

Specific Conductance, ~~umhos~~ mS/cm 1.13, 1.14, 0.946, 1.08 (1.0 11/10) ph 4.52, 4.63, 4.57, 4.52 (7.51 11/10)

Sampling Method and Material _____

CONTAINER DESCRIPTION

Constituents Sampled	From Lab ✓ or G&M _____	Preservative
See Tables 1 & 2 attached		

Remarks D.O. & Redox resampled due to field meter inaccuracy

Sampling Personnel DLH, MAC

Golder Associates Inc.

WATER SAMPLING LOG

Project/No. Solutia/RFI/AL

Page 1 of 1

Site Location Anniston AL

Site/Well No. DWR-95

Coded/Replicated No. _____

Date 8-4-98 — 8-7-98

Weather Sun - 88°

Time Sampling Began 11:30 - 8-4-98

Time Sampling Completed 12:00 - 8-7-98

EVACUATION DATA

Description of Measuring Point (MP) Top of casing

Height of MP Above/Below Ground Surface —

MP Elevation —

Total Sounded Depth of Well Below MP ≈52'

Water Level Elevation —

Held _____ Depth to Water Below MP 37.55'

Diameter of Casing 2"

Wet _____ Water Column in Well 14.45

Gallons Pumped/Bailed Prior to Sampling ≈30 gal

Gallons per Foot 116

Gallons in Well 2.31

Sampling Pump Intake Setting (feet below ground surface) —

Evacuation Method Teflon bladder pump

SAMPLING DATA/FIELD PARAMETERS

Color slightly yellow Odor none Appearance sl. turbid Temperature 22.9, 23.6 (8/7) F/C 24.9, 26.5, 25.3, 24.3 (8/4)

Other (specific ion, OVA, HNU, etc.) D.O. 4.46 mg/l Redox - 117 mV (16/10)

Specific Conductance, ~~umhos~~ mS/cm 0.195, 0.257, 0.287, 0.84 (8/4) 0.253, 0.294 (8/7) ph 6.92, 7.04, 7.38, 7.51 (8/4) 7.22, 7.87 (8/7)

Turbidity (NTU) 10.12, 103.4, 185.8, 174.0 (8/4) 236, 317 (8/7)

Sampling Method and Material _____

CONTAINER DESCRIPTION

Constituents Sampled	From Lab ✓ or G&M	Preservative
See Tables 1 & 2 attached		

Remarks D.O. & Redox resampled due to field meter inaccuracy. Well went dry repeatedly - sampled over period of four days - reduced parameter readings to conserve water

Sampling Personnel MAC

Golder Associates Inc.

WATER SAMPLING LOG

Project/No. Solutia / AFI / AL — Page 1 of 1

Site Location Anniston, AL

Site/Well No. MW-1B — Coded/Replicated No. — Date 7-28-98 — 7-29-98

Weather Cun - 90° — Time Sampling Began 08:27 (7/28) 09:38 (7/29) — Time Sampling Completed 13:20 (7/28) 18:40 (7/29)

EVACUATION DATA

Description of Measuring Point (MP) Top of Casing

Height of MP Above/Below Ground Surface — — MP Elevation —

Total Sounded Depth of Well Below MP 63.0 — Water Level Elevation —

Held ____ Depth to Water Below MP 35.2 — Diameter of Casing 2"

Wet ____ Water Column in Well 27.8 — Gallons Pumped/Bailed Prior to Sampling 33 gal

Gallons per Foot .16

Gallons in Well 4.45 — Sampling Pump Intake Setting (feet below ground surface) —

Evacuation Method Teflon bladder pump

SAMPLING DATA/FIELD PARAMETERS

Color clear — Odor ND — Appearance clear — Temperature 25.1, 25.0, 25.1, 25.1 (7/28) °F/C 24.8, 15.0, 25.0, 24.9 (7/29)

Other (specific ion; OVA, HNU, etc.) Redox - 40's mv D.O - 6.52 mg/l (7/28)

Specific Conductance, ~~mS~~ µmhos/cm 3.4, 2.2, 2.0, 2.0 (7/28) 2.4, 2.0, 2.2, 2.0 (7/29) — pH 5.67, 6.01, 5.71, 5.40 (7/28) 6.68, 6.60, 6.59, 5.59 (7/29) — Turbidity (NTU) 15.79, 13.50, 10.82, 11.45 7.43, 9.28, 8.15, 8.73

Sampling Method and Material ____

CONTAINER DESCRIPTION

Constituents Sampled	From Lab X or G&M	Preservative
See Tables 1 & 2 attached		

Remarks D.O. & Redox resampled due to field meter inaccuracy. Well went dry over 2 day period, sampled intermittently

Sampling Personnel KSD

Golder Associates Inc.

WATER SAMPLING LOG

Project/No. Solutia/RFI/AL Page 1 of ____

Site Location Anniston, AL

Site/Well No. CB-85 Coded/Replicated No. ____ Date 7-28-98 — 7-29-98

Weather Partly Cloudy, 92°F Time Sampling Began 10:08 (7/28) 08:43 (7/29) Time Sampling Completed 19:21 (7/28) 19:40 (7/29)

EVACUATION DATA

Description of Measuring Point (MP) Top of casing

Height of MP Above/Below Ground Surface — MP Elevation —

Total Sounded Depth of Well Below MP 40.0 Water Level Elevation —

Held ____ Depth to Water Below MP 9.85 Diameter of Casing 2"

Wet ____ Water Column in Well 30.15 Gallons Pumped/Bailed Prior to Sampling 53 gal

Gallons per Foot .16

Gallons in Well 4.8 Sampling Pump Intake Setting (feet below ground surface) —

Evacuation Method Teflon bladder pump

SAMPLING DATA/FIELD PARAMETERS

Color Clear Odor ND Appearance Clear Temperature 26.5 26.4 26.0 26.2 °F/C

Other (specific ion, OVA, HNU, etc.) Redox - (-20 mv) D.O. - (0.89 mg/L) (Taken 4/10/98)

Specific Conductance, ~~umhos~~ mS/cm 3.8 3.8 3.6 3.8 (7/28) 4.2, 4.0, 4.0, 3.8 (7/29) pH 6.43, 5.85, 6.05, 5.65 (7/28) 5.96, 5.82, 5.98, 5.97 (7/29) Turbidity 5.40, 1.58, 2.56, 2.11 (7/28) 1.81, 1.61, 1.18, 1.10 (7/29)

Sampling Method and Material ____

CONTAINER DESCRIPTION

Constituents Sampled	From Lab X or G&M ____	Preservative
See Tables 1 & 2 attached		

Remarks D.O & Redox resampled due to field meter inaccuracy - Well went dry intermittently, sampled over 2 day period

Sampling Personnel KSD, MAC

Golder Associates Inc.

WATER SAMPLING LOG

Project/No. Solutia/RFI/AL Page 1 of 1

Site Location Anniston AL

Site/Well No. OW-9 Coded/Replicated No. _____ Date 7-28-98

Weather cloudy - 85°F Time Sampling Began 8:55 Time Sampling Completed 15:20

EVACUATION DATA

Description of Measuring Point (MP) Top of casing

Height of MP Above/Below Ground Surface — MP Elevation —

Total Sounded Depth of Well Below MP 40 Water Level Elevation —

Held ____ Depth to Water Below MP 19.96 Diameter of Casing > 2"

Wet ____ Water Column in Well 20.04 Gallons Pumped/Bailed Prior to Sampling 70 gal

Gallons per Foot .16

Gallons in Well 3.21 Sampling Pump Intake Setting (feet below ground surface) —

Evacuation Method Teflon bladder pump

SAMPLING DATA/FIELD PARAMETERS

Color none Odor none Appearance clear Temperature 22.7, 22.3, 22.3, 22.2 °F/°C

Other (specific ion; OVA; HNU; etc.) Redox (-58) mv D.O. 2.08 mg/l (1/hr)

Specific Conductance, ~~mmhos~~ mS/cm .259, .245, .243, .243 ph 4.82, 4.84, 4.87, 4.86

Turbidity (ntu): 0.61, 0.49, 0.39, 0.64

Sampling Method and Material Teflon bladder pump

CONTAINER DESCRIPTION

Constituents Sampled	From Lab ✓ or G&M ____	Preservative
See Tables 1 & 2 attached		

Remarks D.O. & Redox resampled due to field meter inaccuracy.

Sampling Personnel CDH, MAC

Golder Associates Inc.

WATER SAMPLING LOG

Project/No. Solutia/RFI/AL Page 1 of 1

Site Location Anniston, AL

Site/Well No. OW-10 Coded/Replicated No. _____ Date 7-24-98 → 8-1-98

Weather cloudy, 90°

Time Sampling Began: 13:30 7/24; 9:15 7/30; 8:30 8/1 ~ 7/29 9:00

Time Sampling Completed: 15:35 7/24; 19:15 7/25; 9:00 8/1 ~ 7/29 19:00

EVACUATION DATA

Description of Measuring Point (MP): Top of Casing

Height of MP Above/Below Ground Surface: – MP Elevation: –

Total Sounded Depth of Well Below MP: 39.94 Water Level Elevation: –

Held _____ Depth to Water Below MP: 19.86 Diameter of Casing: 2"

Wet _____ Water Column in Well: 20.08 Gallons Pumped/Bailed Prior to Sampling: ≈ 33 gal

Gallons per Foot: .16

Gallons in Well: 3.21 Sampling Pump Intake Setting (feet below ground surface): –

Evacuation Method: Teflon bladder pump

SAMPLING DATA/FIELD PARAMETERS

Color: none Odor: none Appearance: clear Temperature: 26.3, 26.7, 27.1, 26.5 (7/29); 25.2, 24.6, 24.3, 24.3 (7/30); 24.1, 23.5, 22.7, 26.2 (7/31); 20.4, 19.8, 20.1, 20.5 (8/1) °F/C

Other (specific ion; OVA; HNU; etc.): D.O. 3.27 mg/L Redox -30 mV (11/10)

Specific Conductance, ~~mS~~ µmhos/cm: 1.65, 1.72, 1.67, 1.67 (7/24); 1.57, 1.59, 1.54, 1.61 (7/25); 1.53, 1.58, 1.55, 1.54 (7/31); 1.54, 1.61, 1.62, 1.62 (8/1)

pH: 4.76, 5.33, 5.35, 5.30 (7/24); 5.57, 5.79, 5.81, 5.83 (7/30); 6.05, 5.83, 5.72, 5.65 (7/31); 5.29, 5.46, 5.54, 5.57 (8/1)

Turbidity (NTU): 3.35, 3.42, 3.51, 3.49 (7/24); 3.4, 3.1, 3.6, 3.1 (7/30); 4.70, 4.75, 4.8, 4.76 (7/31); 6.69, 5.65, 4.30, 4.25 (8/1)

~~Sampling Method and Material~~

CONTAINER DESCRIPTION

Constituents Sampled	From Lab _____ or G&M _____	Preservative
See Tables 1 & 2 attached		

Remarks: D.O. & Redox resampled due to field meter inaccuracy. Well went dry numerous times, sampled intermittently over 4 day period.

Sampling Personnel: KSD, DLH, MAC

Golder Associates Inc.

WATER SAMPLING LOG

Project/No. Solutia/RFI/AL

Page 1 of 1

Site Location Anniston, AL

Site/Well No. OW-10

Coded/Replicated No. _____

Date 7-29-98 → 8-1-98

Weather cloudy, 90°

Time Sampling Began 13:30 7/29, 9:15 7/30, 8:30 8/1 ~ 7/29 9:00

Time Sampling Completed 15:35 7/29, 19:15 7/30, 9:00 8/1 ~ 7/29 19:00

EVACUATION DATA

Description of Measuring Point (MP) Top of Casing

Height of MP Above/Below Ground Surface –

MP Elevation –

Total Sounded Depth of Well Below MP 39.94

Water Level Elevation –

Held _____ Depth to Water Below MP 19.86

Diameter of Casing 2"

Wet _____ Water Column in Well 20.08

Gallons Pumped/Bailed Prior to Sampling ≈ 33 gal

Gallons per Foot .16

Gallons in Well 3.21

Sampling Pump Intake Setting (feet below ground surface) –

Evacuation Method Teflon bladder pump

SAMPLING DATA/FIELD PARAMETERS

Color none Odor none Appearance clear Temperature 26.3, 26.7, 27.1, 26.5 (7/29) 25.2, 24.6, 24.3, 24.3 (7/30) °F/°C 24.1, 23.5, 22.7, 26.2 (7/31) 20.4, 19.8, 20.1, 20.8 (8/1)

Other (specific ion; OVA; HNU; etc.) D.O. 3.27 mg/l Redox -30 mv (11/10)

Specific Conductance, ~~mmhos~~/cm 1.65, 1.72, 1.67, 1.67 (7/29) 1.57, 1.59, 1.59, 1.61 (7/30) 1.53, 1.58, 1.58, 1.59 (7/31) 1.54, 1.61, 1.62, 1.62 (8/1)

pH 4.76, 5.33, 5.35, 5.30 (7/29) 5.57, 5.79, 5.81, 5.83 (7/30) 6.05, 5.83, 5.72, 5.65 (7/31) 5.29, 5.46, 5.54, 5.57 (8/1)

~~Sampling Method and Material~~

Turbidity (NTU): 3.35, 3.42, 3.51, 3.49 (7/29) 3.4, 3.1, 3.6, 3.1 (7/30) 4.70, 4.75, 4.8, 4.76 (8/31) 6.69, 5.65, 4.30 4.25 (8/1)

CONTAINER DESCRIPTION

Constituents Sampled	From Lab _____ or G&M _____	Preservative
See Tables 1 & 2 attached		

Remarks D.O. & Redox resampled due to field meter inaccuracy. Well went dry numerous times, sampled intermittently over 4 day period.

Sampling Personnel KSD, DLH, MAC

Golder Associates Inc.

WATER SAMPLING LOG

Project/No. Solutia/RFI/AR — Page 1 of 1

Site Location Anniston, AL

Site/Well No. WEL-1 — Coded/Replicated No. ____ — Date 10-16-98 — 10-21-98

Weather Sun - 80° — Time Sampling Began 13:50 (10/16) — Time Sampling Completed 14:00 (10/20)

EVACUATION DATA

Description of Measuring Point (MP): Top of casing

Height of MP Above/Below Ground Surface: — — MP Elevation: —

Total Sounded Depth of Well Below MP: 34.50 — Water Level Elevation: —

Held ____ Depth to Water Below MP: 31.82 — Diameter of Casing: 2"

Wet ____ Water Column in Well: 2.68 — Gallons Pumped/Bailed Prior to Sampling: ≈ 4 gal → DRY

Gallons per Foot: .16

Gallons in Well: 0.43 — Sampling Pump Intake Setting (feet below ground surface): —

Evacuation Method: Stainless Steel bailer

SAMPLING DATA/FIELD PARAMETERS

Color: orange/brown — Odor: none — Appearance: opaque - Turb.) — Temperature: 16.4, 16.5 °F/(C) 16.9, 16.3

Other (specify: ion, OVA, HNU, etc.): D.O. 3.56 mg/l — Redox: -153 mV (11/10)

Specific Conductance, mS/cm: 0.196, 0.066, 0.066, 0.057 — pH: 4.05, 4.55, 4.62, 4.65 — Turbidity (NTU): 8, 10, 244, 260

Sampling Method and Material: stainless steel bailer

CONTAINER DESCRIPTION

Constituents Sampled	From Lab ✓ or G&M ____	Preservative
See Tables 1 & 2 attached		

Remarks: D.O. & Redox resampled due to field meter inaccuracy - Well continuously went dry

Sampled over 5 day period - stopped sampling field parameters to conserve water

Sampling Personnel: JSR, EGP

Golder Associates Inc.

WATER SAMPLING LOG

Project/No Solutia/RFI/AL — Page 1 of 1

Site Location Anniston AL

Site/Well No WEL-2 — Coded/Replicated No. — Date 10/16/98 — 10/21/98

Weather Sunny 80° — Time Sampling Began 14:00 (10/16) — Time Sampling Completed ~1430 (10/21)

EVACUATION DATA

Description of Measuring Point (MP) Top of casing

Height of MP Above/Below Ground Surface — — MP Elevation —

Total Sounded Depth of Well Below MP 35.01 — Water Level Elevation —

Heid — Depth to Water Below MP 29.61 — Diameter of Casing 2"

Wet — Water Column in Well 5.7 — Gallons Pumped/Bailed Prior to Sampling ~4.5 gal → DRY

Gallons per Foot .16

Gallons in Well 0.864 — Sampling Pump Intake Setting (feet below ground surface) —

Evacuation Method Stainless Steel bailer

SAMPLING DATA/FIELD PARAMETERS

Color yellow/brown — Odor none — Appearance turbid (opaque) — Temperature 20.5, 19.4 °F/C

Other (specify: PID, OVA, HNU, etc.) D.O. 305 mg/l Redox - 153 mV (11/10)

Specific Conductance, umhos/cm 0.104, 0.097 — ph 4.58, 4.52 — Turbidity (NTU): 125, 856

Sampling Method and Material Stainless Steel Bailer

CONTAINER DESCRIPTION

Constituents Sampled	From Lab ✓ or G&M	Preservative
See Tables 1 & 2 attached		

Remarks D.O. & Redox resampled due to field meter inaccuracy. Well continuously went dry - sampled over five day period - Reduced parameter measurements to conserve water

Sampling Personnel MAC

Golder Associates Inc.

WATER SAMPLING LOG

Project/No Solutia/REI/AL — Page 1 of 1

Site Location Anniston AL

Site/Well No WEL-3 — Coded/Replicated No. — Date 10-6-98 — 10-20-98

Weather Sunny 70° — Time Sampling Began 9:00 (10/16) — Time Sampling Completed 11:05 (10/20)

EVACUATION DATA

Description of Measuring Point (MP) Top of Casing

Height of MP Above/Below Ground Surface — — MP Elevation —

Total Sounded Depth of Well Below MP 37.95 — Water Level Elevation —

Held — Depth to Water Below MP 29.57 — Diameter of Casing 2"

Wet — Water Column in Well 8.08 — Gallons Pumped/Bailed Prior to Sampling ~ 5 gal → DRY

Gallons per Foot 1/6

Gallons in Well 1.29 — Sampling Pump Intake Setting (feet below ground surface) —

Evacuation Method Stainless Steel Bailer

SAMPLING DATA/FIELD PARAMETERS

Color clear — Odor slight — Appearance sl. turbid — Temperature 19.3, 23.2 °F/C

Other (specific ion, OVA, HNU, etc.) DO 1.23 mg/l Redox 111 mV (initial)

Specific Conductance, µmhos/cm 0.113, 0.093 — ph 7.62, 4.94 — Turbidity (NTU): 33.5, 530

Sampling Method and Material Stainless steel bailer

CONTAINER DESCRIPTION

Constituents Sampled	From Lab ✓ or G&M	Preservative
See Tables 1 & 2 attached		

Remarks D.O. & Redox resampled due to field meter inaccuracy - Well continuously went dry, sampled over 5 day period - stopped sampling field parameters to conserve water

Sampling Personnel MAC

Golder Associates Inc.

WATER SAMPLING LOG

Project/No. Solutia/RFI/AL

Page 1 of 1

Site Location Anniston AL

Site/Well No. WEL-4

Coded/Replicated No. _____

Date 10-15-98

Weather Sun - 80°

Time Sampling Began 12:45

Time Sampling Completed 16:30

EVACUATION DATA

Description of Measuring Point (MP) Top of casing

Height of MP Above/Below Ground Surface —

MP Elevation —

Total Sounded Depth of Well Below MP 50.82

Water Level Elevation —

Held ____ Depth to Water Below MP 41.45

Diameter of Casing 2"

Wet ____ Water Column in Well 8.87

Gallons Pumped/Bailed Prior to Sampling ≈ 10 → DRY

Gallons per Foot .16

Gallons in Well 1.42

Sampling Pump Intake Setting (feet below ground surface) ≈ 50'

Evacuation Method Teflon bladder pump

SAMPLING DATA/FIELD PARAMETERS

Color clear Odor none Appearance sl. turbid Temperature 21.6, 21.5 21.3, 21.0 °F/°C

Other (specific ion, OVA, HNU, etc.) D.O 5.35 mg/l Redox - 126 mV (11/10)

Specific Conductance, ~~umhos~~ mS/cm 0.085, 0.037, 0.041, 0.043 ph 5.01, 5.03, 5.11, 5.07 5.31 (11/10)

Turbidity (NTU) 84.0, 115.3, 42, 96

Sampling Method and Material teflon bladder pump

CONTAINER DESCRIPTION

Constituents Sampled	From Lab ✓ or G&M ____	Preservative
See Tables 1 & 2 attached		

Remarks D.O. & Redox resampled due to field meter inaccuracy.

Sampling Personnel CDH, MHC

Golder Associates Inc.

WATER SAMPLING LOG

Project/No Solutia / RFI / AL — Page 1 of 1

Site Location Anniston AL

Site/Well No. OWR-5D — Coded/Replicated No. ____ — Date 10-26-98

Weather Sunny, 75° — Time Sampling Began 11:33 — Time Sampling Completed 11:48

EVACUATION DATA

Description of Measuring Point (MP) Top of Casing

Height of MP Above/Below Ground Surface — — MP Elevation —

Total Sounded Depth of Well Below MP 70.74 — Water Level Elevation —

Held ____ Depth to Water Below MP 46.10 — Diameter of Casing 2" > > >

Wet ____ Water Column in Well 24.63 — Gallons Pumped/Bailed Prior to Sampling ≈ 15 gal

Gallons per Foot .16

Gallons in Well 3.94 — Sampling Pump Intake Setting (feet below ground surface) —

Evacuation Method Stainless Steel Bailer

SAMPLING DATA/FIELD PARAMETERS

Color yellow/green — Odor Sl. Septic — Appearance Sl. turb. — Temperature 18.4, 18.5, 18.7, 18.5 °F/(C)

Other (specify: OVA, HNU, etc.) DO. 0.57 mg/L — Redox - 123 mV (11/10)

Specific Conductance, ~~mS~~ µmhos/cm 156, 155, 159, 156 — pH 4.53, 4.57, 4.57, 4.55 — Turb - 404, 233, 246, 214

4.72 (11/10)

Sampling Method and Material Stainless Steel Bailer

CONTAINER DESCRIPTION

Constituents Sampled	From Lab ____ or G&M ____	Preservative
Additional NA parameters		

Remarks DO / Redox resampled due to field meter error.

Sampling Personnel MAC

TABLE D-1
Analyzed Constiuents Per Sample

Parameter	Units	CB-85	CB-85-F	MW-01B	MW-01B-F	OW-06A	OW-09	OW-09-F	OW-10	OW-10-F	OWR-01D	OWR-01D -F	OWR-01S	OWR-01S -F
Inorganic Indicators														
Alkalinity (to pH 4.5) as CaCO3	mg/L	■	□	■	□	■	□	□	■	□	■	□	■	□
Iron, Ferrous (2+)	mg/L	■	□	■	□	■	□	□	■	□	■	□	■	□
Nitrate-N	mg/L	■	□	■	□	■	□	□	■	□	■	□	■	□
Phenolics, Total Recoverables	mg/L	■	□	■	□	■	□	□	■	□	■	□	■	□
Phosphorus, Total	mg/L	■	□	■	□	■	□	□	■	□	■	□	■	□
Standard Plate Coun	CFU/mL	■	□	■	□	■	□	□	■	□	■	□	■	□
Sulfate as SO4	mg/L	■	□	■	□	■	□	□	■	□	■	□	■	□
Sulfide	mg/L	■	□	■	□	■	□	□	■	□	■	□	■	□
Total Dissolved Solids	mg/L	■	□	■	□	■	□	□	■	□	■	□	■	□
Total Kjeldahl Nitrogen-N	mg/L	■	□	■	□	■	□	□	■	□	■	□	■	□
Total Organic Carbon	mg/L	■	□	■	□	■	□	□	■	□	■	□	■	□
Total Organic Halogen	mg/L	■	□	■	□	■	□	□	■	□	■	□	■	□
Total Suspended Solids	mg/L	■	□	■	□	■	□	□	■	□	■	□	■	□
Metals														
Arsenic	mg/L	■	■	■	■	□	■	■	■	■	■	■	■	■
Barium	mg/L	■	■	■	■	□	■	■	■	■	■	■	■	■
Beryllium	mg/L	■	■	■	■	□	■	■	■	■	■	■	■	■
Cadmium	mg/L	■	■	■	■	□	■	■	■	■	■	■	■	■
Chromium	mg/L	■	■	■	■	□	■	■	■	■	■	■	■	■
Cobalt	mg/L	■	■	■	■	□	■	■	■	■	■	■	■	■
Lead	mg/L	■	■	■	■	□	■	■	■	■	■	■	■	■
Manganese	mg/L	■	■	■	■	□	■	■	■	■	■	■	■	■
Mercury	mg/L	■	■	■	■	□	■	■	■	■	■	■	■	■
Nickel	mg/L	■	■	■	■	□	■	■	■	■	■	■	■	■
Vanadium	mg/L	■	■	■	■	□	■	■	■	■	■	■	■	■
Organophosphorus Pesticides														
Methyl parathion	µg/L	■	□	■	□	□	■	□	■	□	■	□	■	□
Parathion	µg/L	■	□	■	□	□	■	□	■	□	■	□	■	□
Tetraethyldithiopyrophosphate (Sulfotepp)	µg/L	■	□	■	□	□	■	□	■	□	■	□	■	□

■ Analyzed
□ Not Analyzed

TABLE D-1
Analyzed Constiuents Per Sample

Parameter	Units	CB-85	CB-85-F	MW-01B	MW-01B-F	OW-06A	OW-09	OW-09-F	OW-10	OW-10-F	OWR-01D	OWR-01D -F	OWR-01S	OWR-01S -F
PCBs														
Aroclor 1016	µg/L	■	■	■	■	□	■	■	■	■	■	■	■	■
Aroclor 1221	µg/L	■	■	■	■	□	■	■	■	■	■	■	■	■
Aroclor 1232	µg/L	■	■	■	■	□	■	■	■	■	■	■	■	■
Aroclor 1242	µg/L	■	■	■	■	□	■	■	■	■	■	■	■	■
Aroclor 1248	µg/L	■	■	■	■	□	■	■	■	■	■	■	■	■
Aroclor 1254	µg/L	■	■	■	■	□	■	■	■	■	■	■	■	■
Aroclor 1260	µg/L	■	■	■	■	□	■	■	■	■	■	■	■	■
Total PCBs	µg/L	■	■	■	■	□	■	■	■	■	■	■	■	■
Semivolatile Organics														
1,2-Dichlorobenzene	µg/L	■	□	■	□	□	■	□	■	□	■	□	■	□
1,4-Dichlorobenzene	µg/L	■	□	■	□	□	■	□	■	□	■	□	■	□
2,4,5-Trichlorophenol	µg/L	■	□	■	□	□	■	□	■	□	■	□	■	□
2,4,6-Trichlorophenol	µg/L	■	□	■	□	□	■	□	■	□	■	□	■	□
2,4-Dichlorophenol	µg/L	■	□	■	□	□	■	□	■	□	■	□	■	□
4-Nitrophenol	µg/L	■	□	■	□	□	■	□	■	□	■	□	■	□
o,o,o-Triethylphosphorothioate	µg/L	■	□	■	□	□	■	□	■	□	■	□	■	□
Pentachlorophenol	µg/L	■	□	■	□	□	■	□	■	□	■	□	■	□
Phenol	µg/L	■	□	■	□	□	■	□	■	□	■	□	■	□
Volatile Organics														
1,1,2,2-Tetrachloroethane	µg/L	■	□	■	□	□	■	□	■	□	■	□	■	□
Chlorobenzene	µg/L	■	□	■	□	□	■	□	■	□	■	□	■	□
Isopropylbenzene	µg/L	■	□	■	□	□	■	□	■	□	■	□	■	□
Methylene chloride	µg/L	■	□	■	□	□	■	□	■	□	■	□	■	□

■ Analyzed
□ Not Analyzed

TABLE D-1
Analyzed Constiuents Per Sample

Parameter	Units	OWR-02D	OWR-02D -F	OWR-02S	OWR-02S -F	OWR-03S	OWR-03S -F	OWR-04D	OWR-04D -F	OWR-05D	OWR-05D -F	OWR-06D	OWR-06D -F
Inorganic Indicators													
Alkalinity (to pH 4.5) as CaCO3	mg/L	■	□	■	□	□	□	□	□	■	□	□	□
Iron, Ferrous (2+)	mg/L	■	□	■	□	□	□	□	□	■	□	□	□
Nitrate-N	mg/L	■	□	■	□	□	□	□	□	■	□	□	□
Phenolics, Total Recoverables	mg/L	■	□	■	□	□	□	□	□	■	□	□	□
Phosphorus, Total	mg/L	■	□	■	□	□	□	□	□	■	□	□	□
Standard Plate Count	CFU/mL	■	□	■	□	□	□	□	□	■	□	□	□
Sulfate as SO4	mg/L	■	□	■	□	□	□	□	□	■	□	□	□
Sulfide	mg/L	■	□	■	□	□	□	□	□	■	□	□	□
Total Dissolved Solids	mg/L	■	□	■	□	□	□	□	□	■	□	□	□
Total Kjeldahl Nitrogen-N	mg/L	■	□	■	□	□	□	□	□	■	□	□	□
Total Organic Carbon	mg/L	■	□	■	□	□	□	□	□	■	□	□	□
Total Organic Halogen	mg/L	■	□	■	□	□	□	□	□	■	□	□	□
Total Suspended Solids	mg/L	■	□	■	□	□	□	□	□	■	□	□	□
Metals													
Arsenic	mg/L	■	■	■	■	■	■	■	■	■	■	■	■
Barium	mg/L	■	■	■	■	■	■	■	■	■	■	■	■
Beryllium	mg/L	■	■	■	■	■	■	■	■	■	■	■	■
Cadmium	mg/L	■	■	■	■	■	■	■	■	■	■	■	■
Chromium	mg/L	■	■	■	■	■	■	■	■	■	■	■	■
Cobalt	mg/L	■	■	■	■	■	■	■	■	■	■	■	■
Lead	mg/L	■	■	■	■	■	■	■	■	■	■	■	■
Manganese	mg/L	■	■	■	■	■	■	■	■	■	■	■	■
Mercury	mg/L	■	■	■	■	■	■	■	■	■	■	■	■
Nickel	mg/L	■	■	■	■	■	■	■	■	■	■	■	■
Vanadium	mg/L	■	■	■	■	■	■	■	■	■	■	■	■
Organophosphorus Pesticides													
Methyl parathion	µg/L	■	□	■	□	■	□	■	□	■	□	■	□
Parathion	µg/L	■	□	■	□	■	□	■	□	■	□	■	□
Tetraethyldithiopyrophosphate (Sulfotepp)	µg/L	■	□	■	□	■	□	■	□	■	□	■	□

■ Analyzed
□ Not Analyzed

TABLE D-1
Analyzed Constituents Per Sample

Parameter	Units	OWR-02D	OWR-02D-F	OWR-02S	OWR-02S-F	OWR-03S	OWR-03S-F	OWR-04D	OWR-04D-F	OWR-05D	OWR-05D-F	OWR-06D	OWR-06D-F
PCBs													
Aroclor 1016	µg/L	■	■	■	■	■	■	■	■	■	■	■	■
Aroclor 1221	µg/L	■	■	■	■	■	■	■	■	■	■	■	■
Aroclor 1232	µg/L	■	■	■	■	■	■	■	■	■	■	■	■
Aroclor 1242	µg/L	■	■	■	■	■	■	■	■	■	■	■	■
Aroclor 1248	µg/L	■	■	■	■	■	■	■	■	■	■	■	■
Aroclor 1254	µg/L	■	■	■	■	■	■	■	■	■	■	■	■
Aroclor 1260	µg/L	■	■	■	■	■	■	■	■	■	■	■	■
Total PCBs	µg/L	■	■	■	■	■	■	■	■	■	■	■	■
Semivolatile Organics													
1,2-Dichlorobenzene	µg/L	■	□	■	□	■	□	■	□	■	□	■	□
1,4-Dichlorobenzene	µg/L	■	□	■	□	■	□	■	□	■	□	■	□
2,4,5-Trichlorophenol	µg/L	■	□	■	□	■	□	■	□	■	□	■	□
2,4,6-Trichlorophenol	µg/L	■	□	■	□	■	□	■	□	■	□	■	□
2,4-Dichlorophenol	µg/L	■	□	■	□	■	□	■	□	■	□	■	□
4-Nitrophenol	µg/L	■	□	■	□	■	□	■	□	■	□	■	□
o,o,o-Triethylphosphorothioate	µg/L	■	□	■	□	■	□	■	□	■	□	■	□
Pentachlorophenol	µg/L	■	□	■	□	■	□	■	□	■	□	■	□
Phenol	µg/L	■	□	■	□	■	□	■	□	■	□	■	□
Volatile Organics													
1,1,2,2-Tetrachloroethane	µg/L	■	□	■	□	■	□	■	□	■	□	■	□
Chlorobenzene	µg/L	■	□	■	□	■	□	■	□	■	□	■	□
Isopropylbenzene	µg/L	■	□	■	□	■	□	■	□	■	□	■	□
Methylene chloride	µg/L	■	□	■	□	■	□	■	□	■	□	■	□

■ Analyzed
□ Not Analyzed

TABLE D-1
Analyzed Constituents Per Sample

Parameter	Units	OWR-07D	OWR-07D -F	OWR-08S	OWR-08S -F	OWR-09S	OWR-09S -F	WEL-01	WEL-01 -F	WEL-02	WEL-02 -F
Inorganic Indicators											
Alkalinity (to pH 4.5) as CaCO3	mg/L	□	□	□	□	□	□	□	□	□	□
Iron, Ferrous (2+)	mg/L	□	□	□	□	□	□	□	□	□	□
Nitrate-N	mg/L	□	□	□	□	□	□	□	□	□	□
Phenolics, Total Recoverables	mg/L	□	□	□	□	□	□	□	□	□	□
Phosphorus, Total	mg/L	□	□	□	□	□	□	□	□	□	□
Standard Plate Court	CFU/mL	□	□	□	□	□	□	□	□	□	□
Sulfate as SO4	mg/L	□	□	□	□	□	□	□	□	□	□
Sulfide	mg/L	□	□	□	□	□	□	□	□	□	□
Total Dissolved Solics	mg/L	□	□	□	□	□	□	□	□	□	□
Total Kjeldahl Nitrogen-N	mg/L	□	□	□	□	□	□	□	□	□	□
Total Organic Carbon	mg/L	□	□	□	□	□	□	□	□	□	□
Total Organic Halogen	mg/L	□	□	□	□	□	□	□	□	□	□
Total Suspended Solids	mg/L	□	□	□	□	□	□	□	□	□	□
Metals											
Arsenic	mg/L	■	■	■	■	■	■	■	■	■	■
Barium	mg/L	■	■	■	■	■	■	■	■	■	■
Beryllium	mg/L	■	■	■	■	■	■	■	■	■	■
Cadmium	mg/L	■	■	■	■	■	■	■	■	■	■
Chromium	mg/L	■	■	■	■	■	■	■	■	■	■
Cobalt	mg/L	■	■	■	■	■	■	■	■	■	■
Lead	mg/L	■	■	■	■	■	■	■	■	■	■
Manganese	mg/L	■	■	■	■	■	■	■	■	■	■
Mercury	mg/L	■	■	■	■	■	■	■	■	■	■
Nickel	mg/L	■	■	■	■	■	■	■	■	■	■
Vanadium	mg/L	■	■	■	■	■	■	■	■	■	■
Organophosphorus Pesticides											
Methyl parathion	µg/L	■	□	■	□	■	□	■	□	■	□
Parathion	µg/L	■	□	■	□	■	□	■	□	■	□
Tetraethyldithiopyrophosphate (Sulfotepp)	µg/L	■	□	■	□	■	□	■	□	■	□

■ Analyzed
□ Not Analyzed

TABLE D-1
Analyzed Constituents Per Sample

Parameter	Units	OWR-07D	OWR-07D -F	OWR-08S	OWR-08S -F	OWR-09S	OWR-09S -F	WEL-01	WEL-01 -F	WEL-02	WEL-02 -F
PCBs											
Aroclor 1016	µg/L	■	■	■	■	■	■	■	■	■	■
Aroclor 1221	µg/L	■	■	■	■	■	■	■	■	■	■
Aroclor 1232	µg/L	■	■	■	■	■	■	■	■	■	■
Aroclor 1242	µg/L	■	■	■	■	■	■	■	■	■	■
Aroclor 1248	µg/L	■	■	■	■	■	■	■	■	■	■
Aroclor 1254	µg/L	■	■	■	■	■	■	■	■	■	■
Aroclor 1260	µg/L	■	■	■	■	■	■	■	■	■	■
Total PCBs	µg/L	■	■	■	■	■	■	■	■	■	■
Semivolatile Organics											
1,2-Dichlorobenzene	µg/L	■	□	■	□	■	□	■	□	■	□
1,4-Dichlorobenzene	µg/L	■	□	■	□	■	□	■	□	■	□
2,4,5-Trichlorophenol	µg/L	■	□	■	□	■	□	■	□	■	□
2,4,6-Trichlorophenol	µg/L	■	□	■	□	■	□	■	□	■	□
2,4-Dichlorophenol	µg/L	■	□	■	□	■	□	■	□	■	□
4-Nitrophenol	µg/L	■	□	■	□	■	□	■	□	■	□
O,O,O-Triethylphosphorothioate	µg/L	■	□	■	□	■	□	■	□	■	□
Pentachlorophenol	µg/L	■	□	■	□	■	□	■	□	■	□
Phenol	µg/L	■	□	■	□	■	□	■	□	■	□
Volatile Organics											
1,1,2,2-Tetrachloroethane	µg/L	■	□	■	□	■	□	■	□	■	□
Chlorobenzene	µg/L	■	□	■	□	■	□	■	□	■	□
Isopropylbenzene	µg/L	■	□	■	□	■	□	■	□	■	□
Methylene chloride	µg/L	■	□	■	□	■	□	■	□	■	□

■ Analyzed
□ Not Analyzed

TABLE D-1
Analyzed Constituents Per Sample

Parameter	Units	WEL-03	WEL-03 -F	WEL-04	WEL-04 -F
Inorganic Indicators					
Alkalinity (to pH 4.5) as CaCO3	mg/L	□	□	□	□
Iron, Ferrous (2+)	mg/L	□	□	□	□
Nitrate-N	mg/L	□	□	□	□
Phenolics, Total Recoverables	mg/L	□	□	□	□
Phosphorus, Total	mg/L	□	□	□	□
Standard Plate Count	CFU/mL	□	□	□	□
Sulfate as SO4	mg/L	□	□	□	□
Sulfide	mg/L	□	□	□	□
Total Dissolved Solids	mg/L	□	□	□	□
Total Kjeldahl Nitrogen-N	mg/L	□	□	□	□
Total Organic Carbon	mg/L	□	□	□	□
Total Organic Halogen	mg/L	□	□	□	□
Total Suspended Solids	mg/L	□	□	□	□
Metals					
Arsenic	mg/L	■	■	■	■
Barium	mg/L	■	■	■	■
Beryllium	mg/L	■	■	■	■
Cadmium	mg/L	■	■	■	■
Chromium	mg/L	■	■	■	■
Cobalt	mg/L	■	■	■	■
Lead	mg/L	■	■	■	■
Manganese	mg/L	■	■	■	■
Mercury	mg/L	■	■	■	■
Nickel	mg/L	■	■	■	■
Vanadium	mg/L	■	■	■	■
Organophosphorus Pesticides					
Methyl parathion	µg/L	■	□	■	□
Parathion	µg/L	■	□	■	□
Tetraethyldithiopyrophosphate (Sulfotepp)	µg/L	■	□	■	□

■ Analyzed
□ Not Analyzed

TABLE D-1
Analyzed Constituents Per Sample

Parameter	Units	WEL-03	WEL-03 -F	WEL-04	WEL-04 -F
PCBs					
Aroclor 1016	µg/L	■	■	■	■
Aroclor 1221	µg/L	■	■	■	■
Aroclor 1232	µg/L	■	■	■	■
Aroclor 1242	µg/L	■	■	■	■
Aroclor 1248	µg/L	■	■	■	■
Aroclor 1254	µg/L	■	■	■	■
Aroclor 1260	µg/L	■	■	■	■
Total PCBs	µg/L	■	■	■	■
Semivolatile Organics					
1,2-Dichlorobenzene	µg/L	■	□	■	□
1,4-Dichlorobenzene	µg/L	■	□	■	□
2,4,5-Trichlorophenol	µg/L	■	□	■	□
2,4,6-Trichlorophenol	µg/L	■	□	■	□
2,4-Dichlorophenol	µg/L	■	□	■	□
4-Nitrophenol	µg/L	■	□	■	□
o,o,o-Triethylphosphorothioate	µg/L	■	□	■	□
Pentachlorophenol	µg/L	■	□	■	□
Phenol	µg/L	■	□	■	□
Volatile Organics					
1,1,2,2-Tetrachloroethane	µg/L	■	□	■	□
Chlorobenzene	µg/L	■	□	■	□
Isopropylbenzene	µg/L	■	□	■	□
Methylene chloride	µg/L	■	□	■	□

■ Analyzed
□ Not Analyzed

TABLE D-2
Analytical Methods, Sample Containers and Preservations

PARAMETER	METHODOLOGY	CONTAINER	MINIMUM SAMPLE	PRESERVATION (1)
Volatile Organics-TCL + additional	SW846 8260	3-40 ml Glass	2 - 40 ml	Cool 4 deg C;HCl,pH<2
Semi-Volatile Organics-TCL+ additional	SW846 8270	2-1000 ml Amber Glass	1000 ml	Cool 4 deg C
Total PCBs	SW846 8080	2-1000 ml Amber Glass	1000 ml	Cool 4 deg C
Organophosphorous Pesticides	SW846 8141	2-1000 ml Amber Glass	1000 ml	Cool 4 deg C
Total Metals	SW846/STD MET (1)	1-500 ml Polyethylene	250 ml	Cool 4 deg C;HNO_3,pH<2
Mercury	SW846 7470 (1)	1-130 ml Glass	130 ml	Cool 4 deg C;HNO_3,pH<2
Total Phenols	EPA 9065	2-1000 ml Glass	1000 ml	Cool 4 deg C;H_2SO_4,pH<2
Total Phosphorous	EPA 365.2	2-250 ml Polyethylene	250 ml	Cool 4 deg C;H_2SO_4,pH<2
Total Organic Carbon	EPA 9060	2-125 ml Amber Glass	125 ml	Cool 4 deg C;H_2SO_4,pH<2
Total Organic Halogen	EPA 9020	2-500 ml Amber Glass	500 ml	Cool 4 deg C;H_2SO_4,pH<2
Total Kjeldahl Nitrogen (TKN)	EPA 351.3	2-250 ml Polyethylene	250 ml	Cool 4 deg C;H_2SO_4,pH<2
Nitrate	EPA 353.2	1-125 ml Polyethylene	125 ml	Cool 4 deg C
Sulfate	EPA 375.4	1-100 ml Polyethylene	100 ml	Cool 4 deg C
Sulfide	EPA 376.1	1-250 ml Polyethylene	250 ml	Cool 4 deg C; ZnAc,NaOH,pH>9
Total Dissolved Solids	EPA 160.1	1-250 ml Polyethylene	200 ml	Cool 4 deg C
Total Suspended Solids	EPA 160.2	1-500 ml Polyethylene	500 ml	Cool 4 deg C
Alkalinity	EPA 310.1	1-250 ml Polyethylene	250 ml	Cool 4 deg C
Ferrous Iron	STDMET 3500-D	1-250 ml Polyethylene	250 ml	Cool 4 deg C;HCl,pH<2
Hetertrophic Plate Count	STDMET 9215B	1-120 ml Polyethylene	120 ml	Cool 4 deg C
Turbidity	Meter	Field	NA	None
Dissolved Oxygen	Electrode/Membrane	Field	NA	None
Oxidation/Reduction Potential	Electorde	Field	NA	None
Specific Conductance	Electrode	Field	NA	None
pH	Electrode	Field	NA	None
Temperature	Thermometer	Field	NA	None

NOTES:

NA - Not Applicable

SW846 - Test Method for Evaluating Solid Waste, dated 4/92.

TCL - Target Compound List, see SW846, 3rd Edition. **Note**: Additional SVOC analytes include o,o,o-Triethylphosphorothioate. Additional VOCs include isopropyl benzene.

EPA "Methods for Chemical Analysis of Water and Waste", 1979, revised 3/83.

(1) Metals to be analyzed are arsenic, barium, beryllium, cadmium, chromium, cobalt, lead, manganese, mercury, nickel and vanadium. Metal analysis will be performed using method 6010 except for mercury (7470). In the case were method 6010 cannot meet the Quantitation Limits for certain metals (e.g., arsenic) analysis by graphite furnace method 7060 will be performed. Total/soluble iron will be analyzed using STDMET 3500-D.

APPENDIX E

Pumping Test Data and Calculations

TABLE E-1
Pumping Test Data

Pumping Wells	X Coordinate	Y Coordinate	Observation Wells and Piezometers	X Coordinate	Y Coordinate	Distance (feet)
IW-05	650320	1145612	OWR-05D	650482	1145694	182
IW-05	650320	1145612	PZR-01	650398	1145640	83
IW-05	650320	1145612	PZR-02	650464	1145685	162
IW-05	650320	1145612	PZR-03	650508	1145699	208
IW-05	650320	1145612	PZR-04	650531	1145717	236
IW-06	650459	1145678	OWR-05D	650482	1145694	28
IW-06	650459	1145678	PZR-01	650398	1145640	72
IW-06	650459	1145678	PZR-02	650464	1145685	9
IW-06	650459	1145678	PZR-03	650508	1145699	53
IW-06	650459	1145678	PZR-04	650531	1145717	82
IW-09	650589	1145737	OWR-05D	650482	1145694	116
IW-09	650589	1145737	PZR-01	650398	1145640	215
IW-09	650589	1145737	PZR-02	650464	1145685	136
IW-09	650589	1145737	PZR-03	650508	1145699	90
IW-09	650589	1145737	PZR-04	650531	1145717	62
IW-10	650528	1145710	OWR-05D	650482	1145694	49
IW-10	650528	1145710	PZR-01	650398	1145640	148
IW-10	650528	1145710	PZR-02	650464	1145685	69
IW-10	650528	1145710	PZR-03	650508	1145699	23
IW-10	650528	1145710	PZR-04	650531	1145717	8
IW-11	650392	1145644	OWR-05D	650482	1145694	103
IW-11	650392	1145644	PZR-01	650398	1145640	7
IW-11	650392	1145644	PZR-02	650464	1145685	82
IW-11	650392	1145644	PZR-03	650508	1145699	128
IW-11	650392	1145644	PZR-04	650531	1145717	157
IW-14	650322	1146388	PZR-05	650315	1146377	13
IW-14	650322	1146388	PZR-06	650252	1146344	83
IW-15	650245	1146349	PZR-05	650315	1146377	75
IW-15	650245	1146349	PZR-06	650252	1146344	8
IW-16	649188	1147360	MW-16	648804	1147136	444
IW-16	649188	1147360	PZ-04	649020	1147267	192
IW-16	649188	1147360	PZ-04A	649024	1147268	188
IW-16	649188	1147360	PZ-04B	649007	1147258	207
IW-16	649188	1147360	PZ-04C	648995	1147249	222
IW-16	649188	1147360	PZ-05	649087	1147305	114
IW-16	649188	1147360	PZ-05A	649091	1147306	110
IW-16	649188	1147360	PZ-06	649163	1147351	26
IW-16	649188	1147360	PZ-06A	649165	1147349	25
IW-16	649188	1147360	PZ-07	649233	1147388	54
IW-19	648992	1147246	MW-16	648804	1147136	218
IW-19	648992	1147246	PZ-04	649020	1147267	34
IW-19	648992	1147246	PZ-04A	649024	1147268	39
IW-19	648992	1147246	PZ-04B	649007	1147258	19
IW-19	648992	1147246	PZ-04C	648995	1147249	4
IW-19	648992	1147246	PZ-05	649087	1147305	112
IW-19	648992	1147246	PZ-05A	649091	1147306	116
IW-19	648992	1147246	PZ-06	649163	1147351	200
IW-19	648992	1147246	PZ-06A	649165	1147349	202
IW-19	648992	1147246	PZ-07	649233	1147388	280

Golder Associates Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341
Phone: (770) 496-1893

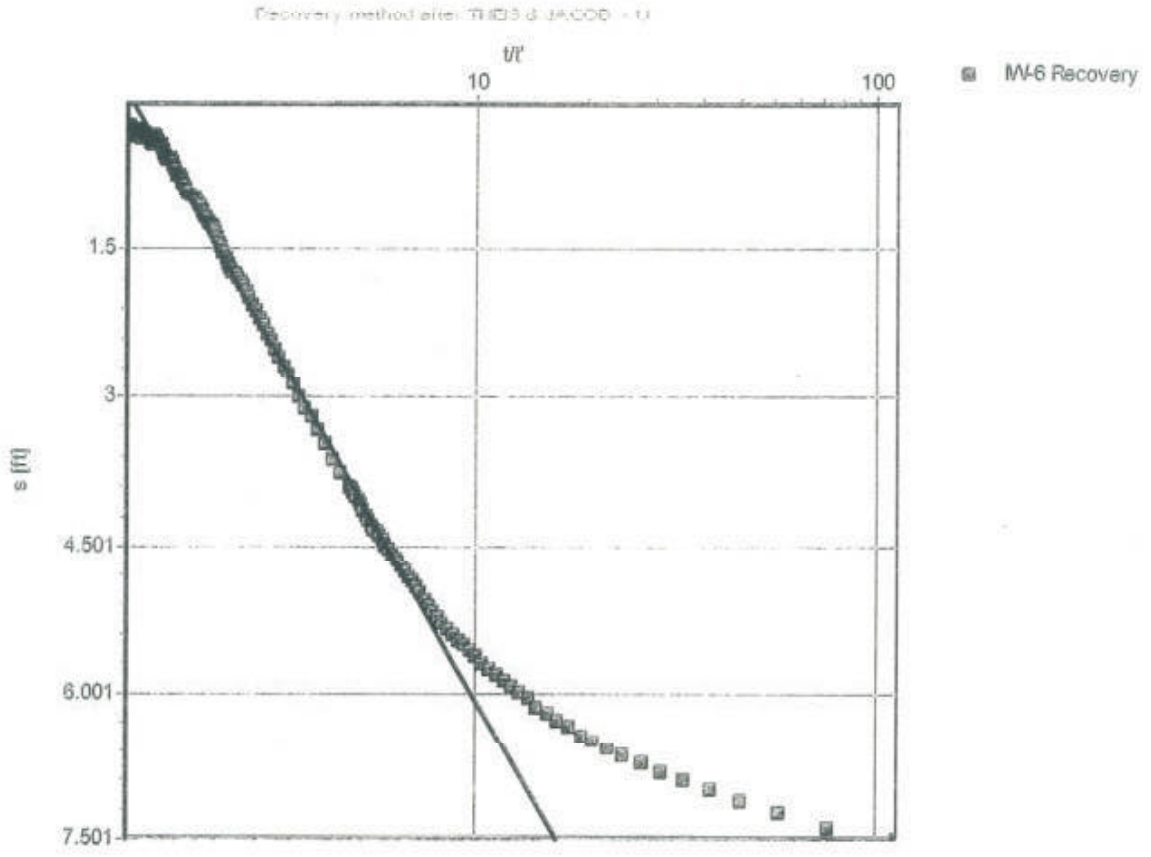
Pumping test analysis

No:

Project: Solutia/IW-6/IW-6 Recovery and uncorrect

Client:

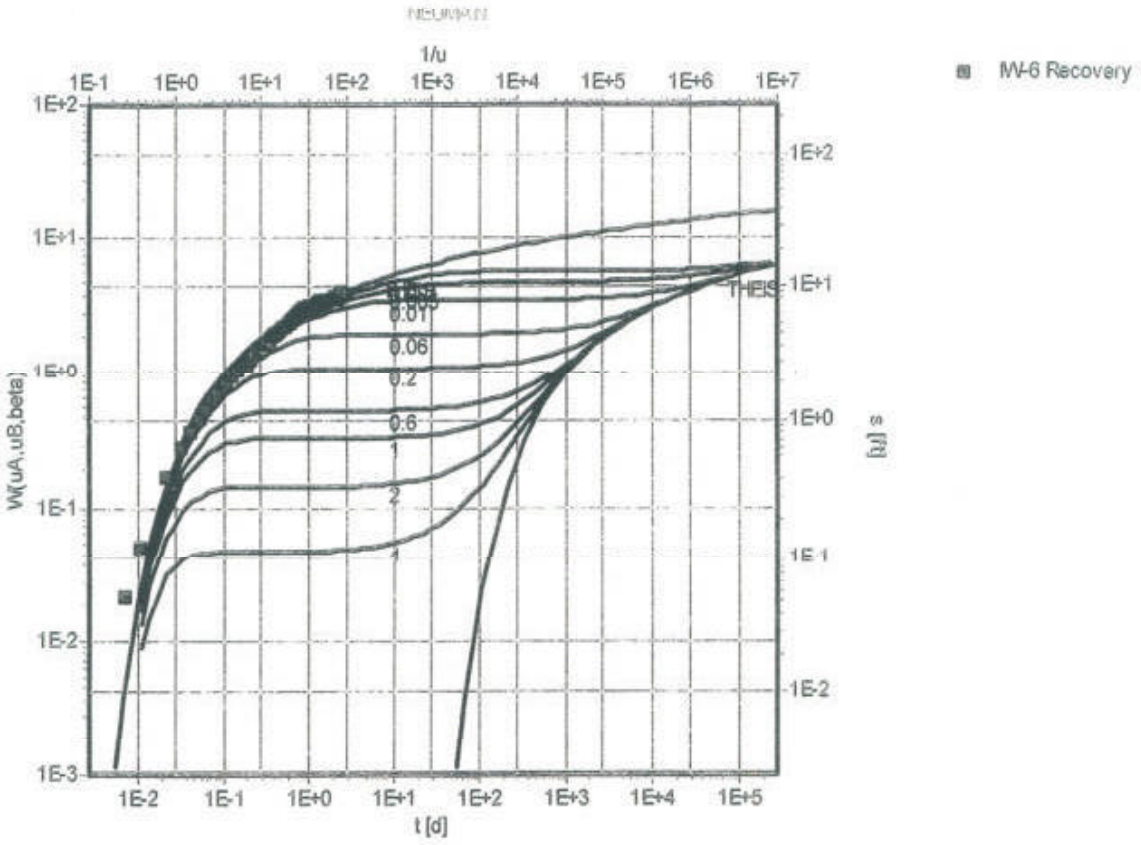
Location:	Pumping test: IW-6	Pumping well: Well name
Test performed by:	Evaluated by: CDH	
Test date: 6/1/01	Evaluation date: 6/1/01	
Analysis method: THEIS Recovery	Aquifer thickness: 25 [ft]	
	Discharge rate: 0.09218107 [U.S. gal/min]	



Transmissivity: 4.66×10^-1 [ft²/d]

Conductivity: 1.86×10^-2 [ft/d]

Golder Associates Inc. 3730 Chamblee Tucker Road Atlanta, GA 30341 Phone: (770) 496-1893	**Pumping test analysis**	
	No:	
	Project: Solutia/IW-6/IW-6 Recovery and uncorrect	
	Client:	
Location:	Pumping test: IW-6	Pumping well: Well name
Test performed by:	Evaluated by:	CDH
Test date: 6/1/01	Evaluation date:	6/1/01
Analysis method: NEUMAN	Aquifer thickness:	25 [ft]
	Discharge rate:	0.09218107 [U.S. gal/min]



Transmissivity:	6.09×10^-1 [ft²/d]
Conductivity:	2.44×10^-2 [ft/d]
Storativity:	6.58×10^-2
Specific yield:	6.58×10^+2

Golder Associates Inc.
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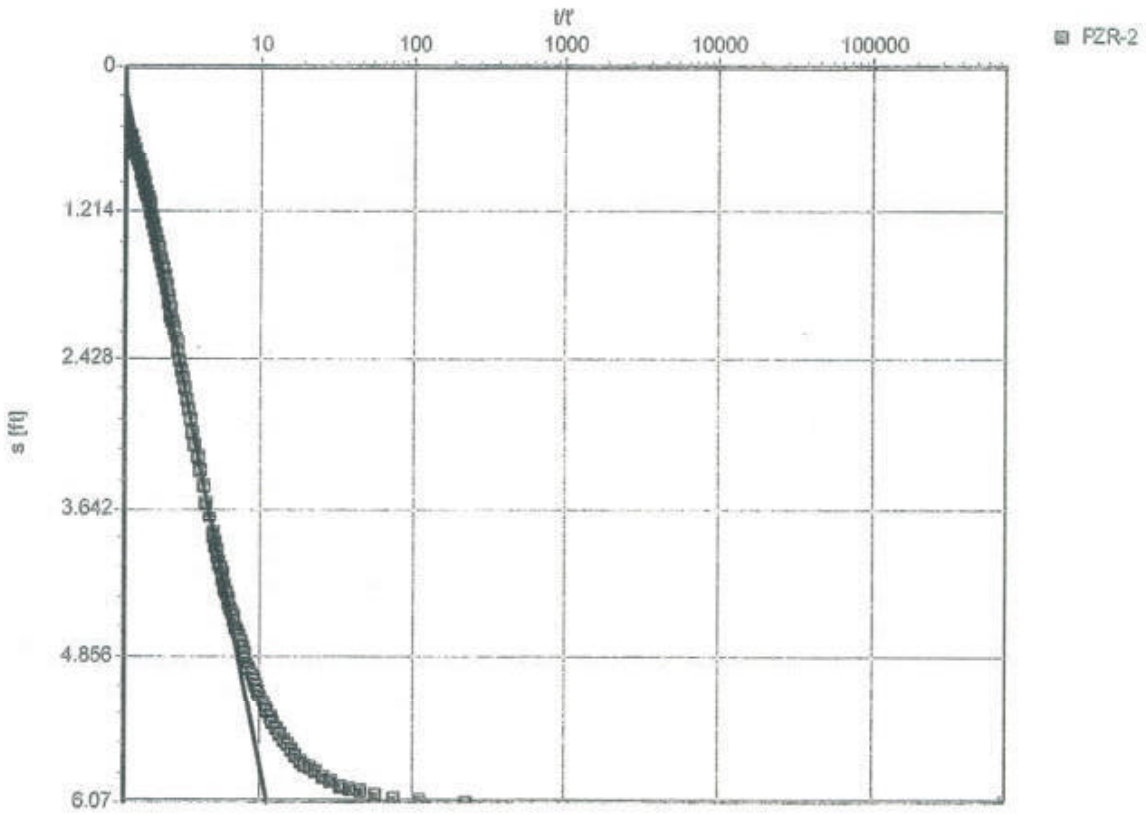
Atlanta, GA 30341
Phone: (770) 496-1893

Pumping test analysis

No:	9433680043
Project:	IW6/PZR2
Client:	Solutia

Location: Anniston AL	Pumping test: IW-6	Pumping well: Well name

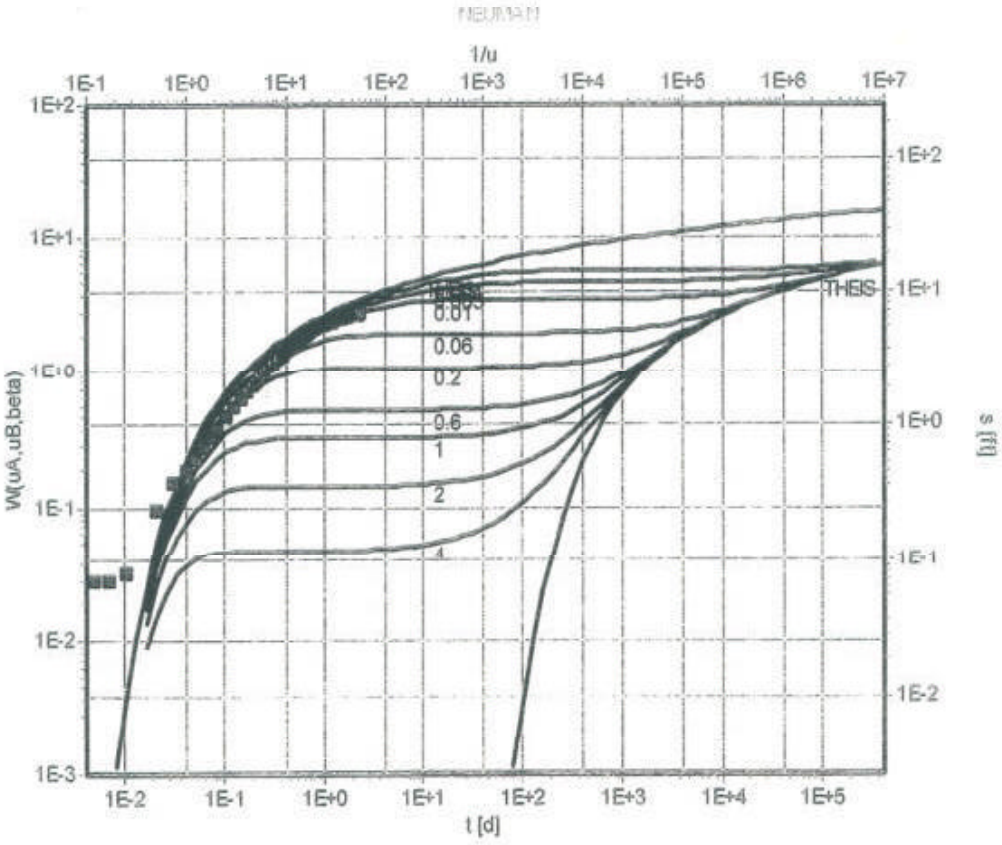
Test performed by:	Evaluated by: CDH
Test date: 6/3/01	Evaluation date: 6/3/01
Analysis method: THEIS Recovery	Aquifer thickness: 25 [ft]
	Discharge rate: 0.093004115 [U.S. gal/min]



Transmissivity: 5.24×10^-1 [ft²/d]

Conductivity: 2.09×10^-2 [ft/d]

Golder Associates Inc. 3730 Chamblee Tucker Road Atlanta, GA 30341 Phone: (770) 496-1893	**Pumping test analysis**	
	No: 9433680043	
	Project: IW6/PZR2	
	Client: Solutia	
Location: Anniston AL	Pumping test: IW-6	Pumping well: Well name
Test performed by:	Evaluated by: CDH	
Test date: 6/3/01	Evaluation date: 6/3/01	
Analysis method: NEUMAN	Aquifer thickness: 25 [ft]	
	Discharge rate: 0.093004115 [U.S. gal/min]	



Transmissivity:	5.66×10^-1 [ft²/d]
Conductivity:	2.27×10^-2 [ft/d]
Storativity:	9.85×10^-4
Specific yield:	9.85×10^+0

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Atlanta, GA 30341
Phone: (770) 496-1893

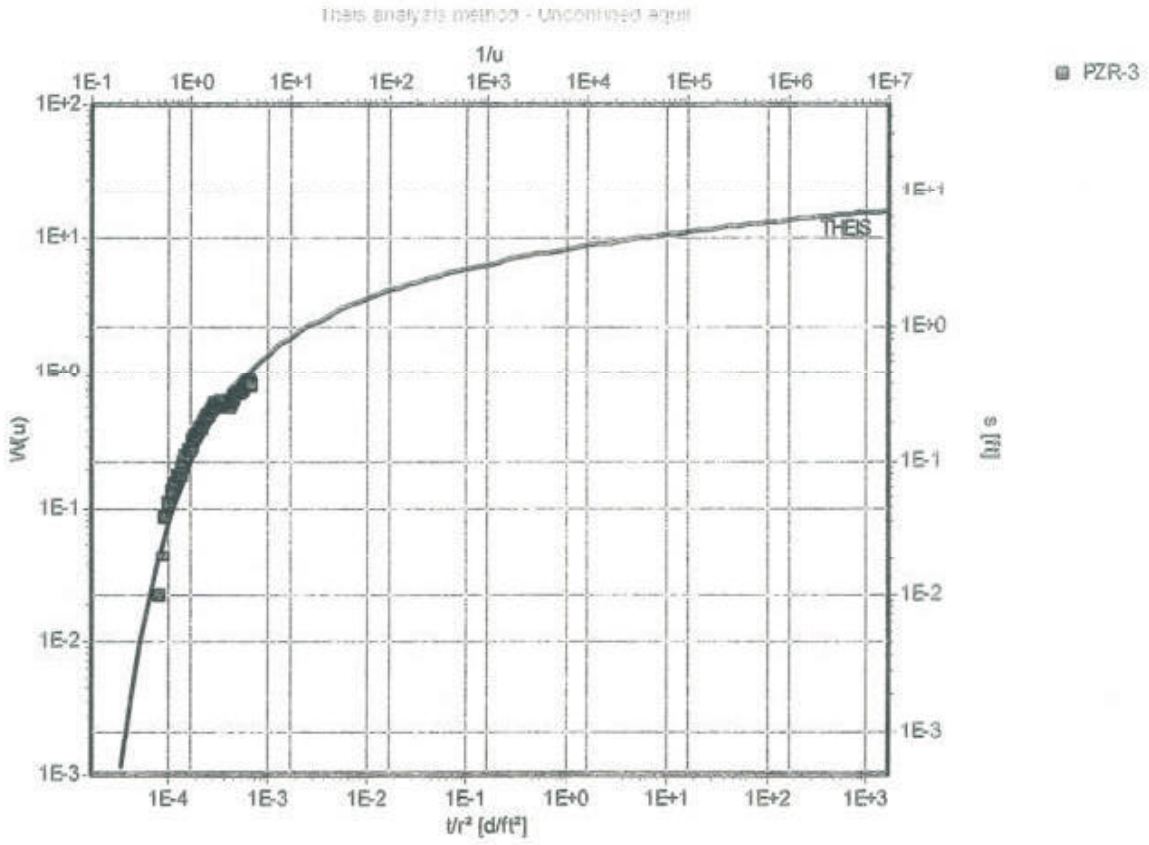
Pumping test analysis

No: 9433680

Project: IW-6PZR-3

Client: Solutia

Location: Anniston AL	Pumping test: IW-6	Pumping well: IW-6
Test performed by: GOLDER	Evaluated by: CDH	
Test date: 7/19/01	Evaluation date: 7/19/01	
Analysis method: THEIS	Aquifer thickness: 25 [ft]	
	Discharge rate: 0.4 [U.S. gal/min]	



Transmissivity: 1.35×10^+1 [ft²/d]

Conductivity: 5.39×10^-1 [ft/d]

Golder Associates Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341
Phone: (770) 496-1893

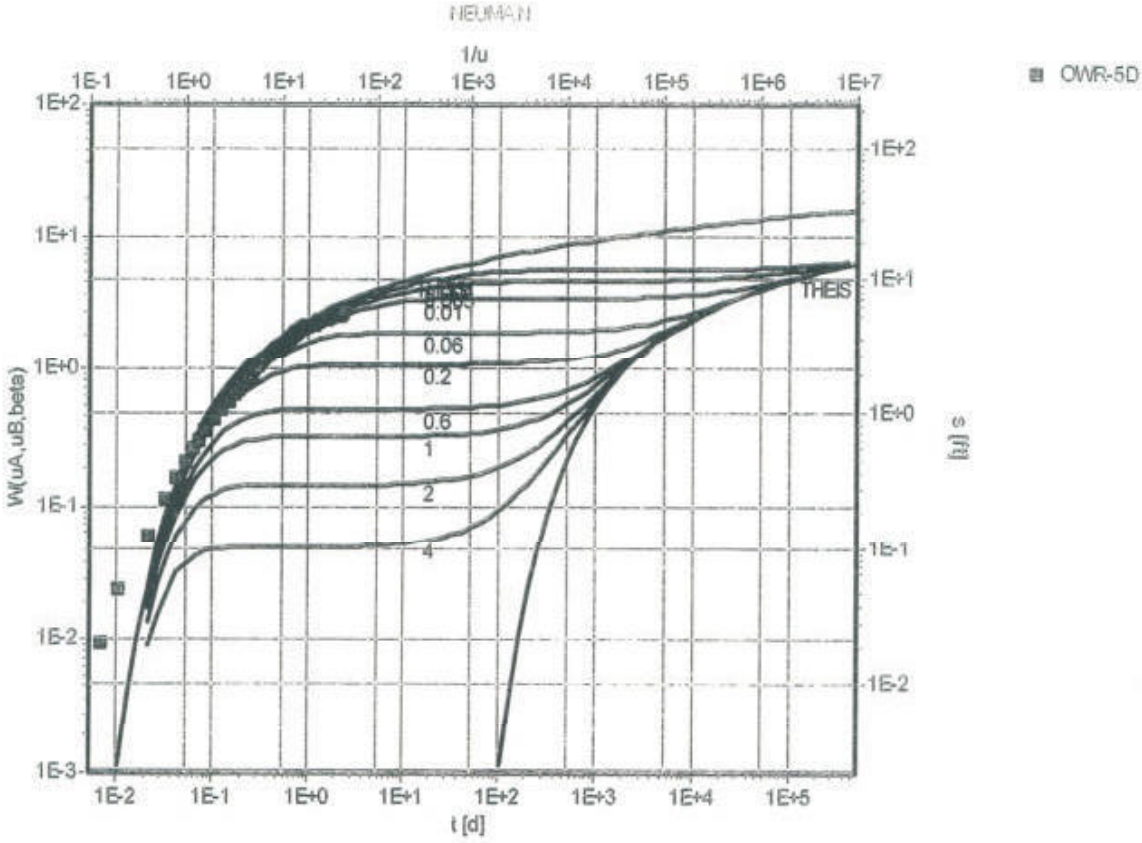
Pumping test analysis

No: 9433680043

Project: IW0/OWR5D Recovery

Client: Solutia

Location: Anniston AL	Pumping test: IW-6	Pumping well: Well name
Test performed by:	Evaluated by: CDH	
Test date: 6/3/01	Evaluation date: 6/3/01	
Analysis method: NEUMAN	Aquifer thickness: 25 [ft]	
	Discharge rate: 0.093004115 [U.S. gal/min]	



Transmissivity:	6.76×10^-1 [ft²/d]
Conductivity:	2.70×10^-2 [ft/d]
Storativity:	1.70×10^-4
Specific yield:	1.70×10^+0

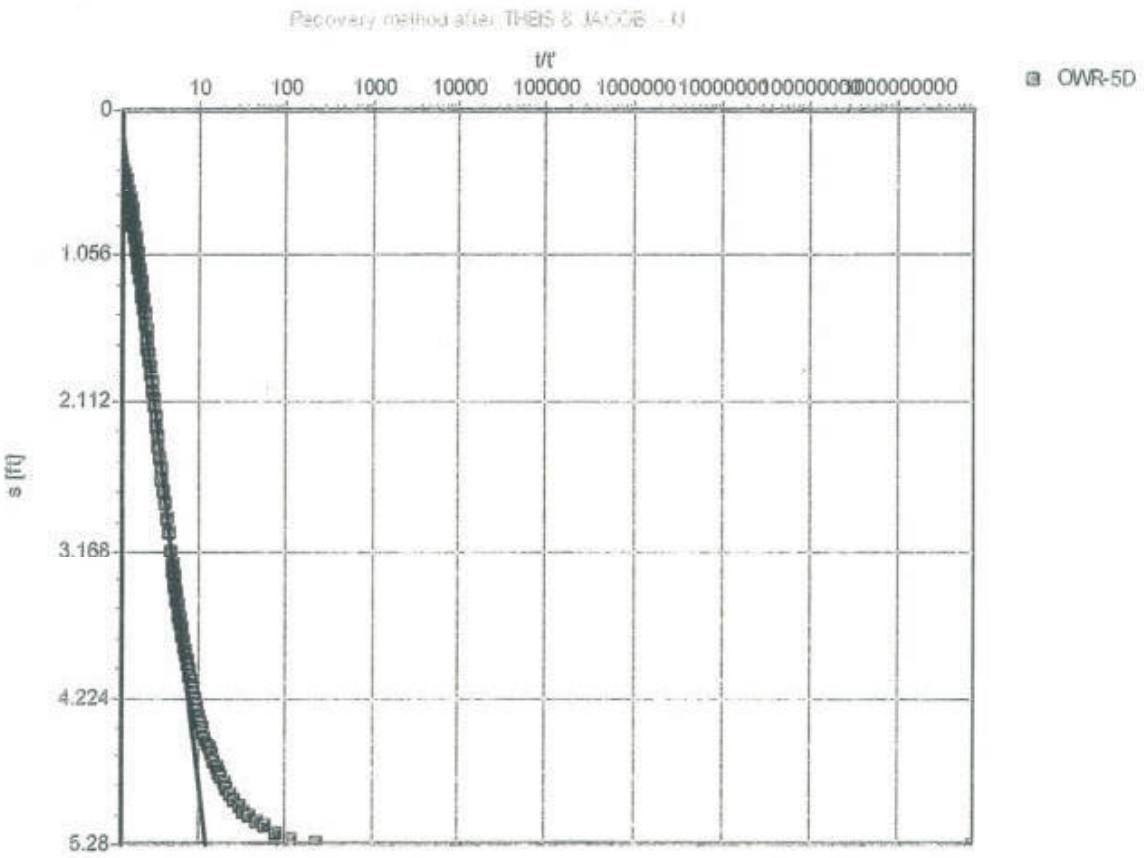
Golder Associates Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341
Phone: (770) 496-1893

Pumping test analysis

No:	9433680043
Project:	IWR/OWR5D Recovery
Client:	Solutia

Location: Anniston AL	Pumping test: IW-6	Pumping well: Well name

Test performed by:	Evaluated by: CDH
Test date: 6/3/01	Evaluation date: 6/3/01
Analysis method: THEIS Recovery	Aquifer thickness: 25 [ft]
	Discharge rate: 0.093004115 [U.S. gal/min]



Transmissivity: 6.25×10^-1 [ft²/d]

Conductivity: 2.50×10^-2 [ft/d]

Golder Associates Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341
Phone: (770) 496-1893

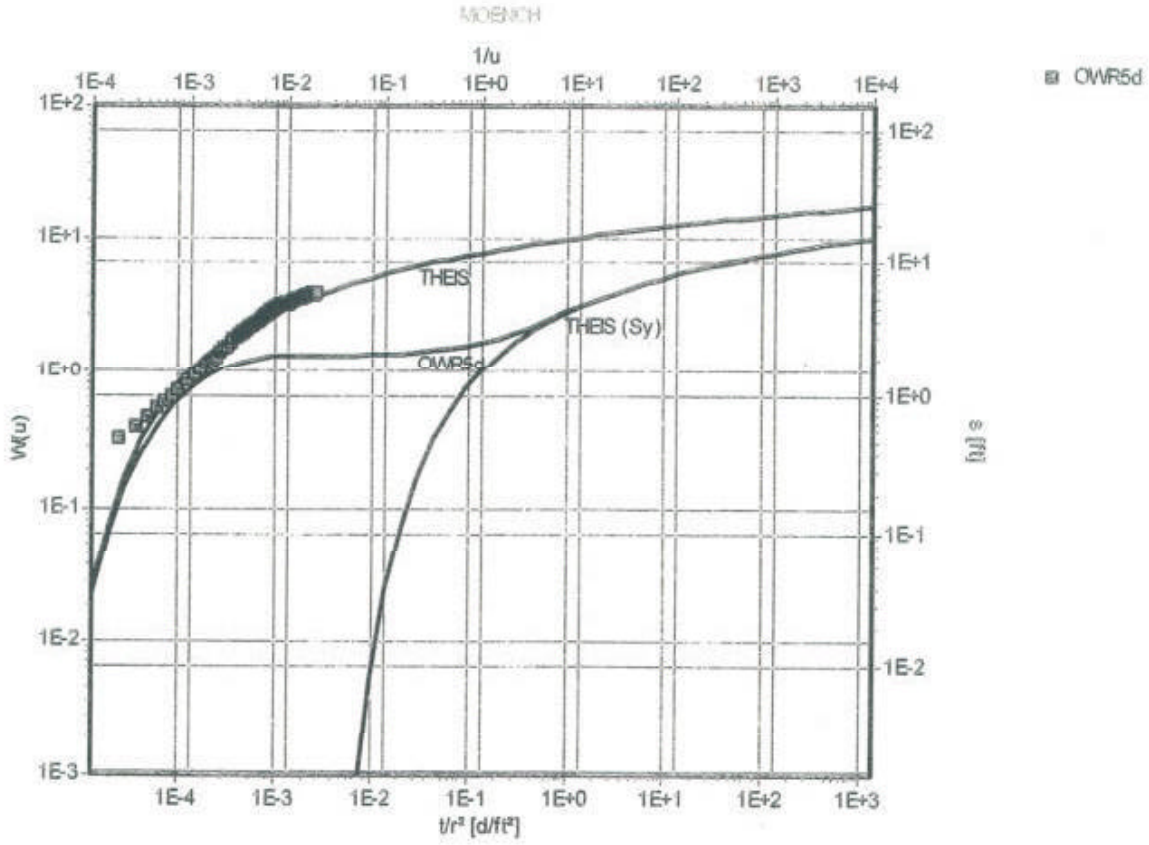
Pumping test analysis

No: 9433680

Project: IW6-OWR5DMOENCH

Client: Solutia

Location: Anniston AL	Pumping test: IW-6	Pumping well: IW-6
Test performed by: Golder	Evaluated by: CDH	
Test date: 7/18/01	Evaluation date: 7/18/01	
Analysis method: MOENCH	Aquifer thickness: 25 [ft]	
	Discharge rate: 0.4 [U.S. gal/min]	



Transmissivity:	4.05×10^+0 [ft²/d]
Conductivity:	1.62×10^-1 [ft/d]
Storativity:	5.59×10^-1
Conductivity vertical:	1.62×10^-2 [ft/d]

Golder Associates Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341
Phone: (770) 496-1893

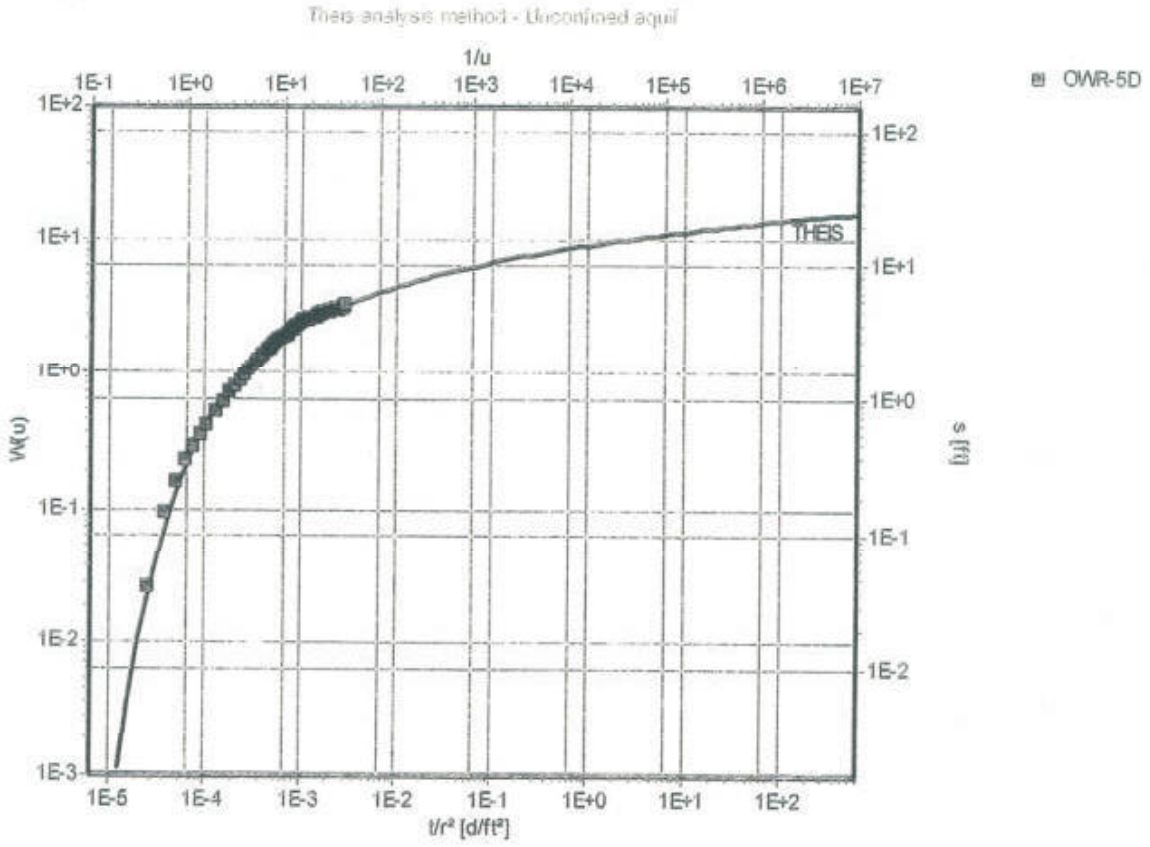
Pumping test analysis

No: 9433680043

Project: Solutia/IW 6 and OWR5D

Client: Solutia

Location: Anniston AL	Pumping test: IW-6	Pumping well: IW-6
Test performed by:	Evaluated by: CDH	
Test date: 5/31/01	Evaluation date: 5/31/01	
Analysis method: THEIS	Aquifer thickness: 25 [ft]	
	Discharge rate: 0.4 [U.S. gal/min]	



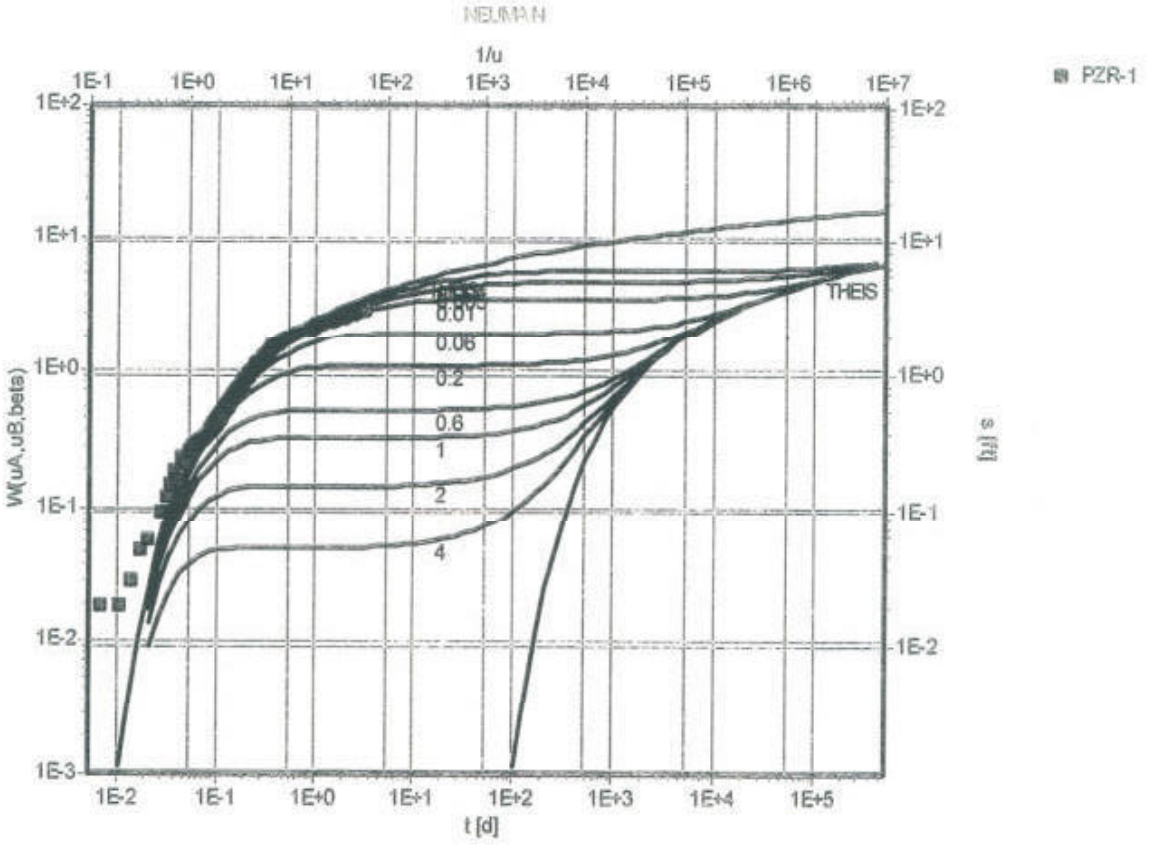
Transmissivity: 3.95×10^+0 [ft²/d]

Conductivity: 1.58×10^-1 [ft/d]

Corrected using Jacob (1944)

Golder Associates Inc.	Pumping test analysis
3730 Chamblee Tucker Road Atlanta, GA 30341 Phone: (770) 496-1893	No: 9433680 Project: IW-11/PZR-1 Client: Solutia

Location: Anniston AL	Pumping test: IW-11	Pumping well: IW-11
Test performed by: Test date: 7/19/01	Evaluated by: CDH Evaluation date: 7/19/01	
Analysis method: NEUMAN	Aquifer thickness: 25 [ft] Discharge rate: 0.4 [U.S. gal/min]	



Transmissivity:	5.67×10^+0 [ft²/d]
Conductivity:	2.27×10^-1 [ft/d]
Storativity:	2.13×10^-2
Specific yield:	2.13×10^+2

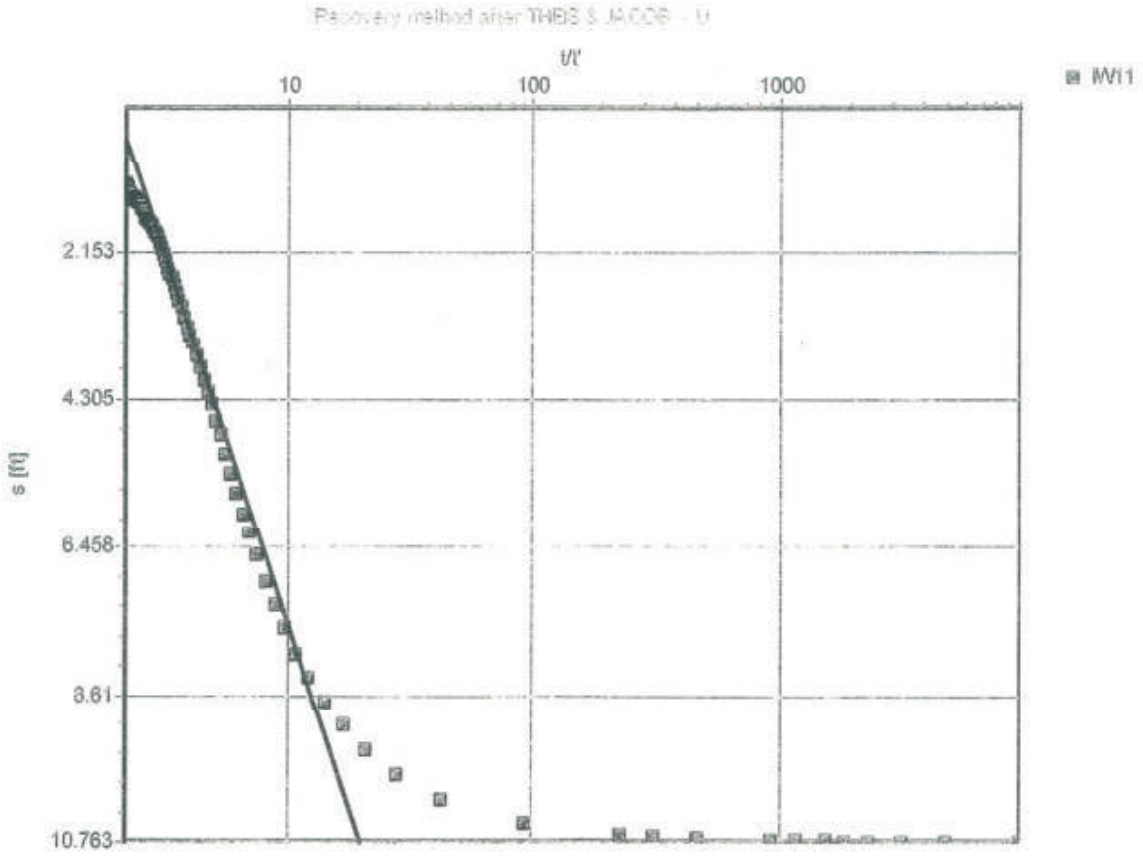
Golder Associates Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341
Phone: (770) 496-1893

Pumping test analysis

No:	9433680043
Project:	Solutia IW-11/IW-11
Client:	Solutia

Location: Anniston AL	Pumping test: IW-11 Recovery	Pumping well: Iw-

Test performed by:	Evaluated by: CDH
Test date: 5/31/01	Evaluation date: 5/31/01
Analysis method: THEIS Recovery	Aquifer thickness: 25 [ft]
	Discharge rate: 0.21455387 [U.S. gal/min]



Transmissivity: 7.04×10^-1 [ft²/d]

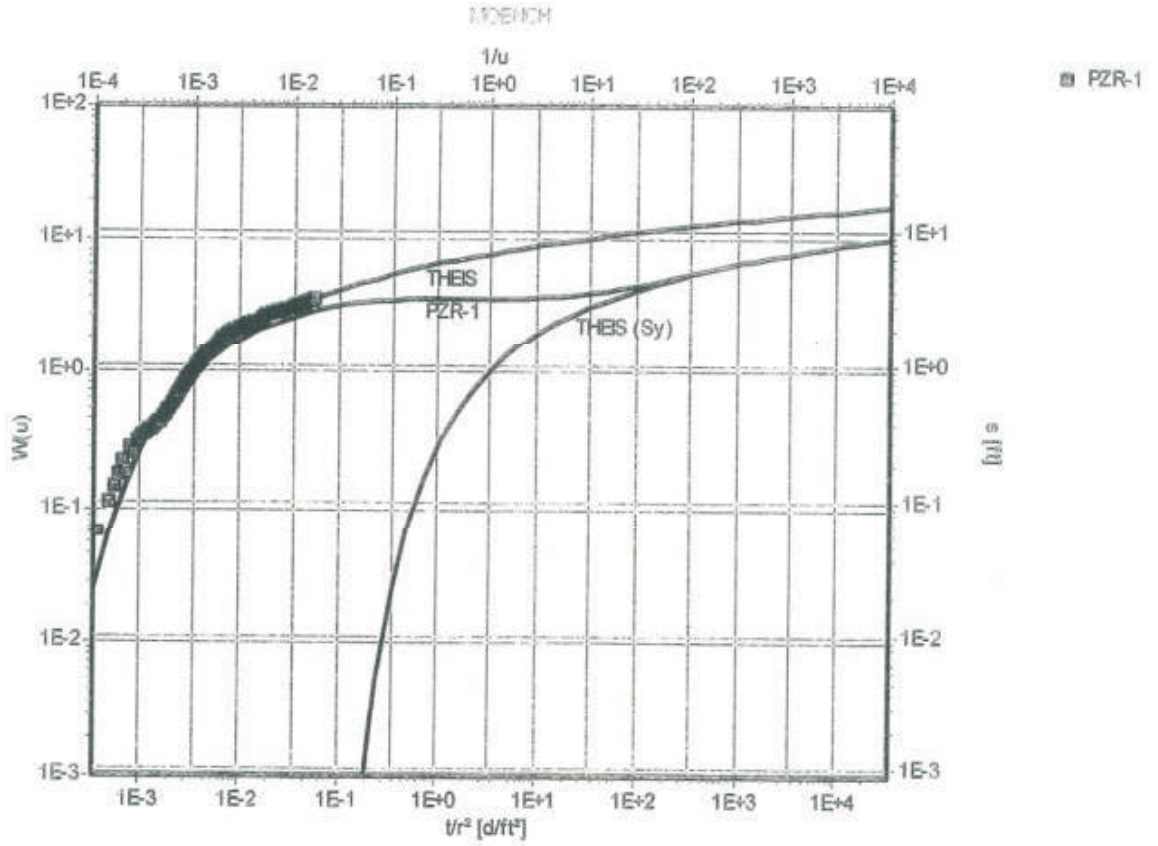
Conductivity: 2.82×10^-2 [ft/d]

Golder Associates Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341
Phone: (770) 496-1893

Pumping test analysis

No: 9433680
Project: IW-11PZR-1Moench
Client: Solutia

Location: Anniston AL	Pumping test: IW-11	Pumping well: IW-11
Test performed by:	Evaluated by: CDH	
Test date: 7/18/01	Evaluation date: 7/18/01	
Analysis method: MOENCH	Aquifer thickness: 25 [ft]	
	Discharge rate: 0.4 [U.S. gal/min]	



Transmissivity:	6.88×10^+0 [ft²/d]
Conductivity:	2.75×10^-1 [ft/d]
Storativity:	2.38×10^+1
Conductivity vertical:	2.75×10^-2 [ft/d]

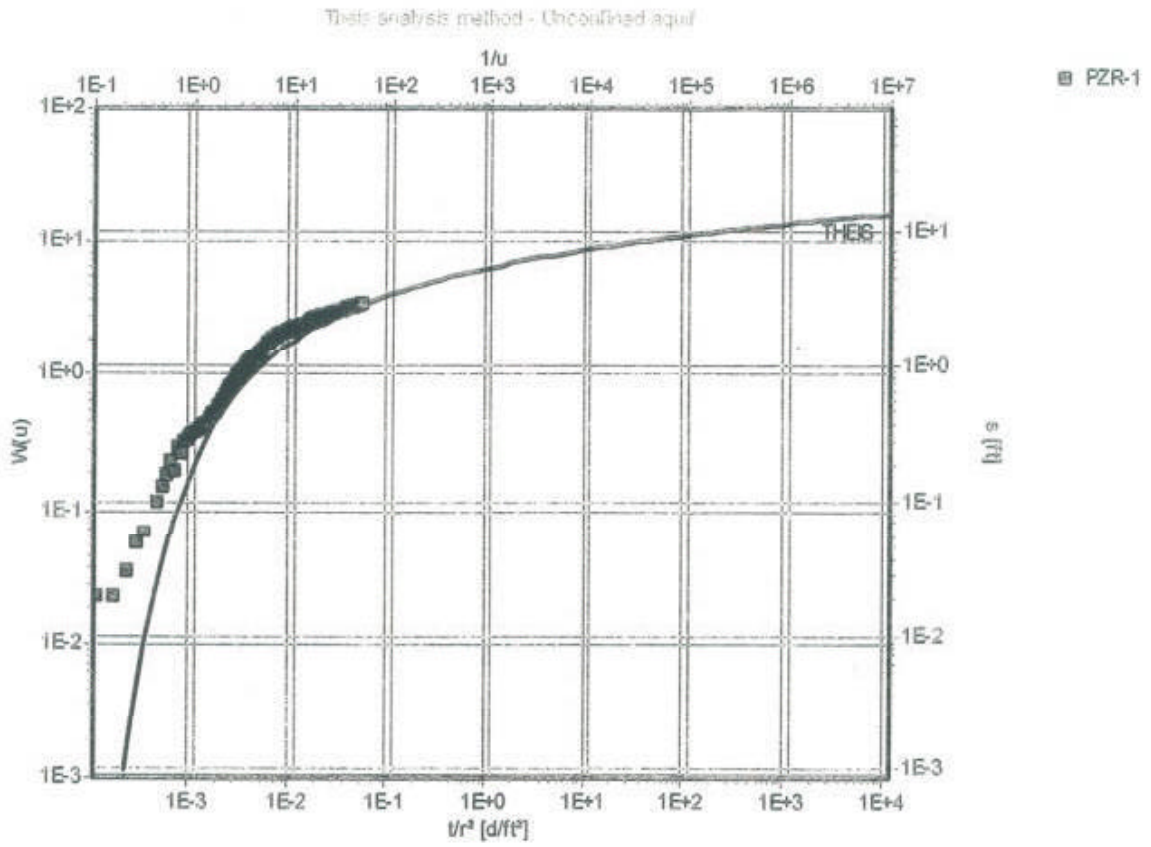
Golder Associates Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341
Phone: (770) 496-1893

Pumping test analysis

No:	9433680
Project:	IW-11/PZR-1
Client:	Solutia

Location: Anniston AL	Pumping test: IW-11	Pumping well: IW-11

Test performed by:	Evaluated by: CDH
Test date: 7/19/01	Evaluation date: 7/19/01
Analysis method: THEIS	Aquifer thickness: 25 [ft]
	Discharge rate: 0.4 [U.S. gal/min]



Transmissivity: 7.11×10^+0 [ft²/d]

Conductivity: 2.84×10^-1 [ft/d]

Golder Associates Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341
Phone: (770) 496-1893

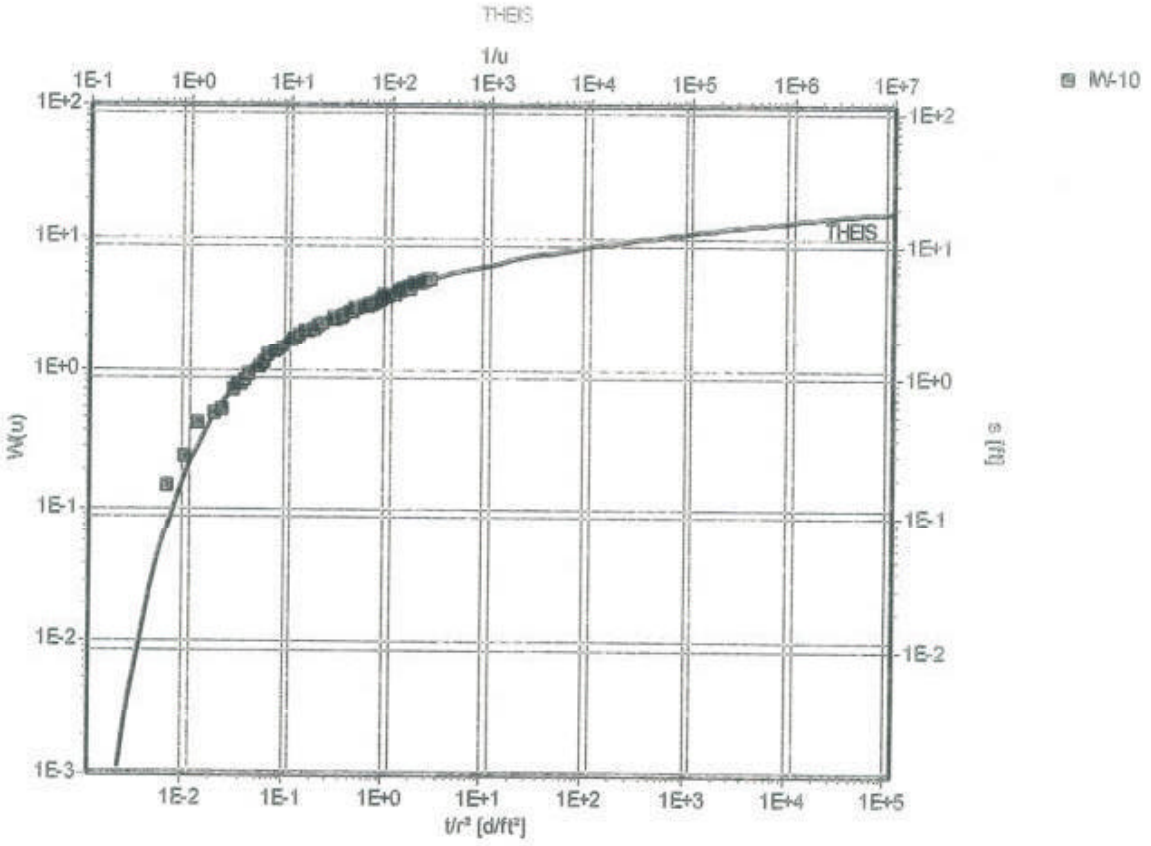
Pumping test analysis

No: 9433680043

Project: Solutia IW10 original theis

Client: Solutia

Location:	Pumping test: IW-10	Pumping well: Inline
Test performed by:	Evaluated by: CDH	
Test date: 5/31/01	Evaluation date: 6/3/01	
Analysis method: THEIS	Aquifer thickness: 25 [ft]	
	Discharge rate: 0.4 [U.S. gal/min]	



Transmissivity: 5.36×10^+0 [ft²/d]

Conductivity: 2.14×10^-1 [ft/d]

Storativity: 2.53×10^-1

Golder Associates Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341
Phone: (770) 496-1893

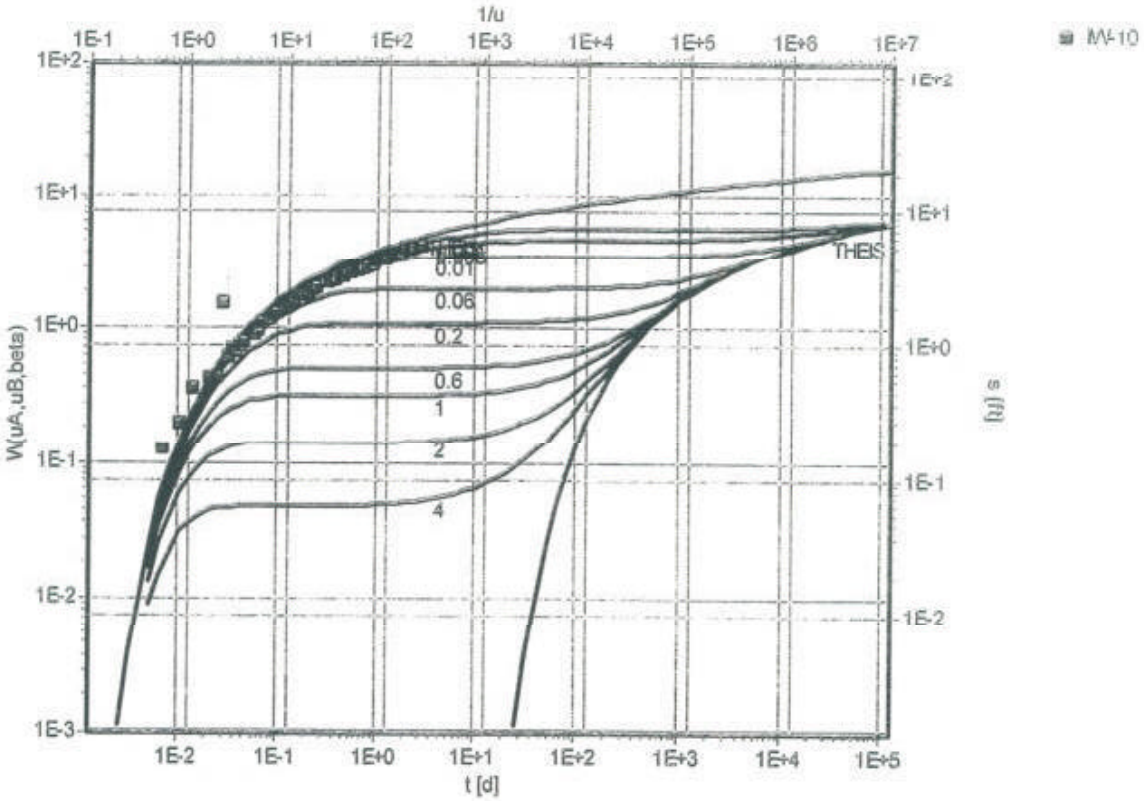
Pumping test analysis

No: 9433680043

Project: Solutia IW-10- IW-10

Client: Solutia

Location: Anniston AL	Pumping test: IW-10	Pumping well: IW-10
Test performed by:	Evaluated by: CDH	
Test date: 5/31/01	Evaluation date: 5/31/01	
Analysis method: NEUMAN	Aquifer thickness: 25 [ft]	
	Discharge rate: 0.14305093 [U.S. gal/min]	



Transmissivity:	1.65×10^+0 [ft²/d]
Conductivity:	6.58×10^-2 [ft/d]
Storativity:	8.55×10^-2
Specific yield:	8.55×10^+2

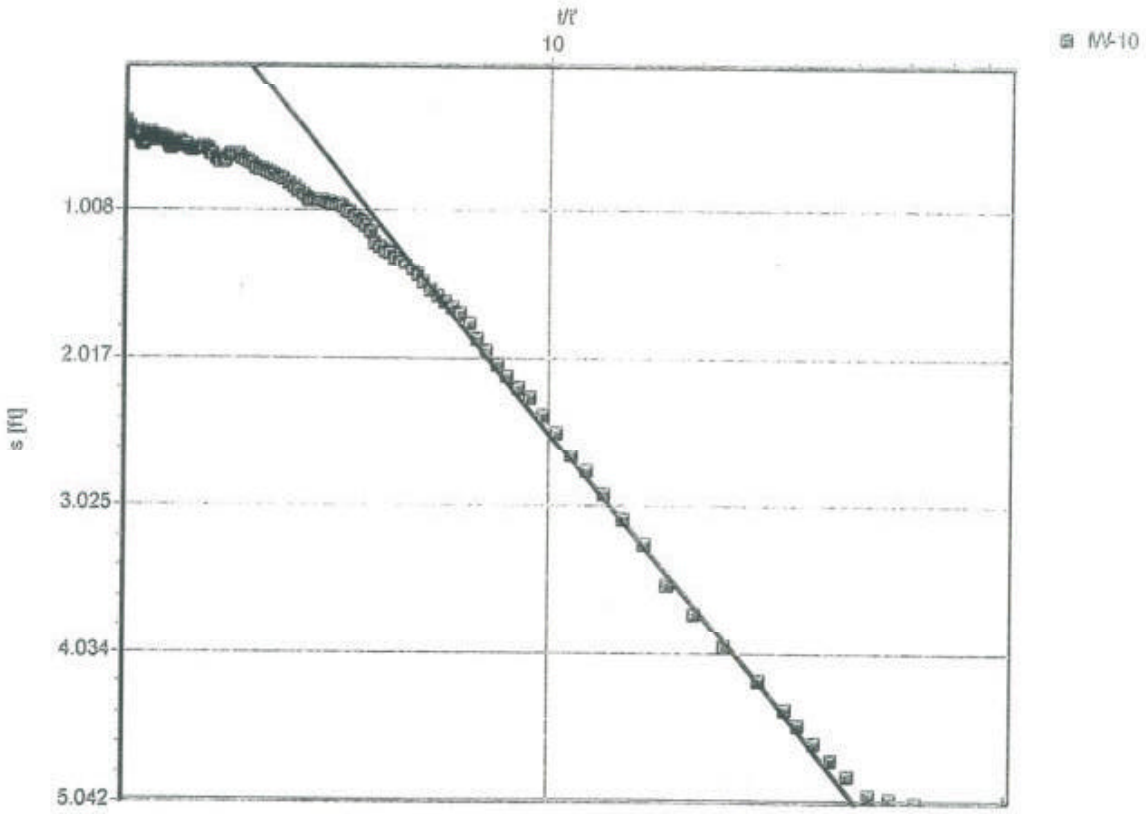
Golder Associates Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341
Phone: (770) 496-1893

Pumping test analysis

No:	9433680043
Project:	Solutia IW-10- IW-10
Client:	Solutia

Location: Anniston AL	Pumping test: IW-10	Pumping well: IW-10

Test performed by:	Evaluated by: CDH
Test date: 5/31/01	Evaluation date: 5/31/01
Analysis method: THEIS Recovery	Aquifer thickness: 25 [ft]
	Discharge rate: 0.14305093 [U.S. gal/min]



Transmissivity: 1.14×10^+0 [ft²/d]

Conductivity: 4.57×10^-2 [ft/d]

Golder Associates Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341
Phone: (770) 496-1893

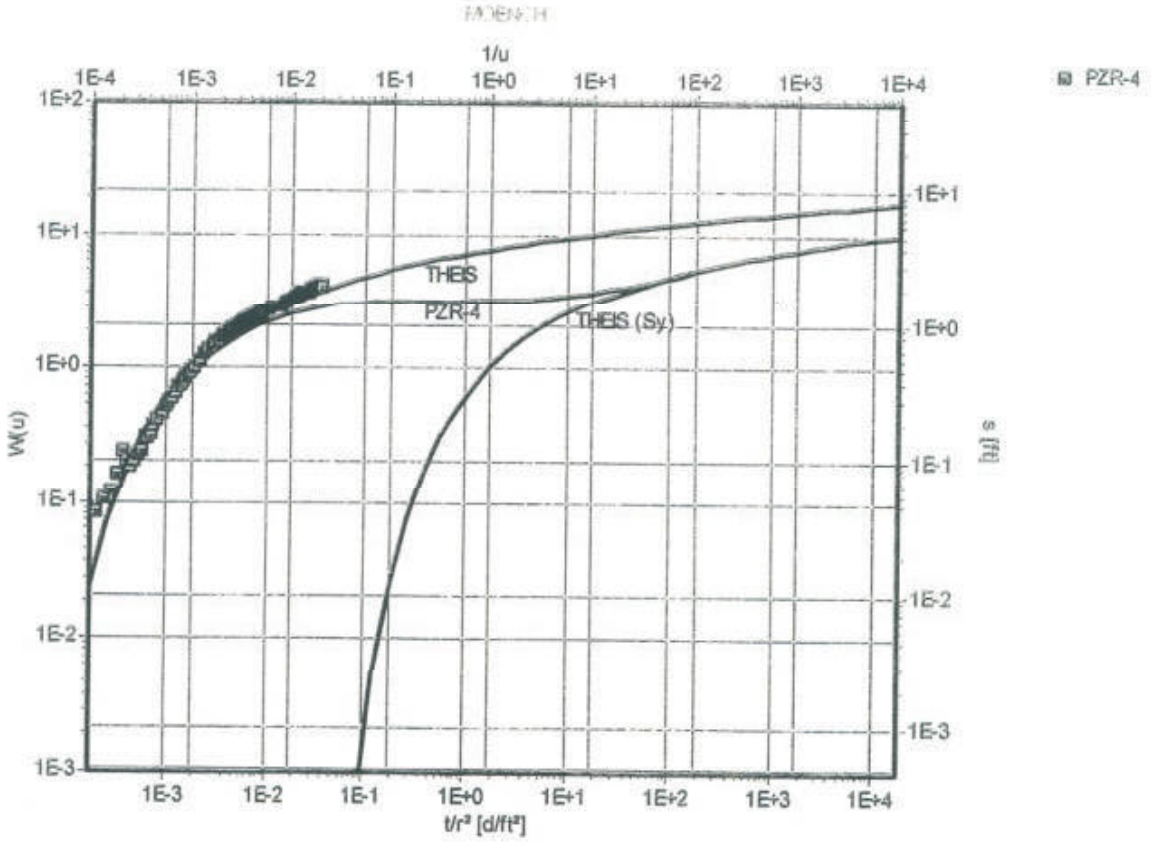
Pumping test analysis

No: 9433680

Project: IW-10PZR-4 Moench

Client: Solutia

Location: Anniston	Pumping test: IW-10	Pumping well: IW-10
Test performed by: Golder	Evaluated by: CDH	
Test date: 7/18/01	Evaluation date: 7/19/01	
Analysis method: MOENCH	Aquifer thickness: 25 [ft]	
	Discharge rate: 0.4 [U.S. gal/min]	



Transmissivity:	1.28×10^+1 [ft²/d]
Conductivity:	5.12×10^-1 [ft/d]
Storativity:	2.28×10^+1
Conductivity vertical:	5.12×10^-2 [ft/d]

Golder Associates Inc.
3730 Chamblee Tucker Rd.
Atlanta, GA 30341
ph.(770)496-1893

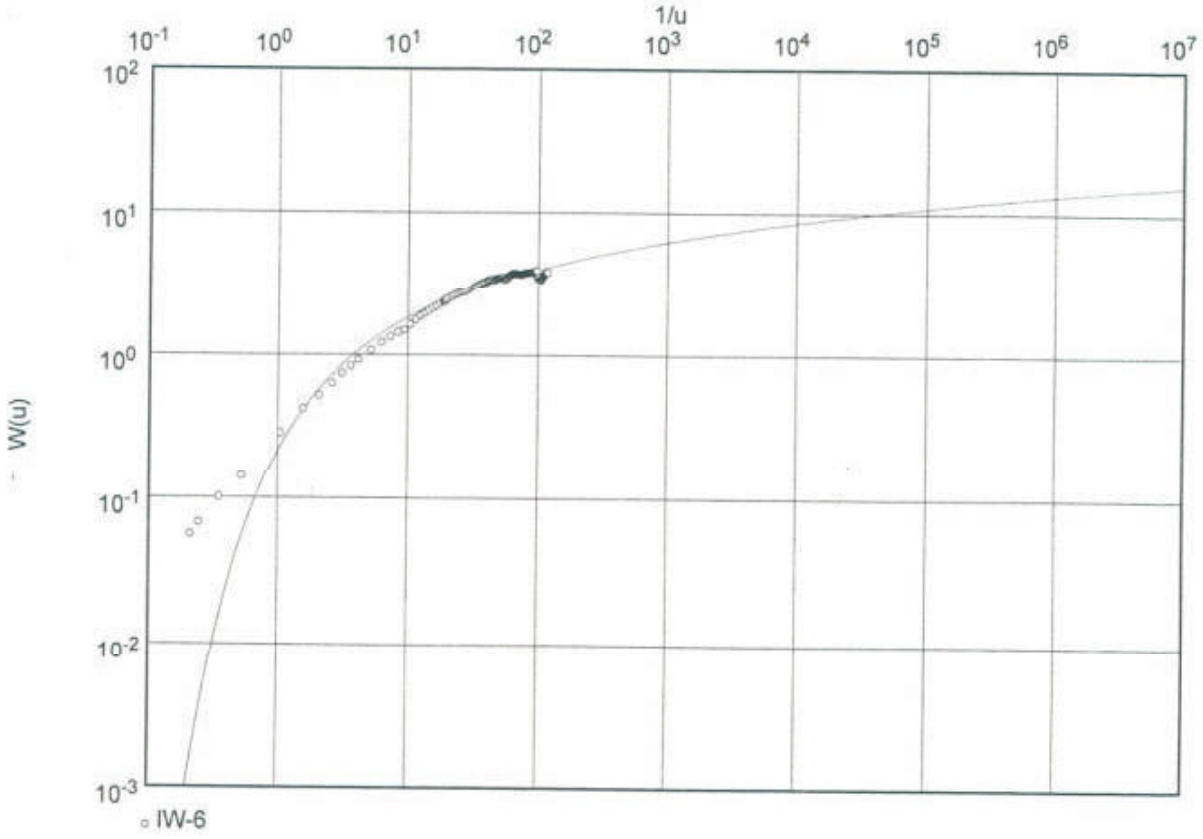
Pumping test analysis
Theis analysis method
Unconfined aquifer

Date: 10-26-98 | Page 1

Project: Solutia/RFI/AL

Evaluated by: CDH

Pumping Test No. IW-6	Test conducted on: 9-9-98
IW-6	
Discharge 0.40 U.S.gal/min	



Transmissivity [ft²/d]: 3.44×10^{0}

Hydraulic conductivity [ft/d]: 1.37×10^{-1}

Aquifer thickness [ft]: 25.00

Golder Associates Inc.
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Atlanta, GA 30341
ph.(770)496-1893

Pumping test analysis
Theis analysis method
Unconfined aquifer

Project: Solutia/RFI/AL

Evaluated by: CDH

Pumping Test No. IW 6	Test conducted on: 9-9-98
IW-6	IW-6
Discharge 0.40 U.S.gal/min	Distance from the pumping well 1.00 ft

Static water level: 36.67 ft below datum

	Pumping test duration [d]	Water level [ft]	Drawdown [ft]	Corrected drawdown [ft]
2	0.00417	36.77	0.10	0.10
3	0.00486	36.79	0.12	0.12
4	0.00694	36.85	0.18	0.18
5	0.01042	36.92	0.25	0.25
6	0.02083	37.19	0.52	0.51
7	0.03125	37.44	0.77	0.76
8	0.04167	37.63	0.96	0.94
9	0.05208	37.83	1.16	1.13
10	0.06250	38.03	1.36	1.32
11	0.07292	38.21	1.54	1.49
12	0.08333	38.38	1.71	1.65
13	0.10417	38.67	2.00	1.92
14	0.12500	38.93	2.26	2.16
15	0.14583	39.16	2.49	2.37
16	0.16667	39.36	2.69	2.55
17	0.18750	39.46	2.79	2.63
18	0.20833	39.75	3.08	2.89
19	0.22917	40.00	3.33	3.11
20	0.25000	40.23	3.56	3.31
21	0.27083	40.42	3.75	3.47
22	0.29167	40.60	3.93	3.62
23	0.31250	40.77	4.10	3.76
24	0.33333	40.92	4.25	3.89
25	0.35417	41.07	4.40	4.01
26	0.37500	41.23	4.56	4.14
27	0.38507	41.24	4.57	4.15
28	0.38519	41.25	4.58	4.16
29	0.38530	41.25	4.58	4.16
30	0.38542	41.25	4.58	4.16
31	0.38611	41.24	4.57	4.15
32	0.38681	41.40	4.73	4.28
33	0.38750	41.40	4.73	4.28
34	0.39583	41.46	4.79	4.33
35	0.41667	41.58	4.91	4.43
36	0.43750	41.70	5.03	4.52
37	0.45833	41.84	5.17	4.64
38	0.47917	41.95	5.28	4.72
39	0.50000	42.04	5.37	4.79
40	0.52083	42.11	5.44	4.85
41	0.54167	42.18	5.51	4.90
42	0.56250	42.27	5.60	4.97
43	0.58333	42.42	5.75	5.09
44	0.60417	42.57	5.90	5.20
45	0.62500	42.69	6.02	5.30
46	0.64583	42.87	6.20	5.43
47	0.66667	42.99	6.32	5.52
48	0.68750	43.09	6.42	5.60
49	0.70833	43.19	6.52	5.67
50	0.72917	43.29	6.62	5.74

Golder Associates Inc.
3730 Chamblee Tucker Rd.
Atlanta, GA 30341
ph.(770)496-1893

Pumping test analysis
Theis analysis method
Unconfined aquifer

Project: Solutia/RFI/AL

Evaluated by: CDH

Pumping Test No. IW 6	Test conducted on: 9-9-98
IW-6	IW-6
Discharge 0.40 U.S.gal/min	Distance from the pumping well 1.00 ft

Static water level: 36.67 ft below datum

	Pumping test duration [d]	Water level [ft]	Drawdown [ft]	Corrected drawdown [ft]
51	0.75000	43.41	6.74	5.83
52	0.77083	43.48	6.81	5.88
53	0.79167	43.59	6.92	5.96
54	0.81250	43.69	7.02	6.03
55	0.83333	43.76	7.09	6.08
56	0.85417	43.84	7.17	6.14
57	0.87500	43.88	7.21	6.17
58	0.89583	43.96	7.29	6.23
59	0.91667	43.79	7.12	6.11
60	0.93750	43.89	7.22	6.18
61	0.95833	43.95	7.28	6.22
62	0.97917	44.03	7.36	6.28
63	1.00000	44.05	7.38	6.29
64	1.02083	44.10	7.43	6.33
65	1.04167	44.13	7.46	6.35
66	1.06250	44.13	7.46	6.36
67	1.08333	43.97	7.30	6.23
68	1.10417	43.86	7.19	6.16
69	1.12500	43.93	7.26	6.21
70	1.14583	44.07	7.40	6.30
71	1.16667	44.22	7.55	6.41
72	1.18750	44.37	7.70	6.51
73	1.20833	44.47	7.80	6.58
74	1.22917	44.55	7.88	6.64
75	1.25000	44.65	7.98	6.71
76	1.27083	44.78	8.11	6.79
77	1.29167	44.75	8.08	6.77
78	1.31250	44.73	8.06	6.76
79	1.33333	44.71	8.04	6.75
80	1.35417	44.71	8.04	6.75
81	1.37500	44.69	8.02	6.73
82	1.39583	44.66	7.99	6.71
83	1.41667	44.66	7.99	6.71
84	1.43750	44.64	7.97	6.70
85	1.45833	44.62	7.95	6.69
86	1.47917	44.64	7.97	6.70
87	1.50000	44.69	8.02	6.73
88	1.52083	44.74	8.07	6.77
89	1.54167	44.78	8.11	6.79
90	1.56250	44.80	8.13	6.81
91	1.58333	44.83	8.16	6.83
92	1.60417	44.84	8.17	6.84
93	1.62500	44.85	8.18	6.84
94	1.64583	44.87	8.20	6.86
95	1.66667	44.88	8.21	6.86
96	1.68750	44.89	8.22	6.87
97	1.70833	44.90	8.23	6.88
98	1.72917	44.91	8.24	6.88
99	1.75000	44.93	8.26	6.90
100	1.77083	44.94	8.27	6.90

Golder Associates Inc.
3730 Chamblee Tucker Rd.
Atlanta, GA 30341
ph.(770)496-1893

Pumping test analysis
Theis analysis method
Unconfined aquifer

Project: Solutia/RFI/AL

Evaluated by: CDH

Pumping Test No. IW-6	Test conducted on: 9-9-98
IW-6	IW-6
Discharge 0.40 U.S.gal/min	Distance from the pumping well 1.00 ft
Static water level: 36.67 ft below datum	

	Pumping test duration [d]	Water level [ft]	Drawdown [ft]	Corrected drawdown [ft]
101	1.79167	44.95	8.28	6.91
102	1.81250	44.96	8.29	6.92
103	1.83333	44.99	8.32	6.94
104	1.85417	45.08	8.41	7.00
105	1.87500	45.13	8.46	7.03
106	1.89583	45.22	8.55	7.09
107	1.91667	45.22	8.55	7.09
108	1.93750	45.22	8.55	7.09
109	1.95660	44.19	7.52	6.39
110	1.95694	44.17	7.50	6.38
111	1.95729	44.22	7.55	6.41
112	1.97917	44.33	7.66	6.49
113	2.00000	44.12	7.45	6.34
114	2.02083	43.81	7.14	6.12
115	2.04167	43.80	7.13	6.11
116	2.06250	43.77	7.10	6.09
117	2.08333	43.97	7.30	6.23
118	2.10417	44.05	7.38	6.29
119	2.12500	44.09	7.42	6.32
120	2.14583	44.24	7.57	6.42
121	2.16667	44.41	7.74	6.54
122	2.18750	44.54	7.87	6.63
123	2.20833	44.64	7.97	6.70
124	2.22917	44.72	8.05	6.75
125	2.25000	44.80	8.13	6.81
126	2.27083	44.82	8.15	6.82
127	2.29167	44.89	8.22	6.87
128	2.31250	44.92	8.25	6.90
129	2.33333	44.97	8.30	6.92

Golder Associates Inc.
3730 Chamblee Tucker Rd.
Atlanta, GA 30341
ph.(770)496-1893

Pumping test analysis
Theis analysis method
Unconfined aquifer

Project: Solutia/RFI/AL

Evaluated by: CDH

Pumping Test No. IW-6	Test conducted on: 9-9-98
IW-6	Inline Flow Meter
Discharge 0.40 U.S.gal/min	

	Pumping test duration [d]	Discharge [U.S.gal/min]		
1	0.00000	0.40		
2	2.43056	0.40		

Golder Associates Inc.
3730 Chamblee Tucker Rd.
Atlanta, GA 30341
ph.(770)496-1893

Pumping test analysis
Recovery method after
THEIS & JACOB
Unconfined aquifer

Date: 11-03-98 | Page 1

Project: Solutia/RFI/AL

Evaluated by: CDH

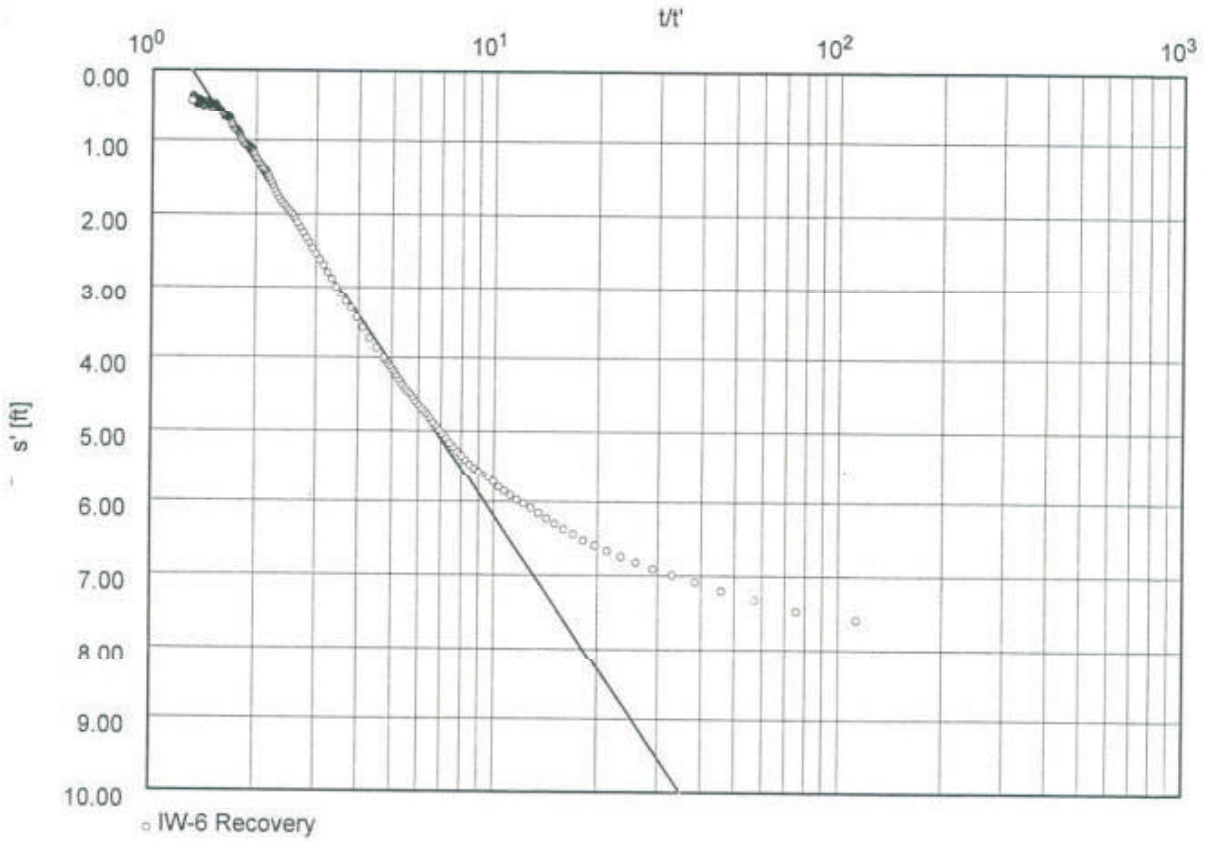
Pumping Test No. IW 6

Test conducted on: 09-09-98

IW-6

Discharge 0.09 U.S.gal/min

Pumping test duration: 2.33333 d



Transmissivity [ft²/d]: 4.65×10^{-1}

Hydraulic conductivity [ft/d]: 1.86×10^{-2}

Aquifer thickness [ft]: 25.00

Golder Associates Inc.
3730 Chamblee Tucker Rd.
Atlanta, GA 30341
ph.(770)496-1893

Pumping test analysis
Recovery method after
THEIS & JACOB
Unconfined aquifer

Project: Solutia/RFI/AL

Evaluated by: CDH

Pumping Test No. IW-6	Test conducted on: 09-09-98
IW-6	IW-6 Recovery
Discharge 0.09 U.S.gal/min	Distance from the pumping well 1.00 ft
Static water level: 36.66 ft below datum	Pumping test duration: 2.33333 d

	Time from end of pumping [d]	Water level [ft]	Residual drawdown [ft]	Corrected drawdown [ft]
1	0.02083	45.99	9.33	7.59
2	0.03125	45.81	9.15	7.48
3	0.04167	45.58	8.92	7.33
4	0.05208	45.38	8.72	7.20
5	0.06250	45.20	8.54	7.08
6	0.07292	45.06	8.40	6.99
7	0.08333	44.94	8.28	6.91
8	0.09375	44.81	8.15	6.82
9	0.10417	44.69	8.03	6.74
10	0.11458	44.58	7.92	6.67
11	0.12500	44.48	7.82	6.60
12	0.13542	44.38	7.72	6.53
13	0.14583	44.26	7.60	6.44
14	0.15625	44.16	7.50	6.37
15	0.16667	44.06	7.40	6.30
16	0.17708	43.96	7.30	6.23
17	0.18750	43.85	7.19	6.16
18	0.19792	43.75	7.09	6.08
19	0.20833	43.67	7.01	6.03
20	0.21875	43.60	6.94	5.98
21	0.22917	43.52	6.86	5.92
22	0.23958	43.44	6.78	5.86
23	0.25000	43.36	6.70	5.80
24	0.26042	43.26	6.60	5.73
25	0.27083	43.18	6.52	5.67
26	0.28125	43.10	6.44	5.61
27	0.29167	43.04	6.38	5.57
28	0.30208	42.97	6.31	5.51
29	0.31250	42.90	6.24	5.46
30	0.32292	42.82	6.16	5.40
31	0.33333	42.74	6.08	5.34
32	0.34375	42.66	6.00	5.28
33	0.35417	42.58	5.92	5.22
34	0.36458	42.51	5.85	5.17
35	0.37500	42.42	5.76	5.10
36	0.38542	42.34	5.68	5.03
37	0.39583	42.27	5.61	4.98
38	0.40625	42.20	5.54	4.93
39	0.41667	42.14	5.48	4.88
40	0.42708	42.06	5.40	4.82
41	0.43750	41.99	5.33	4.76
42	0.44792	41.94	5.28	4.72
43	0.45833	41.89	5.23	4.68
44	0.46875	41.83	5.17	4.64
45	0.47917	41.77	5.11	4.59
46	0.48958	41.71	5.05	4.54
47	0.50000	41.65	4.99	4.49
48	0.51042	41.61	4.95	4.46
49	0.52083	41.57	4.91	4.43
50	0.53125	41.52	4.86	4.39

Golder Associates Inc.
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Pumping test analysis
Recovery method after
THEIS & JACOB
Unconfined aquifer

Project: Solutia/RFI/AL

Evaluated by: CDH

Pumping Test No. IW-6	Test conducted on: 09-09-98
IW-6	IW-6 Recovery
Discharge 0.09 U.S.gal/min	Distance from the pumping well 1.00 ft
Static water level: 36.66 ft below datum	Pumping test duration: 2.33333 d

	Time from end of pumping [d]	Water level [ft]	Residual drawdown [ft]	Corrected drawdown [ft]
51	0.54167	41.47	4.81	4.35
52	0.55208	41.41	4.75	4.30
53	0.56250	41.34	4.68	4.24
54	0.57292	41.28	4.62	4.19
55	0.58333	41.23	4.57	4.15
56	0.59375	41.18	4.52	4.11
57	0.60417	41.13	4.47	4.07
58	0.61458	41.09	4.43	4.04
59	0.62500	41.05	4.39	4.00
60	0.63667	40.89	4.23	3.87
61	0.70833	40.73	4.07	3.74
62	0.75000	40.56	3.90	3.60
63	0.79167	40.39	3.73	3.45
64	0.83333	40.24	3.58	3.32
65	0.87500	40.14	3.48	3.24
66	0.91667	40.01	3.35	3.13
67	0.95833	39.86	3.20	3.00
68	1.00000	39.73	3.07	2.88
69	1.04167	39.63	2.97	2.79
70	1.08333	39.52	2.86	2.70
71	1.12500	39.43	2.77	2.62
72	1.16667	39.34	2.68	2.54
73	1.20833	39.26	2.60	2.46
74	1.25000	39.17	2.51	2.38
75	1.29167	39.10	2.44	2.32
76	1.33333	39.02	2.36	2.25
77	1.37500	38.94	2.28	2.18
78	1.41667	38.87	2.21	2.11
79	1.45833	38.79	2.13	2.04
80	1.50000	38.74	2.08	1.99
81	1.54167	38.70	2.04	1.96
82	1.58333	38.66	2.00	1.92
83	1.62500	38.62	1.96	1.88
84	1.66667	38.59	1.93	1.86
85	1.70833	38.55	1.89	1.82
86	1.75000	38.50	1.84	1.77
87	1.79167	38.44	1.78	1.72
88	1.83333	38.38	1.72	1.66
89	1.87500	38.32	1.66	1.60
90	1.91667	38.27	1.61	1.56
91	1.95833	38.21	1.55	1.50
92	2.00000	38.16	1.50	1.45
93	2.04167	38.11	1.45	1.41
94	2.08333	38.10	1.44	1.40
95	2.12500	38.08	1.42	1.38
96	2.16667	38.06	1.40	1.36
97	2.20833	38.02	1.36	1.32
98	2.25000	38.00	1.34	1.30
99	2.29167	37.96	1.30	1.27
100	2.33333	37.93	1.27	1.24

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Pumping test analysis
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Project: Solutia/RFI/AL

Evaluated by: CDH

Pumping Test No. IW-6	Test conducted on: 09-09-98
IW-6	IW-6 Recovery
Discharge 0.09 U.S.gal/min	Distance from the pumping well 1.00 ft
Static water level: 36.66 ft below datum	Pumping test duration: 2.33333 d

	Time from end of pumping [d]	Water level [ft]	Residual drawdown [ft]	Corrected drawdown [ft]
101	2.37500	37.89	1.23	1.20
102	2.41667	37.86	1.20	1.17
103	2.45833	37.81	1.15	1.12
104	2.50000	37.79	1.13	1.10
105	2.54167	37.77	1.11	1.09
106	2.58333	37.76	1.10	1.08
107	2.62500	37.76	1.10	1.08
108	2.66667	37.75	1.09	1.07
109	2.70833	37.75	1.09	1.07
110	2.75000	37.74	1.08	1.06
111	2.79167	37.72	1.06	1.04
112	2.83333	37.69	1.03	1.01
113	2.87500	37.67	1.01	0.99
114	2.91667	37.63	0.97	0.95
115	2.95833	37.60	0.94	0.92
116	3.00000	37.57	0.91	0.89
117	3.04167	37.55	0.89	0.87
118	3.08333	37.53	0.87	0.85
119	3.12500	37.53	0.87	0.85
120	3.16667	37.52	0.86	0.85
121	3.20833	37.52	0.86	0.85
122	3.25000	37.50	0.84	0.83
123	3.29167	37.47	0.81	0.80
124	3.33333	37.45	0.79	0.78
125	3.37500	37.42	0.76	0.75
126	3.41667	37.39	0.73	0.72
127	3.45833	37.36	0.70	0.69
128	3.50000	37.35	0.69	0.68
129	3.54167	37.35	0.69	0.68
130	3.58333	37.35	0.69	0.68
131	3.62500	37.35	0.69	0.68
132	3.64792	37.36	0.70	0.69
133	3.64861	37.34	0.68	0.67
134	3.64931	37.35	0.69	0.68
135	3.65000	37.35	0.69	0.68
136	3.65278	37.35	0.69	0.68
137	3.65625	37.34	0.68	0.67
138	3.65972	37.35	0.69	0.68
139	3.66319	37.34	0.68	0.67
140	3.66667	37.35	0.69	0.68
141	3.67014	37.35	0.69	0.68
142	3.67361	37.35	0.69	0.68
143	3.67708	37.35	0.69	0.68
144	3.68056	37.34	0.68	0.67
145	3.68403	37.34	0.68	0.67
146	3.68750	37.35	0.69	0.68
147	3.69097	37.35	0.69	0.68
148	3.69444	37.34	0.68	0.67
149	3.69792	37.35	0.69	0.68
150	3.70139	37.35	0.69	0.68

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Pumping test analysis
Recovery method after
THEIS & JACOB
Unconfined aquifer

Project: Solutia/RFI/AL

Evaluated by: CDH

Pumping Test No. IW-6	Test conducted on: 09-09-98
IW-6	IW-6 Recovery
Discharge 0.09 U.S.gal/min	Distance from the pumping well 1.00 ft
Static water level: 36.66 ft below datum	Pumping test duration: 2.33333 d

	Time from end of pumping [d]	Water level [ft]	Residual drawdown [ft]	Corrected drawdown [ft]
151	3.70486	37.34	0.68	0.67
152	3.70833	37.35	0.69	0.68
153	3.71181	37.34	0.68	0.67
154	3.71528	37.35	0.69	0.68
155	3.72222	37.35	0.69	0.68
156	3.72917	37.35	0.69	0.68
157	3.73611	37.35	0.69	0.68
158	3.74306	37.35	0.69	0.68
159	3.75000	37.35	0.69	0.68
160	3.75694	37.34	0.68	0.67
161	3.76389	37.34	0.68	0.67
162	3.77083	37.35	0.69	0.68
163	3.77778	37.35	0.69	0.68
164	3.78472	37.34	0.68	0.67
165	3.79167	37.34	0.68	0.67
166	3.79861	37.34	0.68	0.67
167	3.81250	37.33	0.67	0.66
168	3.83333	37.32	0.66	0.65
169	3.85417	37.31	0.65	0.64
170	3.87500	37.30	0.64	0.63
171	3.89583	37.28	0.62	0.61
172	3.91667	37.28	0.62	0.61
173	3.93750	37.26	0.60	0.59
174	3.95833	37.24	0.58	0.57
175	3.97917	37.24	0.58	0.57
176	4.00000	37.23	0.57	0.56
177	4.02083	37.22	0.56	0.55
178	4.04167	37.22	0.56	0.55
179	4.06250	37.22	0.56	0.55
180	4.08333	37.22	0.56	0.55
181	4.10417	37.22	0.56	0.55
182	4.12500	37.21	0.55	0.54
183	4.14583	37.22	0.56	0.55
184	4.16667	37.22	0.56	0.55
185	4.18750	37.22	0.56	0.55
186	4.20833	37.21	0.55	0.54
187	4.22917	37.21	0.55	0.54
188	4.25000	37.20	0.54	0.53
189	4.27083	37.20	0.54	0.53
190	4.29167	37.19	0.53	0.52
191	4.31250	37.18	0.52	0.51
192	4.33333	37.18	0.52	0.51
193	4.35417	37.17	0.51	0.50
194	4.37500	37.16	0.50	0.49
195	4.39583	37.15	0.49	0.49
196	4.41667	37.14	0.48	0.48
197	4.43750	37.14	0.48	0.48
198	4.45833	37.13	0.47	0.47
199	4.47917	37.13	0.47	0.47
200	4.50000	37.12	0.46	0.46

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Pumping test analysis
Recovery method after
THEIS & JACOB
Unconfined aquifer

Project: Solutia/RFI/AL

Evaluated by: CDH

Pumping Test No. IW-6	Test conducted on: 09-09-98
IW-6	IW-6 Recovery
Discharge 0.09 U.S.gal/min	Distance from the pumping well 1.00 ft
Static water level: 36.66 ft below datum	Pumping test duration: 2.33333 d

	Time from end of pumping [d]	Water level [ft]	Residual drawdown [ft]	Corrected drawdown [ft]
201	4.54167	37.13	0.47	0.47
202	4.58333	37.15	0.49	0.49
203	4.62500	37.16	0.50	0.49
204	4.66667	37.18	0.52	0.51
205	4.70833	37.20	0.54	0.53
206	4.75000	37.21	0.55	0.54
207	4.79167	37.20	0.54	0.53
208	4.83333	37.19	0.53	0.52
209	4.87500	37.17	0.51	0.50
210	4.91667	37.15	0.49	0.49
211	4.95833	37.14	0.48	0.48
212	5.00000	37.13	0.47	0.47
213	5.04167	37.13	0.47	0.47
214	5.08333	37.13	0.47	0.47
215	5.12500	37.13	0.47	0.47
216	5.16667	37.14	0.48	0.48
217	5.20833	37.14	0.48	0.48
218	5.25000	37.14	0.48	0.48
219	5.29167	37.13	0.47	0.47
220	5.33333	37.12	0.46	0.46
221	5.37500	37.10	0.44	0.44
222	5.41667	37.09	0.43	0.43
223	5.45833	37.09	0.43	0.43
224	5.50000	37.09	0.43	0.43
225	5.54167	37.09	0.43	0.43
226	5.58333	37.11	0.45	0.45
227	5.62500	37.12	0.46	0.46
228	5.66667	37.14	0.48	0.48
229	5.70833	37.15	0.49	0.49
230	5.75000	37.16	0.50	0.49
231	5.79167	37.16	0.50	0.49
232	5.83333	37.15	0.49	0.49
233	5.87500	37.14	0.48	0.48
234	5.91667	37.13	0.47	0.47
235	5.95833	37.11	0.45	0.45
236	6.00000	37.09	0.43	0.43
237	6.04167	37.09	0.43	0.43
238	6.08333	37.10	0.44	0.44
239	6.12500	37.10	0.44	0.44
240	6.16667	37.10	0.44	0.44
241	6.20833	37.11	0.45	0.45
242	6.25000	37.11	0.45	0.45
243	6.29167	37.10	0.44	0.44
244	6.33333	37.08	0.42	0.42
245	6.37500	37.07	0.41	0.41
246	6.41667	37.06	0.40	0.40
247	6.45833	37.06	0.40	0.40
248	6.50000	37.06	0.40	0.40
249	6.54167	37.07	0.41	0.41
250	6.58333	37.08	0.42	0.42

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ph.(770)496-1893

Pumping test analysis
Recovery method after
THEIS & JACOB
Unconfined aquifer

Project: Solutia/RFI/AL

Evaluated by: CDH

Pumping Test No. IW 6	Test conducted on: 09-09-98
IW-6	IW-6 Recovery
Discharge 0.09 U.S.gal/min	Distance from the pumping well 1.00 ft
Static water level: 36.66 ft below datum	Pumping test duration: 2.33333 d

	Time from end of pumping [d]	Water level [ft]	Residual drawdown [ft]	Corrected drawdown [ft]
251	6.62500	37.09	0.43	0.43
252	6.64583	37.10	0.44	0.44
253	6.65278	37.10	0.44	0.44
254	6.65972	37.11	0.45	0.45
255	6.66667	37.11	0.45	0.45
256	6.67361	37.12	0.46	0.46
257	6.68056	37.12	0.46	0.46
258	6.68750	37.11	0.45	0.45
259	6.69444	37.13	0.47	0.47
260	6.70833	37.13	0.47	0.47
261	6.72917	37.14	0.48	0.48
262	6.75000	37.14	0.48	0.48
263	6.77083	37.14	0.48	0.48
264	6.79167	37.13	0.47	0.47
265	6.81250	37.12	0.46	0.46
266	6.83333	37.12	0.46	0.46
267	6.85417	37.11	0.45	0.45
268	6.87500	37.11	0.45	0.45
269	6.89583	37.10	0.44	0.44
270	6.91667	37.09	0.43	0.43
271	6.93750	37.08	0.42	0.42
272	6.95833	37.08	0.42	0.42
273	6.97917	37.08	0.42	0.42
274	7.00000	37.07	0.41	0.41
275	7.02083	37.06	0.40	0.40
276	7.04167	37.06	0.40	0.40
277	7.06250	37.06	0.40	0.40
278	7.08333	37.06	0.40	0.40
279	7.10417	37.07	0.41	0.41
280	7.12500	37.08	0.42	0.42
281	7.14583	37.08	0.42	0.42
282	7.16667	37.08	0.42	0.42
283	7.18750	37.08	0.42	0.42
284	7.20833	37.08	0.42	0.42
285	7.22917	37.09	0.43	0.43
286	7.25000	37.09	0.43	0.43
287	7.27083	37.09	0.43	0.43
288	7.29167	37.08	0.42	0.42
289	7.31250	37.07	0.41	0.41
290	7.33333	37.06	0.40	0.40
291	7.35417	37.06	0.40	0.40
292	7.37500	37.05	0.39	0.39
293	7.39583	37.04	0.38	0.38
294	7.41667	37.04	0.38	0.38
295	7.43750	37.03	0.37	0.37
296	7.45833	37.03	0.37	0.37
297	7.47917	37.03	0.37	0.37
298	7.50000	37.01	0.35	0.35
299	7.52083	37.01	0.35	0.35
300	7.54167	37.01	0.35	0.35

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Pumping test analysis
Recovery method after
THEIS & JACOB
Unconfined aquifer

Project: Solutia/RFI/AL

Evaluated by: CDH

Pumping Test No. IW-6	Test conducted on: 09-09-98
IW-6	IW-6 Recovery
Discharge 0.09 U.S.gal/min	Distance from the pumping well 1.00 ft
Static water level: 36.66 ft below datum	Pumping test duration: 2.33333 d

	Time from end of pumping [d]	Water level [ft]	Residual drawdown [ft]	Corrected drawdown [ft]
301	7.56250	37.01	0.35	0.35
302	7.58333	37.02	0.36	0.36
303	7.60417	37.02	0.36	0.36
304	7.62500	37.02	0.36	0.36
305	7.64583	37.04	0.38	0.38
306	7.66667	37.05	0.39	0.39
307	7.68750	37.06	0.40	0.40
308	7.70833	37.08	0.42	0.42
309	7.72917	37.09	0.43	0.43
310	7.75000	37.09	0.43	0.43
311	7.77083	37.09	0.43	0.43
312	7.79167	37.08	0.42	0.42

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Pumping test analysis
Recovery method after
THEIS & JACOB
Unconfined aquifer

Project: Solutia/RFI/AL

Evaluated by: CDH

Pumping Test No. IW-6

Test conducted on: 09-09-98

IW-6

Discharge 0.09 U.S.gal/min

Pumping test duration: 2.33333 d

	Pumping test duration [d]	Discharge [U.S.gal/min]
1	0.00000	0.40
2	2.33333	0.40
3	2.33403	0.00
4	10.12500	0.00

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Pumping test analysis
Theis analysis method
Unconfined aquifer

Date: 10-28-98 | Page 1

Project: Solutia/RFI/AL

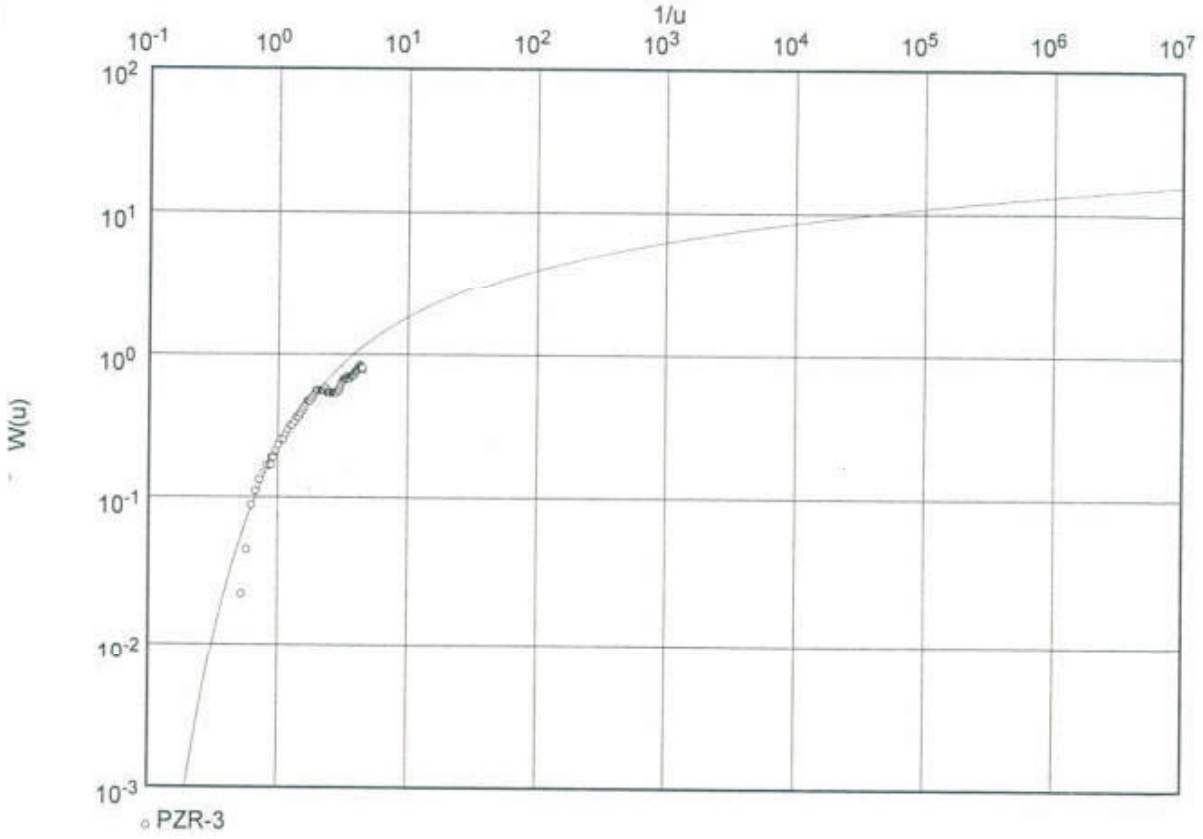
Evaluated by: CDH

Pumping Test No. IW-6

Test conducted on: 09-09-98

PZR-3

Discharge 0.40 U.S.gal/min



Transmissivity [ft²/d]: 1.34×10^{1}

Hydraulic conductivity [ft/d]: 5.39×10^{-1}

Aquifer thickness [ft]: 25.00

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Pumping test analysis
Theis analysis method
Unconfined aquifer

Project: Solutia/RFI/AL

Evaluated by: CDH

Pumping Test No. IW-6	Test conducted on: 09-09-98
PZR-3	PZR-3
Discharge 0.40 U.S.gal/min	Distance from the pumping well 54.25 ft

Static water level: 45.47 ft below datum

	Pumping test duration [d]	Water level [ft]	Drawdown [ft]	Corrected drawdown [ft]
2	0.00486	45.46	-0.01	-0.01
3	0.00694	45.45	-0.02	-0.02
4	0.01042	45.46	-0.01	-0.01
5	0.02083	45.45	-0.02	-0.02
6	0.03125	45.46	-0.01	-0.01
7	0.04167	45.45	-0.02	-0.02
8	0.05208	45.45	-0.02	-0.02
9	0.06250	45.45	-0.02	-0.02
10	0.07292	45.44	-0.03	-0.03
11	0.08333	45.44	-0.03	-0.03
12	0.10417	45.43	-0.04	-0.04
13	0.12500	45.45	-0.02	-0.02
14	0.14583	45.45	-0.02	-0.02
15	0.16667	45.45	-0.02	-0.02
16	0.18750	45.46	-0.01	-0.01
17	0.20833	45.47	0.00	0.00
18	0.22917	45.48	0.01	0.01
19	0.25000	45.49	0.02	0.02
20	0.27083	45.51	0.04	0.04
21	0.29167	45.52	0.05	0.05
22	0.31250	45.53	0.06	0.06
23	0.33333	45.54	0.07	0.07
24	0.35417	45.55	0.08	0.08
25	0.37500	45.55	0.08	0.08
26	0.38507	45.55	0.08	0.08
27	0.38519	45.56	0.09	0.09
28	0.38530	45.55	0.08	0.08
29	0.38542	45.56	0.09	0.09
30	0.38611	45.55	0.08	0.08
31	0.38681	45.56	0.09	0.09
32	0.38750	45.56	0.09	0.09
33	0.39583	45.56	0.09	0.09
34	0.41667	45.57	0.10	0.10
35	0.43750	45.58	0.11	0.11
36	0.45833	45.59	0.12	0.12
37	0.47917	45.59	0.12	0.12
38	0.50000	45.60	0.13	0.13
39	0.52083	45.61	0.14	0.14
40	0.54167	45.62	0.15	0.15
41	0.56250	45.62	0.15	0.15
42	0.58333	45.63	0.16	0.16
43	0.60417	45.64	0.17	0.17
44	0.62500	45.64	0.17	0.17
45	0.64583	45.65	0.18	0.18
46	0.66667	45.66	0.19	0.19
47	0.68750	45.67	0.20	0.20
48	0.70833	45.68	0.21	0.21
49	0.72917	45.69	0.22	0.22
50	0.75000	45.69	0.22	0.22

Golder Associates Inc.
3730 Chamblee Tucker Rd.
Atlanta, GA 30341
ph.(770)496-1893

Pumping test analysis
Theis analysis method
Unconfined aquifer

Project: Solutia/RFI/AL

Evaluated by: CDH

Pumping Test No. IW-6	Test conducted on: 09-09-98
PZR-3	PZR-3
Discharge 0.40 U.S.gal/min	Distance from the pumping well 54.25 ft
Static water level: 45.47 ft below datum	

	Pumping test duration [d]	Water level [ft]	Drawdown [ft]	Corrected drawdown [ft]
51	0.77083	45.69	0.22	0.22
52	0.79167	45.70	0.23	0.23
53	0.81250	45.71	0.24	0.24
54	0.83333	45.72	0.25	0.25
55	0.85417	45.73	0.26	0.26
56	0.87500	45.73	0.26	0.26
57	0.91667	45.73	0.26	0.26
58	0.93750	45.73	0.26	0.26
59	0.95833	45.73	0.26	0.26
60	0.97917	45.73	0.26	0.26
61	1.00000	45.74	0.27	0.27
62	1.02083	45.73	0.26	0.26
63	1.04167	45.72	0.25	0.25
64	1.06250	45.72	0.25	0.25
65	1.08333	45.72	0.25	0.25
66	1.10417	45.72	0.25	0.25
67	1.14583	45.72	0.25	0.25
68	1.16667	45.72	0.25	0.25
69	1.18750	45.72	0.25	0.25
70	1.20833	45.72	0.25	0.25
71	1.22917	45.72	0.25	0.25
72	1.25000	45.73	0.26	0.26
73	1.27083	45.73	0.26	0.26
74	1.29167	45.74	0.27	0.27
75	1.31250	45.75	0.28	0.28
76	1.33333	45.76	0.29	0.29
77	1.35417	45.77	0.30	0.30
78	1.37500	45.78	0.31	0.31
79	1.39583	45.78	0.31	0.31
80	1.41667	45.78	0.31	0.31
81	1.43750	45.78	0.31	0.31
82	1.45833	45.79	0.32	0.32
83	1.47917	45.79	0.32	0.32
84	1.50000	45.78	0.31	0.31
85	1.52083	45.79	0.32	0.32
86	1.54167	45.78	0.31	0.31
87	1.56250	45.79	0.32	0.32
88	1.58333	45.79	0.32	0.32
89	1.60417	45.79	0.32	0.32
90	1.62500	45.80	0.33	0.33
91	1.64583	45.80	0.33	0.33
92	1.66667	45.80	0.33	0.33
93	1.68750	45.81	0.34	0.34
94	1.70833	45.82	0.35	0.35
95	1.72917	45.82	0.35	0.35
96	1.75000	45.82	0.35	0.35
97	1.77083	45.83	0.36	0.36
98	1.79167	45.83	0.36	0.36
99	1.81250	45.84	0.37	0.37
100	1.83333	45.85	0.38	0.38

Golder Associates Inc.
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Pumping test analysis
Theis analysis method
Unconfined aquifer

Project: Solutia/RFI/AL

Evaluated by: CDH

Pumping Test No. IW 6	Test conducted on: 09-09-98
PZR-3	PZR-3
Discharge 0.40 U.S.gal/min	Distance from the pumping well 54.25 ft

Static water level: 45.47 ft below datum

	Pumping test duration [d]	Water level [ft]	Drawdown [ft]	Corrected drawdown [ft]
101	1.85417	45.86	0.39	0.39
102	1.87500	45.85	0.38	0.38
103	1.89583	45.85	0.38	0.38
104	1.91667	45.84	0.37	0.37
105	1.93750	45.84	0.37	0.37
106	1.95660	45.84	0.37	0.37
107	1.95694	45.83	0.36	0.36
108	1.95729	45.84	0.37	0.37

Golder Associates Inc.
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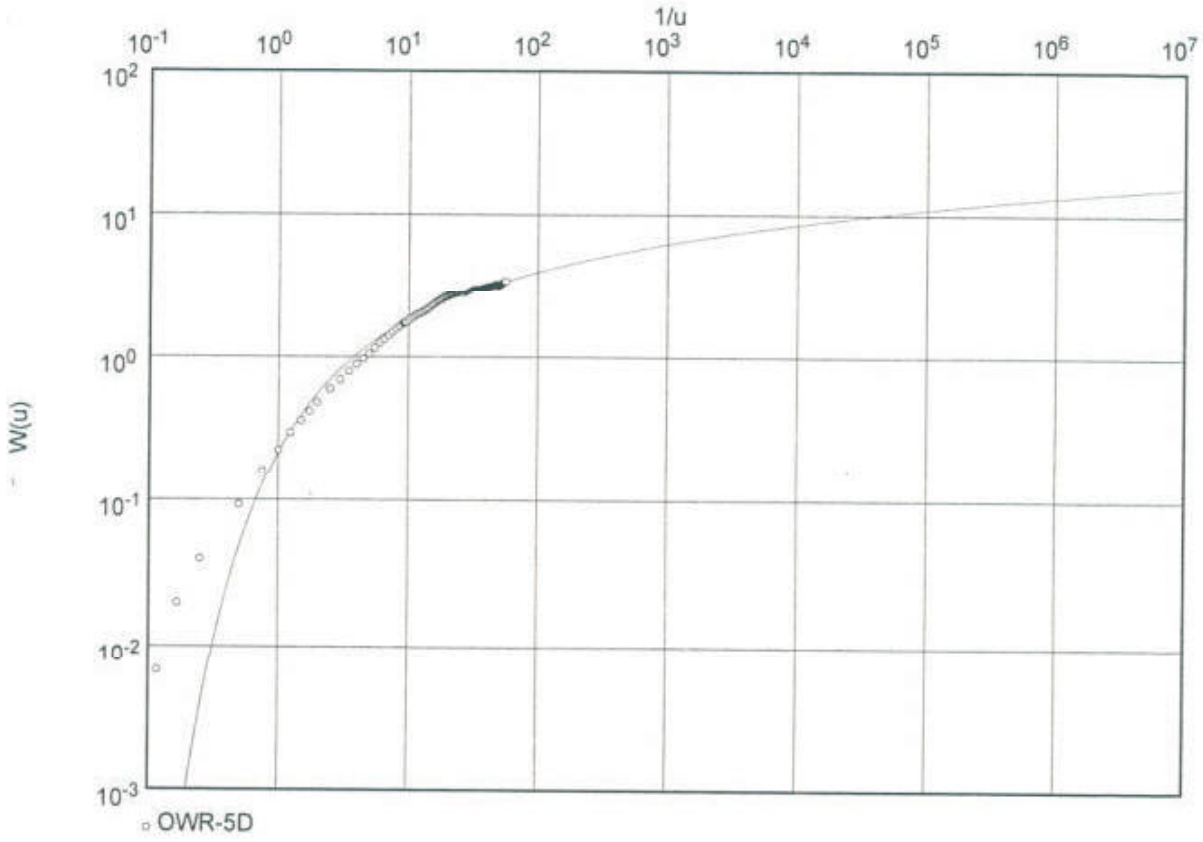
Pumping test analysis
Theis analysis method
Unconfined aquifer

Date: 10-27-98 | Page 1

Project: Solutia/RFI/AL

Evaluated by: CDH

Pumping Test No. IW-6	Test conducted on: 09-09-98
OWR-5D	
Discharge 0.40 U.S.gal/min	



Transmissivity [ft²/d]: 4.04×10^{0}

Hydraulic conductivity [ft/d]: 1.61×10^{-1}

Aquifer thickness [ft]: 25.00

Golder Associates Inc.
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Pumping test analysis
Theis analysis method
Unconfined aquifer

Project: Solutia/RFI/AL

Evaluated by: CDH

Pumping Test No. IW 6	Test conducted on: 09-09-98
OWR-5D	OWR-5D
Discharge 0.40 U.S.gal/min	Distance from the pumping well 28.75 ft

Static water level: 44.85 ft below datum

	Pumping test duration [d]	Water level [ft]	Drawdown [ft]	Corrected drawdown [ft]
2	0.00417	44.86	0.01	0.01
3	0.00486	44.86	0.01	0.01
4	0.00694	44.88	0.03	0.03
5	0.01042	44.91	0.06	0.06
6	0.02083	44.99	0.14	0.14
7	0.03125	45.10	0.25	0.25
8	0.04167	45.20	0.35	0.35
9	0.05208	45.31	0.46	0.46
10	0.06250	45.41	0.56	0.55
11	0.07292	45.50	0.65	0.64
12	0.08333	45.60	0.75	0.74
13	0.10417	45.78	0.93	0.91
14	0.12500	45.93	1.08	1.06
15	0.14583	46.09	1.24	1.21
16	0.16667	46.24	1.39	1.35
17	0.18750	46.36	1.51	1.46
18	0.20833	46.49	1.64	1.59
19	0.22917	46.65	1.80	1.74
20	0.25000	46.80	1.95	1.87
21	0.27083	46.94	2.09	2.00
22	0.29167	47.07	2.22	2.12
23	0.31250	47.20	2.35	2.24
24	0.33333	47.32	2.47	2.35
25	0.35417	47.43	2.58	2.45
26	0.37500	47.53	2.68	2.54
27	0.38507	47.57	2.72	2.57
28	0.38519	47.57	2.72	2.57
29	0.38530	47.58	2.73	2.58
30	0.38542	47.57	2.72	2.57
31	0.38611	47.58	2.73	2.58
32	0.38681	47.58	2.73	2.58
33	0.38750	47.58	2.73	2.58
34	0.39583	47.62	2.77	2.62
35	0.41667	47.72	2.87	2.71
36	0.43750	47.82	2.97	2.79
37	0.45833	47.90	3.05	2.86
38	0.47917	47.99	3.14	2.94
39	0.50000	48.05	3.20	3.00
40	0.52083	48.12	3.27	3.06
41	0.54167	48.18	3.33	3.11
42	0.56250	48.25	3.40	3.17
43	0.58333	48.32	3.47	3.23
44	0.60417	48.40	3.55	3.30
45	0.62500	48.50	3.65	3.38
46	0.64583	48.58	3.73	3.45
47	0.66667	48.67	3.82	3.53
48	0.68750	48.75	3.90	3.60
49	0.70833	48.84	3.99	3.67
50	0.72917	48.90	4.05	3.72

Golder Associates Inc.
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Pumping test analysis
Theis analysis method
Unconfined aquifer

Project: Solutia/RFI/AL

Evaluated by: CDH

Pumping Test No. IW 6	Test conducted on: 09-09-98
OWR-5D	OWR-5D
Discharge 0.40 U.S.gal/min	Distance from the pumping well 28.75 ft
Static water level: 44.85 ft below datum	

	Pumping test duration [d]	Water level [ft]	Drawdown [ft]	Corrected drawdown [ft]
51	0.75000	48.97	4.12	3.78
52	0.77083	49.04	4.19	3.84
53	0.79167	49.11	4.26	3.90
54	0.81250	49.16	4.31	3.94
55	0.83333	49.22	4.37	3.99
56	0.85417	49.28	4.43	4.04
57	0.87500	49.34	4.49	4.09
58	0.89583	49.38	4.53	4.12
59	0.91667	49.36	4.51	4.10
60	0.93750	49.38	4.53	4.12
61	0.95833	49.43	4.58	4.16
62	0.97917	49.44	4.59	4.17
63	1.00000	49.47	4.62	4.19
64	1.02083	49.50	4.65	4.22
65	1.04167	49.53	4.68	4.24
66	1.06250	49.57	4.72	4.27
67	1.08333	49.54	4.69	4.25
68	1.10417	49.50	4.65	4.22
69	1.12500	49.48	4.63	4.20
70	1.14583	49.55	4.70	4.26
71	1.16667	49.61	4.76	4.31
72	1.18750	49.66	4.81	4.36
73	1.20833	49.71	4.86	4.39
74	1.22917	49.76	4.91	4.43
75	1.25000	49.81	4.96	4.47
76	1.27083	49.87	5.02	4.52
77	1.29167	49.91	5.06	4.55
78	1.31250	49.93	5.08	4.56
79	1.33333	49.95	5.10	4.58
80	1.35417	49.97	5.12	4.60
81	1.37500	49.98	5.13	4.60
82	1.39583	49.99	5.14	4.61
83	1.41667	49.99	5.14	4.61
84	1.43750	49.99	5.14	4.61
85	1.45833	49.99	5.14	4.61
86	1.47917	50.00	5.15	4.62
87	1.50000	50.01	5.16	4.63
88	1.52083	50.04	5.19	4.65
89	1.54167	50.06	5.21	4.67
90	1.56250	50.08	5.23	4.68
91	1.58333	50.11	5.26	4.71
92	1.60417	50.13	5.28	4.72
93	1.62500	50.15	5.30	4.74
94	1.64583	50.16	5.31	4.75
95	1.66667	50.18	5.33	4.76
96	1.68750	50.21	5.36	4.79
97	1.70833	50.22	5.37	4.79
98	1.72917	50.24	5.39	4.81
99	1.75000	50.26	5.41	4.82
100	1.77083	50.27	5.42	4.83

Golder Associates Inc.
3730 Chamblee Tucker Rd.
Atlanta, GA 30341
ph.(770)496-1893

Pumping test analysis
Theis analysis method
Unconfined aquifer

Project: Solutia/RFI/AL

Evaluated by: CDH

Pumping Test No. IW-6	Test conducted on: 09-09-98
OWR-5D	OWR-5D
Discharge 0.40 U.S.gal/min	Distance from the pumping well 28.75 ft

Static water level: 44.85 ft below datum

	Pumping test duration [d]	Water level [ft]	Drawdown [ft]	Corrected drawdown [ft]
101	1.79167	50.29	5.44	4.85
102	1.81250	50.30	5.45	4.86
103	1.83333	50.33	5.48	4.88
104	1.85417	50.34	5.49	4.89
105	1.87500	50.37	5.52	4.91
106	1.89583	50.40	5.55	4.93
107	1.91667	50.43	5.58	4.96
108	1.93750	50.45	5.60	4.97
109	1.95660	50.49	5.64	5.00
110	1.95694	50.48	5.63	5.00
111	1.95729	50.48	5.63	5.00
112	1.95833	50.48	5.63	5.00
113	1.97917	50.51	5.66	5.02
114	2.00000	50.51	5.66	5.02
115	2.02083	50.41	5.56	4.94
116	2.04167	50.37	5.52	4.91
117	2.06250	50.32	5.47	4.87
118	2.08333	50.37	5.52	4.91
119	2.10417	50.41	5.56	4.94
120	2.12500	50.44	5.59	4.97
121	2.14583	50.48	5.63	5.00
122	2.16667	50.52	5.67	5.03
123	2.18750	50.57	5.72	5.07
124	2.20833	50.62	5.77	5.10
125	2.22917	50.66	5.81	5.13
126	2.25000	50.71	5.86	5.17
127	2.27083	50.75	5.90	5.20
128	2.29167	50.79	5.94	5.23
129	2.31250	50.81	5.96	5.25
130	2.33333	50.84	5.99	5.27
131	2.35417	50.86	6.01	5.29

Golder Associates Inc.
3730 Chamblee Tucker Rd.
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Pumping test analysis
Theis analysis method
Unconfined aquifer

Project: Solutia/RFI/AL

Evaluated by: CDH

Pumping Test No. IW-6

Test conducted on: 09-09-98

OWR-5D

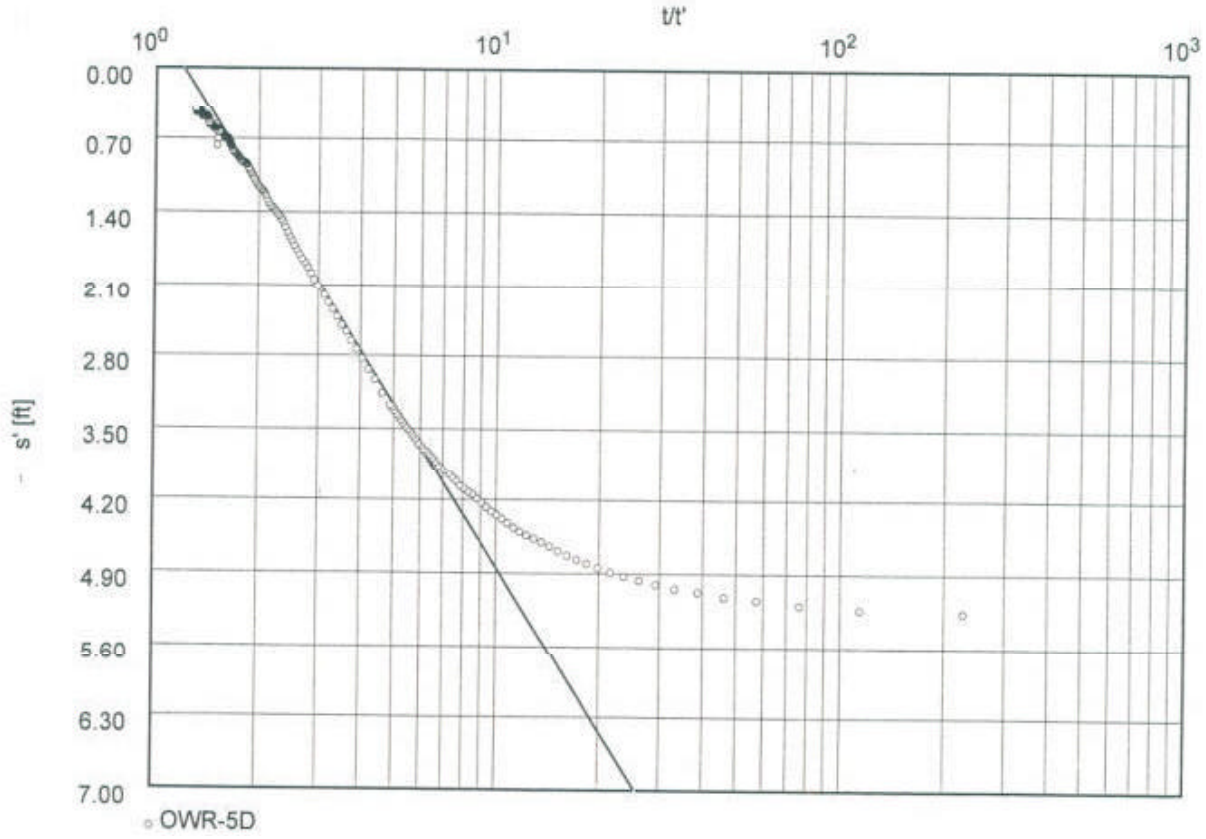
Inline Flow Meter

Discharge 0.40 U.S.gal/min

	Pumping test duration [d]	Discharge [U.S.gal/min]
1	0.00000	0.40
2	2.43056	0.40

Golder Associates Inc. 3730 Chamblee Tucker Rd. Atlanta, GA 30341 ph.(770)496-1893	Pumping test analysis Recovery method after THEIS & JACOB Unconfined aquifer	Date: 11-03-98	Page 1
		Project: Solutia/RFI/AL	
		Evaluated by: CDH	

Pumping Test No. IW-6	Test conducted on: 09-09-98
OWR-5D	
Discharge 0.09 U.S.gal/min	
	Pumping test duration: 2.35417 d



Transmissivity [ft²/d]: 6.22×10^{-1}

Hydraulic conductivity [ft/d]: 2.48×10^{-2}

Aquifer thickness [ft]: 25.00

Golder Associates Inc.
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Pumping test analysis
Recovery method after
THEIS & JACOB
Unconfined aquifer

Project: Solutia/RFI/AL

Evaluated by: CDH

Pumping Test No. IW 6

Test conducted on: 09-09-98

OWR-5D

Discharge 0.09 U.S.gal/min

Pumping test duration: 2.35417 d

	Pumping test duration [d]	Discharge [U.S.gal/min]
1	0.00000	0.40
2	2.35417	0.40
3	2.35486	0.00
4	10.12500	0.00

Golder Associates Inc.
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Pumping test analysis
Recovery method after
THEIS & JACOB
Unconfined aquifer

Project: Solutia/RFI/AL

Evaluated by: CDH

Pumping Test No. IW-6	Test conducted on: 00 00 08
OWR-5D	OWR-5D
Discharge 0.09 U.S.gal/min	Distance from the pumping well 28.75 ft
Static water level: 44.86 ft below datum	Pumping test duration: 2.35417 d

	Time from end of pumping [d]	Water level [ft]	Residual drawdown [ft]	Corrected drawdown [ft]
1	0.01042	50.84	5.98	5.26
2	0.02083	50.80	5.94	5.23
3	0.03125	50.75	5.89	5.20
4	0.04167	50.69	5.83	5.15
5	0.05208	50.65	5.79	5.12
6	0.06250	50.59	5.73	5.07
7	0.07292	50.55	5.69	5.04
8	0.08333	50.50	5.64	5.00
9	0.09375	50.45	5.59	4.97
10	0.10417	50.40	5.54	4.93
11	0.11458	50.35	5.49	4.89
12	0.12500	50.30	5.44	4.85
13	0.13542	50.25	5.39	4.81
14	0.14583	50.20	5.34	4.77
15	0.15625	50.15	5.29	4.73
16	0.16667	50.10	5.24	4.69
17	0.17708	50.04	5.18	4.64
18	0.18750	49.99	5.13	4.60
19	0.19792	49.95	5.09	4.57
20	0.20833	49.91	5.05	4.54
21	0.21875	49.87	5.01	4.51
22	0.22917	49.82	4.96	4.47
23	0.23958	49.77	4.91	4.43
24	0.25000	49.72	4.86	4.39
25	0.26042	49.67	4.81	4.35
26	0.27083	49.63	4.77	4.31
27	0.28125	49.58	4.72	4.27
28	0.29167	49.53	4.67	4.23
29	0.30208	49.48	4.62	4.19
30	0.31250	49.43	4.57	4.15
31	0.32292	49.40	4.54	4.13
32	0.33333	49.36	4.50	4.10
33	0.34375	49.33	4.47	4.07
34	0.35417	49.27	4.41	4.02
35	0.36458	49.23	4.37	3.99
36	0.37500	49.19	4.33	3.96
37	0.38542	49.15	4.29	3.92
38	0.39583	49.11	4.25	3.89
39	0.40625	49.07	4.21	3.86
40	0.41667	49.02	4.16	3.81
41	0.42708	48.98	4.12	3.78
42	0.43750	48.94	4.08	3.75
43	0.44792	48.91	4.05	3.72
44	0.45833	48.88	4.02	3.70
45	0.46875	48.84	3.98	3.66
46	0.47917	48.81	3.95	3.64
47	0.48958	48.76	3.90	3.60
48	0.50000	48.72	3.86	3.56
49	0.51042	48.68	3.82	3.53
50	0.52083	48.65	3.79	3.50

Golder Associates Inc. 3730 Chamblee Tucker Rd. Atlanta, GA 30341 ph.(770)496-1893	Pumping test analysis Recovery method after THEIS & JACOB Unconfined aquifer	Date: 11-03-98 | Page 4 Project: Solutia/RFI/AL Evaluated by: CDH

Pumping Test No. IW 6	Test conducted on: 09-09-98
OWR-5D	OWR-5D
Discharge 0.09 U.S.gal/min	Distance from the pumping well 28.75 ft
Static water level: 44.86 ft below datum	Pumping test duration: 2.35417 d

	Time from end of pumping [d]	Water level [ft]	Residual drawdown [ft]	Corrected drawdown [ft]
51	0.53125	48.62	3.76	3.48
52	0.54167	48.58	3.72	3.44
53	0.55208	48.55	3.69	3.42
54	0.56250	48.51	3.65	3.38
55	0.57292	48.48	3.62	3.36
56	0.58333	48.44	3.58	3.32
57	0.59375	48.41	3.55	3.30
58	0.60417	48.38	3.52	3.27
59	0.64583	48.25	3.39	3.16
60	0.68750	48.10	3.24	3.03
61	0.72917	47.99	3.13	2.93
62	0.77083	47.87	3.01	2.83
63	0.81250	47.77	2.91	2.74
64	0.85417	47.68	2.82	2.66
65	0.89583	47.58	2.72	2.57
66	0.93750	47.51	2.65	2.51
67	0.97917	47.42	2.56	2.43
68	1.02083	47.34	2.48	2.36
69	1.06250	47.27	2.41	2.29
70	1.10417	47.19	2.33	2.22
71	1.14583	47.11	2.25	2.15
72	1.18750	47.06	2.20	2.10
73	1.22917	47.00	2.14	2.05
74	1.27083	46.93	2.07	1.98
75	1.31250	46.87	2.01	1.93
76	1.35417	46.82	1.96	1.88
77	1.39583	46.78	1.92	1.85
78	1.43750	46.73	1.87	1.80
79	1.47917	46.68	1.82	1.75
80	1.52083	46.64	1.78	1.72
81	1.56250	46.59	1.73	1.67
82	1.60417	46.55	1.69	1.63
83	1.64583	46.50	1.64	1.59
84	1.68750	46.45	1.59	1.54
85	1.72917	46.40	1.54	1.49
86	1.77083	46.37	1.51	1.46
87	1.81250	46.34	1.48	1.44
88	1.85417	46.32	1.46	1.42
89	1.89583	46.29	1.43	1.39
90	1.93750	46.27	1.41	1.37
91	1.97917	46.25	1.39	1.35
92	2.02083	46.24	1.38	1.34
93	2.06250	46.21	1.35	1.31
94	2.10417	46.18	1.32	1.29
95	2.14583	46.14	1.28	1.25
96	2.18750	46.11	1.25	1.22
97	2.22917	46.09	1.23	1.20
98	2.27083	46.08	1.22	1.19
99	2.31250	46.06	1.20	1.17
100	2.35417	46.05	1.19	1.16

Golder Associates Inc.
3730 Chamblee Tucker Rd.
Atlanta, GA 30341
ph.(770)496-1893

Pumping test analysis
Recovery method after
THEIS & JACOB
Unconfined aquifer

Project: Solutia/RFI/AL

Evaluated by: CDH

Pumping Test No. IW-6	Test conducted on: 09-09-98
OWR-5D	OWR-5D
Discharge 0.09 U.S.gal/min	Distance from the pumping well 28.75 ft
Static water level: 44.86 ft below datum	Pumping test duration: 2.35417 d

	Time from end of pumping [d]	Water level [ft]	Residual drawdown [ft]	Corrected drawdown [ft]
101	2.39583	46.03	1.17	1.14
102	2.43750	46.01	1.15	1.12
103	2.47917	45.99	1.13	1.10
104	2.52083	45.97	1.11	1.09
105	2.56250	45.94	1.08	1.06
106	2.60417	45.92	1.06	1.04
107	2.64583	45.90	1.04	1.02
108	2.68750	45.88	1.02	1.00
109	2.72917	45.86	1.00	0.98
110	2.77083	45.83	0.97	0.95
111	2.81250	45.82	0.96	0.94
112	2.85417	45.82	0.96	0.94
113	2.89583	45.81	0.95	0.93
114	2.93750	45.81	0.95	0.93
115	2.97917	45.80	0.94	0.92
116	3.02083	45.80	0.94	0.92
117	3.06250	45.79	0.93	0.91
118	3.10417	45.77	0.91	0.89
119	3.14583	45.76	0.90	0.88
120	3.18750	45.75	0.89	0.87
121	3.22917	45.74	0.88	0.86
122	3.27083	45.73	0.87	0.85
123	3.31250	45.72	0.86	0.85
124	3.35417	45.71	0.85	0.84
125	3.39583	45.71	0.85	0.84
126	3.43750	45.70	0.84	0.83
127	3.47917	45.69	0.83	0.82
128	3.52083	45.67	0.81	0.80
129	3.56250	45.65	0.79	0.78
130	3.60417	45.64	0.78	0.77
131	3.62708	45.64	0.78	0.77
132	3.62778	45.64	0.78	0.77
133	3.62847	45.63	0.77	0.76
134	3.62917	45.63	0.77	0.76
135	3.63194	45.64	0.78	0.77
136	3.63542	45.63	0.77	0.76
137	3.63889	45.62	0.76	0.75
138	3.64236	45.62	0.76	0.75
139	3.64583	45.63	0.77	0.76
140	3.64931	45.62	0.76	0.75
141	3.65278	45.62	0.76	0.75
142	3.65625	45.62	0.76	0.75
143	3.65972	45.62	0.76	0.75
144	3.66319	45.61	0.75	0.74
145	3.66667	45.61	0.75	0.74
146	3.67014	45.62	0.76	0.75
147	3.67361	45.61	0.75	0.74
148	3.67708	45.62	0.76	0.75
149	3.68056	45.62	0.76	0.75
150	3.68403	45.61	0.75	0.74

Golder Associates Inc. 3730 Chamblee Tucker Rd. Atlanta, GA 30341 ph.(770)496-1893	Pumping test analysis Recovery method after THEIS & JACOB Unconfined aquifer	Date: 11-03-98 | Page 6 Project: Solutia/RFI/AL Evaluated by: CDH

Pumping Test No. IW 6	Test conducted on: 09-09-98
OWR-5D	OWR-5D
Discharge 0.09 U.S.gal/min	Distance from the pumping well 28.75 ft
Static water level: 44.86 ft below datum	Pumping test duration: 2.35417 d

	Time from end of pumping [d]	Water level [ft]	Residual drawdown [ft]	Corrected drawdown [ft]
151	3.68750	45.61	0.75	0.74
152	3.69097	45.60	0.74	0.73
153	3.69444	45.60	0.74	0.73
154	3.70139	45.61	0.75	0.74
155	3.70833	45.60	0.74	0.73
156	3.71528	45.60	0.74	0.73
157	3.72222	45.59	0.73	0.72
158	3.72917	45.59	0.73	0.72
159	3.73611	45.59	0.73	0.72
160	3.74306	45.60	0.74	0.73
161	3.75000	45.59	0.73	0.72
162	3.75694	45.58	0.72	0.71
163	3.76389	45.58	0.72	0.71
164	3.77083	45.57	0.71	0.70
165	3.77778	45.58	0.72	0.71
166	3.78167	45.58	0.72	0.71
167	3.81250	45.58	0.72	0.71
168	3.83333	45.58	0.72	0.71
169	3.85417	45.58	0.72	0.71
170	3.87500	45.58	0.72	0.71
171	3.89583	45.57	0.71	0.70
172	3.91667	45.57	0.71	0.70
173	3.93750	45.57	0.71	0.70
174	3.95833	45.57	0.71	0.70
175	3.97917	45.57	0.71	0.70
176	4.00000	45.57	0.71	0.70
177	4.02083	45.57	0.71	0.70
178	4.04167	45.56	0.70	0.69
179	4.06250	45.56	0.70	0.69
180	4.08333	45.56	0.70	0.69
181	4.10417	45.55	0.69	0.68
182	4.12500	45.55	0.69	0.68
183	4.14583	45.54	0.68	0.67
184	4.16667	45.54	0.68	0.67
185	4.18750	45.53	0.67	0.66
186	4.20833	45.53	0.67	0.66
187	4.22917	45.53	0.67	0.66
188	4.25000	45.53	0.67	0.66
189	4.27083	45.52	0.66	0.65
190	4.29167	45.52	0.66	0.65
191	4.31250	45.52	0.66	0.65
192	4.33333	45.52	0.66	0.65
193	4.35417	45.52	0.66	0.65
194	4.37500	45.52	0.66	0.65
195	4.39583	45.52	0.66	0.65
196	4.41667	45.52	0.66	0.65
197	4.43750	45.52	0.66	0.65
198	4.45833	45.52	0.66	0.65
199	4.47917	45.51	0.65	0.64
200	4.52083	45.57	0.71	0.70

Golder Associates Inc.
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Pumping test analysis
Recovery method after
THEIS & JACOB
Unconfined aquifer

Project: Solutia/RFI/AL

Evaluated by: CDH

Pumping Test No. IW-6	Test conducted on: 09-09-98
OWR-5D	OWR-5D
Discharge 0.09 U.S.gal/min	Distance from the pumping well 28.75 ft
Static water level: 44.86 ft below datum	Pumping test duration: 2.35417 d

	Time from end of pumping [d]	Water level [ft]	Residual drawdown [ft]	Corrected drawdown [ft]
201	4.56250	45.58	0.72	0.71
202	4.60417	45.64	0.78	0.77
203	4.64583	45.46	0.60	0.59
204	4.68750	45.45	0.59	0.58
205	4.72917	45.44	0.58	0.57
206	4.77083	45.49	0.63	0.62
207	4.81250	45.47	0.61	0.60
208	4.85417	45.47	0.61	0.60
209	4.89583	45.47	0.61	0.60
210	4.93750	45.47	0.61	0.60
211	4.97917	45.47	0.61	0.60
212	5.02083	45.47	0.61	0.60
213	5.06250	45.46	0.60	0.59
214	5.10417	45.46	0.60	0.59
215	5.14583	45.45	0.59	0.58
216	5.18750	45.44	0.58	0.57
217	5.22917	45.44	0.58	0.57
218	5.27083	45.44	0.58	0.57
219	5.31250	45.44	0.58	0.57
220	5.35417	45.44	0.58	0.57
221	5.39583	45.44	0.58	0.57
222	5.43750	45.44	0.58	0.57
223	5.47917	45.44	0.58	0.57
224	5.52083	45.43	0.57	0.56
225	5.56250	45.42	0.56	0.55
226	5.60417	45.39	0.53	0.52
227	5.64583	45.37	0.51	0.50
228	5.68750	45.36	0.50	0.49
229	5.72917	45.36	0.50	0.49
230	5.77083	45.35	0.49	0.49
231	5.81250	45.35	0.49	0.49
232	5.85417	45.35	0.49	0.49
233	5.89583	45.35	0.49	0.49
234	5.93750	45.36	0.50	0.49
235	5.97917	45.36	0.50	0.49
236	6.02083	45.36	0.50	0.49
237	6.06250	45.36	0.50	0.49
238	6.10417	45.36	0.50	0.49
239	6.14583	45.35	0.49	0.49
240	6.18750	45.35	0.49	0.49
241	6.22917	45.35	0.49	0.49
242	6.27083	45.35	0.49	0.49
243	6.31250	45.35	0.49	0.49
244	6.35417	45.36	0.50	0.49
245	6.39583	45.36	0.50	0.49
246	6.43750	45.36	0.50	0.49
247	6.47917	45.35	0.49	0.49
248	6.52083	45.35	0.49	0.49
249	6.56250	45.35	0.49	0.49
250	6.60417	45.34	0.48	0.48

Golder Associates Inc.
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Pumping test analysis
Recovery method after
THEIS & JACOB
Unconfined aquifer

Project: Solutia/RFI/AL

Evaluated by: CDH

Pumping Test No. IW-6	Test conducted on: 09-09-98
OWR-5D	OWR-5D
Discharge 0.09 U.S.gal/min	Distance from the pumping well 28.75 ft
Static water level: 44.86 ft below datum	Pumping test duration: 2.35417 d

	Time from end of pumping [d]	Water level [ft]	Residual drawdown [ft]	Corrected drawdown [ft]
251	6.62500	45.33	0.47	0.47
252	6.63194	45.33	0.47	0.47
253	6.63889	45.33	0.47	0.47
254	6.64583	45.32	0.46	0.46
255	6.65278	45.33	0.47	0.47
256	6.65972	45.33	0.47	0.47
257	6.66667	45.32	0.46	0.46
258	6.67361	45.32	0.46	0.46
259	6.68750	45.32	0.46	0.46
260	6.70833	45.31	0.45	0.45
261	6.72917	45.31	0.45	0.45
262	6.75000	45.31	0.45	0.45
263	6.77083	45.31	0.45	0.45
264	6.79167	45.31	0.45	0.45
265	6.81250	45.31	0.45	0.45
266	6.83333	45.31	0.45	0.45
267	6.85417	45.31	0.45	0.45
268	6.87500	45.31	0.45	0.45
269	6.89583	45.31	0.45	0.45
270	6.91667	45.32	0.46	0.46
271	6.93750	45.32	0.46	0.46
272	6.95833	45.32	0.46	0.46
273	6.97917	45.32	0.46	0.46
274	7.00000	45.32	0.46	0.46
275	7.02083	45.32	0.46	0.46
276	7.04167	45.32	0.46	0.46
277	7.06250	45.32	0.46	0.46
278	7.08333	45.32	0.46	0.46
279	7.10417	45.32	0.46	0.46
280	7.12500	45.31	0.45	0.45
281	7.14583	45.31	0.45	0.45
282	7.16667	45.31	0.45	0.45
283	7.18750	45.31	0.45	0.45
284	7.20833	45.31	0.45	0.45
285	7.22917	45.30	0.44	0.44
286	7.25000	45.30	0.44	0.44
287	7.27083	45.30	0.44	0.44
288	7.29167	45.31	0.45	0.45
289	7.31250	45.31	0.45	0.45
290	7.33333	45.31	0.45	0.45
291	7.35417	45.31	0.45	0.45
292	7.37500	45.31	0.45	0.45
293	7.39583	45.31	0.45	0.45
294	7.41667	45.32	0.46	0.46
295	7.43750	45.32	0.46	0.46
296	7.45833	45.32	0.46	0.46
297	7.47917	45.32	0.46	0.46
298	7.50000	45.32	0.46	0.46
299	7.52083	45.32	0.46	0.46
300	7.54167	45.32	0.46	0.46

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Pumping test analysis
Recovery method after
THEIS & JACOB
Unconfined aquifer

Project: Solutia/RFI/AL

Evaluated by: CDH

Pumping Test No. IW 6	Test conducted on: 09-09-98
OWR-5D	OWR-5D
Discharge 0.09 U.S.gal/min	Distance from the pumping well 28.75 ft
Static water level: 44.86 ft below datum	Pumping test duration: 2.35417 d

	Time from end of pumping [d]	Water level [ft]	Residual drawdown [ft]	Corrected drawdown [ft]
301	7.56250	45.32	0.46	0.46
302	7.58333	45.32	0.46	0.46
303	7.60417	45.31	0.45	0.45
304	7.62500	45.31	0.45	0.45
305	7.64583	45.30	0.44	0.44
306	7.66667	45.30	0.44	0.44
307	7.68750	45.29	0.43	0.43
308	7.70833	45.28	0.42	0.42
309	7.72917	45.28	0.42	0.42
310	7.75000	45.28	0.42	0.42
311	7.77083	45.28	0.42	0.42

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Pumping test analysis
Recovery method after
THEIS & JACOB
Unconfined aquifer

Date: 11-03-98 | Page 1

Project: Solutia/RFI/AL

Evaluated by: CDH

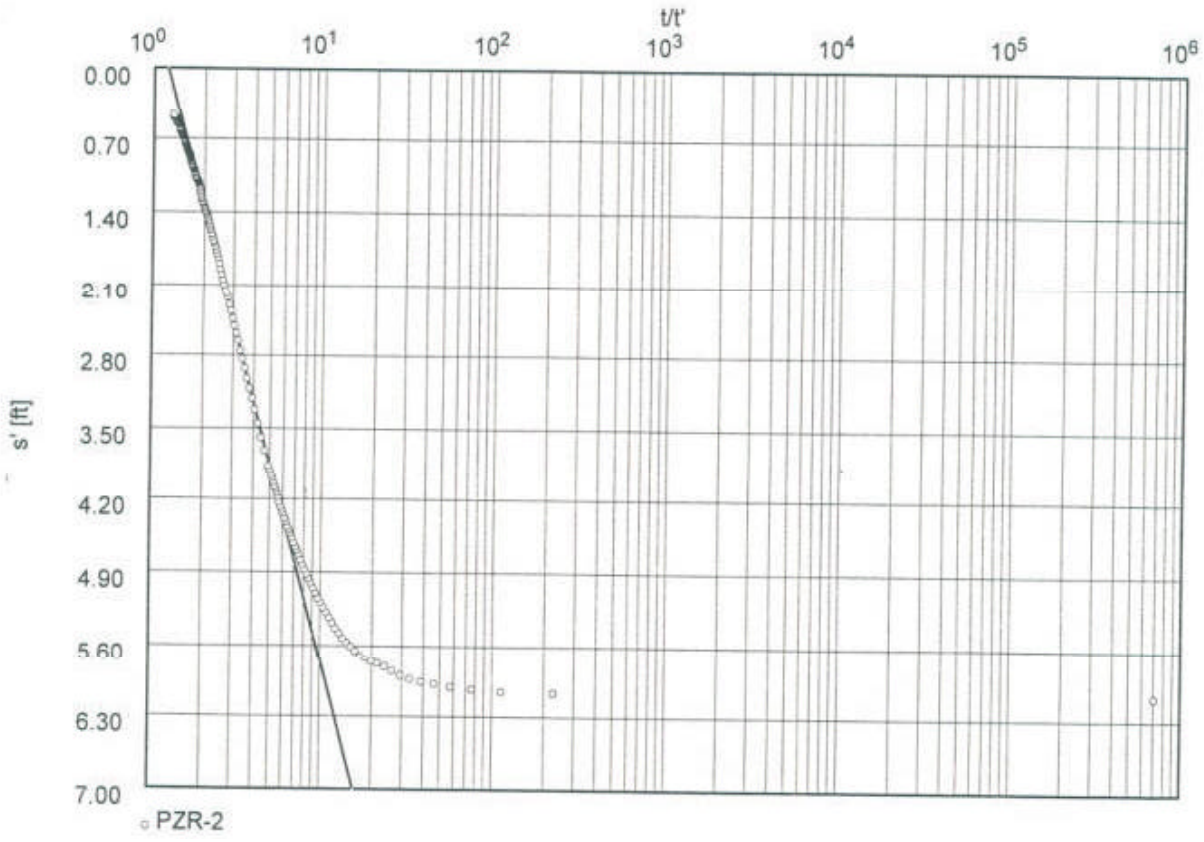
Pumping Test No. IW-6

Test conducted on: 09-09-98

PZR-2

Discharge 0.09 U.S.gal/min

Pumping test duration: 2.35417 d



Transmissivity [ft²/d]: 5.23×10^{-1}

Hydraulic conductivity [ft/d]: 2.09×10^{-2}

Aquifer thickness [ft]: 25.00

Golder Associates Inc.
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Pumping test analysis
Recovery method after
THEIS & JACOB
Unconfined aquifer

Project: Solutia/RFI/AL

Evaluated by: CDH

Pumping Test No. IW-6	Test conducted on: 09-09-98
PZR-2	PZR-2
Discharge 0.09 U.S.gal/min	Distance from the pumping well 9.75 ft
Static water level: 45.93 ft below datum	Pumping test duration: 2.35417 d

	Time from end of pumping [d]	Water level [ft]	Residual drawdown [ft]	Corrected drawdown [ft]
1	0.00000	53.00	7.07	6.07
2	0.01041	53.00	7.07	6.07
3	0.02083	52.98	7.05	6.06
4	0.03125	52.95	7.02	6.03
5	0.04166	52.92	6.99	6.01
6	0.05208	52.88	6.95	5.98
7	0.06250	52.85	6.92	5.96
8	0.07291	52.82	6.89	5.94
9	0.08333	52.77	6.84	5.90
10	0.09375	52.71	6.78	5.86
11	0.10416	52.65	6.72	5.82
12	0.11458	52.61	6.68	5.79
13	0.12500	52.58	6.65	5.77
14	0.13541	52.54	6.61	5.74
15	0.14583	52.49	6.56	5.70
16	0.15625	52.42	6.49	5.65
17	0.16666	52.36	6.43	5.60
18	0.17708	52.31	6.38	5.57
19	0.18750	52.26	6.33	5.53
20	0.19791	52.19	6.26	5.48
21	0.20833	52.13	6.20	5.43
22	0.21875	52.06	6.13	5.38
23	0.22916	52.00	6.07	5.33
24	0.23958	51.93	6.00	5.28
25	0.25000	51.87	5.94	5.23
26	0.26041	51.81	5.88	5.19
27	0.27083	51.76	5.83	5.15
28	0.28125	51.69	5.76	5.10
29	0.29166	51.63	5.70	5.05
30	0.30208	51.57	5.64	5.00
31	0.31250	51.51	5.58	4.96
32	0.32291	51.46	5.53	4.92
33	0.33333	51.40	5.47	4.87
34	0.34375	51.34	5.41	4.82
35	0.35416	51.29	5.36	4.79
36	0.36458	51.22	5.29	4.73
37	0.37500	51.17	5.24	4.69
38	0.38541	51.13	5.20	4.66
39	0.39583	51.08	5.15	4.62
40	0.40625	51.02	5.09	4.57
41	0.41666	50.97	5.04	4.53
42	0.42708	50.93	5.00	4.50
43	0.43750	50.89	4.96	4.47
44	0.44791	50.83	4.90	4.42
45	0.45833	50.79	4.86	4.39
46	0.46875	50.73	4.80	4.34
47	0.47916	50.69	4.76	4.31
48	0.48958	50.65	4.72	4.27
49	0.50000	50.60	4.67	4.23
50	0.51041	50.54	4.61	4.18

Golder Associates Inc.
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Pumping test analysis
Recovery method after
THEIS & JACOB
Unconfined aquifer

Project: Solutia/RFI/AL

Evaluated by: CDH

Pumping Test No. IW-0	Test conducted on: 09-09-98
PZR-2	PZR-2
Discharge 0.09 U.S.gal/min	Distance from the pumping well 9.75 ft
Static water level: 45.93 ft below datum	Pumping test duration: 2.35417 d

	Time from end of pumping [d]	Water level [ft]	Residual drawdown [ft]	Corrected drawdown [ft]
51	0.52083	50.49	4.56	4.14
52	0.53125	50.45	4.52	4.11
53	0.54166	50.42	4.49	4.09
54	0.55208	50.37	4.44	4.05
55	0.56250	50.32	4.39	4.00
56	0.57291	50.28	4.35	3.97
57	0.58333	50.23	4.30	3.93
58	0.59375	50.19	4.26	3.90
59	0.60416	50.15	4.22	3.86
60	0.64583	49.97	4.04	3.71
61	0.68750	49.82	3.89	3.59
62	0.72916	49.66	3.73	3.45
63	0.77083	49.51	3.58	3.32
64	0.81250	49.38	3.45	3.21
65	0.85416	49.27	3.34	3.12
66	0.89583	49.16	3.23	3.02
67	0.93750	49.05	3.12	2.93
68	0.97916	48.95	3.02	2.84
69	1.02083	48.86	2.93	2.76
70	1.06250	48.75	2.82	2.66
71	1.10416	48.67	2.74	2.59
72	1.14583	48.60	2.66	2.52
73	1.18750	48.51	2.58	2.45
74	1.22916	48.43	2.50	2.38
75	1.27083	48.36	2.43	2.31
76	1.31250	48.28	2.35	2.24
77	1.35416	48.24	2.31	2.20
78	1.39583	48.18	2.25	2.15
79	1.43750	48.12	2.19	2.09
80	1.47916	48.07	2.14	2.05
81	1.52083	48.01	2.08	1.99
82	1.56250	47.96	2.03	1.95
83	1.60416	47.90	1.97	1.89
84	1.64583	47.84	1.91	1.84
85	1.68750	47.80	1.87	1.80
86	1.72916	47.76	1.83	1.76
87	1.77083	47.72	1.79	1.73
88	1.81250	47.68	1.75	1.69
89	1.85416	47.66	1.73	1.67
90	1.89583	47.62	1.69	1.63
91	1.93750	47.59	1.66	1.60
92	1.97916	47.55	1.62	1.57
93	2.02083	47.52	1.59	1.54
94	2.06250	47.49	1.56	1.51
95	2.10416	47.46	1.53	1.48
96	2.14583	47.43	1.50	1.45
97	2.18750	47.40	1.47	1.43
98	2.22916	47.38	1.45	1.41
99	2.27083	47.36	1.43	1.39
100	2.31250	47.34	1.41	1.37

Golder Associates Inc. 3730 Chamblee Tucker Rd. Atlanta, GA 30341 ph.(770)496-1893	Pumping test analysis Recovery method after THEIS & JACOB Unconfined aquifer	Date: 11-03-98 | Page 4 Project: Solutia/RFI/AL Evaluated by: CDH

Pumping Test No. IW-6	Test conducted on: 09-09-98
PZR-2	PZR-2
Discharge 0.09 U.S.gal/min	Distance from the pumping well 9.75 ft
Static water level: 45.93 ft below datum	Pumping test duration: 2.35417 d

	Time from end of pumping [d]	Water level [ft]	Residual drawdown [ft]	Corrected drawdown [ft]
101	2.35416	47.32	1.39	1.35
102	2.39583	47.30	1.37	1.33
103	2.43750	47.28	1.35	1.31
104	2.47916	47.27	1.34	1.30
105	2.52083	47.24	1.31	1.28
106	2.56250	47.22	1.29	1.26
107	2.60416	47.19	1.26	1.23
108	2.64583	47.16	1.23	1.20
109	2.68750	47.13	1.20	1.17
110	2.72916	47.10	1.17	1.14
111	2.77083	47.08	1.15	1.12
112	2.81250	47.07	1.14	1.11
113	2.85416	47.06	1.13	1.10
114	2.89583	47.05	1.12	1.09
115	2.93750	47.04	1.11	1.09
116	2.97916	47.04	1.11	1.09
117	3.02083	47.03	1.10	1.08
118	3.06250	47.02	1.09	1.07
119	3.10416	47.00	1.07	1.05
120	3.14583	46.98	1.05	1.03
121	3.18750	46.97	1.04	1.02
122	3.22916	46.96	1.02	1.00
123	3.27083	46.94	1.01	0.99
124	3.31250	46.93	1.00	0.98
125	3.35416	46.92	0.99	0.97
126	3.39583	46.91	0.98	0.96
127	3.43750	46.91	0.98	0.96
128	3.47916	46.90	0.97	0.95
129	3.52083	46.88	0.95	0.93
130	3.56250	46.87	0.94	0.92
131	3.60416	46.85	0.92	0.90
132	3.62708	46.84	0.91	0.89
133	3.62777	46.84	0.91	0.89
134	3.62847	46.84	0.91	0.89
135	3.62916	46.84	0.91	0.89
136	3.63194	46.84	0.91	0.89
137	3.63541	46.84	0.91	0.89
138	3.63889	46.84	0.91	0.89
139	3.64236	46.84	0.91	0.89
140	3.64583	46.83	0.90	0.88
141	3.64930	46.84	0.91	0.89
142	3.65277	46.84	0.91	0.89
143	3.65625	46.84	0.91	0.89
144	3.65972	46.83	0.90	0.88
145	3.66319	46.83	0.90	0.88
146	3.66666	46.83	0.90	0.88
147	3.67014	46.83	0.90	0.88
148	3.67361	46.83	0.90	0.88
149	3.67708	46.83	0.90	0.88
150	3.68055	46.82	0.89	0.87

Golder Associates Inc. 3730 Chamblee Tucker Rd. Atlanta, GA 30341 ph.(770)496-1893	Pumping test analysis Recovery method after THEIS & JACOB Unconfined aquifer	Date: 11-03-98 | Page 5 Project: Solutia/RFI/AL Evaluated by: CDH

Pumping Test No. IW-6	Test conducted on: 09-09-98
PZR-2	PZR-2
Discharge 0.09 U.S.gal/min	Distance from the pumping well 9.75 ft
Static water level: 45.93 ft below datum	Pumping test duration: 2.35417 d

	Time from end of pumping [d]	Water level [ft]	Residual drawdown [ft]	Corrected drawdown [ft]
151	3.68402	46.82	0.89	0.87
152	3.68750	46.82	0.89	0.87
153	3.69097	46.82	0.89	0.87
154	3.69444	46.82	0.89	0.87
155	3.70139	46.82	0.89	0.87
156	3.70833	46.81	0.88	0.86
157	3.71527	46.81	0.88	0.86
158	3.72222	46.81	0.88	0.86
159	3.72916	46.80	0.87	0.85
160	3.73611	46.81	0.88	0.86
161	3.74305	46.81	0.88	0.86
162	3.75000	46.80	0.87	0.85
163	3.75694	46.80	0.87	0.85
164	3.76389	46.80	0.87	0.85
165	3.77083	46.79	0.86	0.85
166	3.77777	46.79	0.86	0.85
167	3.79166	46.80	0.87	0.85
168	3.81250	46.79	0.86	0.85
169	3.83333	46.79	0.86	0.85
170	3.85416	46.79	0.86	0.85
171	3.87500	46.78	0.85	0.84
172	3.89583	46.78	0.85	0.84
173	3.91666	46.78	0.85	0.84
174	3.93750	46.78	0.85	0.84
175	3.95833	46.77	0.84	0.83
176	3.97916	46.77	0.84	0.83
177	4.00000	46.77	0.84	0.83
178	4.02083	46.76	0.83	0.82
179	4.04166	46.76	0.83	0.82
180	4.06250	46.75	0.82	0.81
181	4.08333	46.75	0.82	0.81
182	4.10416	46.75	0.82	0.81
183	4.12500	46.74	0.81	0.80
184	4.14583	46.73	0.80	0.79
185	4.16666	46.73	0.80	0.79
186	4.18750	46.72	0.79	0.78
187	4.20833	46.72	0.79	0.78
188	4.22916	46.72	0.79	0.78
189	4.25000	46.71	0.78	0.77
190	4.27083	46.71	0.78	0.77
191	4.29166	46.71	0.78	0.77
192	4.31250	46.70	0.77	0.76
193	4.33333	46.70	0.77	0.76
194	4.35416	46.70	0.77	0.76
195	4.37500	46.70	0.77	0.76
196	4.39583	46.70	0.77	0.76
197	4.41666	46.70	0.77	0.76
198	4.43750	46.69	0.76	0.75
199	4.45833	46.69	0.76	0.75
200	4.47916	46.69	0.76	0.75

Golder Associates Inc.
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Pumping test analysis
Recovery method after
THEIS & JACOB
Unconfined aquifer

Project: Solutia/RFI/AL

Evaluated by: CDH

Pumping Test No. IW-6	Test conducted on: 09-09-98
PZR-2	PZR-2
Discharge 0.09 U.S.gal/min	Distance from the pumping well 9.75 ft
Static water level: 45.93 ft below datum	Pumping test duration: 2.35417 d

	Time from end of pumping [d]	Water level [ft]	Residual drawdown [ft]	Corrected drawdown [ft]
201	4.52083	46.68	0.75	0.74
202	4.56250	46.67	0.74	0.73
203	4.60416	46.66	0.73	0.72
204	4.64583	46.65	0.72	0.71
205	4.68750	46.63	0.70	0.69
206	4.72916	46.63	0.70	0.69
207	4.77083	46.62	0.69	0.68
208	4.81250	46.62	0.69	0.68
209	4.85416	46.61	0.68	0.67
210	4.89583	46.61	0.68	0.67
211	4.93750	46.61	0.68	0.67
212	4.97916	46.61	0.68	0.67
213	5.02083	46.61	0.68	0.67
214	5.06250	46.60	0.67	0.66
215	5.10416	46.60	0.67	0.66
216	5.14583	46.59	0.66	0.65
217	5.18750	46.58	0.65	0.64
218	5.22916	46.58	0.65	0.64
219	5.27083	46.57	0.64	0.63
220	5.31250	46.57	0.64	0.63
221	5.35416	46.57	0.64	0.63
222	5.39583	46.57	0.64	0.63
223	5.43750	46.57	0.64	0.63
224	5.47916	46.57	0.64	0.63
225	5.52083	46.56	0.63	0.62
226	5.56250	46.55	0.62	0.61
227	5.60416	46.54	0.61	0.60
228	5.64583	46.53	0.60	0.59
229	5.68750	46.51	0.58	0.57
230	5.72916	46.51	0.58	0.57
231	5.77083	46.50	0.57	0.56
232	5.81250	46.50	0.57	0.56
233	5.85416	46.50	0.57	0.56
234	5.89583	46.50	0.57	0.56
235	5.93750	46.50	0.57	0.56
236	5.97916	46.50	0.57	0.56
237	6.02083	46.50	0.57	0.56
238	6.06250	46.49	0.56	0.55
239	6.10416	46.49	0.56	0.55
240	6.14583	46.49	0.56	0.55
241	6.18750	46.48	0.55	0.54
242	6.22916	46.48	0.55	0.54
243	6.27083	46.48	0.55	0.54
244	6.31250	46.48	0.55	0.54
245	6.35416	46.49	0.56	0.55
246	6.39583	46.49	0.56	0.55
247	6.43750	46.49	0.56	0.55
248	6.47916	46.49	0.56	0.55
249	6.52083	46.48	0.55	0.54
250	6.56250	46.47	0.54	0.53

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3730 Chamblee Tucker Rd.
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Pumping test analysis
Recovery method after
THEIS & JACOB
Unconfined aquifer

Project: Solutia/RFI/AL

Evaluated by: CDH

Pumping Test No. IW-6	Test conducted on: 09-09-98
PZR-2	PZR-2
Discharge 0.09 U.S.gal/min	Distance from the pumping well 9.75 ft
Static water level: 45.93 ft below datum	Pumping test duration: 2.35417 d

	Time from end of pumping [d]	Water level [ft]	Residual drawdown [ft]	Corrected drawdown [ft]
251	6.60416	46.47	0.54	0.53
252	6.62500	46.46	0.53	0.52
253	6.63194	46.46	0.53	0.52
254	6.63889	46.46	0.53	0.52
255	6.64583	46.46	0.53	0.52
256	6.65277	46.46	0.53	0.52
257	6.65972	46.45	0.52	0.51
258	6.66666	46.45	0.52	0.51
259	6.67361	46.45	0.52	0.51
260	6.68750	46.44	0.51	0.50
261	6.70833	46.44	0.51	0.50
262	6.72916	46.44	0.51	0.50
263	6.75000	46.44	0.51	0.50
264	6.77083	46.44	0.51	0.50
265	6.79166	46.44	0.51	0.50
266	6.81250	46.44	0.51	0.50
267	6.83333	46.44	0.51	0.50
268	6.85416	46.44	0.51	0.50
269	6.87500	46.44	0.51	0.50
270	6.89583	46.44	0.51	0.50
271	6.91666	46.44	0.51	0.50
272	6.93750	46.44	0.51	0.50
273	6.95833	46.44	0.51	0.50
274	6.97916	46.44	0.51	0.50
275	7.00000	46.45	0.52	0.51
276	7.02083	46.45	0.52	0.51
277	7.04166	46.45	0.52	0.51
278	7.06250	46.45	0.52	0.51
279	7.08333	46.44	0.51	0.50
280	7.10416	46.44	0.51	0.50
281	7.12500	46.44	0.51	0.50
282	7.14583	46.44	0.51	0.50
283	7.16666	46.44	0.51	0.50
284	7.18750	46.44	0.51	0.50
285	7.20833	46.43	0.50	0.49
286	7.22916	46.43	0.50	0.49
287	7.25000	46.43	0.50	0.49
288	7.27083	46.43	0.50	0.49
289	7.29166	46.44	0.51	0.50
290	7.31250	46.44	0.51	0.50
291	7.33333	46.44	0.51	0.50
292	7.35416	46.44	0.51	0.50
293	7.37500	46.44	0.51	0.50
294	7.39583	46.44	0.51	0.50
295	7.41666	46.44	0.51	0.50
296	7.43750	46.44	0.51	0.50
297	7.45833	46.44	0.51	0.50
298	7.47916	46.44	0.51	0.50
299	7.50000	46.44	0.51	0.50
300	7.52083	46.44	0.51	0.50

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Pumping test analysis
Recovery method after
THEIS & JACOB
Unconfined aquifer

Project: Solutia/RFI/AL

Evaluated by: CDH

Pumping Test No. IW-6	Test conducted on: 09-09-98
PZR-2	PZR-2
Discharge 0.09 U.S.gal/min	Distance from the pumping well 9.75 ft
Static water level: 45.93 ft below datum	Pumping test duration: 2.35417 d

	Time from end of pumping [d]	Water level [ft]	Residual drawdown [ft]	Corrected drawdown [ft]
301	7.54166	46.44	0.51	0.50
302	7.56250	46.44	0.51	0.50
303	7.58333	46.44	0.51	0.50
304	7.60416	46.44	0.51	0.50
305	7.62500	46.43	0.50	0.49
306	7.64583	46.43	0.50	0.49
307	7.66666	46.42	0.49	0.49
308	7.68750	46.42	0.49	0.49
309	7.70833	46.41	0.48	0.48
310	7.72916	46.41	0.48	0.48
311	7.75000	46.41	0.48	0.48
312	7.77083	46.41	0.48	0.48

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Pumping test analysis
Recovery method after
THEIS & JACOB
Unconfined aquifer

Project: Solutia/RFI/AL

Evaluated by: CDH

Pumping Test No. IW 6

Test conducted on: 09-09-90

PZR-2

Discharge 0.09 U.S.gal/min

Pumping test duration: 2.35417 d

	Pumping test duration [d]	Discharge [U.S.gal/min]
1	0.00000	0.40
2	2.35417	0.40
3	2.35486	0.00
4	10.12500	0.00

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Pumping test analysis
Theis analysis method
Unconfined aquifer

Date: 10-26-98 | Page 1

Project: Solutia/RFI/AL

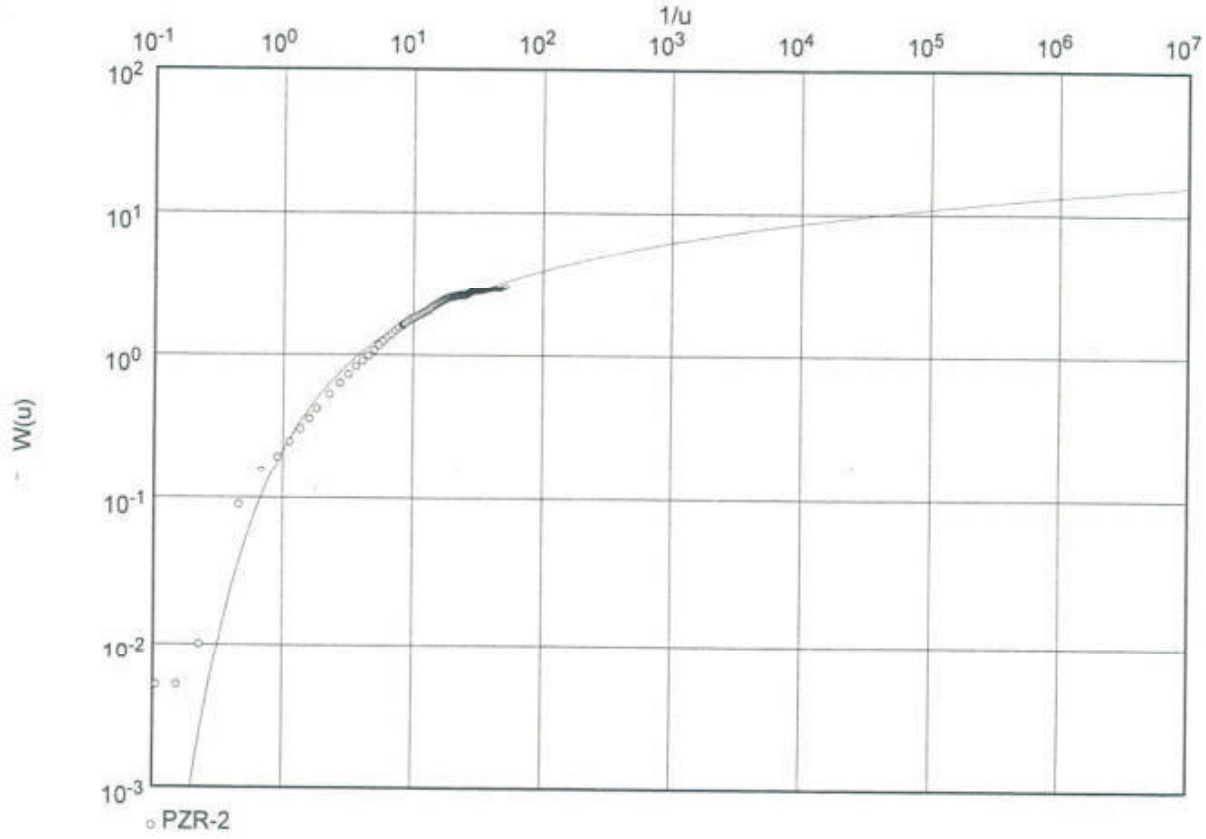
Evaluated by: CDH

Pumping Test No. IW-6

Test conducted on: 09-09-98

PZR-2

Discharge 0.40 U.S.gal/min



Transmissivity [ft²/d]: 3.07×10^{0}

Hydraulic conductivity [ft/d]: 1.22×10^{-1}

Aquifer thickness [ft]: 25.00

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Pumping test analysis
Theis analysis method
Unconfined aquifer

Project: Solutia/RFI/AL

Evaluated by: CDH

Pumping Test No. IW-6	Test conducted on: 09-09-98
PZR-2	PZR-2
Discharge 0.40 U.S.gal/min	Distance from the pumping well 9.66 ft

Static water level: 45.99 ft below datum

	Pumping test duration [d]	Water level [ft]	Drawdown [ft]	Corrected drawdown [ft]
2	0.00417	46.00	0.01	0.01
3	0.00486	46.00	0.01	0.01
4	0.00694	46.00	0.01	0.01
5	0.01042	46.01	0.02	0.02
6	0.02083	46.17	0.18	0.18
7	0.03125	46.31	0.32	0.32
8	0.04167	46.39	0.40	0.40
9	0.05208	46.50	0.51	0.50
10	0.06250	46.62	0.63	0.62
11	0.07292	46.73	0.74	0.73
12	0.08333	46.86	0.87	0.85
13	0.10417	47.09	1.10	1.08
14	0.12500	47.31	1.32	1.29
15	0.14583	47.50	1.51	1.46
16	0.16667	47.71	1.72	1.66
17	0.18750	47.88	1.89	1.82
18	0.20833	48.04	2.05	1.97
19	0.22917	48.23	2.24	2.14
20	0.25000	48.44	2.45	2.33
21	0.27083	48.62	2.63	2.49
22	0.29167	48.79	2.80	2.64
23	0.31250	48.95	2.96	2.78
24	0.33333	49.11	3.12	2.93
25	0.35417	49.26	3.27	3.06
26	0.37500	49.38	3.39	3.16
27	0.38507	49.46	3.47	3.23
28	0.38519	49.46	3.47	3.23
29	0.38530	49.46	3.47	3.23
30	0.38542	49.46	3.47	3.23
31	0.38611	49.46	3.47	3.23
32	0.38681	49.47	3.48	3.24
33	0.38750	49.47	3.48	3.24
34	0.39583	49.52	3.53	3.28
35	0.41667	49.65	3.66	3.39
36	0.43750	49.76	3.77	3.49
37	0.45833	49.87	3.88	3.58
38	0.47917	49.95	3.96	3.65
39	0.50000	50.04	4.05	3.72
40	0.52083	50.13	4.14	3.80
41	0.54167	50.22	4.23	3.87
42	0.56250	50.29	4.30	3.93
43	0.58333	50.37	4.38	4.00
44	0.60417	50.47	4.48	4.08
45	0.62500	50.59	4.60	4.18
46	0.64583	50.71	4.72	4.27
47	0.66667	50.81	4.82	4.36
48	0.68750	50.91	4.92	4.44
49	0.70833	50.99	5.00	4.50
50	0.72917	51.10	5.11	4.59

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Atlanta, GA 30341
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Pumping test analysis
Theis analysis method
Unconfined aquifer

Project: Solutia/RFI/AL

Evaluated by: CDH

Pumping Test No. IW-6	Test conducted on: 09-09-98
PZR-2	PZR-2
Discharge 0.40 U.S.gal/min	Distance from the pumping well 9.66 ft

Static water level: 45.99 ft below datum

	Pumping test duration [d]	Water level [ft]	Drawdown [ft]	Corrected drawdown [ft]
51	0.75000	51.17	5.18	4.64
52	0.77083	51.23	5.24	4.69
53	0.79167	51.31	5.32	4.75
54	0.81250	51.40	5.41	4.82
55	0.83333	51.47	5.48	4.88
56	0.85417	51.53	5.54	4.93
57	0.87500	51.58	5.59	4.97
58	0.89583	51.64	5.65	5.01
59	0.91667	51.63	5.64	5.00
60	0.93750	51.66	5.67	5.03
61	0.95833	51.68	5.69	5.04
62	0.97917	51.73	5.74	5.08
63	1.00000	51.76	5.77	5.10
64	1.02083	51.79	5.80	5.13
65	1.04167	51.82	5.83	5.15
66	1.06250	51.86	5.87	5.18
67	1.08333	51.84	5.85	5.17
68	1.10417	51.78	5.79	5.12
69	1.12500	51.77	5.78	5.11
70	1.14583	51.83	5.84	5.16
71	1.16667	51.89	5.90	5.20
72	1.18750	51.94	5.95	5.24
73	1.20833	52.00	6.01	5.29
74	1.22917	52.06	6.07	5.33
75	1.25000	52.11	6.12	5.37
76	1.27083	52.19	6.20	5.43
77	1.29167	52.25	6.26	5.48
78	1.31250	52.29	6.30	5.51
79	1.33333	52.31	6.32	5.52
80	1.35417	52.33	6.34	5.54
81	1.37500	52.33	6.34	5.54
82	1.39583	52.34	6.35	5.54
83	1.41667	52.34	6.35	5.54
84	1.43750	52.34	6.35	5.54
85	1.45833	52.34	6.35	5.54
86	1.47917	52.34	6.35	5.54
87	1.50000	52.35	6.36	5.55
88	1.52083	52.37	6.38	5.57
89	1.54167	52.38	6.39	5.57
90	1.56250	52.40	6.41	5.59
91	1.58333	52.43	6.44	5.61
92	1.60417	52.46	6.47	5.63
93	1.62500	52.49	6.50	5.65
94	1.64583	52.51	6.52	5.67
95	1.66667	52.53	6.54	5.68
96	1.68750	52.55	6.56	5.70
97	1.70833	52.56	6.57	5.71
98	1.72917	52.58	6.59	5.72
99	1.75000	52.59	6.60	5.73
100	1.77083	52.61	6.62	5.74

Golder Associates Inc.
3730 Chamblee Tucker Rd.
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Pumping test analysis
Theis analysis method
Unconfined aquifer

Project: Solutia/RFI/AL

Evaluated by: CDH

Pumping Test No. MW-6	Test conducted on: 09-09-98
PZR-2	PZR-2
Discharge 0.40 U.S.gal/min	Distance from the pumping well 9.66 ft
Static water level: 45.99 ft below datum	

	Pumping test duration [d]	Water level [ft]	Drawdown [ft]	Corrected drawdown [ft]
101	1.79167	52.62	6.63	5.75
102	1.81250	52.65	6.66	5.77
103	1.83333	52.67	6.68	5.79
104	1.85417	52.69	6.70	5.80
105	1.87500	52.71	6.72	5.82
106	1.89583	52.74	6.75	5.84
107	1.91667	52.77	6.78	5.86
108	1.93750	52.78	6.79	5.87
109	1.95660	52.79	6.80	5.88
110	1.95694	52.79	6.80	5.88
111	1.95729	52.79	6.80	5.88
112	1.95833	52.79	6.80	5.88
113	1.97917	52.80	6.81	5.88
114	2.00000	52.80	6.81	5.88
115	2.02083	52.75	6.76	5.85
116	2.04167	52.71	6.72	5.82
117	2.06250	52.65	6.66	5.77
118	2.08333	52.68	6.69	5.79
119	2.10417	52.71	6.72	5.82
120	2.12500	52.73	6.74	5.83
121	2.14583	52.74	6.75	5.84
122	2.16667	52.76	6.77	5.85
123	2.18750	52.79	6.80	5.88
124	2.20833	52.83	6.84	5.90
125	2.22917	52.86	6.87	5.93
126	2.25000	52.90	6.91	5.96
127	2.27083	52.92	6.93	5.97
128	2.29167	52.95	6.96	5.99
129	2.31250	52.96	6.97	6.00
130	2.33333	52.98	6.99	6.01
131	2.35417	53.00	7.01	6.03

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Pumping test analysis
Theis analysis method
Unconfined aquifer

Project: Solutia/RFI/AL

Evaluated by: CDH

Pumping Test No. IW-6

Test conducted on: 09-09-98

PZR-2

measured with inline flow meter

Discharge 0.40 U.S.gal/min

	Pumping test duration [d]	Discharge [U.S.gal/min]
1	0.00000	0.40
2	2.36111	0.40

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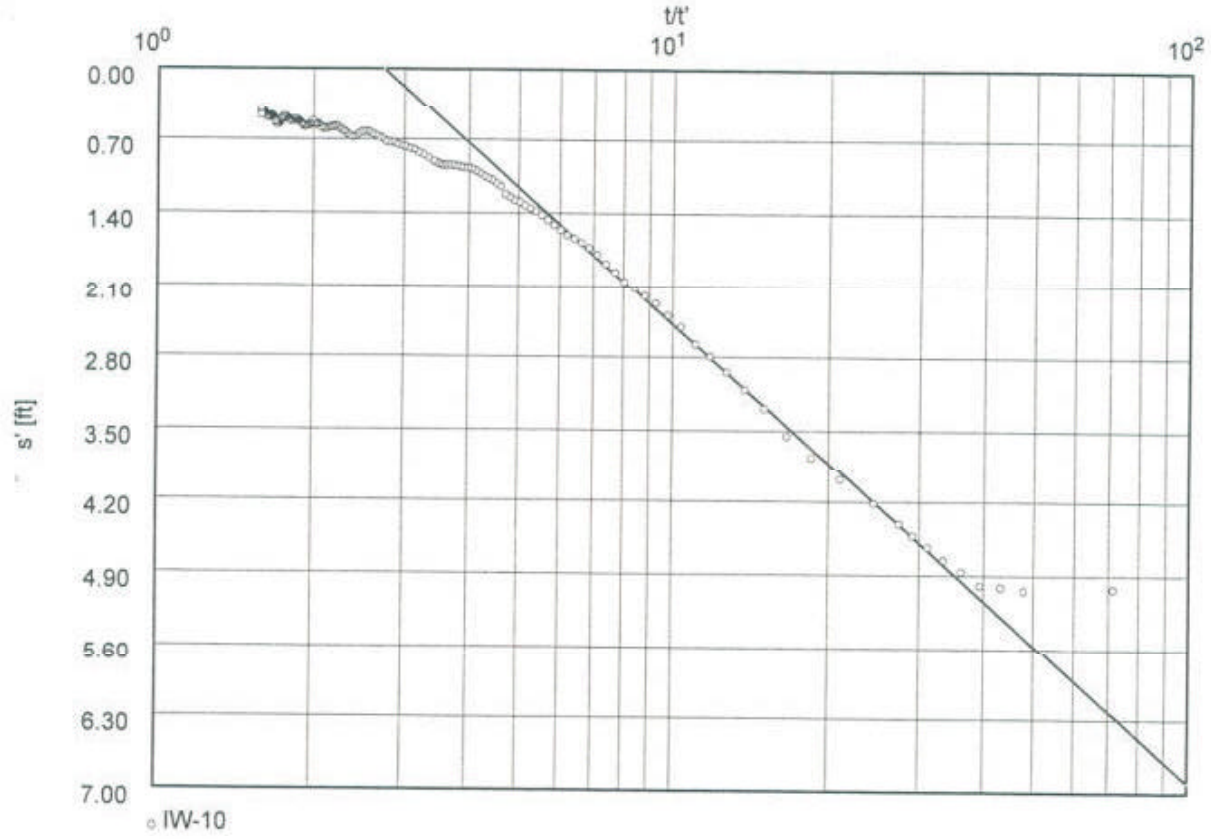
Pumping test analysis
Recovery method after
THEIS & JACOB
Unconfined aquifer

Date: 11-04-98 | Page 1

Project: Solutia/RFI/AL

Evaluated by: CDH

Pumping Test No. IW-10 Recovery	Test conducted on: 09-15-98
IW-10	
Discharge 0.14 U.S.gal/min	
	Pumping test duration: 2.93056 d



Transmissivity [ft²/d]: 1.14×10^0

Hydraulic conductivity [ft/d]: 4.56×10^{-2}

Aquifer thickness [ft]: 25.00

Golder Associates Inc. 3730 Chamblee Tucker Rd. Atlanta, GA 30341 ph.(770)496-1893	Pumping test analysis Recovery method after THEIS & JACOB Unconfined aquifer	Date: 11-04-98 | Page 2 Project: Solutia/RFI/AL Evaluated by: CDH

Pumping Test No. IW-10 Recovery	Test conducted on: 09-15-98
IW-10	IW-10
Discharge 0.14 U.S.gal/min	Distance from the pumping well 1.00 ft
Static water level: 42.64 ft below datum	Pumping test duration: 2.93056 d

	Time from end of pumping [d]	Water level [ft]	Residual drawdown [ft]	Corrected drawdown [ft]
1	0.04167	48.31	5.67	5.03
2	0.06250	48.33	5.69	5.04
3	0.06944	48.29	5.65	5.01
4	0.07639	48.27	5.63	5.00
5	0.08333	48.10	5.46	4.86
6	0.09028	47.96	5.32	4.75
7	0.09722	47.81	5.17	4.64
8	0.10417	47.67	5.03	4.52
9	0.11111	47.53	4.89	4.41
10	0.12500	47.29	4.65	4.22
11	0.14583	47.01	4.37	3.99
12	0.16667	46.73	4.09	3.76
13	0.18750	46.49	3.85	3.55
14	0.20833	46.18	3.54	3.29
15	0.22917	45.97	3.33	3.11
16	0.25000	45.78	3.14	2.94
17	0.27083	45.61	2.97	2.79
18	0.29167	45.48	2.84	2.68
19	0.31250	45.29	2.65	2.51
20	0.33333	45.17	2.53	2.40
21	0.35417	45.04	2.40	2.28
22	0.37500	44.96	2.32	2.21
23	0.39583	44.88	2.24	2.14
24	0.41667	44.79	2.15	2.06
25	0.43750	44.69	2.05	1.97
26	0.45833	44.60	1.96	1.88
27	0.47917	44.50	1.86	1.79
28	0.50000	44.43	1.79	1.73
29	0.52083	44.38	1.74	1.68
30	0.54167	44.34	1.70	1.64
31	0.56250	44.30	1.66	1.60
32	0.58333	44.25	1.61	1.56
33	0.60417	44.20	1.56	1.51
34	0.62500	44.15	1.51	1.46
35	0.64583	44.10	1.46	1.42
36	0.66667	44.06	1.42	1.38
37	0.68750	44.03	1.39	1.35
38	0.70833	44.00	1.36	1.32
39	0.72917	43.97	1.33	1.29
40	0.75000	43.95	1.31	1.28
41	0.77083	43.92	1.28	1.25
42	0.79167	43.89	1.25	1.22
43	0.81250	43.81	1.17	1.14
44	0.83333	43.78	1.14	1.11
45	0.85417	43.75	1.11	1.09
46	0.87500	43.73	1.09	1.07
47	0.89583	43.71	1.07	1.05
48	0.91667	43.68	1.04	1.02
49	0.93750	43.66	1.02	1.00
50	0.95833	43.64	1.00	0.98

Golder Associates Inc.
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Pumping test analysis
Recovery method after
THEIS & JACOB
Unconfined aquifer

Project: Solutia/RFI/AL

Evaluated by: CDH

Pumping Test No. IW-10 Recovery	Test conducted on: 09-15-98
IW-10	IW-10
Discharge 0.14 U.S.gal/min	Distance from the pumping well 1.00 ft
Static water level: 42.64 ft below datum	Pumping test duration: 2.93056 d

	Time from end of pumping [d]	Water level [ft]	Residual drawdown [ft]	Corrected drawdown [ft]
51	0.97917	43.63	0.99	0.97
52	1.00000	43.63	0.99	0.97
53	1.02083	43.62	0.98	0.96
54	1.04167	43.61	0.97	0.95
55	1.06250	43.61	0.97	0.95
56	1.08333	43.60	0.96	0.94
57	1.10417	43.60	0.96	0.94
58	1.12500	43.60	0.96	0.94
59	1.14583	43.60	0.96	0.94
60	1.16667	43.59	0.95	0.93
61	1.18750	43.58	0.94	0.92
62	1.20833	43.56	0.92	0.90
63	1.25000	43.53	0.89	0.87
64	1.29167	43.50	0.86	0.85
65	1.33333	43.48	0.84	0.83
66	1.37500	43.45	0.81	0.80
67	1.41667	43.44	0.80	0.79
68	1.45833	43.42	0.78	0.77
69	1.50000	43.41	0.77	0.76
70	1.54167	43.40	0.76	0.75
71	1.58333	43.38	0.74	0.73
72	1.62500	43.38	0.74	0.73
73	1.66667	43.37	0.73	0.72
74	1.70833	43.34	0.70	0.69
75	1.75000	43.33	0.69	0.68
76	1.79167	43.31	0.67	0.66
77	1.83333	43.30	0.66	0.65
78	1.87500	43.28	0.64	0.63
79	1.91667	43.28	0.64	0.63
80	1.95833	43.28	0.64	0.63
81	2.00000	43.29	0.65	0.64
82	2.04167	43.31	0.67	0.66
83	2.08333	43.33	0.69	0.68
84	2.12500	43.33	0.69	0.68
85	2.16667	43.32	0.68	0.67
86	2.20833	43.30	0.66	0.65
87	2.25000	43.28	0.64	0.63
88	2.29167	43.27	0.63	0.62
89	2.33333	43.25	0.61	0.60
90	2.37500	43.24	0.60	0.59
91	2.41667	43.22	0.58	0.57
92	2.45833	43.23	0.59	0.58
93	2.50000	43.23	0.59	0.58
94	2.54167	43.24	0.60	0.59
95	2.58333	43.24	0.60	0.59
96	2.62500	43.25	0.61	0.60
97	2.66667	43.25	0.61	0.60
98	2.70833	43.24	0.60	0.59
99	2.75000	43.24	0.60	0.59
100	2.79167	43.21	0.57	0.56

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Pumping test analysis
Recovery method after
THEIS & JACOB
Unconfined aquifer

Project: Solutia/RFI/AL

Evaluated by: CDH

Pumping Test No. IW-10 Recovery	Test conducted on: 09-15-98
IW-10	IW-10
Discharge 0.14 U.S.gal/min	Distance from the pumping well 1.00 ft
Static water level: 42.64 ft below datum	Pumping test duration: 2.93056 d

	Time from end of pumping [d]	Water level [ft]	Residual drawdown [ft]	Corrected drawdown [ft]
101	2.83333	43.21	0.57	0.56
102	2.87500	43.21	0.57	0.56
103	2.91667	43.20	0.56	0.55
104	2.95833	43.18	0.54	0.53
105	3.00000	43.21	0.57	0.56
106	3.04167	43.21	0.57	0.56
107	3.08333	43.22	0.58	0.57
108	3.12500	43.22	0.58	0.57
109	3.16667	43.23	0.59	0.58
110	3.20833	43.22	0.58	0.57
111	3.25000	43.21	0.57	0.56
112	3.29167	43.20	0.56	0.55
113	3.33333	43.18	0.54	0.53
114	3.37500	43.17	0.53	0.52
115	3.41667	43.17	0.53	0.52
116	3.45833	43.16	0.52	0.51
117	3.50000	43.17	0.53	0.52
118	3.54167	43.16	0.52	0.51
119	3.58333	43.18	0.54	0.53
120	3.62500	43.18	0.54	0.53
121	3.66667	43.17	0.53	0.52
122	3.70833	43.17	0.53	0.52
123	3.75000	43.15	0.51	0.50
124	3.79167	43.14	0.50	0.49
125	3.83333	43.14	0.50	0.49
126	3.87500	43.13	0.49	0.49
127	3.91667	43.13	0.49	0.49
128	3.95833	43.15	0.51	0.50
129	4.00000	43.16	0.52	0.51
130	4.04167	43.18	0.54	0.53
131	4.08333	43.20	0.56	0.55
132	4.12500	43.20	0.56	0.55
133	4.16667	43.21	0.57	0.56
134	4.20833	43.21	0.57	0.56
135	4.25000	43.19	0.55	0.54
136	4.29167	43.18	0.54	0.53
137	4.33333	43.15	0.51	0.50
138	4.37500	43.13	0.49	0.49
139	4.41667	43.12	0.48	0.48
140	4.45833	43.13	0.49	0.49
141	4.50000	43.13	0.49	0.49
142	4.54167	43.13	0.49	0.49
143	4.58333	43.14	0.50	0.49
144	4.62500	43.14	0.50	0.49
145	4.66667	43.14	0.50	0.49
146	4.70833	43.13	0.49	0.49
147	4.75000	43.11	0.47	0.47
148	4.79167	43.10	0.46	0.46
149	4.83333	43.09	0.45	0.45
150	4.87500	43.09	0.45	0.45

Golder Associates Inc.
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Pumping test analysis
Recovery method after
THEIS & JACOB
Unconfined aquifer

Project: Solutia/RFI/AL

Evaluated by: CDH

Pumping Test No. IW-10 Recovery	Test conducted on: 09-15-98
IW-10	IW-10
Discharge 0.14 U.S.gal/min	Distance from the pumping well 1.00 ft
Static water level: 42.64 ft below datum	Pumping test duration: 2.93056 d

	Time from end of pumping [d]	Water level [ft]	Residual drawdown [ft]	Corrected drawdown [ft]
151	4.91667	43.09	0.45	0.45
152	4.95833	43.09	0.45	0.45
153	5.00000	43.10	0.46	0.46
154	5.03316	43.09	0.45	0.45
155	5.03328	43.11	0.47	0.47
156	5.03339	43.11	0.47	0.47
157	5.03351	43.12	0.48	0.48
158	5.03363	43.11	0.47	0.47
159	5.03374	43.12	0.48	0.48
160	5.03385	43.05	0.41	0.41
161	5.03397	43.11	0.47	0.47
162	5.03408	43.11	0.47	0.47
163	5.03420	43.11	0.47	0.47
164	5.03432	43.12	0.48	0.48
165	5.03443	43.12	0.48	0.48
166	5.03455	43.11	0.47	0.47
167	5.03467	43.12	0.48	0.48
168	5.03478	43.11	0.47	0.47
169	5.03490	43.12	0.48	0.48
170	5.03501	43.09	0.45	0.45
171	5.03513	43.12	0.48	0.48
172	5.03524	43.12	0.48	0.48
173	5.03536	43.12	0.48	0.48
174	5.03547	43.05	0.41	0.41
175	5.03559	43.12	0.48	0.48

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Pumping test analysis
Recovery method after
THEIS & JACOB
Unconfined aquifer

Project: Solutia/RFI/AL

Evaluated by: CDH

Pumping Test No. IW-10 Recovery	Test conducted on: 09-15-98
IW-10	IW-10 discharge
Discharge 0.14 U.S.gal/min	

Pumping test duration: 2.93056 d

	Pumping test duration [d]	Discharge [U.S.gal/min]
1	0.00000	0.40
2	2.93056	0.40
3	2.93125	0.00
4	8.19444	0.00

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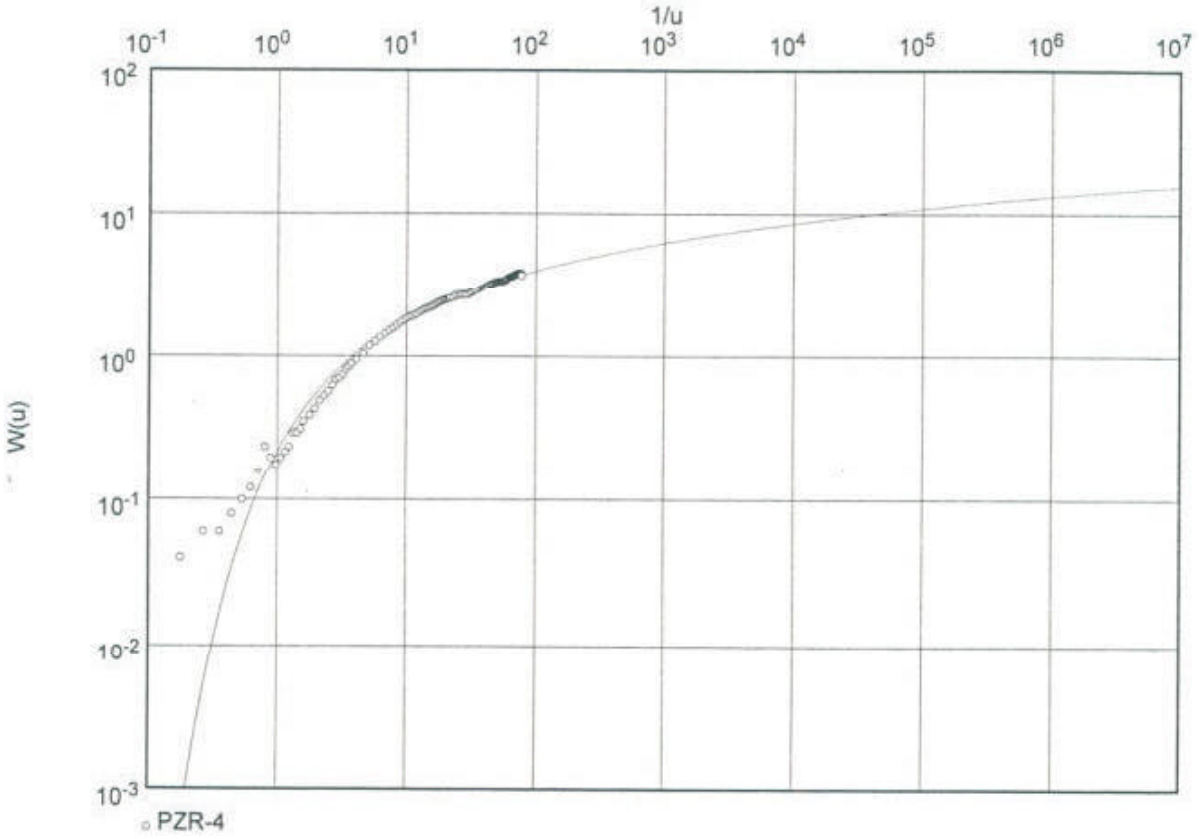
Pumping test analysis
Theis analysis method
Unconfined aquifer

Date: 10-27-98 | Page 1

Project: Solutia/RFI/AL

Evaluated by: CDH

Pumping Test No. IW-10	Test conducted on: 09-15-98
PZR-4	
Discharge 0.40 U.S.gal/min	



Transmissivity [ft²/d]: 1.21×10^{1}

Hydraulic conductivity [ft/d]: 4.87×10^{-1}

Aquifer thickness [ft]: 25.00

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Pumping test analysis
Theis analysis method
Unconfined aquifer

Project: Solutia/RFI/AL

Evaluated by: CDH

Pumping Test No. IW-10	Test conducted on: 09-15-98
PZR-4	PZR-4
Discharge 0.40 U.S.gal/min	Distance from the pumping well 9.25 ft

Static water level: 44.66 ft below datum

	Pumping test duration [d]	Water level [ft]	Drawdown [ft]	Corrected drawdown [ft]
2	0.00347	44.67	0.01	0.01
3	0.00694	44.68	0.02	0.02
4	0.01042	44.69	0.03	0.03
5	0.01389	44.69	0.03	0.03
6	0.01736	44.70	0.04	0.04
7	0.02083	44.71	0.05	0.05
8	0.02431	44.72	0.06	0.06
9	0.02778	44.74	0.08	0.08
10	0.03125	44.78	0.12	0.12
11	0.03472	44.76	0.10	0.10
12	0.03819	44.75	0.09	0.09
13	0.04167	44.76	0.10	0.10
14	0.04514	44.77	0.11	0.11
15	0.04861	44.78	0.12	0.12
16	0.05208	44.81	0.15	0.15
17	0.05556	44.81	0.15	0.15
18	0.05903	44.82	0.16	0.16
19	0.06250	44.84	0.18	0.18
20	0.06944	44.86	0.20	0.20
21	0.07639	44.88	0.22	0.22
22	0.08333	44.91	0.25	0.25
23	0.09028	44.93	0.27	0.27
24	0.09722	44.95	0.29	0.29
25	0.10417	44.98	0.32	0.32
26	0.11111	45.01	0.35	0.35
27	0.11806	45.02	0.36	0.36
28	0.12500	45.04	0.38	0.38
29	0.13194	45.07	0.41	0.41
30	0.13889	45.09	0.43	0.43
31	0.14583	45.11	0.45	0.45
32	0.15972	45.14	0.48	0.48
33	0.18056	45.19	0.53	0.52
34	0.20139	45.26	0.60	0.60
35	0.22222	45.30	0.64	0.63
36	0.24306	45.35	0.69	0.68
37	0.26389	45.39	0.73	0.72
38	0.28472	45.43	0.77	0.76
39	0.30556	45.46	0.80	0.79
40	0.32639	45.49	0.83	0.82
41	0.34722	45.53	0.87	0.85
42	0.36806	45.56	0.90	0.88
43	0.38889	45.59	0.93	0.91
44	0.40972	45.61	0.95	0.93
45	0.43056	45.63	0.97	0.95
46	0.45139	45.65	0.99	0.97
47	0.47222	45.67	1.01	0.99
48	0.49306	45.70	1.04	1.02
49	0.51389	45.72	1.06	1.04
50	0.53472	45.74	1.08	1.06

Golder Associates Inc. 3730 Chamblee Tucker Rd. Atlanta, GA 30341 ph.(770)496-1893	Pumping test analysis Theis analysis method Unconfined aquifer	Date: 10-27-98	Page 3
		Project: Solutia/RFI/AL	
		Evaluated by: CDH	

Pumping Test No. IW-10	Test conducted on: 09-15-98
PZR-4	PZR-4
Discharge 0.40 U.S.gal/min	Distance from the pumping well 9.25 ft

Static water level: 44.66 ft below datum

	Pumping test duration [d]	Water level [ft]	Drawdown [ft]	Corrected drawdown [ft]
51	0.55556	45.76	1.10	1.08
52	0.57639	45.77	1.11	1.09
53	0.59722	45.78	1.12	1.09
54	0.61806	45.80	1.14	1.11
55	0.63889	45.82	1.16	1.13
56	0.65972	45.84	1.18	1.15
57	0.68056	45.86	1.20	1.17
58	0.70139	45.88	1.22	1.19
59	0.72222	45.89	1.23	1.20
60	0.74306	45.91	1.25	1.22
61	0.76389	45.92	1.26	1.23
62	0.78472	45.93	1.27	1.24
63	0.80556	45.94	1.28	1.25
64	0.82639	45.95	1.29	1.26
65	0.84722	45.96	1.30	1.27
66	0.86869	45.98	1.32	1.29
67	0.93056	46.01	1.35	1.31
68	0.97222	46.02	1.36	1.32
69	1.01389	46.03	1.37	1.33
70	1.05556	46.03	1.37	1.33
71	1.09722	46.03	1.37	1.33
72	1.13889	46.03	1.37	1.33
73	1.18056	46.05	1.39	1.35
74	1.22222	46.08	1.42	1.38
75	1.26389	46.10	1.44	1.40
76	1.30556	46.13	1.47	1.43
77	1.34722	46.15	1.49	1.45
78	1.38889	46.17	1.51	1.46
79	1.43056	46.20	1.54	1.49
80	1.47222	46.22	1.56	1.51
81	1.51389	46.24	1.58	1.53
82	1.55556	46.26	1.60	1.55
83	1.59722	46.28	1.62	1.57
84	1.63889	46.30	1.64	1.60
85	1.68056	46.33	1.67	1.61
86	1.72222	46.35	1.69	1.63
87	1.76389	46.37	1.71	1.65
88	1.80556	46.38	1.72	1.66
89	1.84722	46.40	1.74	1.68
90	1.88889	46.42	1.76	1.70
91	1.93056	46.43	1.77	1.71
92	1.97222	46.44	1.78	1.72
93	2.01389	46.44	1.78	1.72
94	2.05556	46.44	1.78	1.72
95	2.09722	46.44	1.78	1.72
96	2.13889	46.44	1.78	1.72
97	2.18056	46.45	1.79	1.73
98	2.22222	46.46	1.80	1.74
99	2.26389	46.48	1.82	1.75
100	2.30556	46.50	1.84	1.77

Golder Associates Inc. 3730 Chamblee Tucker Rd. Atlanta, GA 30341 ph.(770)496-1893	Pumping test analysis Theis analysis method Unconfined aquifer	Date: 10-27-98	Page 4
		Project: Solutia/RFI/AL	
		Evaluated by: CDH	

Pumping Test No. IW-10	Test conducted on: 09-15-98
PZR-4	PZR-4
Discharge 0.40 U.S.gal/min	Distance from the pumping well 9.25 ft

Static water level: 44.66 ft below datum

	Pumping test duration [d]	Water level [ft]	Drawdown [ft]	Corrected drawdown [ft]
101	2.34722	46.53	1.87	1.80
102	2.38889	46.56	1.90	1.83
103	2.43056	46.57	1.91	1.84
104	2.47222	46.58	1.92	1.85
105	2.51389	46.59	1.93	1.86
106	2.55556	46.60	1.94	1.86
107	2.59722	46.60	1.94	1.86
108	2.63889	46.62	1.96	1.88
109	2.68056	46.64	1.98	1.90
110	2.72222	46.66	2.00	1.92
111	2.76389	46.68	2.02	1.94
112	2.80556	46.69	2.03	1.95
113	2.84722	46.70	2.04	1.96
114	2.88889	46.70	2.04	1.96
115	2.93056	46.70	2.04	1.96
116	2.97222	46.70	2.04	1.96
117	2.99306	46.69	2.03	1.95
118	3.00000	46.70	2.04	1.96
119	3.00694	46.68	2.02	1.94
120	3.01389	46.68	2.02	1.94
121	3.02083	46.66	2.00	1.92
122	3.02778	46.65	1.97	1.89

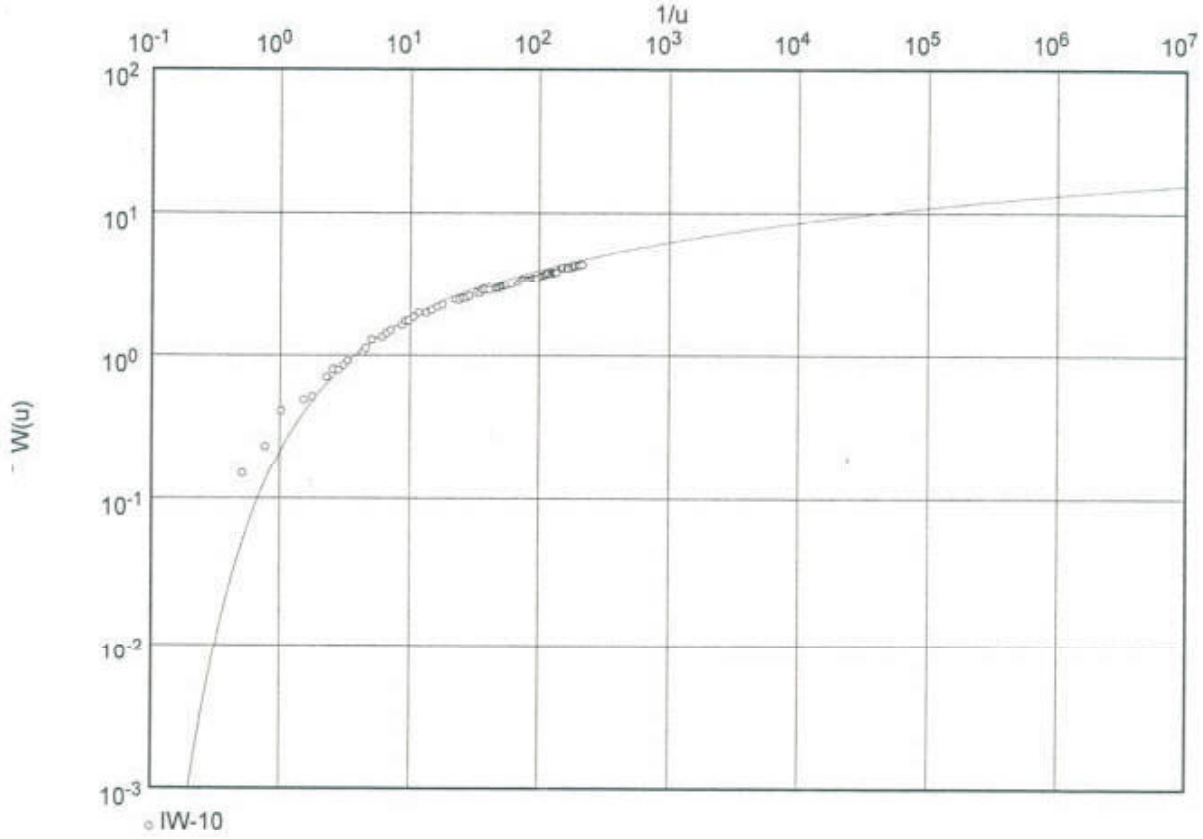
Golder Associates Inc. 3730 Chamblee Tucker Rd. Atlanta, GA 30341 ph.(770)496-1893	Pumping test analysis Theis analysis method Unconfined aquifer	Date: 10-27-98	Page 5
		Project: Solutia/RFI/AL	
		Evaluated by: CDH	

Pumping Test No. IW-10	Test conducted on: 09-15-98
PZR-4	Inline Flow Meter
Discharge 0.40 U.S.gal/min	

	Pumping test duration [d]	Discharge [U.S.gal/min]		
1	0.00000	0.40		
2	2.91667	0.40		

Golder Associates Inc. 3730 Chamblee Tucker Rd. Atlanta, GA 30341 ph.(770)496-1893	Pumping test analysis Theis analysis method Unconfined aquifer	Date: 10-27-98	Page 1
		Project: Solutia/RFI/AL	
		Evaluated by: CDH	

Pumping Test No. IW-10	Test conducted on: 09-15-98
IW-10	
Discharge 0.40 U.S.gal/min	



Transmissivity [ft²/d]: 5.38×10^{0}

Hydraulic conductivity [ft/d]: 2.15×10^{-1}

Aquifer thickness [ft]: 25.00

Golder Associates Inc. 3730 Chamblee Tucker Rd. Atlanta, GA 30341 ph.(770)496-1893	Pumping test analysis Theis analysis method Unconfined aquifer	Date: 10-27-98	Page 2
		Project: Solutia/RFI/AL	
		Evaluated by: CDH	

Pumping Test No. IW-10	Test conducted on: 09-15-98
IW-10	IW-10
Discharge 0.40 U.S.gal/min	Distance from the pumping well 1.00 ft

Static water level: 42.64 ft below datum

	Pumping test duration [d]	Water level [ft]	Drawdown [ft]	Corrected drawdown [ft]
2	0.00347	42.63	-0.01	-0.01
3	0.00694	42.81	0.17	0.17
4	0.01042	42.91	0.27	0.27
5	0.01389	43.12	0.48	0.48
6	0.02083	43.21	0.57	0.56
7	0.02431	43.24	0.60	0.59
8	0.03125	43.46	0.82	0.81
9	0.03472	43.57	0.93	0.91
10	0.03819	43.56	0.92	0.90
11	0.04167	43.63	0.99	0.97
12	0.04514	43.71	1.07	1.05
13	0.05903	43.87	1.23	1.20
14	0.06250	43.94	1.30	1.27
15	0.06944	44.14	1.50	1.45
16	0.08333	44.21	1.57	1.52
17	0.09028	44.30	1.66	1.60
18	0.09722	44.39	1.75	1.69
19	0.11806	44.55	1.91	1.84
20	0.12500	44.68	2.04	1.96
21	0.13194	44.70	2.06	1.98
22	0.14583	44.82	2.18	2.08
23	0.15972	44.99	2.35	2.24
24	0.18056	44.98	2.34	2.23
25	0.20139	45.08	2.44	2.32
26	0.22222	45.22	2.58	2.45
27	0.24306	45.30	2.66	2.52
28	0.30556	45.58	2.94	2.77
29	0.32639	45.55	2.91	2.74
30	0.34722	45.65	3.01	2.83
31	0.36806	45.64	3.00	2.82
32	0.38889	45.75	3.11	2.92
33	0.45139	45.93	3.29	3.07
34	0.47222	45.90	3.26	3.06
35	0.49306	46.08	3.44	3.20
36	0.51389	46.11	3.47	3.23
37	0.55556	46.10	3.46	3.22
38	0.61806	46.19	3.55	3.30
39	0.63889	46.23	3.59	3.33
40	0.65972	46.20	3.56	3.31
41	0.68056	46.28	3.64	3.38
42	0.70139	46.30	3.66	3.39
43	0.72222	46.38	3.74	3.46
44	0.74306	46.37	3.73	3.45
45	0.76389	46.41	3.77	3.49
46	0.82639	46.47	3.83	3.54
47	0.93056	46.63	3.99	3.67
48	0.97222	46.81	4.17	3.82
49	1.01389	46.96	4.32	3.95
50	1.05556	46.97	4.33	3.96

Golder Associates Inc. 3730 Chamblee Tucker Rd. Atlanta, GA 30341 ph.(770)496-1893	Pumping test analysis Theis analysis method Unconfined aquifer	Date: 10-27-98	Page 3
		Project: Solutia/RFI/AL	
		Evaluated by: CDH	

Pumping Test No. IW-10	Test conducted on: 09-15-98
IW-10	IW-10
Discharge 0.40 U.S.gal/min	Distance from the pumping well 1.00 ft
Static water level: 42.64 ft below datum	

	Pumping test duration [d]	Water level [ft]	Drawdown [ft]	Corrected drawdown [ft]
51	1.09722	46.92	4.28	3.91
52	1.13889	46.96	4.32	3.95
53	1.18056	47.00	4.36	3.98
54	1.22222	47.04	4.40	4.01
55	1.26389	47.02	4.38	4.00
56	1.30556	47.05	4.41	4.02
57	1.43056	47.26	4.62	4.19
58	1.47222	47.33	4.69	4.25
59	1.51389	47.41	4.77	4.31
60	1.55556	47.41	4.77	4.31
61	1.59722	47.53	4.89	4.41
62	1.68056	47.47	4.83	4.36
63	1.72222	47.59	4.95	4.46
64	1.76389	47.49	4.85	4.38
65	1.80556	47.56	4.92	4.44
66	1.84722	47.55	4.91	4.43
67	2.01389	47.98	5.34	4.77
68	2.05556	48.03	5.39	4.81
69	2.22222	47.97	5.33	4.76
70	2.26389	47.98	5.34	4.77
71	2.43056	48.03	5.39	4.81
72	2.51389	48.14	5.50	4.89
73	2.55556	48.22	5.58	4.96
74	2.72222	48.25	5.61	4.98
75	2.80556	48.28	5.64	5.00
76	2.93056	48.34	5.70	5.05

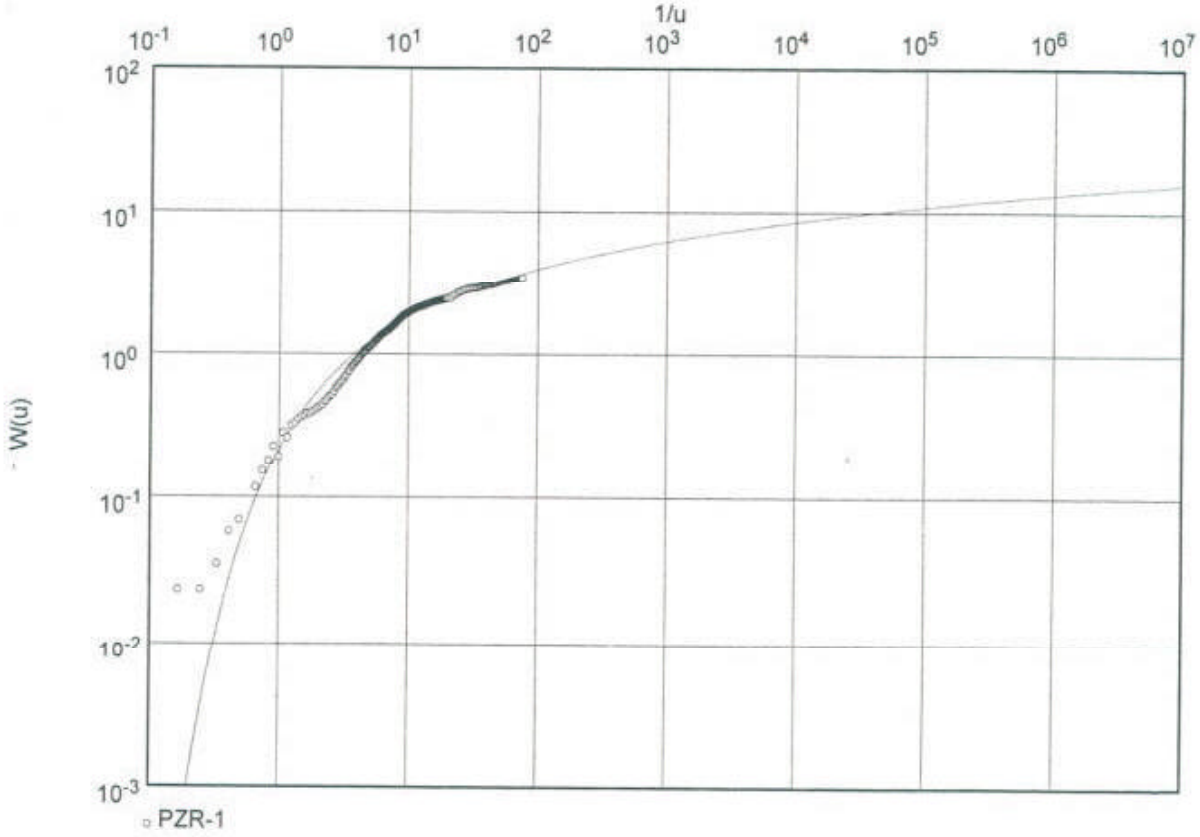
Golder Associates Inc. 3730 Chamblee Tucker Rd. Atlanta, GA 30341 ph.(770)496-1893	Pumping test analysis Theis analysis method Unconfined aquifer	Date: 10-27-98	Page 4
		Project: Solutia/RFI/AL	
		Evaluated by: CDH	

Pumping Test No. IW-10	Test conducted on: 09-15-98
IW-10	Inline Flow Meter
Discharge 0.40 U.S.gal/min	

	Pumping test duration [d]	Discharge [U.S.gal/min]		
1	0.00000	0.40		
2	2.84722	0.40		

Golder Associates Inc. 3730 Chamblee Tucker Rd. Atlanta, GA 30341 ph.(770)496-1893	Pumping test analysis Theis analysis method Unconfined aquifer	Date: 10-27-98	Page 1
		Project: Solutia/RFI/AL	
		Evaluated by: CDH	

Pumping Test No. IW-11	Test conducted on: 09-23-98
PZR-1	
Discharge 0.40 U.S.gal/min	



Transmissivity [ft²/d]: 7.11×10^{0}

Hydraulic conductivity [ft/d]: 2.84×10^{-1}

Aquifer thickness [ft]: 25.00

Golder Associates Inc. 3730 Chamblee Tucker Rd. Atlanta, GA 30341 ph.(770)496-1893	Pumping test analysis Theis analysis method Unconfined aquifer	Date: 10-27-98	Page 2
		Project: Solutia/RFI/AL	
		Evaluated by: CDH	

Pumping Test No. IW-11	Test conducted on: 09-23-98
PZR-1	PZR-1
Discharge 0.40 U.S.gal/min	Distance from the pumping well 7.50 ft

Static water level: 47.25 ft below datum

	Pumping test duration [d]	Water level [ft]	Drawdown [ft]	Corrected drawdown [ft]
2	0.00012	47.25	0.00	0.00
3	0.00023	47.25	0.00	0.00
4	0.00035	47.25	0.00	0.00
5	0.00047	47.25	0.00	0.00
6	0.00058	47.25	0.00	0.00
7	0.00069	47.22	-0.03	-0.03
8	0.00081	47.25	0.00	0.00
9	0.00104	47.25	0.00	0.00
10	0.00116	47.25	0.00	0.00
11	0.00127	47.25	0.00	0.00
12	0.00139	47.25	0.00	0.00
13	0.00162	47.22	-0.03	-0.03
14	0.00174	47.25	0.00	0.00
15	0.00185	47.25	0.00	0.00
16	0.00197	47.25	0.00	0.00
17	0.00208	47.25	0.00	0.00
18	0.00220	47.25	0.00	0.00
19	0.00231	47.25	0.00	0.00
20	0.00243	47.25	0.00	0.00
21	0.00255	47.25	0.00	0.00
22	0.00266	47.25	0.00	0.00
23	0.00278	47.25	0.00	0.00
24	0.00290	47.25	0.00	0.00
25	0.00301	47.25	0.00	0.00
26	0.00347	47.26	0.01	0.01
27	0.00417	47.26	0.01	0.01
28	0.00486	47.24	-0.01	-0.01
29	0.00694	47.27	0.02	0.02
30	0.01042	47.27	0.02	0.02
31	0.01389	47.28	0.03	0.03
32	0.01736	47.30	0.05	0.05
33	0.02083	47.31	0.06	0.06
34	0.02778	47.35	0.10	0.10
35	0.03125	47.38	0.13	0.13
36	0.03472	47.41	0.16	0.16
37	0.03819	47.45	0.20	0.20
38	0.04167	47.42	0.17	0.17
39	0.04514	47.50	0.25	0.25
40	0.04861	47.48	0.23	0.23
41	0.05208	47.53	0.28	0.28
42	0.05556	47.54	0.29	0.29
43	0.05903	47.56	0.31	0.31
44	0.06250	47.57	0.32	0.32
45	0.06597	47.58	0.33	0.33
46	0.06944	47.59	0.34	0.34
47	0.07292	47.59	0.34	0.34
48	0.07639	47.60	0.35	0.35
49	0.07986	47.61	0.36	0.36
50	0.08333	47.62	0.37	0.37

Golder Associates Inc. 3730 Chamblee Tucker Rd. Atlanta, GA 30341 ph.(770)496-1893	Pumping test analysis Theis analysis method Unconfined aquifer	Date: 10-27-98	Page 3
		Project: Solutia/RFI/AL	
		Evaluated by: CDH	

Pumping Test No. IW-11	Test conducted on: 09-23-98
PZR-1	PZR-1
Discharge 0.40 U.S.gal/min	Distance from the pumping well 7.50 ft

Static water level: 47.25 ft below datum

	Pumping test duration [d]	Water level [ft]	Drawdown [ft]	Corrected drawdown [ft]
51	0.08681	47.63	0.38	0.38
52	0.09028	47.64	0.39	0.39
53	0.09375	47.66	0.41	0.41
54	0.09722	47.67	0.42	0.42
55	0.10069	47.69	0.44	0.44
56	0.10417	47.70	0.45	0.45
57	0.10764	47.71	0.46	0.46
58	0.11111	47.73	0.48	0.48
59	0.11458	47.76	0.51	0.50
60	0.11806	47.77	0.52	0.51
61	0.12153	47.79	0.54	0.53
62	0.12500	47.81	0.56	0.55
63	0.12847	47.82	0.57	0.56
64	0.13194	47.84	0.59	0.58
65	0.13542	47.86	0.61	0.60
66	0.13889	47.88	0.63	0.62
67	0.14236	47.91	0.66	0.65
68	0.14583	47.92	0.67	0.66
69	0.14931	47.95	0.70	0.69
70	0.15278	47.97	0.72	0.71
71	0.15625	47.98	0.73	0.72
72	0.15972	48.00	0.75	0.74
73	0.16319	48.02	0.77	0.76
74	0.16667	48.03	0.78	0.77
75	0.17014	48.05	0.80	0.79
76	0.17361	48.07	0.82	0.81
77	0.17708	48.09	0.84	0.83
78	0.18056	48.11	0.86	0.85
79	0.18403	48.13	0.88	0.86
80	0.18750	48.14	0.89	0.87
81	0.19097	48.16	0.91	0.89
82	0.19444	48.17	0.92	0.90
83	0.19792	48.19	0.94	0.92
84	0.20139	48.20	0.95	0.93
85	0.20486	48.22	0.97	0.95
86	0.20833	48.23	0.98	0.96
87	0.21181	48.24	0.99	0.97
88	0.21528	48.26	1.01	0.99
89	0.21875	48.28	1.03	1.01
90	0.22222	48.29	1.04	1.02
91	0.22569	48.31	1.06	1.04
92	0.22917	48.32	1.07	1.05
93	0.23264	48.34	1.09	1.07
94	0.23611	48.35	1.10	1.08
95	0.23958	48.37	1.12	1.09
96	0.24306	48.38	1.13	1.10
97	0.24653	48.40	1.15	1.12
98	0.25000	48.42	1.17	1.14
99	0.25347	48.43	1.18	1.15
100	0.25694	48.44	1.19	1.16

Golder Associates Inc. 3730 Chamblee Tucker Rd. Atlanta, GA 30341 ph.(770)496-1893	Pumping test analysis Theis analysis method Unconfined aquifer	Date: 10-27-98	Page 4
		Project: Solutia/RFI/AL	
		Evaluated by: CDH	

Pumping Test No. IW-11	Test conducted on: 09-23-98
PZR-1	PZR-1
Discharge 0.40 U.S.gal/min	Distance from the pumping well 7.50 ft

Static water level: 47.25 ft below datum

	Pumping test duration [d]	Water level [ft]	Drawdown [ft]	Corrected drawdown [ft]
101	0.26042	48.45	1.20	1.17
102	0.26389	48.46	1.21	1.18
103	0.26736	48.47	1.22	1.19
104	0.27083	48.48	1.23	1.20
105	0.27431	48.49	1.24	1.21
106	0.27778	48.50	1.25	1.22
107	0.28125	48.51	1.26	1.23
108	0.28472	48.52	1.27	1.24
109	0.28819	48.53	1.28	1.25
110	0.29167	48.54	1.29	1.26
111	0.29514	48.56	1.31	1.28
112	0.29861	48.57	1.32	1.29
113	0.30208	48.58	1.33	1.29
114	0.30556	48.59	1.34	1.30
115	0.30903	48.60	1.35	1.31
116	0.31250	48.62	1.37	1.33
117	0.31597	48.64	1.39	1.35
118	0.31944	48.65	1.40	1.36
119	0.32292	48.66	1.41	1.37
120	0.32639	48.68	1.43	1.39
121	0.32986	48.69	1.44	1.40
122	0.33333	48.71	1.46	1.42
123	0.33681	48.72	1.47	1.43
124	0.34028	48.73	1.48	1.44
125	0.34375	48.75	1.50	1.45
126	0.34722	48.76	1.51	1.46
127	0.35069	48.78	1.53	1.48
128	0.35417	48.79	1.54	1.49
129	0.35764	48.81	1.56	1.51
130	0.36111	48.82	1.57	1.52
131	0.36458	48.83	1.58	1.53
132	0.36806	48.85	1.60	1.55
133	0.37153	48.86	1.61	1.56
134	0.37500	48.88	1.63	1.58
135	0.37847	48.89	1.64	1.59
136	0.38194	48.90	1.65	1.60
137	0.38542	48.90	1.65	1.60
138	0.38889	48.91	1.66	1.60
139	0.39236	48.92	1.67	1.61
140	0.39583	48.93	1.68	1.62
141	0.39931	48.94	1.69	1.63
142	0.40278	48.94	1.69	1.63
143	0.40625	48.95	1.70	1.64
144	0.40972	48.96	1.71	1.65
145	0.41319	48.97	1.72	1.66
146	0.41667	48.98	1.73	1.67
147	0.42014	48.98	1.73	1.67
148	0.42361	48.99	1.74	1.68
149	0.42708	49.00	1.75	1.69
150	0.43056	49.01	1.76	1.70

Golder Associates Inc. 3730 Chamblee Tucker Rd. Atlanta, GA 30341 ph.(770)496-1893	Pumping test analysis Theis analysis method Unconfined aquifer	Date: 10-27-98	Page 5
		Project: Solutia/RFI/AL	
		Evaluated by: CDH	

Pumping Test No. IW-11	Test conducted on: 09-23-98
PZR-1	PZR-1
Discharge 0.40 U.S.gal/min	Distance from the pumping well 7.50 ft

Static water level: 47.25 ft below datum

	Pumping test duration [d]	Water level [ft]	Drawdown [ft]	Corrected drawdown [ft]
151	0.43403	49.01	1.76	1.70
152	0.43750	49.02	1.77	1.71
153	0.44097	49.03	1.78	1.72
154	0.44444	49.03	1.78	1.72
155	0.44792	49.04	1.79	1.73
156	0.45139	49.05	1.80	1.74
157	0.45486	49.06	1.81	1.74
158	0.45833	49.07	1.82	1.75
159	0.46181	49.07	1.82	1.75
160	0.46528	49.08	1.83	1.76
161	0.46875	49.08	1.83	1.76
162	0.47222	49.09	1.84	1.77
163	0.47569	49.09	1.84	1.77
164	0.47917	49.10	1.85	1.78
165	0.48264	49.10	1.85	1.78
166	0.48611	49.11	1.86	1.79
167	0.48958	49.11	1.86	1.79
168	0.49306	49.12	1.87	1.80
169	0.49653	49.12	1.87	1.80
170	0.50000	49.13	1.88	1.81
171	0.50347	49.13	1.88	1.81
172	0.50694	49.13	1.88	1.81
173	0.51042	49.14	1.89	1.82
174	0.51389	49.14	1.89	1.82
175	0.51736	49.14	1.89	1.82
176	0.52083	49.15	1.90	1.83
177	0.52431	49.15	1.90	1.83
178	0.52778	49.15	1.90	1.83
179	0.53125	49.16	1.91	1.84
180	0.53472	49.16	1.91	1.84
181	0.53819	49.17	1.92	1.85
182	0.54167	49.17	1.92	1.85
183	0.54514	49.18	1.93	1.86
184	0.54861	49.18	1.93	1.86
185	0.55208	49.19	1.94	1.86
186	0.55556	49.19	1.94	1.86
187	0.55903	49.20	1.95	1.87
188	0.56250	49.20	1.95	1.87
189	0.56597	49.21	1.96	1.88
190	0.56944	49.21	1.96	1.88
191	0.57292	49.22	1.97	1.89
192	0.57639	49.22	1.97	1.89
193	0.57986	49.22	1.97	1.89
194	0.58333	49.23	1.98	1.90
195	0.58681	49.23	1.98	1.90
196	0.59028	49.24	1.99	1.91
197	0.59375	49.24	1.99	1.91
198	0.59722	49.25	2.00	1.92
199	0.60069	49.25	2.00	1.92
200	0.60417	49.25	2.00	1.92

Golder Associates Inc. 3730 Chamblee Tucker Rd. Atlanta, GA 30341 ph.(770)496-1893	Pumping test analysis Theis analysis method Unconfined aquifer	Date: 10-27-98	Page 6
		Project: Solutia/RFI/AL	
		Evaluated by: CDH	

Pumping Test No. IW-11	Test conducted on: 09-23-98
PZR-1	PZR-1
Discharge 0.40 U.S.gal/min	Distance from the pumping well 7.50 ft
Static water level: 47.25 ft below datum	

	Pumping test duration [d]	Water level [ft]	Drawdown [ft]	Corrected drawdown [ft]
201	0.60764	49.26	2.01	1.93
202	0.61111	49.26	2.01	1.93
203	0.61458	49.26	2.01	1.93
204	0.61806	49.27	2.02	1.94
205	0.62153	49.27	2.02	1.94
206	0.62500	49.28	2.03	1.95
207	0.62847	49.28	2.03	1.95
208	0.63194	49.28	2.03	1.95
209	0.63542	49.29	2.04	1.96
210	0.63889	49.29	2.04	1.96
211	0.64236	49.30	2.05	1.97
212	0.64583	49.30	2.05	1.97
213	0.64931	49.30	2.05	1.97
214	0.65278	49.31	2.06	1.98
215	0.65625	49.31	2.06	1.98
216	0.65972	49.31	2.06	1.98
217	0.66319	49.31	2.06	1.98
218	0.66667	49.32	2.07	1.98
219	0.67014	49.32	2.07	1.98
220	0.67361	49.32	2.07	1.98
221	0.67708	49.32	2.07	1.98
222	0.68056	49.32	2.07	1.98
223	0.68403	49.33	2.08	1.99
224	0.68750	49.33	2.08	1.99
225	0.69097	49.33	2.08	1.99
226	0.69444	49.34	2.09	2.00
227	0.69792	49.34	2.09	2.00
228	0.70139	49.34	2.09	2.00
229	0.70486	49.34	2.09	2.00
230	0.70833	49.34	2.09	2.00
231	0.71181	49.35	2.10	2.01
232	0.71528	49.36	2.11	2.02
233	0.71875	49.36	2.11	2.02
234	0.72222	49.36	2.11	2.02
235	0.72569	49.36	2.11	2.02
236	0.72917	49.37	2.12	2.03
237	0.73264	49.37	2.12	2.03
238	0.73611	49.37	2.12	2.03
239	0.73958	49.37	2.12	2.03
240	0.74306	49.37	2.12	2.03
241	0.74653	49.38	2.13	2.04
242	0.75000	49.38	2.13	2.04
243	0.75347	49.38	2.13	2.04
244	0.75694	49.38	2.13	2.04
245	0.76042	49.38	2.13	2.04
246	0.76389	49.38	2.13	2.04
247	0.76736	49.39	2.14	2.05
248	0.77083	49.39	2.14	2.05
249	0.77431	49.39	2.14	2.05
250	0.77778	49.40	2.15	2.06

Golder Associates Inc. 3730 Chamblee Tucker Rd. Atlanta, GA 30341 ph.(770)496-1893	Pumping test analysis Theis analysis method Unconfined aquifer	Date: 10-27-98	Page 7
		Project: Solutia/RFI/AL	
		Evaluated by: CDH	

Pumping Test No. IW-11	Test conducted on: 09-23-98
PZR-1	PZR-1
Discharge 0.40 U.S.gal/min	Distance from the pumping well 7.50 ft

Static water level: 47.25 ft below datum

	Pumping test duration [d]	Water level [ft]	Drawdown [ft]	Corrected drawdown [ft]
251	0.78125	49.40	2.15	2.06
252	0.78472	49.40	2.15	2.06
253	0.78819	49.40	2.15	2.06
254	0.79167	49.41	2.16	2.07
255	0.79514	49.41	2.16	2.07
256	0.79861	49.41	2.16	2.07
257	0.80208	49.41	2.16	2.07
258	0.80556	49.41	2.16	2.07
259	0.80903	49.42	2.17	2.08
260	0.81250	49.42	2.17	2.08
261	0.81597	49.42	2.17	2.08
262	0.81944	49.42	2.17	2.08
263	0.82292	49.43	2.18	2.08
264	0.82639	49.43	2.18	2.08
265	0.82986	49.44	2.19	2.09
266	0.83333	49.43	2.18	2.08
267	0.87500	49.43	2.18	2.08
268	0.91667	49.52	2.27	2.17
269	0.95833	49.58	2.33	2.22
270	1.00000	49.64	2.39	2.28
271	1.04167	49.68	2.43	2.31
272	1.08333	49.72	2.47	2.35
273	1.12500	49.75	2.50	2.38
274	1.16667	49.78	2.53	2.40
275	1.20833	49.80	2.55	2.42
276	1.25000	49.82	2.57	2.44
277	1.29167	49.83	2.58	2.45
278	1.33333	49.84	2.59	2.46
279	1.37500	49.83	2.58	2.45
280	1.41667	49.85	2.60	2.46
281	1.45833	49.88	2.63	2.49
282	1.50000	49.89	2.64	2.50
283	1.54167	49.91	2.66	2.52
284	1.58333	49.94	2.69	2.55
285	1.62500	49.96	2.71	2.56
286	1.66667	49.98	2.73	2.58
287	1.70833	49.98	2.73	2.58
288	1.75000	49.99	2.74	2.59
289	1.79167	49.99	2.74	2.59
290	1.83333	50.00	2.75	2.60
291	1.87500	50.02	2.77	2.62
292	1.91667	50.03	2.78	2.63
293	1.95833	50.05	2.80	2.64
294	2.00000	50.07	2.82	2.66
295	2.04167	50.10	2.85	2.69
296	2.08333	50.13	2.88	2.71
297	2.12500	50.14	2.89	2.72
298	2.16667	50.16	2.91	2.74
299	2.20833	50.17	2.92	2.75
300	2.25000	50.19	2.94	2.77

Golder Associates Inc. 3730 Chamblee Tucker Rd. Atlanta, GA 30341 ph.(770)496-1893	Pumping test analysis Theis analysis method Unconfined aquifer	Date: 10-27-98	Page 8
		Project: Solutia/RFI/AL	
		Evaluated by: CDH	

Pumping Test No. IW-11	Test conducted on: 09-23-98
PZR-1	PZR-1
Discharge 0.40 U.S.gal/min	Distance from the pumping well 7.50 ft
Static water level: 47.25 ft below datum	

	Pumping test duration [d]	Water level [ft]	Drawdown [ft]	Corrected drawdown [ft]
301	2.29167	50.19	2.94	2.77
302	2.33333	50.19	2.94	2.77
303	2.37500	50.20	2.95	2.78
304	2.41667	50.21	2.96	2.78
305	2.45833	50.22	2.97	2.79
306	2.50000	50.24	2.99	2.81
307	2.54167	50.26	3.01	2.83
308	2.58333	50.28	3.03	2.85
309	2.62500	50.30	3.05	2.86
310	2.66667	50.31	3.06	2.87
311	2.70833	50.32	3.07	2.88
312	2.75000	50.32	3.07	2.88
313	2.79167	50.32	3.07	2.88
314	2.83333	50.32	3.07	2.88
315	2.87500	50.34	3.09	2.90
316	2.91667	50.34	3.09	2.90
317	2.95833	50.36	3.11	2.92
318	3.00000	50.39	3.14	2.94
319	3.04167	50.42	3.17	2.97
320	3.08333	50.44	3.19	2.99
321	3.12500	50.47	3.22	3.01
322	3.16667	50.46	3.23	3.02
323	3.17292	50.48	3.23	3.02
324	3.17326	50.48	3.23	3.02
325	3.17361	50.49	3.24	3.03
326	3.17396	50.48	3.23	3.02

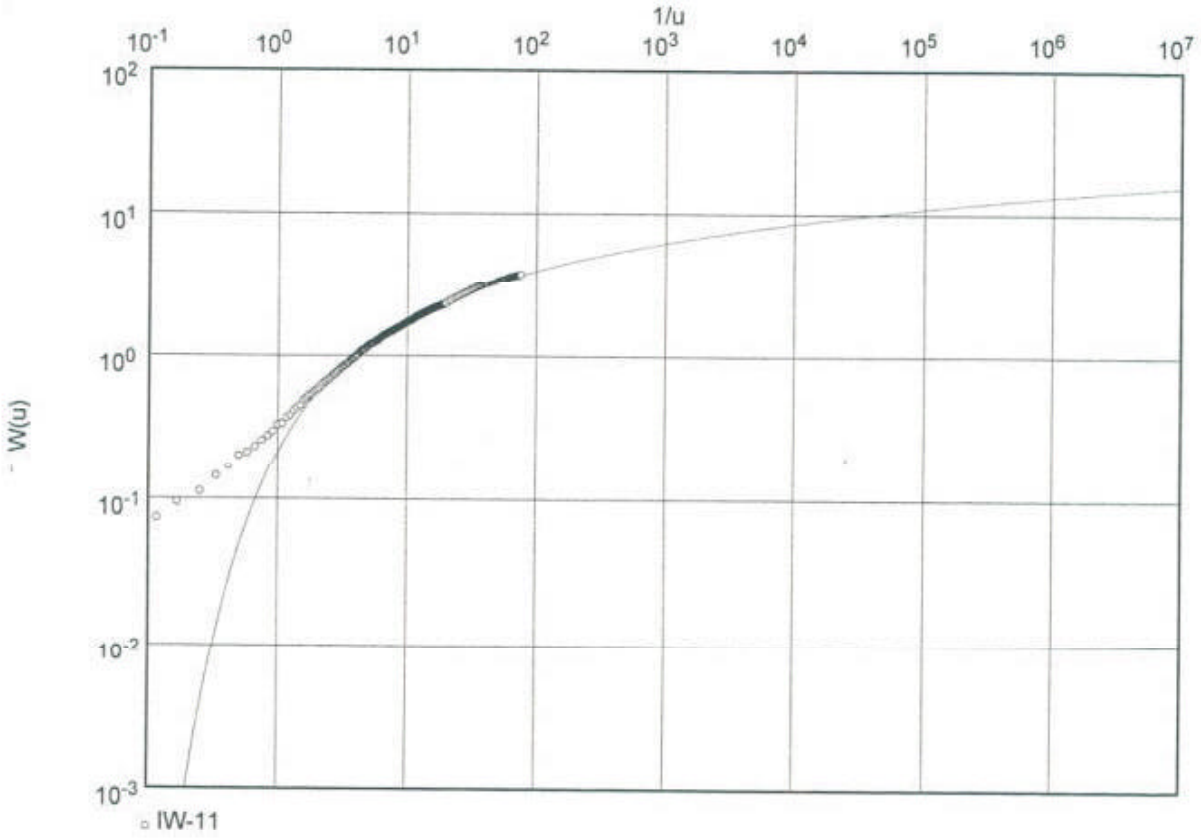
Golder Associates Inc. 3730 Chamblee Tucker Rd. Atlanta, GA 30341 ph.(770)496-1893	Pumping test analysis Theis analysis method Unconfined aquifer	Date: 10-27-98	Page 9
		Project: Solutia/RFI/AL	
		Evaluated by: CDH	

Pumping Test No. MW-11	Test conducted on: 09-23-98
PZR-1	Inline Flow Meter
Discharge 0.40 U.S.gal/min	

	Pumping test duration [d]	Discharge [U.S.gal/min]		
1	0.00000	0.40		
2	3.00000	0.40		

Golder Associates Inc. 3730 Chamblee Tucker Rd. Atlanta, GA 30341 ph.(770)496-1893	Pumping test analysis Theis analysis method Unconfined aquifer	Date: 10-27-98	Page 1
		Project: Solutia/RFI/AL	
		Evaluated by: CDH	

Pumping Test No. IW-11	Test conducted on: 09-23-98
IW-11	
Discharge 0.40 U.S.gal/min	



Transmissivity [ft²/d]: 2.15×10^{0}

Hydraulic conductivity [ft/d]: 8.62×10^{-2}

Aquifer thickness [ft]: 25.00

Golder Associates Inc. 3730 Chamblee Tucker Rd. Atlanta, GA 30341 ph.(770)496-1893	Pumping test analysis Theis analysis method Unconfined aquifer	Date: 10-27-98	Page 2
		Project: Solutia/RFI/AL	
		Evaluated by: CDH	

Pumping Test No. IW-11	Test conducted on: 09-23-98
IW-11	IW-11
Discharge 0.40 U.S.gal/min	Distance from the pumping well 1.00 ft

Static water level: 45.10 ft below datum

	Pumping test duration [d]	Water level [ft]	Drawdown [ft]	Corrected drawdown [ft]
2	0.00012	45.12	0.02	0.02
3	0.00023	45.07	-0.03	-0.03
4	0.00035	45.12	0.02	0.02
5	0.00047	45.12	0.02	0.02
6	0.00058	45.07	-0.03	-0.03
7	0.00069	45.21	0.11	0.11
8	0.00081	45.20	0.10	0.10
9	0.00092	45.23	0.13	0.13
10	0.00104	45.23	0.13	0.13
11	0.00116	45.24	0.14	0.14
12	0.00127	45.24	0.14	0.14
13	0.00139	45.22	0.12	0.12
14	0.00151	45.24	0.14	0.14
15	0.00162	45.21	0.11	0.11
16	0.00174	45.25	0.15	0.15
17	0.00185	45.26	0.16	0.16
18	0.00197	45.23	0.13	0.13
19	0.00208	45.27	0.17	0.17
20	0.00220	45.22	0.12	0.12
21	0.00231	45.25	0.15	0.15
22	0.00243	45.28	0.18	0.18
23	0.00255	45.24	0.14	0.14
24	0.00266	45.27	0.17	0.17
25	0.00278	45.26	0.16	0.16
26	0.00290	45.24	0.14	0.14
27	0.00301	45.26	0.16	0.16
28	0.00347	45.27	0.17	0.17
29	0.00417	45.30	0.20	0.20
30	0.00486	45.31	0.21	0.21
31	0.00694	45.37	0.27	0.27
32	0.01042	45.42	0.32	0.32
33	0.01389	45.51	0.41	0.41
34	0.01736	45.58	0.48	0.48
35	0.02083	45.69	0.59	0.58
36	0.02431	45.72	0.62	0.61
37	0.02778	45.78	0.68	0.67
38	0.03125	45.85	0.75	0.74
39	0.03472	45.91	0.81	0.80
40	0.03819	45.97	0.87	0.85
41	0.04167	46.07	0.97	0.95
42	0.04514	46.09	0.99	0.97
43	0.04861	46.19	1.09	1.07
44	0.05208	46.24	1.14	1.11
45	0.05556	46.32	1.22	1.19
46	0.05903	46.38	1.28	1.25
47	0.06250	46.43	1.33	1.29
48	0.06597	46.54	1.44	1.40
49	0.06944	46.59	1.49	1.45
50	0.07292	46.66	1.56	1.51

Golder Associates Inc. 3730 Chamblee Tucker Rd. Atlanta, GA 30341 ph.(770)496-1893	Pumping test analysis Theis analysis method Unconfined aquifer	Date: 10-27-98	Page 3
		Project: Solutia/RFI/AL	
		Evaluated by: CDH	

Pumping Test No. IW-11	Test conducted on: 09-23-98
IW-11	IW-11
Discharge 0.40 U.S.gal/min	Distance from the pumping well 1.00 ft
Static water level: 45.10 ft below datum	

	Pumping test duration [d]	Water level [ft]	Drawdown [ft]	Corrected drawdown [ft]
51	0.07639	46.70	1.60	1.55
52	0.07986	46.77	1.67	1.61
53	0.08333	46.81	1.71	1.65
54	0.08681	46.86	1.76	1.70
55	0.09028	46.94	1.84	1.77
56	0.09375	47.00	1.90	1.83
57	0.09722	47.05	1.95	1.87
58	0.10069	47.11	2.01	1.93
59	0.10417	47.14	2.04	1.96
60	0.10764	47.22	2.12	2.03
61	0.11111	47.29	2.19	2.09
62	0.11458	47.31	2.21	2.11
63	0.11806	47.37	2.27	2.17
64	0.12153	47.43	2.33	2.22
65	0.12500	47.51	2.41	2.29
66	0.12847	47.55	2.45	2.33
67	0.13194	47.58	2.48	2.36
68	0.13542	47.66	2.56	2.43
69	0.13889	47.67	2.57	2.44
70	0.14236	47.74	2.64	2.50
71	0.14583	47.77	2.67	2.53
72	0.14931	47.83	2.73	2.58
73	0.15278	47.90	2.80	2.64
74	0.15625	47.93	2.83	2.67
75	0.15972	47.99	2.89	2.72
76	0.16319	48.02	2.92	2.75
77	0.16667	48.09	2.99	2.81
78	0.17014	48.15	3.05	2.86
79	0.17361	48.17	3.07	2.88
80	0.17708	48.26	3.16	2.96
81	0.18056	48.32	3.22	3.01
82	0.18403	48.38	3.28	3.06
83	0.18750	48.41	3.31	3.09
84	0.19097	48.44	3.34	3.12
85	0.19444	48.47	3.37	3.14
86	0.19792	48.50	3.40	3.17
87	0.20139	48.59	3.49	3.25
88	0.20486	48.64	3.54	3.29
89	0.20833	48.67	3.57	3.32
90	0.21181	48.70	3.60	3.34
91	0.21528	48.77	3.67	3.40
92	0.21875	48.80	3.70	3.43
93	0.22222	48.82	3.72	3.44
94	0.22569	48.84	3.74	3.46
95	0.22917	48.86	3.76	3.48
96	0.23264	48.89	3.79	3.50
97	0.23611	48.97	3.87	3.57
98	0.23958	49.00	3.90	3.60
99	0.24306	48.98	3.88	3.58
100	0.24653	49.04	3.94	3.63

Golder Associates Inc. 3730 Chamblee Tucker Rd. Atlanta, GA 30341 ph.(770)496-1893	Pumping test analysis Theis analysis method Unconfined aquifer	Date: 10-27-98	Page 4
		Project: Solutia/RFI/AL	
		Evaluated by: CDH	

Pumping Test No. IW-11	Test conducted on: 09-23-98
IW-11	IW-11
Discharge 0.40 U.S.gal/min	Distance from the pumping well 1.00 ft
Static water level: 45.10 ft below datum	

	Pumping test duration [d]	Water level [ft]	Drawdown [ft]	Corrected drawdown [ft]
101	0.25000	49.07	3.97	3.65
102	0.25347	49.08	3.98	3.66
103	0.25694	49.16	4.06	3.73
104	0.26042	49.20	4.10	3.76
105	0.26389	49.25	4.15	3.81
106	0.26736	49.30	4.20	3.85
107	0.27083	49.34	4.24	3.88
108	0.27431	49.37	4.27	3.91
109	0.27778	49.39	4.29	3.92
110	0.28125	49.42	4.32	3.95
111	0.28472	49.43	4.33	3.96
112	0.28819	49.45	4.35	3.97
113	0.29167	49.53	4.43	4.04
114	0.29514	49.55	4.45	4.05
115	0.29861	49.58	4.48	4.08
116	0.30208	49.60	4.50	4.10
117	0.30556	49.62	4.52	4.11
118	0.30903	49.66	4.56	4.14
119	0.31250	49.68	4.58	4.16
120	0.31597	49.74	4.64	4.21
121	0.31944	49.74	4.64	4.21
122	0.32292	49.76	4.66	4.23
123	0.32639	49.81	4.71	4.27
124	0.32986	49.84	4.74	4.29
125	0.33333	49.86	4.76	4.31
126	0.33681	49.90	4.80	4.34
127	0.34028	49.92	4.82	4.36
128	0.34375	49.95	4.85	4.38
129	0.34722	49.96	4.86	4.39
130	0.35069	50.02	4.92	4.44
131	0.35417	50.03	4.93	4.44
132	0.35764	50.05	4.95	4.46
133	0.36111	50.07	4.97	4.48
134	0.36458	50.12	5.02	4.52
135	0.36806	50.14	5.04	4.53
136	0.37153	50.14	5.04	4.53
137	0.37500	50.18	5.08	4.56
138	0.37847	50.21	5.11	4.59
139	0.38194	50.23	5.13	4.60
140	0.38542	50.28	5.18	4.64
141	0.38889	50.30	5.20	4.66
142	0.39236	50.35	5.25	4.70
143	0.39583	50.37	5.27	4.71
144	0.39931	50.41	5.31	4.75
145	0.40278	50.43	5.33	4.76
146	0.40625	50.49	5.39	4.81
147	0.40972	50.50	5.40	4.82
148	0.41319	50.52	5.42	4.83
149	0.41667	50.51	5.41	4.82
150	0.42014	50.56	5.46	4.86

Golder Associates Inc. 3730 Chamblee Tucker Rd. Atlanta, GA 30341 ph.(770)496-1893	Pumping test analysis Theis analysis method Unconfined aquifer	Date: 10-27-98	Page 5
		Project: Solutia/RFI/AL	
		Evaluated by: CDH	

Pumping Test No. IW-11	Test conducted on: 09-23-98
IW-11	IW-11
Discharge 0.40 U.S.gal/min	Distance from the pumping well 1.00 ft
Static water level: 45.10 ft below datum	

	Pumping test duration [d]	Water level [ft]	Drawdown [ft]	Corrected drawdown [ft]
151	0.42361	50.56	5.46	4.86
152	0.42708	50.58	5.48	4.88
153	0.43056	50.61	5.51	4.90
154	0.43403	50.60	5.50	4.89
155	0.43750	50.64	5.54	4.93
156	0.44097	50.67	5.57	4.95
157	0.44444	50.70	5.60	4.97
158	0.44792	50.70	5.60	4.97
159	0.45139	50.71	5.61	4.98
160	0.45486	50.76	5.66	5.02
161	0.45833	50.81	5.71	5.06
162	0.46181	50.82	5.72	5.07
163	0.46528	50.85	5.75	5.09
164	0.46875	50.86	5.76	5.10
165	0.47222	50.93	5.83	5.15
166	0.47569	50.93	5.83	5.15
167	0.47917	50.96	5.86	5.17
168	0.48264	51.01	5.91	5.21
169	0.48611	51.03	5.93	5.23
170	0.48958	51.03	5.93	5.23
171	0.49306	51.08	5.98	5.26
172	0.49653	51.14	6.04	5.31
173	0.50000	51.14	6.04	5.31
174	0.50347	51.11	6.01	5.29
175	0.50694	51.15	6.05	5.32
176	0.51042	51.20	6.10	5.36
177	0.51389	51.21	6.11	5.36
178	0.51736	51.26	6.16	5.40
179	0.52083	51.28	6.18	5.42
180	0.52431	51.28	6.18	5.42
181	0.52778	51.30	6.20	5.43
182	0.53125	51.36	6.26	5.48
183	0.53472	51.36	6.26	5.48
184	0.53819	51.39	6.29	5.50
185	0.54167	51.41	6.31	5.51
186	0.54514	51.44	6.34	5.54
187	0.54861	51.47	6.37	5.56
188	0.55208	51.50	6.40	5.58
189	0.55556	51.50	6.40	5.58
190	0.55903	51.49	6.39	5.57
191	0.56250	51.55	6.45	5.62
192	0.56597	51.57	6.47	5.63
193	0.56944	51.58	6.48	5.64
194	0.57292	51.58	6.48	5.64
195	0.57639	51.64	6.54	5.68
196	0.57986	51.61	6.51	5.66
197	0.58333	51.64	6.54	5.68
198	0.58681	51.66	6.56	5.70
199	0.59028	51.68	6.58	5.71
200	0.59375	51.72	6.62	5.74

Golder Associates Inc. 3730 Chamblee Tucker Rd. Atlanta, GA 30341 ph.(770)496-1893	Pumping test analysis Theis analysis method Unconfined aquifer	Date: 10-27-98	Page 6
		Project: Solutia/RFI/AL	
		Evaluated by: CDH	

Pumping Test No. IW-11	Test conducted on: 09-23-98
IW-11	IW-11
Discharge 0.40 U.S.gal/min	Distance from the pumping well 1.00 ft

Static water level: 45.10 ft below datum

	Pumping test duration [d]	Water level [ft]	Drawdown [ft]	Corrected drawdown [ft]
201	0.59722	51.76	6.66	5.77
202	0.60069	51.76	6.66	5.77
203	0.60417	51.77	6.67	5.78
204	0.60764	51.83	6.73	5.82
205	0.61111	51.84	6.74	5.83
206	0.61458	51.85	6.75	5.84
207	0.61806	51.85	6.75	5.84
208	0.62153	51.89	6.79	5.87
209	0.62500	51.92	6.82	5.89
210	0.62847	51.94	6.84	5.90
211	0.63194	51.95	6.85	5.91
212	0.63542	51.96	6.86	5.92
213	0.63889	51.96	6.86	5.92
214	0.64236	51.98	6.88	5.93
215	0.64583	51.99	6.89	5.94
216	0.64931	52.05	6.95	5.98
217	0.65278	52.08	6.98	6.01
218	0.65625	52.10	7.00	6.02
219	0.65972	52.10	7.00	6.02
220	0.66319	52.13	7.03	6.04
221	0.66667	52.08	6.98	6.01
222	0.67014	52.13	7.03	6.04
223	0.67361	52.14	7.04	6.05
224	0.67708	52.15	7.05	6.06
225	0.68056	52.23	7.13	6.11
226	0.68403	52.21	7.11	6.10
227	0.68750	52.26	7.16	6.13
228	0.69097	52.26	7.16	6.13
229	0.69444	52.27	7.17	6.14
230	0.69792	52.31	7.21	6.17
231	0.70139	52.29	7.19	6.16
232	0.70486	52.29	7.19	6.16
233	0.70833	52.35	7.25	6.20
234	0.71181	52.31	7.21	6.17
235	0.71528	52.34	7.24	6.19
236	0.71875	52.36	7.26	6.21
237	0.72222	52.37	7.27	6.21
238	0.72569	52.41	7.31	6.24
239	0.72917	52.40	7.30	6.23
240	0.73264	52.41	7.31	6.24
241	0.73611	52.43	7.33	6.26
242	0.73958	52.43	7.33	6.26
243	0.74306	52.45	7.35	6.27
244	0.74653	52.50	7.40	6.30
245	0.75000	52.50	7.40	6.30
246	0.75347	52.50	7.40	6.30
247	0.75694	52.52	7.42	6.32
248	0.76042	52.52	7.42	6.32
249	0.76389	52.53	7.43	6.33
250	0.76736	52.54	7.44	6.33

Golder Associates Inc. 3730 Chamblee Tucker Rd. Atlanta, GA 30341 ph.(770)496-1893	Pumping test analysis Theis analysis method Unconfined aquifer	Date: 10-27-98	Page 7
		Project: Solutia/RFI/AL	
		Evaluated by: CDH	

Pumping Test No. IW-11	Test conducted on: 09-23-98
IW-11	IW-11
Discharge 0.40 U.S.gal/min	Distance from the pumping well 1.00 ft

Static water level: 45.10 ft below datum

	Pumping test duration [d]	Water level [ft]	Drawdown [ft]	Corrected drawdown [ft]
251	0.77083	52.55	7.45	6.34
252	0.77431	52.56	7.46	6.35
253	0.77778	52.61	7.51	6.38
254	0.78125	52.62	7.52	6.39
255	0.78472	52.63	7.53	6.40
256	0.78819	52.63	7.53	6.40
257	0.79167	52.67	7.57	6.42
258	0.79514	52.69	7.59	6.44
259	0.79861	52.70	7.60	6.44
260	0.80208	52.71	7.61	6.45
261	0.80556	52.73	7.63	6.47
262	0.80903	52.72	7.62	6.46
263	0.81250	52.75	7.65	6.48
264	0.81597	52.73	7.63	6.47
265	0.81944	52.75	7.65	6.48
266	0.82292	52.76	7.66	6.49
267	0.82639	52.79	7.69	6.51
268	0.82986	52.81	7.71	6.52
269	0.83333	52.84	7.74	6.54
270	0.87500	53.17	8.07	6.77
271	0.91667	53.39	8.29	6.92
272	0.95833	53.63	8.53	7.07
273	1.00000	53.81	8.71	7.19
274	1.04167	54.03	8.93	7.34
275	1.08333	54.26	9.16	7.48
276	1.12500	54.44	9.34	7.60
277	1.16667	54.66	9.56	7.73
278	1.20833	54.85	9.75	7.85
279	1.25000	55.02	9.92	7.95
280	1.29167	55.27	10.17	8.10
281	1.33333	55.43	10.33	8.20
282	1.37500	55.59	10.49	8.29
283	1.41667	55.80	10.70	8.41
284	1.45833	55.95	10.85	8.50
285	1.50000	56.11	11.01	8.59
286	1.54167	56.29	11.19	8.69
287	1.58333	56.43	11.33	8.76
288	1.62500	56.64	11.54	8.88
289	1.66667	56.77	11.67	8.95
290	1.70833	56.87	11.77	9.00
291	1.75000	56.95	11.85	9.04
292	1.79167	57.09	11.99	9.11
293	1.83333	57.23	12.13	9.19
294	1.87500	57.34	12.24	9.24
295	1.91667	57.41	12.31	9.28
296	1.95833	57.56	12.46	9.36
297	2.00000	57.65	12.55	9.40
298	2.04167	57.83	12.73	9.49
299	2.08333	58.12	13.02	9.63
300	2.12500	58.23	13.13	9.68

Golder Associates Inc. 3730 Chamblee Tucker Rd. Atlanta, GA 30341 ph.(770)496-1893	Pumping test analysis Theis analysis method Unconfined aquifer	Date: 10-27-98	Page 8
		Project: Solutia/RFI/AL	
		Evaluated by: CDH	

Pumping Test No. IW-11	Test conducted on: 09-23-98
IW-11	IW-11
Discharge 0.40 U.S.gal/min	Distance from the pumping well 1.00 ft

Static water level: 45.10 ft below datum

	Pumping test duration [d]	Water level [ft]	Drawdown [ft]	Corrected drawdown [ft]
301	2.16667	58.40	13.30	9.76
302	2.20833	58.58	13.48	9.85
303	2.25000	58.65	13.55	9.88
304	2.29167	58.74	13.64	9.92
305	2.33333	58.87	13.77	9.98
306	2.37500	59.00	13.90	10.04
307	2.41667	59.16	14.06	10.11
308	2.45833	59.29	14.19	10.16
309	2.50000	59.42	14.32	10.22
310	2.54167	59.55	14.45	10.27
311	2.58333	59.75	14.65	10.36
312	2.62500	59.88	14.78	10.41
313	2.66667	59.95	14.85	10.44
314	2.70833	60.08	14.98	10.49
315	2.75000	60.19	15.09	10.54
316	2.79167	60.25	15.15	10.56
317	2.83333	60.33	15.23	10.59
318	2.87500	60.41	15.31	10.62
319	2.91667	60.51	15.41	10.66
320	2.95833	60.60	15.50	10.70
321	3.00000	60.69	15.59	10.73
322	3.04167	60.77	15.67	10.76
323	3.08333	60.84	15.74	10.79
324	3.12500	60.89	15.79	10.80
325	3.16667	60.94	15.84	10.82
326	3.17292	60.95	15.85	10.83
327	3.17326	60.95	15.85	10.83
328	3.17361	60.96	15.89	10.84
329	3.17396	60.98	15.88	10.84

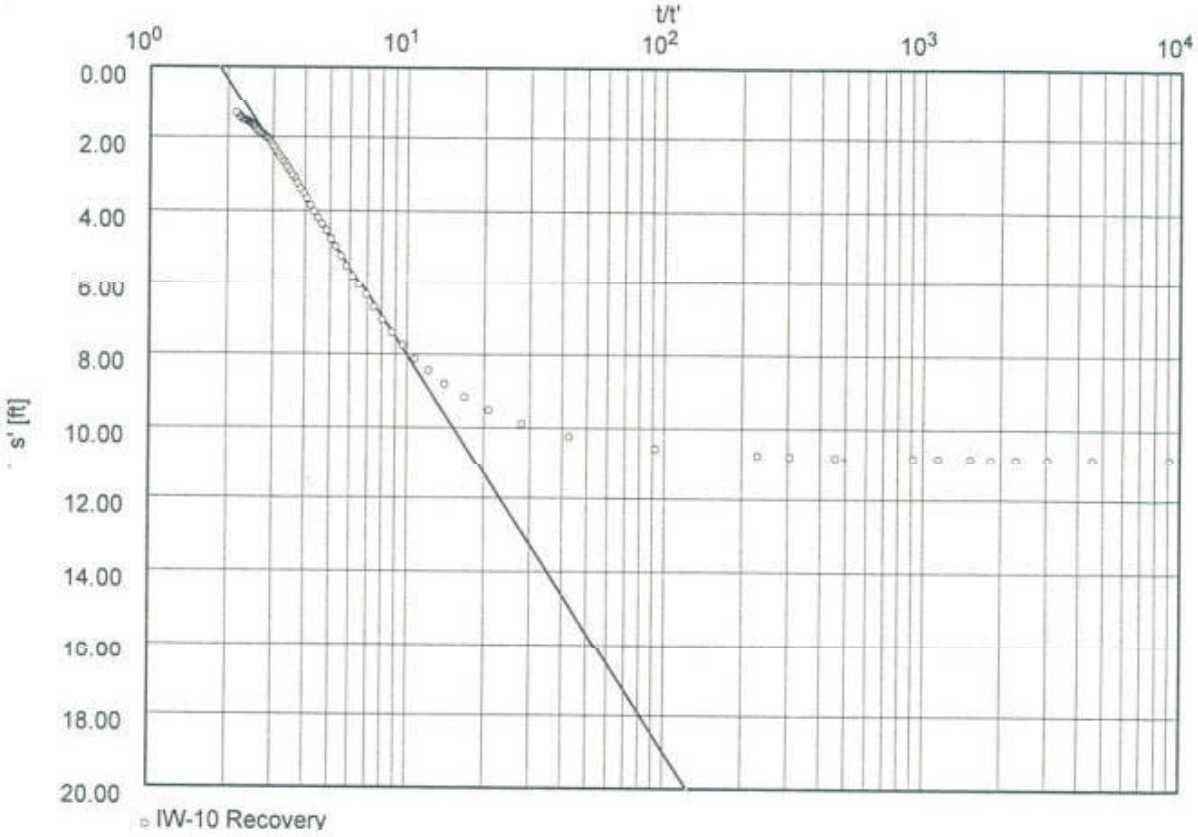
Golder Associates Inc. 3730 Chamblee Tucker Rd. Atlanta, GA 30341 ph.(770)496-1893	Pumping test analysis Theis analysis method Unconfined aquifer	Date: 10-27-98	Page 9
		Project: Solutia/RFI/AL	
		Evaluated by: CDH	

Pumping Test No. IW-11	Test conducted on: 09-23-98
IW-11	Inline Flow Meter
Discharge 0.40 U.S.gal/min	

	Pumping test duration [d]	Discharge [U.S.gal/min]
1	0.00000	0.40
2	3.00000	0.40

Golder Associates Inc. 3730 Chamblee Tucker Rd. Atlanta, GA 30341 ph.(770)496-1893	Pumping test analysis Recovery method after THEIS & JACOB Unconfined aquifer	Date: 11-04-98	Page 1
		Project: Solutia/RFI/AL	
		Evaluated by: CDH	

Pumping Test No. IW-11 Recovery	Test conducted on: 09-23-98
IW-11	
Discharge 0.21 U.S.gal/min	
	Pumping test duration: 3.17361 d



Transmissivity [ft²/d]: 6.90×10^{-1}

Hydraulic conductivity [ft/d]: 2.76×10^{-2}

Aquifer thickness [ft]: 25.00

Golder Associates Inc. 3730 Chamblee Tucker Rd. Atlanta, GA 30341 ph.(770)496-1893	Pumping test analysis Recovery method after THEIS & JACOB Unconfined aquifer	Date: 11-04-98	Page 2
		Project: Solutia/RFI/AL	
		Evaluated by: CDH	

Pumping Test No. IW-11 Recovery	Test conducted on: 09-23-98
IW-11	IW-10 Recovery
Discharge 0.21 U.S.gal/min	Distance from the pumping well 1.00 ft
Static water level: 45.10 ft below datum	Pumping test duration: 3.17361 d

	Time from end of pumping [d]	Water level [ft]	Residual drawdown [ft]	Corrected drawdown [ft]
1	0.00035	60.98	15.88	10.84
2	0.00069	60.97	15.87	10.83
3	0.00104	60.97	15.87	10.83
4	0.00139	60.96	15.86	10.83
5	0.00174	60.95	15.85	10.83
6	0.00208	60.92	15.82	10.81
7	0.00278	60.92	15.82	10.81
8	0.00347	60.90	15.80	10.81
9	0.00694	60.85	15.75	10.79
10	0.01042	60.79	15.69	10.77
11	0.01389	60.72	15.62	10.74
12	0.03472	60.24	15.14	10.56
13	0.07639	59.45	14.35	10.23
14	0.11806	58.67	13.57	9.89
15	0.15972	57.88	12.78	9.51
16	0.20139	57.19	12.09	9.17
17	0.24306	56.50	11.40	8.80
18	0.28472	55.86	10.76	8.44
19	0.32639	55.31	10.21	8.13
20	0.36806	54.69	9.59	7.75
21	0.40972	54.14	9.04	7.41
22	0.45139	53.63	8.53	7.07
23	0.49306	53.09	7.99	6.71
24	0.53472	52.60	7.50	6.38
25	0.57639	52.19	7.09	6.08
26	0.61806	51.77	6.67	5.78
27	0.65972	51.41	6.31	5.51
28	0.70139	51.04	5.94	5.23
29	0.74306	50.69	5.59	4.97
30	0.78472	50.43	5.33	4.76
31	0.82639	50.14	5.04	4.53
32	0.86806	49.92	4.82	4.36
33	0.90972	49.71	4.61	4.18
34	0.95139	49.50	4.40	4.01
35	0.99306	49.30	4.20	3.85
36	1.03472	49.07	3.97	3.65
37	1.07639	48.90	3.80	3.51
38	1.11806	48.77	3.67	3.40
39	1.15972	48.59	3.49	3.25
40	1.20139	48.41	3.31	3.08
41	1.24306	48.32	3.22	3.01
42	1.28472	48.18	3.08	2.89
43	1.32639	48.07	2.97	2.79
44	1.36806	47.94	2.84	2.68
45	1.40972	47.88	2.78	2.63
46	1.45139	47.78	2.68	2.54
47	1.49306	47.67	2.57	2.44
48	1.53472	47.58	2.48	2.36
49	1.57639	47.49	2.39	2.28
50	1.61806	47.40	2.30	2.19

Golder Associates Inc. 3730 Chamblee Tucker Rd. Atlanta, GA 30341 ph.(770)496-1893	Pumping test analysis Recovery method after THEIS & JACOB Unconfined aquifer	Date: 11-04-98	Page 3
		Project: Solutia/RFI/AL	
		Evaluated by: CDH	

Pumping Test No. IW-11 Recovery	Test conducted on: 09-23-98
IW-11	IW-10 Recovery
Discharge 0.21 U.S.gal/min	Distance from the pumping well 1.00 ft
Static water level: 45.10 ft below datum	Pumping test duration: 3.17361 d

	Time from end of pumping [d]	Water level [ft]	Residual drawdown [ft]	Corrected drawdown [ft]
51	1.65972	47.31	2.21	2.11
52	1.70139	47.24	2.14	2.05
53	1.74306	47.20	2.10	2.01
54	1.78472	47.16	2.06	1.98
55	1.82639	47.11	2.01	1.93
56	1.86806	47.09	1.99	1.91
57	1.90972	47.07	1.97	1.89
58	1.95139	47.04	1.94	1.86
59	1.99306	47.00	1.90	1.83
60	2.03472	46.95	1.85	1.78
61	2.07639	46.87	1.77	1.71
62	2.11806	46.84	1.74	1.68
63	2.15972	46.80	1.70	1.64
64	2.20139	46.77	1.67	1.61
65	2.24306	46.75	1.65	1.60
66	2.28472	46.73	1.63	1.58
67	2.32639	46.72	1.62	1.57
68	2.36806	46.70	1.60	1.55
69	2.40972	46.69	1.59	1.54
70	2.45139	46.68	1.58	1.53
71	2.49306	46.67	1.57	1.52
72	2.53472	46.62	1.52	1.47
73	2.57639	46.60	1.50	1.45
74	2.61806	46.59	1.49	1.45
75	2.65972	46.53	1.43	1.39
76	2.70139	46.49	1.39	1.35
77	2.74306	46.48	1.38	1.34

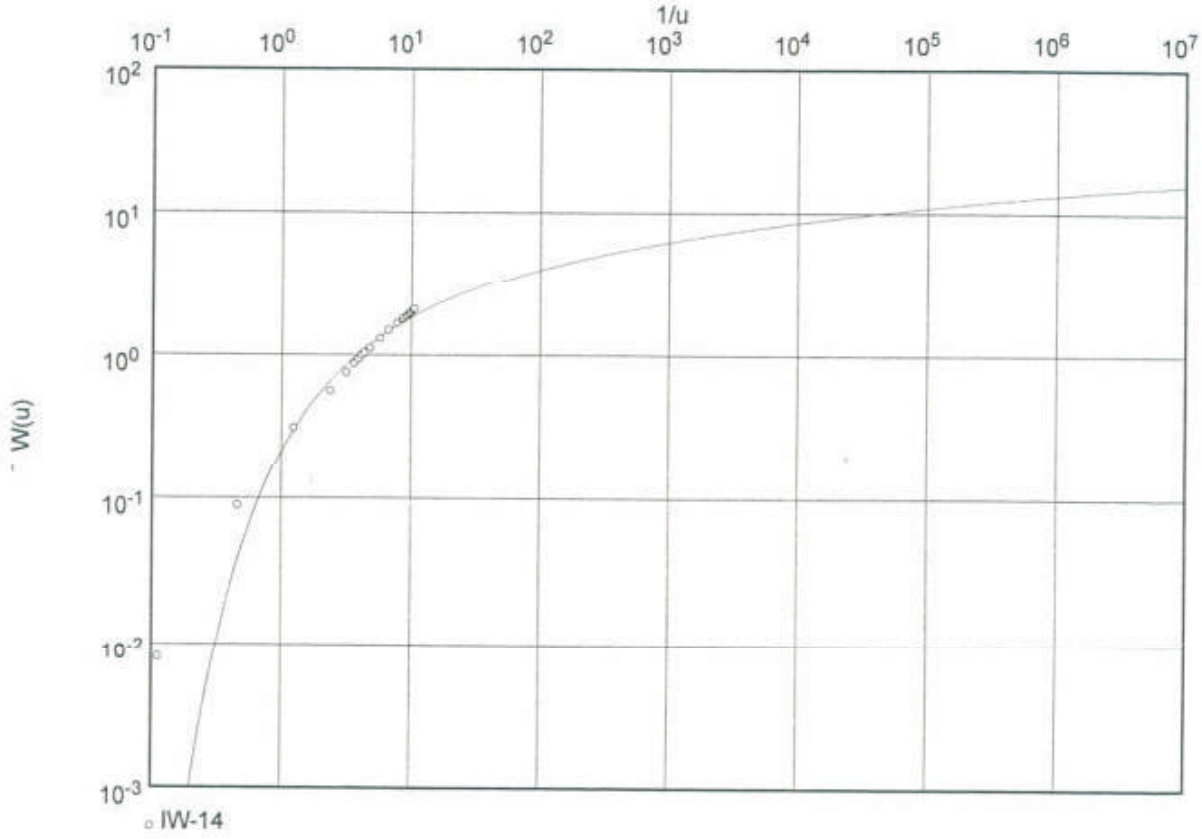
Golder Associates Inc. 3730 Chamblee Tucker Rd. Atlanta, GA 30341 ph.(770)496-1893	Pumping test analysis Recovery method after THEIS & JACOB Unconfined aquifer	Date: 11-04-98	Page 4
		Project: Solutia/RFI/AL	
		Evaluated by: CDH	

Pumping Test No. IW-11 Recovery	Test conducted on: 09-23-98
IW-11	Iw-10 discharge
Discharge 0.21 U.S.gal/min	
	Pumping test duration: 3.17361 d

	Pumping test duration [d]	Discharge [U.S.gal/min]
1	0.00000	0.40
2	3.17361	0.40
3	3.17431	0.00
4	5.91667	0.00

Golder Associates Inc. 3730 Chamblee Tucker Rd. Atlanta, GA 30341 ph.(770)496-1893	Pumping test analysis Theis analysis method Unconfined aquifer	Date: 10-29-98 | Page 1 Project: Solutia/RFI/AL Evaluated by: CDH

Pumping Test No. IW-14	Test conducted on: 10-12-98
IW-14	
Discharge 0.25 U.S.gal/min	



Transmissivity [ft²/d]: 5.03×10^{-1}

Hydraulic conductivity [ft/d]: 1.25×10^{-2}

Aquifer thickness [ft]: 40.00

Golder Associates Inc. 3730 Chamblee Tucker Rd. Atlanta, GA 30341 ph.(770)496-1893	Pumping test analysis Theis analysis method Unconfined aquifer	Date: 10-29-98	Page 2
		Project: Solutia/RFI/AL	
		Evaluated by: CDH	

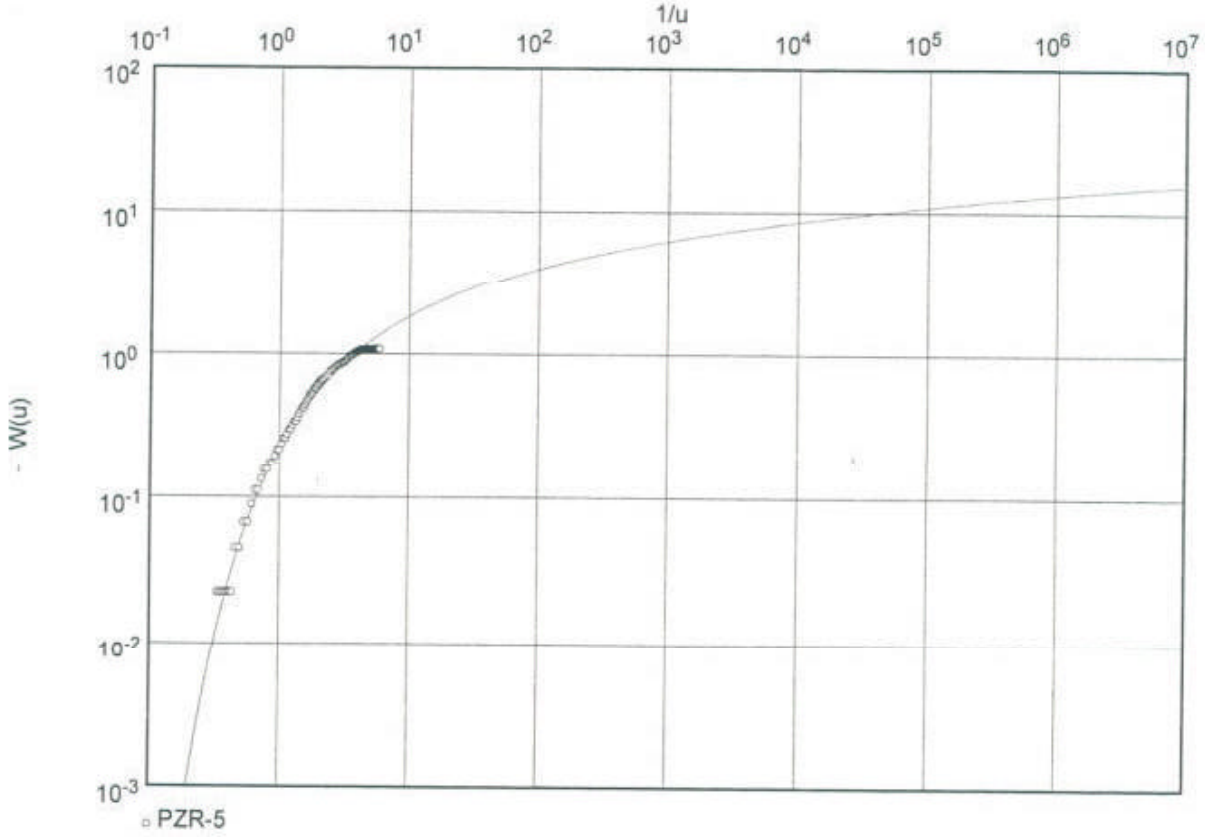
Pumping Test No. IW-14	Test conducted on: 10-12-98
IW-14	IW-14
Discharge 0.25 U.S.gal/min	Distance from the pumping well 1.00 ft

Static water level: 17.03 ft below datum

	Pumping test duration [d]	Water level [ft]	Drawdown [ft]	Corrected drawdown [ft]
2	0.02292	17.09	0.06	0.06
3	0.09375	17.71	0.68	0.67
4	0.25278	19.51	2.48	2.40
5	0.48472	21.62	4.59	4.33
6	0.64236	23.28	6.25	5.76
7	0.73889	24.34	7.31	6.64
8	0.79722	24.94	7.91	7.13
9	0.84375	25.50	8.47	7.57
10	0.88542	25.91	8.88	7.89
11	0.97431	26.71	9.68	8.51
12	1.16667	28.54	11.51	9.85
13	1.36528	30.59	13.56	11.26
14	1.58125	32.57	15.54	12.52
15	1.72500	33.89	16.86	13.31
16	1.75417	34.21	17.18	13.49
17	1.83125	34.89	17.86	13.87
18	1.88681	35.48	18.45	14.19
19	1.93264	36.05	19.02	14.50
20	1.98889	36.68	19.65	14.82
21	2.02917	37.15	20.12	15.06
22	2.11042	37.98	20.95	15.46
23	2.14931	38.45	21.42	15.68
24	2.15764	38.57	21.54	15.74

Golder Associates Inc. 3730 Chamblee Tucker Rd. Atlanta, GA 30341 ph.(770)496-1893	Pumping test analysis Theis analysis method Unconfined aquifer	Date: 10-28-98	Page 1
		Project: Solutia/RFI/AL	
		Evaluated by: CDH	

Pumping Test No. IW-14	Test conducted on: 10-12-98
PZR-5	
Discharge 0.25 U.S.gal/min	



Transmissivity [ft²/d]: 8.57×10^{-1}

Hydraulic conductivity [ft/d]: 4.28×10^{-2}

Aquifer thickness [ft]: 20.00

Golder Associates Inc. 3730 Chamblee Tucker Rd. Atlanta, GA 30341 ph.(770)496-1893	Pumping test analysis Theis analysis method Unconfined aquifer	Date: 10-28-98	Page 2
		Project: Solutia/RFI/AL	
		Evaluated by: CDH	

Pumping Test No. IW-14	Test conducted on: 10-12-98
PZR-5	PZR-5
Discharge 0.25 U.S.gal/min	Distance from the pumping well 12.50 ft

Static water level: 16.70 ft below datum

	Pumping test duration [d]	Water level [ft]	Drawdown [ft]	Corrected drawdown [ft]
2	0.02222	16.70	0.00	0.00
3	0.02229	16.70	0.00	0.00
4	0.02236	16.70	0.00	0.00
5	0.02243	16.70	0.00	0.00
6	0.02250	16.60	-0.10	-0.10
7	0.02257	16.70	0.00	0.00
8	0.02264	16.60	-0.10	-0.10
9	0.02271	16.70	0.00	0.00
10	0.02278	16.70	0.00	0.00
11	0.02285	16.60	-0.10	-0.10
12	0.02292	16.70	0.00	0.00
13	0.02299	16.70	0.00	0.00
14	0.02306	16.60	-0.10	-0.10
15	0.02778	16.70	0.00	0.00
16	0.03472	16.60	-0.10	-0.10
17	0.04167	16.60	-0.10	-0.10
18	0.04861	16.60	-0.10	-0.10
19	0.05556	16.60	-0.10	-0.10
20	0.06250	16.70	0.00	0.00
21	0.06944	16.70	0.00	0.00
22	0.07639	16.70	0.00	0.00
23	0.08333	16.70	0.00	0.00
24	0.09028	16.70	0.00	0.00
25	0.09722	16.70	0.00	0.00
26	0.10417	16.70	0.00	0.00
27	0.11111	16.70	0.00	0.00
28	0.11806	16.70	0.00	0.00
29	0.12500	16.70	0.00	0.00
30	0.13194	16.70	0.00	0.00
31	0.13889	16.70	0.00	0.00
32	0.14583	16.70	0.00	0.00
33	0.15278	16.70	0.00	0.00
34	0.15972	16.70	0.00	0.00
35	0.16667	16.70	0.00	0.00
36	0.17361	16.70	0.00	0.00
37	0.18056	16.80	0.10	0.10
38	0.18750	16.80	0.10	0.10
39	0.19444	16.80	0.10	0.10
40	0.20139	16.80	0.10	0.10
41	0.20833	16.80	0.10	0.10
42	0.21528	16.80	0.10	0.10
43	0.22222	16.80	0.10	0.10
44	0.22917	16.80	0.10	0.10
45	0.23611	16.80	0.10	0.10
46	0.25000	16.90	0.20	0.20
47	0.27083	16.90	0.20	0.20
48	0.29167	17.00	0.30	0.30
49	0.31250	17.00	0.30	0.30
50	0.33333	17.10	0.40	0.40

Golder Associates Inc. 3730 Chamblee Tucker Rd. Atlanta, GA 30341 ph.(770)496-1893	Pumping test analysis Theis analysis method Unconfined aquifer	Date: 10-28-98	Page 3
		Project: Solutia/RFI/AL	
		Evaluated by: CDH	

Pumping Test No. IW-14	Test conducted on: 10-12-98
PZR-5	PZR-5
Discharge 0.25 U.S.gal/min	Distance from the pumping well 12.50 ft

Static water level: 16.70 ft below datum

	Pumping test duration [d]	Water level [ft]	Drawdown [ft]	Corrected drawdown [ft]
51	0.35417	17.20	0.50	0.49
52	0.37500	17.20	0.50	0.49
53	0.39583	17.30	0.60	0.59
54	0.41667	17.40	0.70	0.69
55	0.43750	17.40	0.70	0.69
56	0.45833	17.50	0.80	0.78
57	0.47917	17.50	0.80	0.78
58	0.50000	17.60	0.90	0.88
59	0.52083	17.70	1.00	0.98
60	0.54167	17.70	1.00	0.98
61	0.56250	17.80	1.10	1.07
62	0.58333	17.90	1.20	1.16
63	0.60417	17.90	1.20	1.16
64	0.62500	18.00	1.30	1.26
65	0.64583	18.10	1.40	1.35
66	0.66667	18.10	1.40	1.35
67	0.68750	18.20	1.50	1.44
68	0.70833	18.30	1.60	1.54
69	0.72917	18.30	1.60	1.54
70	0.75000	18.40	1.70	1.63
71	0.77083	18.50	1.80	1.72
72	0.79167	18.60	1.90	1.81
73	0.81250	18.70	2.00	1.90
74	0.83333	18.70	2.00	1.90
75	0.85417	18.80	2.10	1.99
76	0.87500	18.90	2.20	2.08
77	0.89583	19.00	2.30	2.17
78	0.91667	19.10	2.40	2.26
79	0.93750	19.20	2.50	2.34
80	0.95833	19.20	2.50	2.34
81	0.97917	19.30	2.60	2.43
82	1.00000	19.40	2.70	2.52
83	1.02083	19.50	2.80	2.60
84	1.04167	19.50	2.80	2.60
85	1.06250	19.60	2.90	2.69
86	1.08333	19.70	3.00	2.77
87	1.10417	19.80	3.10	2.86
88	1.12500	19.80	3.10	2.86
89	1.14583	19.90	3.20	2.94
90	1.15979	19.90	3.20	2.94
91	1.15986	19.90	3.20	2.94
92	1.15993	19.90	3.20	2.94
93	1.16000	19.90	3.20	2.94
94	1.16007	19.90	3.20	2.94
95	1.16014	19.90	3.20	2.94
96	1.16021	19.90	3.20	2.94
97	1.16028	19.90	3.20	2.94
98	1.16035	19.90	3.20	2.94
99	1.16042	19.90	3.20	2.94
100	1.16049	19.90	3.20	2.94

Golder Associates Inc. 3730 Chamblee Tucker Rd. Atlanta, GA 30341 ph.(770)496-1893	Pumping test analysis Theis analysis method Unconfined aquifer	Date: 10-28-98	Page 4
		Project: Solutia/RFI/AL	
		Evaluated by: CDH	

Pumping Test No. IW-14	Test conducted on: 10-12-98
PZR-5	PZR-5
Discharge 0.25 U.S.gal/min	Distance from the pumping well 12.50 ft

Static water level: 16.70 ft below datum

	Pumping test duration [d]	Water level [ft]	Drawdown [ft]	Corrected drawdown [ft]
101	1.16056	19.90	3.20	2.94
102	1.16063	19.90	3.20	2.94
103	1.16069	19.90	3.20	2.94
104	1.16076	19.90	3.20	2.94
105	1.16083	19.90	3.20	2.94
106	1.16090	19.90	3.20	2.94
107	1.16097	19.90	3.20	2.94
108	1.16104	19.90	3.20	2.94
109	1.16111	19.90	3.20	2.94
110	1.16118	19.90	3.20	2.94
111	1.16125	19.90	3.20	2.94
112	1.16132	19.90	3.20	2.94
113	1.16139	19.90	3.20	2.94
114	1.16146	19.90	3.20	2.94
115	1.16153	19.90	3.20	2.94
116	1.16160	19.90	3.20	2.94
117	1.16167	19.90	3.20	2.94
118	1.16174	19.90	3.20	2.94
119	1.16181	19.90	3.20	2.94
120	1.16187	19.90	3.20	2.94
121	1.16194	19.90	3.20	2.94
122	1.16201	19.90	3.20	2.94
123	1.16208	19.90	3.20	2.94
124	1.16215	19.90	3.20	2.94
125	1.16222	19.90	3.20	2.94
126	1.16229	19.90	3.20	2.94
127	1.16236	19.90	3.20	2.94
128	1.16243	19.90	3.20	2.94
129	1.16250	19.90	3.20	2.94
130	1.16257	19.90	3.20	2.94
131	1.16264	19.90	3.20	2.94
132	1.16271	19.90	3.20	2.94
133	1.16278	19.90	3.20	2.94
134	1.16285	19.90	3.20	2.94
135	1.16292	19.90	3.20	2.94
136	1.16299	19.90	3.20	2.94
137	1.16306	19.90	3.20	2.94
138	1.16312	19.90	3.20	2.94
139	1.16319	19.90	3.20	2.94
140	1.16326	19.90	3.20	2.94
141	1.16333	19.90	3.20	2.94
142	1.16340	19.90	3.20	2.94
143	1.16347	19.90	3.20	2.94
144	1.16354	19.90	3.20	2.94
145	1.16361	19.90	3.20	2.94
146	1.16368	19.90	3.20	2.94
147	1.16375	19.90	3.20	2.94
148	1.16382	19.90	3.20	2.94
149	1.16389	19.90	3.20	2.94
150	1.16396	19.90	3.20	2.94

Golder Associates Inc. 3730 Chamblee Tucker Rd. Atlanta, GA 30341 ph.(770)496-1893	Pumping test analysis Theis analysis method Unconfined aquifer	Date: 10-28-98	Page 5
		Project: Solutia/RFI/AL	
		Evaluated by: CDH	

Pumping Test No. IW-14	Test conducted on: 10-12-98
PZR-5	PZR-5
Discharge 0.25 U.S.gal/min	Distance from the pumping well 12.50 ft

Static water level: 16.70 ft below datum

	Pumping test duration [d]	Water level [ft]	Drawdown [ft]	Corrected drawdown [ft]
151	1.16403	19.90	3.20	2.94
152	1.16410	19.90	3.20	2.94
153	1.16417	19.90	3.20	2.94
154	1.16424	19.90	3.20	2.94
155	1.16431	19.90	3.20	2.94
156	1.16437	19.90	3.20	2.94
157	1.16444	19.90	3.20	2.94
158	1.16451	19.90	3.20	2.94
159	1.16458	19.90	3.20	2.94
160	1.16465	19.90	3.20	2.94
161	1.16472	19.90	3.20	2.94
162	1.16479	19.90	3.20	2.94
163	1.16486	19.90	3.20	2.94
164	1.16493	19.90	3.20	2.94
165	1.16500	19.90	3.20	2.94
166	1.16507	19.90	3.20	2.94
167	1.16514	19.90	3.20	2.94
168	1.16521	19.90	3.20	2.94
169	1.16528	19.90	3.20	2.94
170	1.16535	19.90	3.20	2.94
171	1.16542	19.90	3.20	2.94
172	1.16549	19.90	3.20	2.94
173	1.16556	19.90	3.20	2.94
174	1.16563	19.90	3.20	2.94
175	1.16569	19.90	3.20	2.94
176	1.16576	19.90	3.20	2.94
177	1.16583	19.90	3.20	2.94
178	1.16590	19.90	3.20	2.94
179	1.16597	19.90	3.20	2.94
180	1.16604	19.90	3.20	2.94
181	1.16611	19.90	3.20	2.94
182	1.16618	19.90	3.20	2.94
183	1.16625	19.90	3.20	2.94
184	1.16632	19.90	3.20	2.94
185	1.16639	19.90	3.20	2.94
186	1.16646	19.90	3.20	2.94
187	1.16653	19.90	3.20	2.94
188	1.16660	19.90	3.20	2.94
189	1.16667	19.90	3.20	2.94
190	1.16674	19.90	3.20	2.94
191	1.16681	19.90	3.20	2.94
192	1.16688	19.90	3.20	2.94
193	1.16694	19.90	3.20	2.94
194	1.16701	19.90	3.20	2.94
195	1.16708	19.90	3.20	2.94
196	1.16715	19.90	3.20	2.94
197	1.16722	19.90	3.20	2.94
198	1.16729	19.90	3.20	2.94
199	1.16736	19.90	3.20	2.94
200	1.16743	19.90	3.20	2.94

Golder Associates Inc. 3730 Chamblee Tucker Rd. Atlanta, GA 30341 ph.(770)496-1893	Pumping test analysis Theis analysis method Unconfined aquifer	Date: 10-28-98	Page 6
		Project: Solutia/RFI/AL	
		Evaluated by: CDH	

Pumping Test No. IW-14	Test conducted on: 10-12-98
PZR-5	PZR-5
Discharge 0.25 U.S.gal/min	Distance from the pumping well 12.50 ft

Static water level: 16.70 ft below datum

	Pumping test duration [d]	Water level [ft]	Drawdown [ft]	Corrected drawdown [ft]
201	1.16750	19.90	3.20	2.94
202	1.16757	19.90	3.20	2.94
203	1.16764	19.90	3.20	2.94
204	1.16771	19.90	3.20	2.94
205	1.16778	19.90	3.20	2.94
206	1.16785	19.90	3.20	2.94
207	1.16792	19.90	3.20	2.94
208	1.16799	19.90	3.20	2.94
209	1.16806	19.90	3.20	2.94
210	1.16813	19.90	3.20	2.94
211	1.16819	19.90	3.20	2.94
212	1.16826	19.90	3.20	2.94
213	1.16833	19.90	3.20	2.94
214	1.16840	19.90	3.20	2.94
215	1.16847	19.90	3.20	2.94
216	1.16854	19.90	3.20	2.94
217	1.16861	19.90	3.20	2.94
218	1.16868	19.90	3.20	2.94
219	1.16875	19.90	3.20	2.94
220	1.16882	19.90	3.20	2.94
221	1.16889	19.90	3.20	2.94
222	1.16896	19.90	3.20	2.94
223	1.16903	19.90	3.20	2.94
224	1.16910	19.90	3.20	2.94
225	1.16917	19.90	3.20	2.94
226	1.16924	19.90	3.20	2.94
227	1.16931	19.90	3.20	2.94
228	1.16938	19.90	3.20	2.94
229	1.16944	19.90	3.20	2.94
230	1.16951	19.90	3.20	2.94
231	1.20833	20.00	3.30	3.03
232	1.25000	20.10	3.40	3.11
233	1.29167	20.20	3.50	3.19
234	1.33333	20.40	3.70	3.36
235	1.37500	20.50	3.80	3.44
236	1.41667	20.60	3.90	3.52
237	1.45833	20.70	4.00	3.60
238	1.50000	20.80	4.10	3.68
239	1.54167	20.90	4.20	3.76
240	1.58333	20.90	4.20	3.76
241	1.62500	21.00	4.30	3.84
242	1.66667	21.10	4.40	3.92
243	1.70833	21.10	4.40	3.92
244	1.75000	21.20	4.50	3.99
245	1.79167	21.30	4.60	4.07
246	1.83333	21.40	4.70	4.15
247	1.87500	21.50	4.80	4.22
248	1.91667	21.60	4.90	4.30
249	1.95833	21.70	5.00	4.38
250	2.00000	21.70	5.00	4.38

Golder Associates Inc. 3730 Chamblee Tucker Rd. Atlanta, GA 30341 ph.(770)496-1893	Pumping test analysis Theis analysis method Unconfined aquifer	Date: 10-28-98	Page 7
		Project: Solutia/RFI/AL	
		Evaluated by: CDH	

Pumping Test No. IW-14	Test conducted on: 10-12-98
PZR-5	PZR-5
Discharge 0.25 U.S.gal/min	Distance from the pumping well 12.50 ft
Static water level: 16.70 ft below datum	

	Pumping test duration [d]	Water level [ft]	Drawdown [ft]	Corrected drawdown [ft]
251	2.04167	21.80	5.10	4.45
252	2.08333	21.90	5.20	4.52
253	2.11076	21.90	5.20	4.52
254	2.11083	21.90	5.20	4.52
255	2.11090	21.90	5.20	4.52
256	2.11097	21.90	5.20	4.52
257	2.11104	21.90	5.20	4.52
258	2.11111	21.90	5.20	4.52
259	2.11118	21.90	5.20	4.52
260	2.11125	21.90	5.20	4.52
261	2.11132	21.90	5.20	4.52
262	2.14521	22.00	5.30	4.60
263	2.14528	22.00	5.30	4.60
264	2.14535	22.00	5.30	4.60
265	2.14542	22.00	5.30	4.60
266	2.14549	22.00	5.30	4.60
267	2.14556	22.00	5.30	4.60
268	2.14562	22.00	5.30	4.60
269	2.14569	22.00	5.30	4.60
270	2.14583	22.00	5.30	4.60
271	2.16667	22.00	5.30	4.60
272	2.18750	22.00	5.30	4.60
273	2.20833	22.10	5.40	4.67
274	2.22917	22.10	5.40	4.67
275	2.25000	22.10	5.40	4.67
276	2.27083	22.10	5.40	4.67
277	2.29167	22.10	5.40	4.67
278	2.31250	22.20	5.50	4.74
279	2.33333	22.20	5.50	4.74
280	2.35417	22.20	5.50	4.74
281	2.37500	22.20	5.50	4.74
282	2.39583	22.20	5.50	4.74
283	2.41667	22.20	5.50	4.74
284	2.43750	22.20	5.50	4.74
285	2.45833	22.20	5.50	4.74
286	2.47917	22.20	5.50	4.74
287	2.50000	22.30	5.60	4.82
288	2.52083	22.30	5.60	4.82
289	2.54167	22.30	5.60	4.82
290	2.56250	22.30	5.60	4.82
291	2.58333	22.30	5.60	4.82
292	2.60417	22.30	5.60	4.82
293	2.62500	22.30	5.60	4.82
294	2.64583	22.20	5.50	4.74
295	2.66667	22.20	5.50	4.74
296	2.68750	22.20	5.50	4.74
297	2.70833	22.20	5.50	4.74
298	2.75000	22.20	5.50	4.74
299	2.79167	22.20	5.50	4.74
300	2.83333	22.20	5.50	4.74

Golder Associates Inc.
3730 Chamblee Tucker Rd.
Atlanta, GA 30341
ph.(770)496-1893

Pumping test analysis
Theis analysis method
Unconfined aquifer

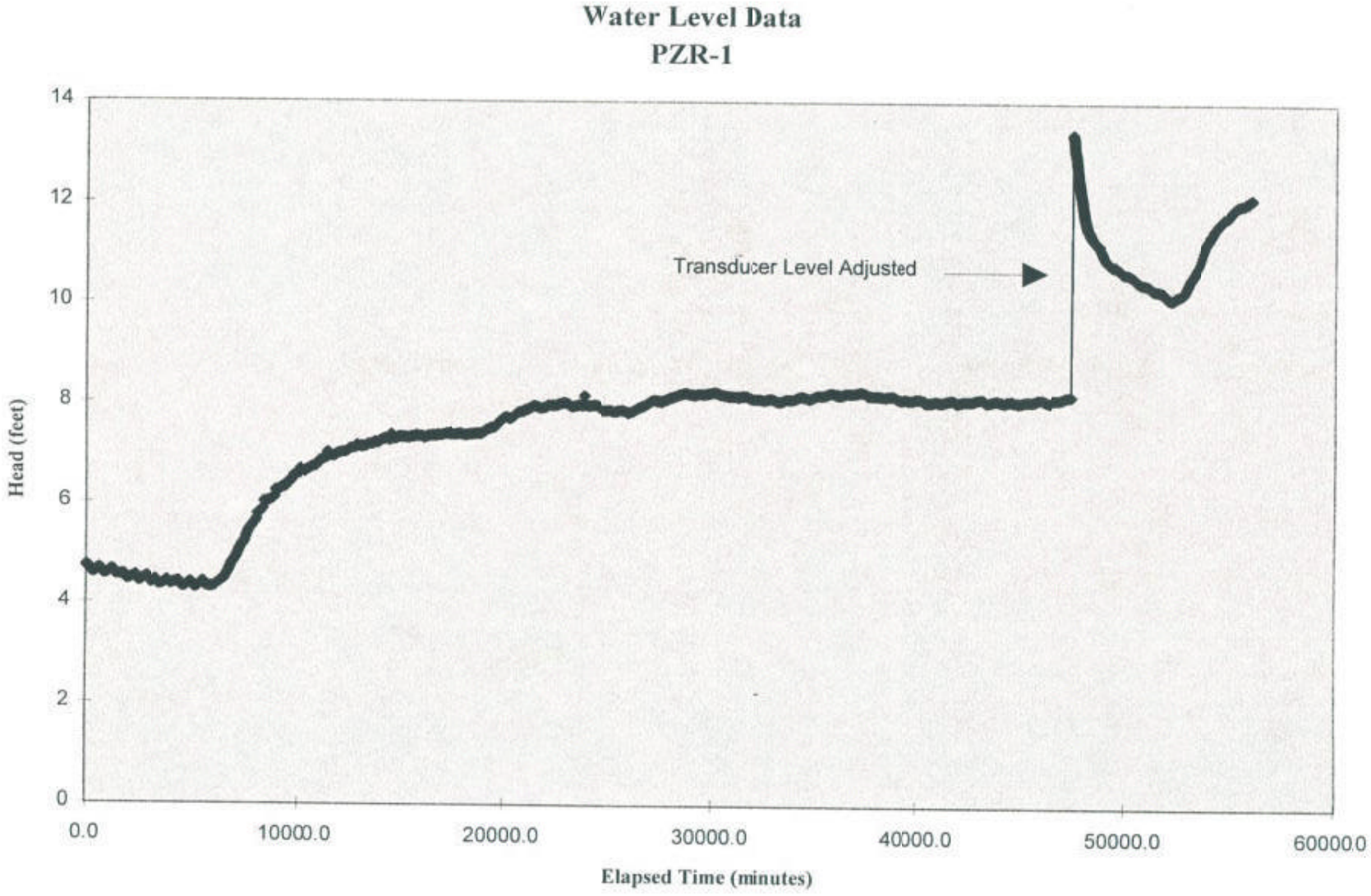
Project: Solutia/RFI/AL

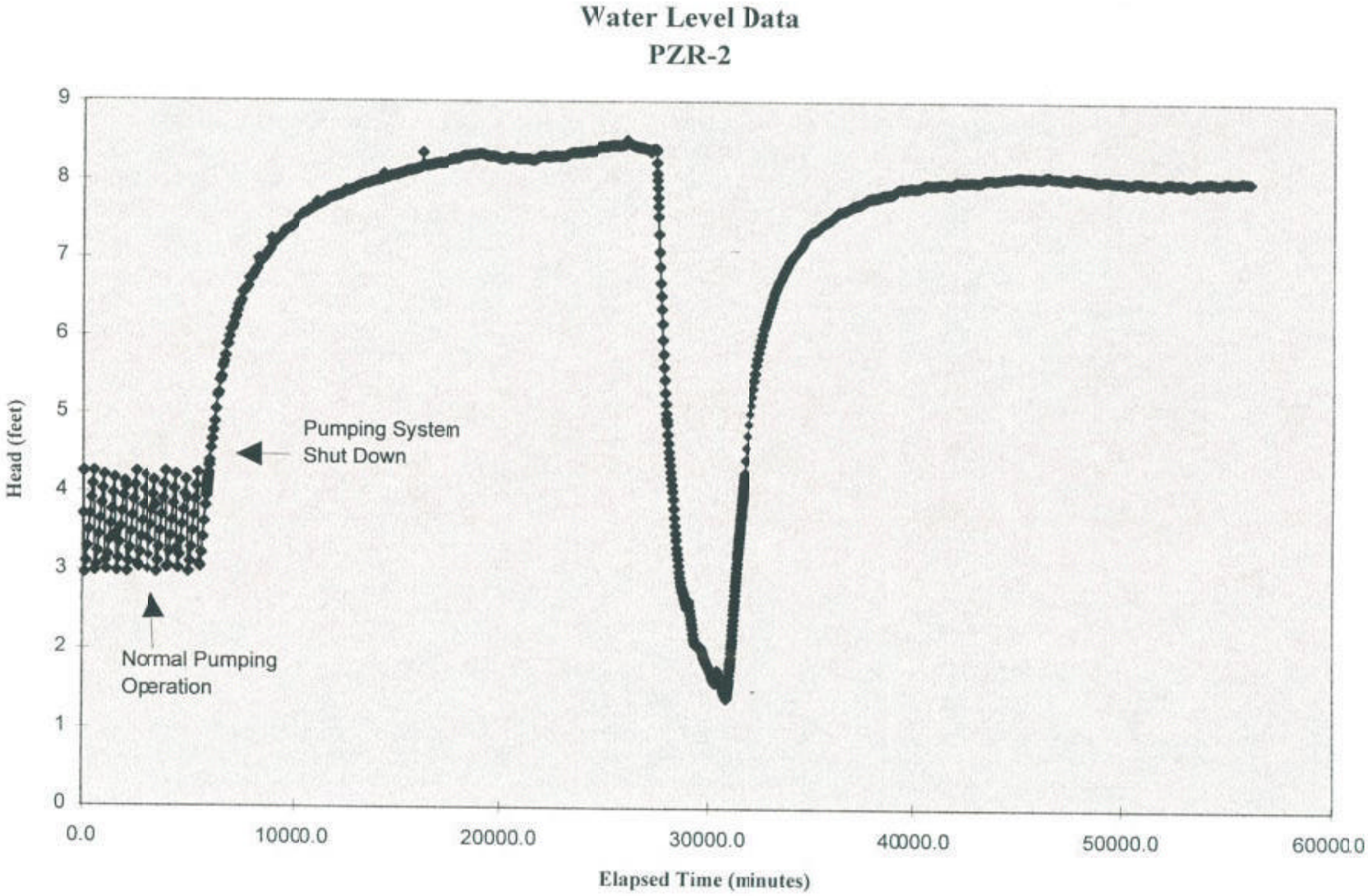
Evaluated by: CDH

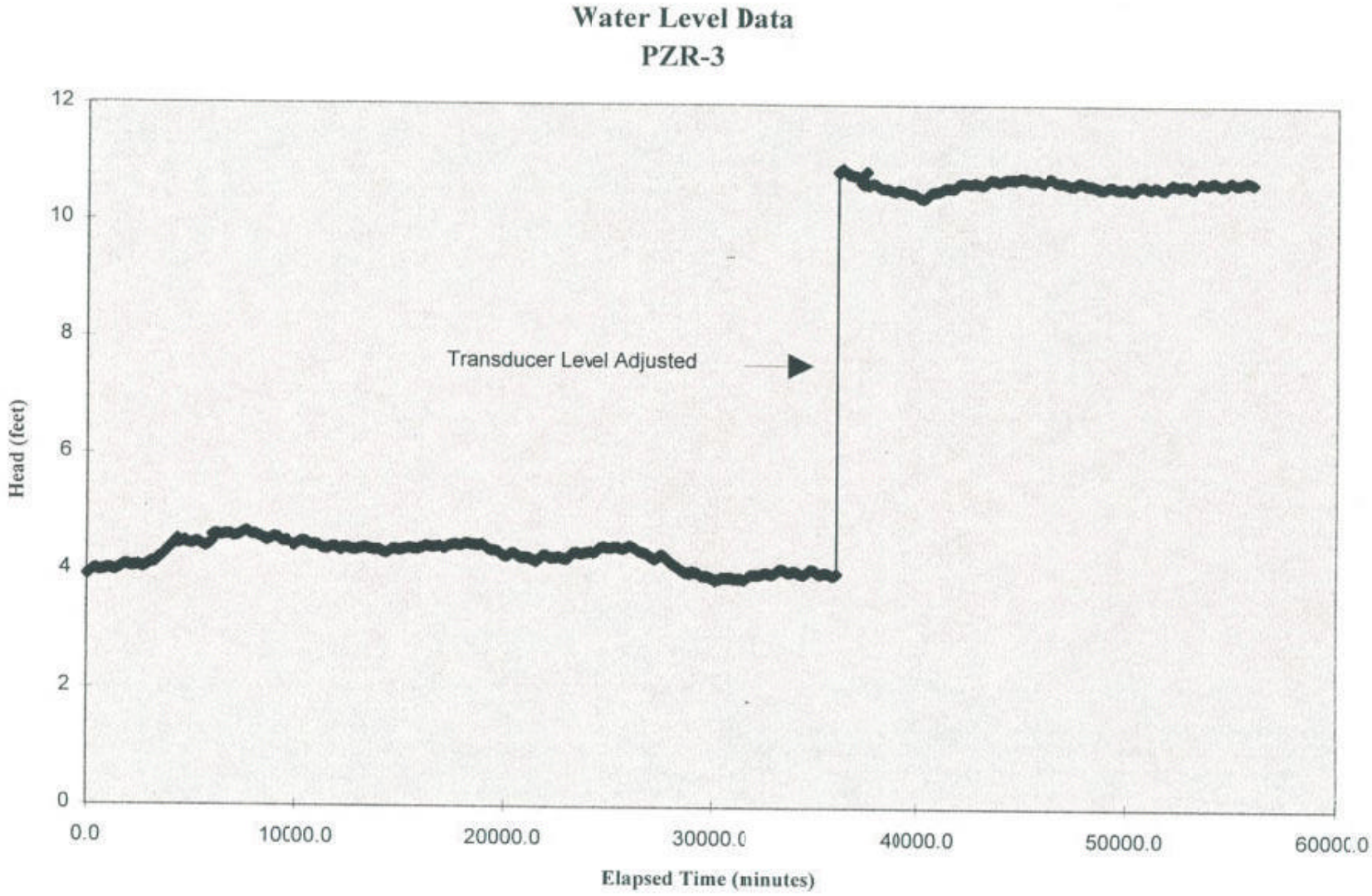
Pumping Test No. IW-14	Test conducted on: 10-12-98
PZR-5	PZR-5
Discharge 0.25 U.S.gal/min	Distance from the pumping well 12.50 ft

Static water level: 16.70 ft below datum

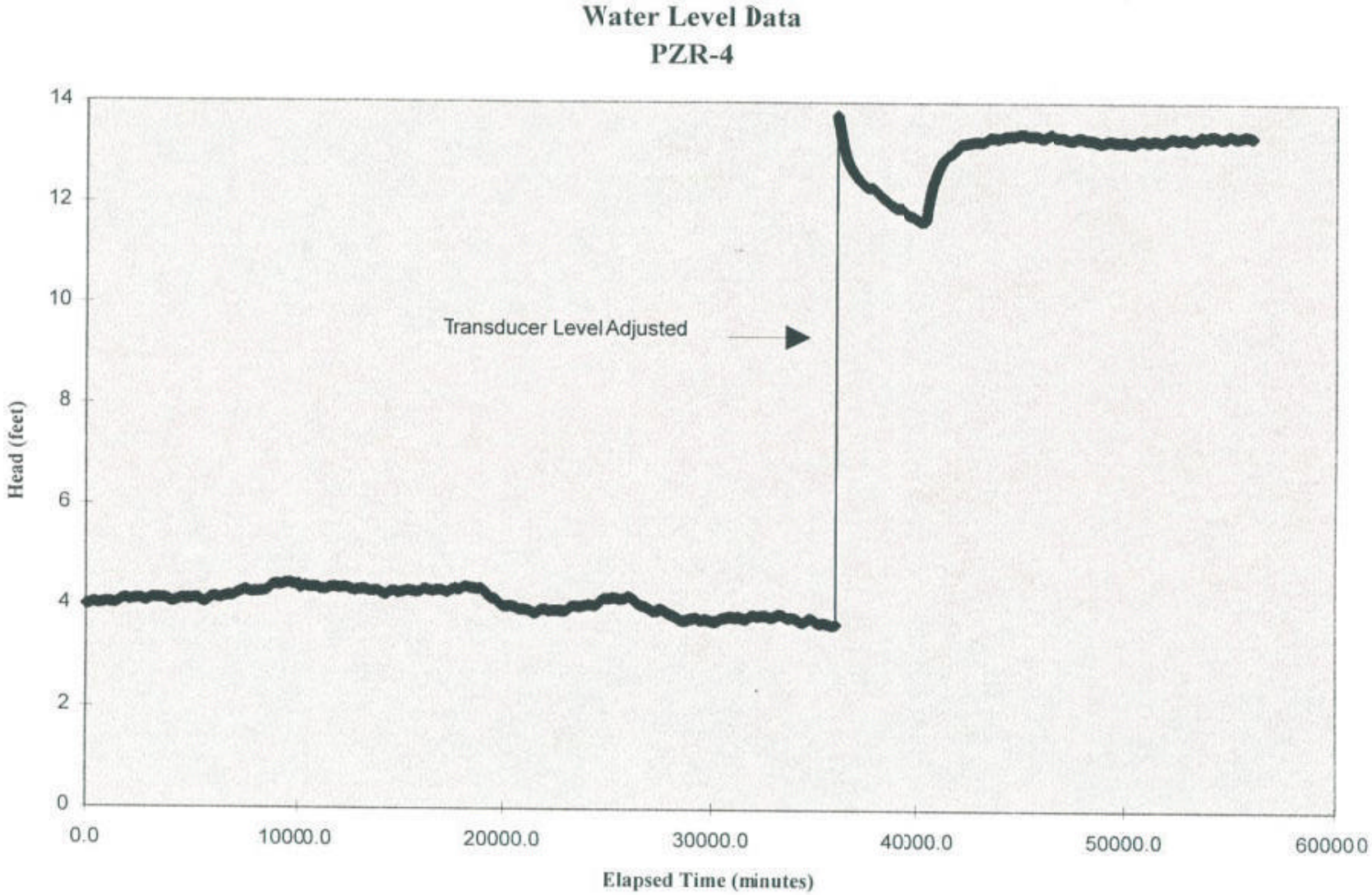
	Pumping test duration [d]	Water level [ft]	Drawdown [ft]	Corrected drawdown [ft]
301	2.87500	22.30	5.60	4.82
302	2.91667	22.30	5.60	4.82
303	2.95833	22.30	5.60	4.82
304	3.00000	22.30	5.60	4.82
305	3.04167	22.30	5.60	4.82
306	3.08333	22.30	5.60	4.82
307	3.12500	22.30	5.60	4.82
308	3.16667	22.30	5.60	4.82
309	3.20833	22.30	5.60	4.82


Water Level Data
PZR-1
Transducer Level Adjusted
Head (feet)
0
2
4
6
8
10
12
14
0.0
10000.0
20000.0
30000.0
40000.0
50000.0
60000.0
Elapsed Time (minutes)

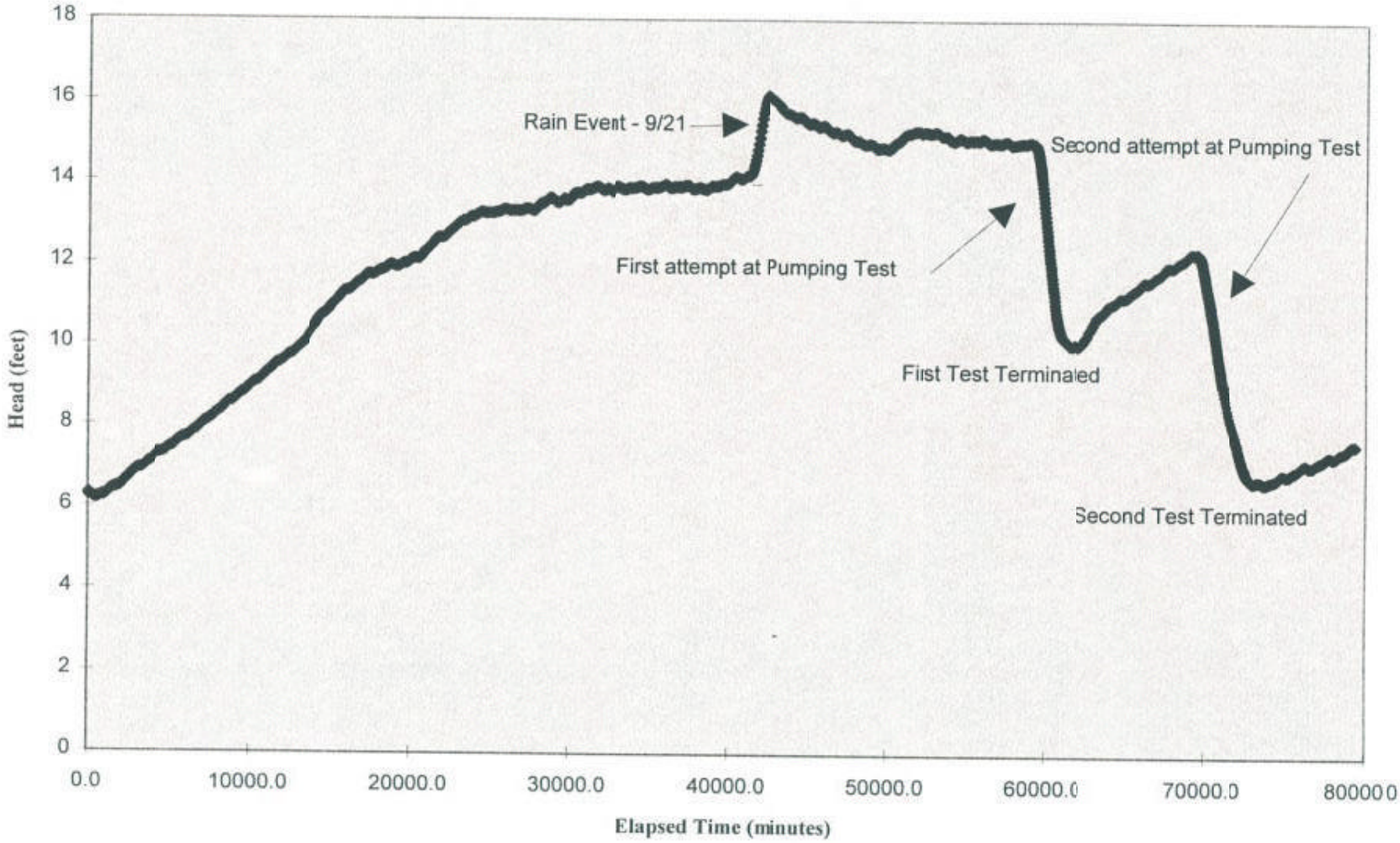

Water Level Data
PZR-2
Head (feet)
9
8
7
6
5
4
3
2
1
0
Pumping System
Shut Down
Normal Pumping
Operation
0.0
10000.0
20000.0
30000.0
40000.0
50000.0
60000.0
Elapsed Time (minutes)

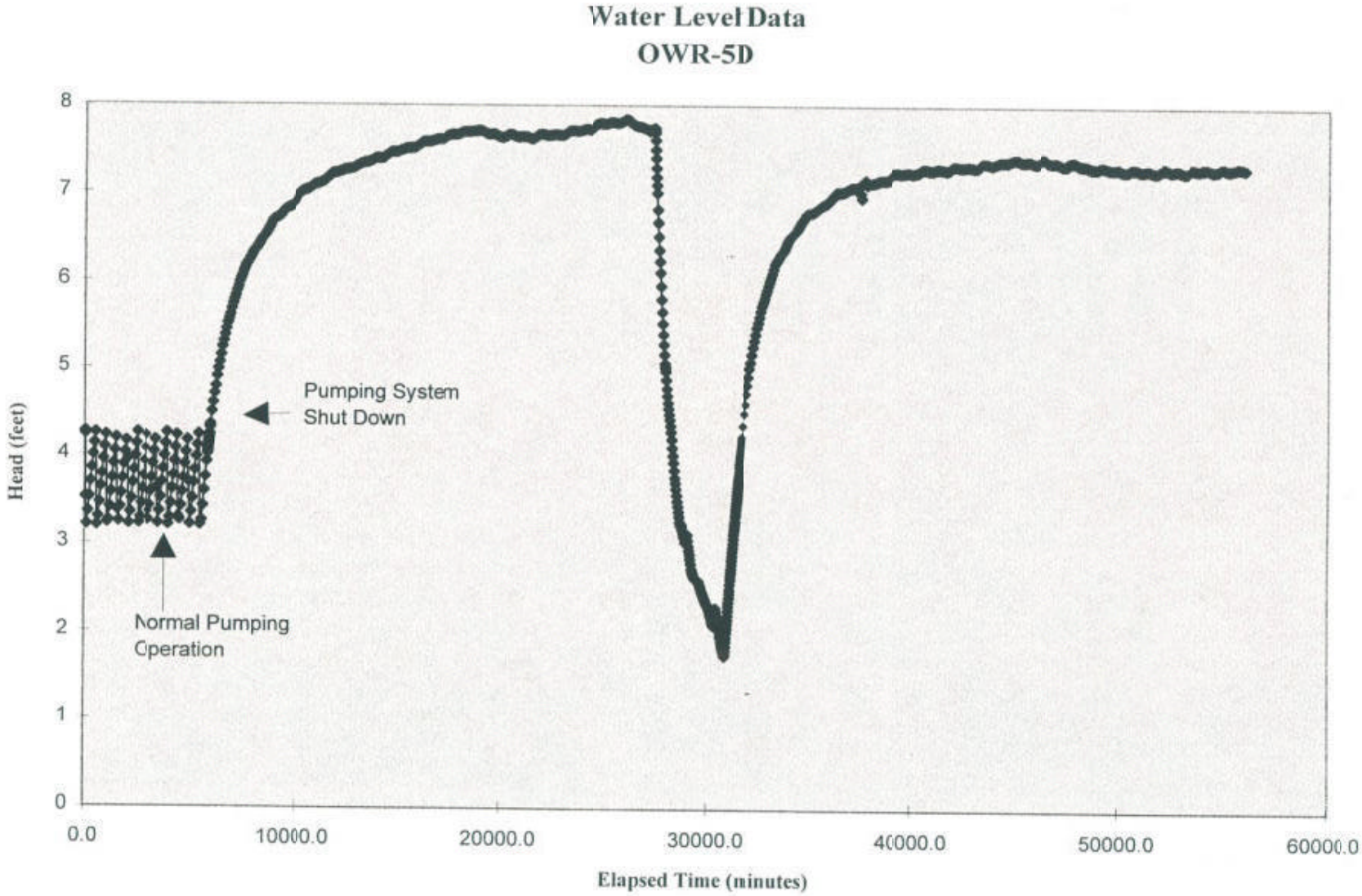

Water Level Data
PZR-3
Head (feet)
12
10
8
6
4
2
0
Transducer Level Adjusted
0.0
10000.0
20000.0
30000.0
40000.0
50000.0
60000.0
Elapsed Time (minutes)

pzr-4

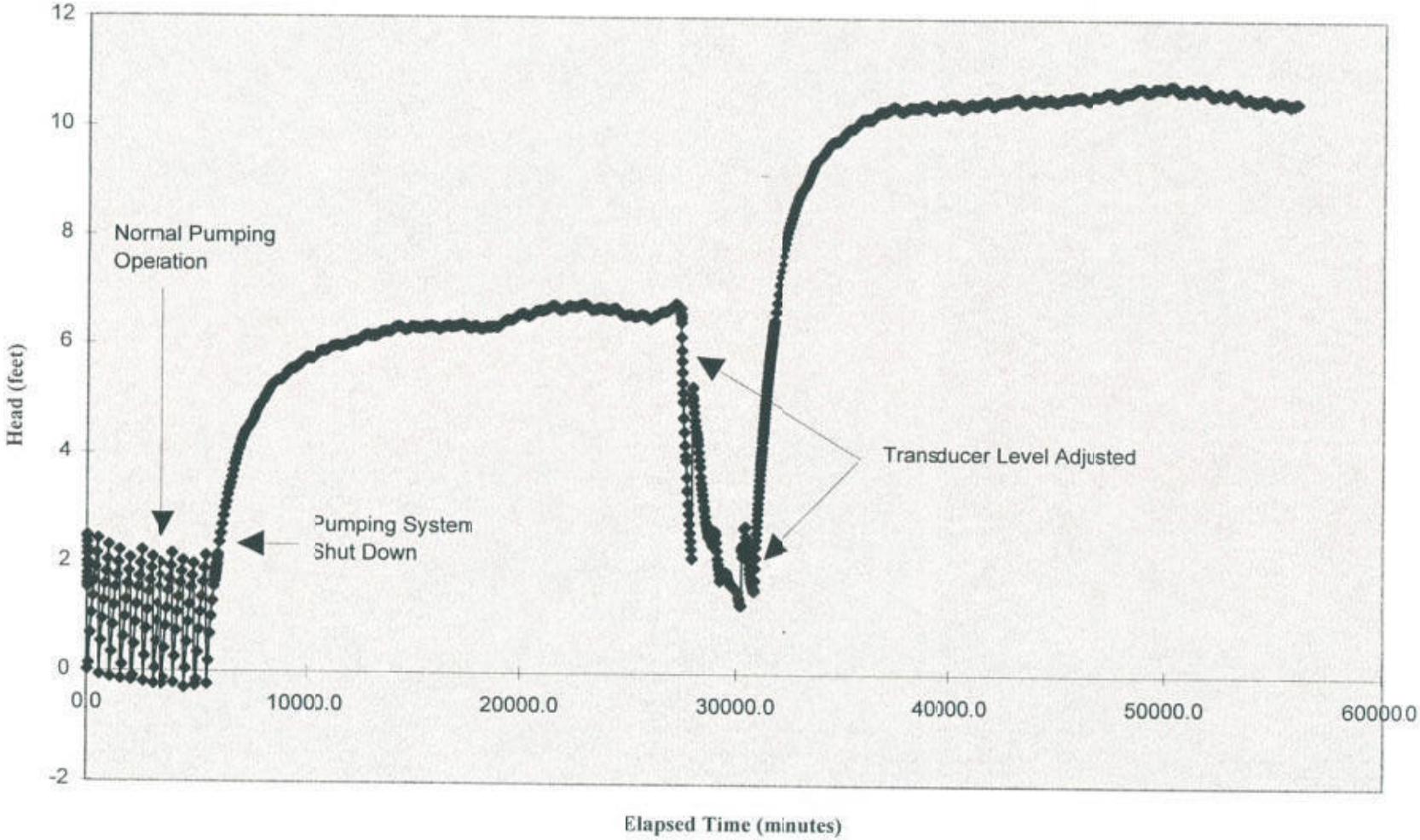

Water Level Data
PZR-4
14
12
10
8
6
4
2
0
Head (feet)
Transducer Level Adjusted
0.0
10000.0
20000.0
30000.0
40000.0
50000.0
60000.0
Elapsed Time (minutes)

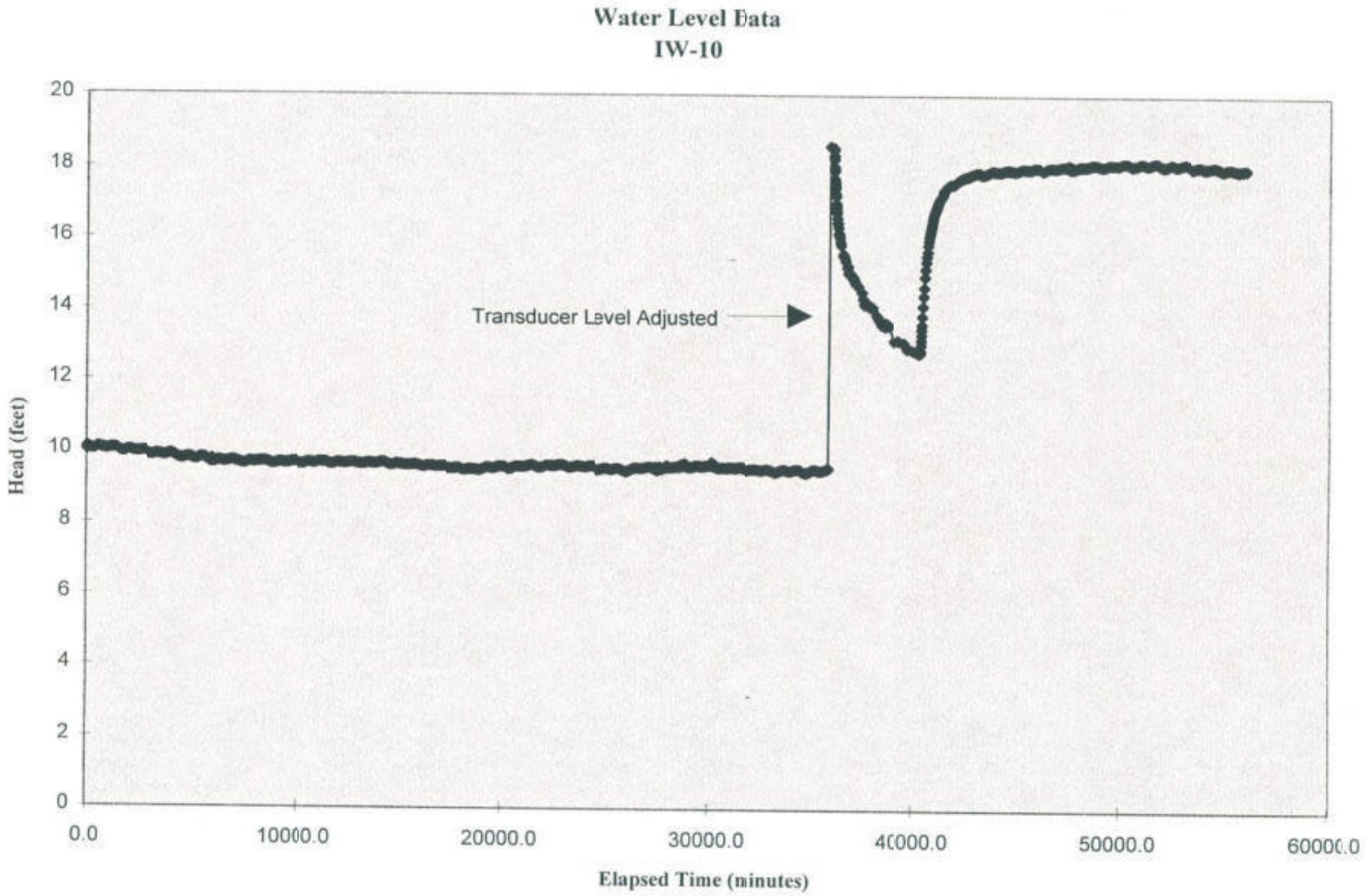
Water Level Data
PZR-5



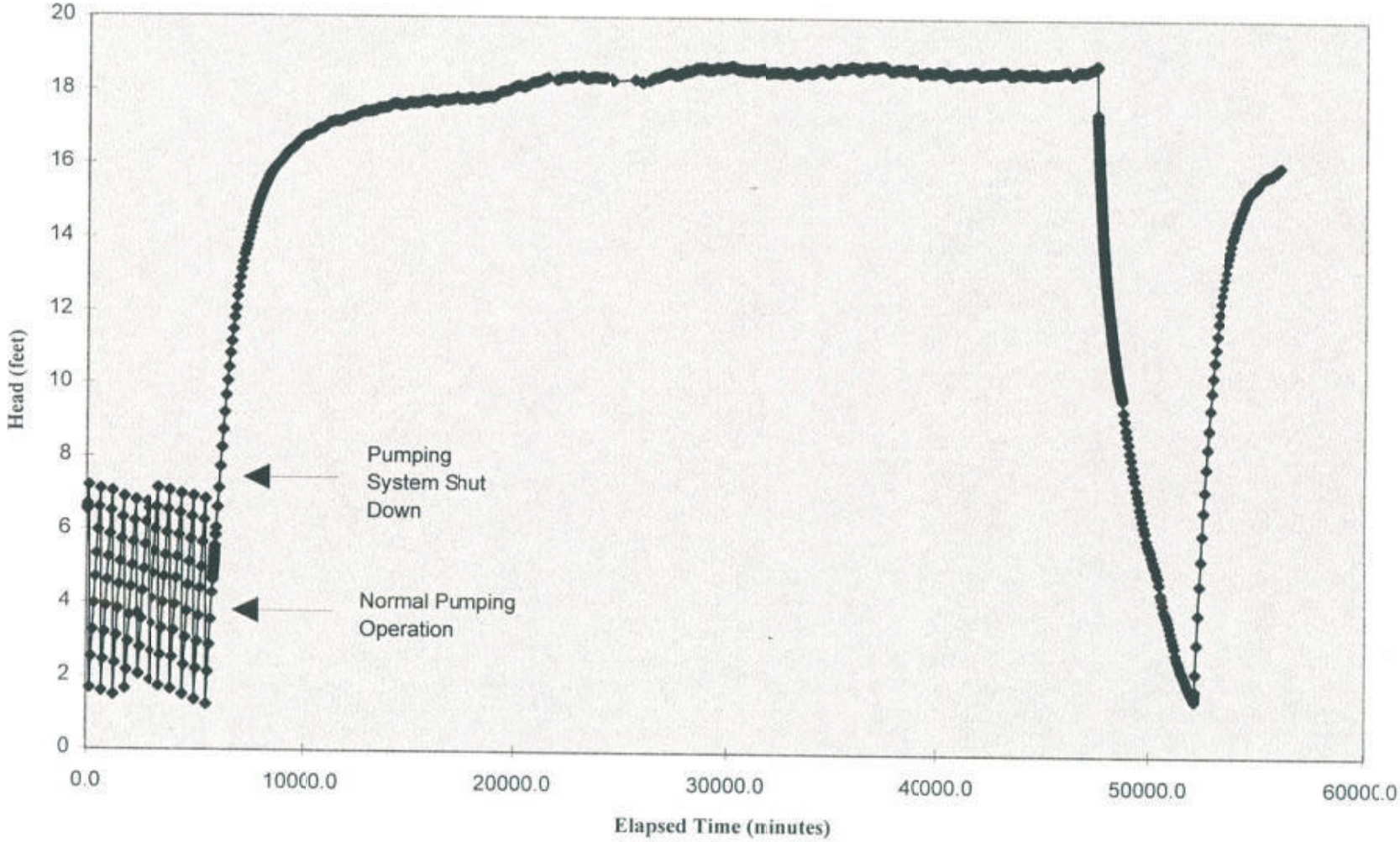

Water Level Data
OWR-5D
Head (feet)
8
7
6
5
4
3
2
1
0
Pumping System
Shut Down
Normal Pumping
Operation
0.0
10000.0
20000.0
30000.0
40000.0
50000.0
60000.0
Elapsed Time (minutes)

Water Level Data
IW-6

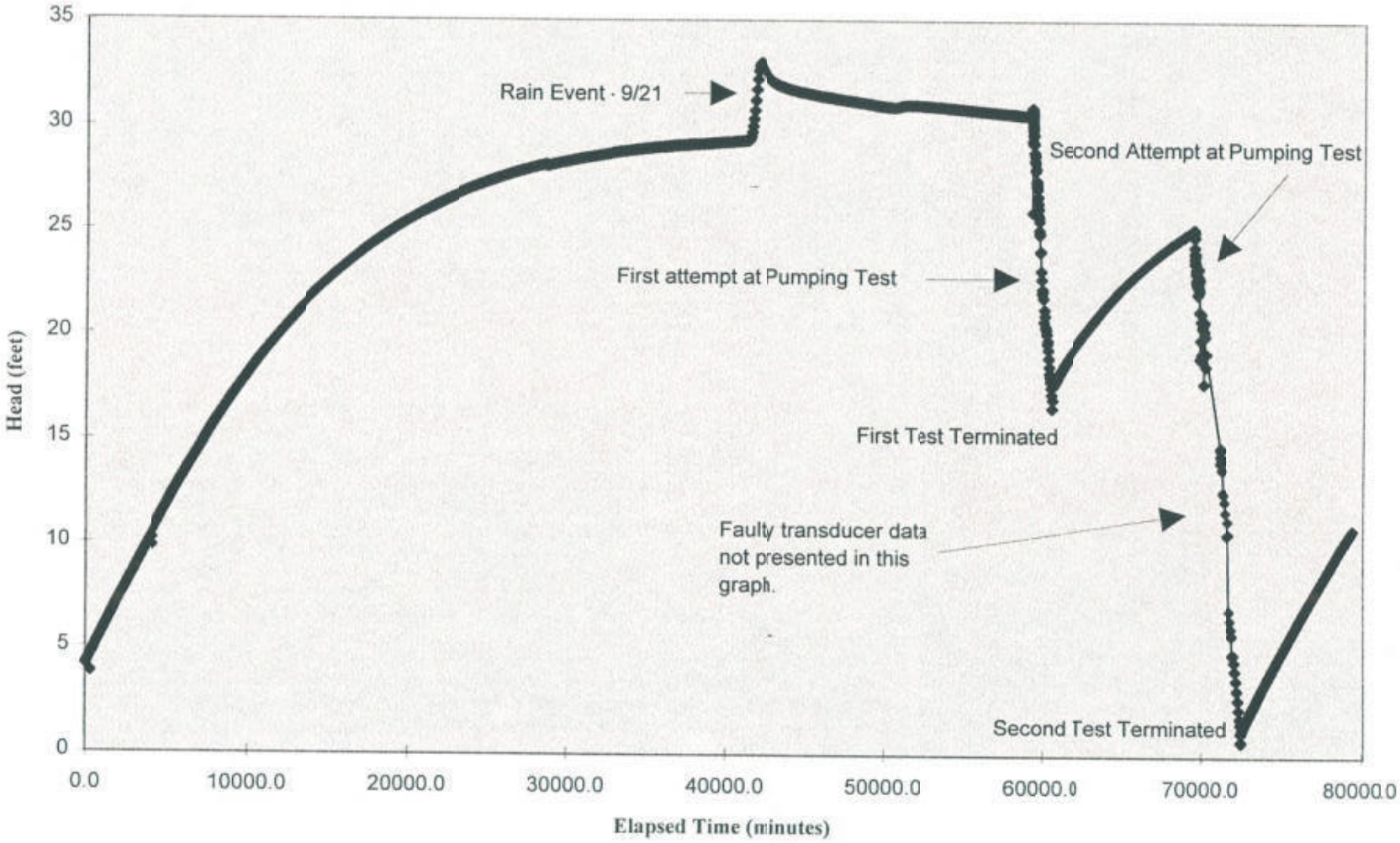



Water Level Data
IW-10
Transducer Level Adjusted
Head (feet)
Elapsed Time (minutes)
0
2
4
6
8
10
12
14
16
18
20
0.0
10000.0
20000.0
30000.0
40000.0
50000.0
60000.0

Water Level Data
IW-11



Water Level Data
IW-14



1996 Old Limestone Bed Surface Impoundment (OLBSI) Pumping Test Data

Golder Associates	SUBJECT Monsanto/Pump/AL		
	Job No. 943-3680	Made by CDH	Date 12-10-96
	Ref. 029	Checked JMF	Sheet 1 of 2
		Reviewed JMF	

IW-16

Chow

$Q = 0.1\,gpm = 0.002228\ ft^3/sec$

$Sa = 8ft$

$\Delta Sa = 48ft$

$ta = 240\ sec$

$F(u) = \frac{Sa}{\Delta Sa} = 0.166$

$u(a) = 2.0 \quad W(u) = .048$

$T = \frac{Q}{4\pi Sa}(Wu) = \frac{0.0022\ ft^3/sec\ (.048)}{(4)(\pi)(8ft)}$

$= 1.05e^{-6}\ ft^2/sec$

$= 6.3e^{-5}\ ft^2/min$

$= .09072\ ft^2/day$

$K = \frac{1.05e^{-6}\ ft^2/sec}{40ft} = 2.6e^{-8}\ ft/sec$

$7.92\ e^{-7}\ cm/sec$

Theis Recovery

$Q = 0.0022\ ft^3/sec$

$\Delta s' = 48\ ft$

$T = \frac{2.3Q}{4\pi\Delta s'} = \frac{0.008512}{603.19} = 8.49e^{-7}\ ft^2/sec$

$K = 2.12e^{-8}\ ft/sec$

$K = 6.47\ e^{-7}\ cm/sec$

Jacob

$T = \frac{2.3Q}{4\pi(h_o - h)} = \frac{19.25\ ft^3/day\ (2.3)}{4\pi\ 48} = 0.073\ ft^2/day$

$K = 0.0018\ ft/day$

$= 2.12e^{-8}\ ft/sec$

$= 6.47\ e^{-7}\ cm/sec$

DRAFT

Golder Associates

SUBJECT	MONSANTO/PUMP/AC		
Job No. 943-3680.04	Made by CAH	Date 12-10-96	
Ref.	Checked JMF	Sheet 2 of 2	
	Reviewed JMF		

PZ 6A

Jacob method

$$T = \frac{2.3Q}{4\pi(h_o - h)} = \frac{(19.25\ ft^3/day)(2.3)}{(4)(\pi)(1.1\ ft)} = \frac{44275}{(4)\pi(1.1\ ft)} = 2.07\ ft^2/day$$

$K = 5.18\ e^{-2}\ ft/day$

$= 6.00\ e^{-7}\ ft/sec$

$= 1.82\ e^{-5}\ cm/sec$

PZ 4C drawdown

Jacob $T = \frac{2.3Q}{4\pi(h_o - h)} = \frac{2.3(7.7\ ft^3/day)}{4\pi(3.1)} = .36\ ft^2/day$

$K = .009\ ft/day$

$= 1\ e^{-7}\ ft/sec$

$= 3.18\ e^{-6}\ cm/sec$

DMW-1L DRAWDOWN

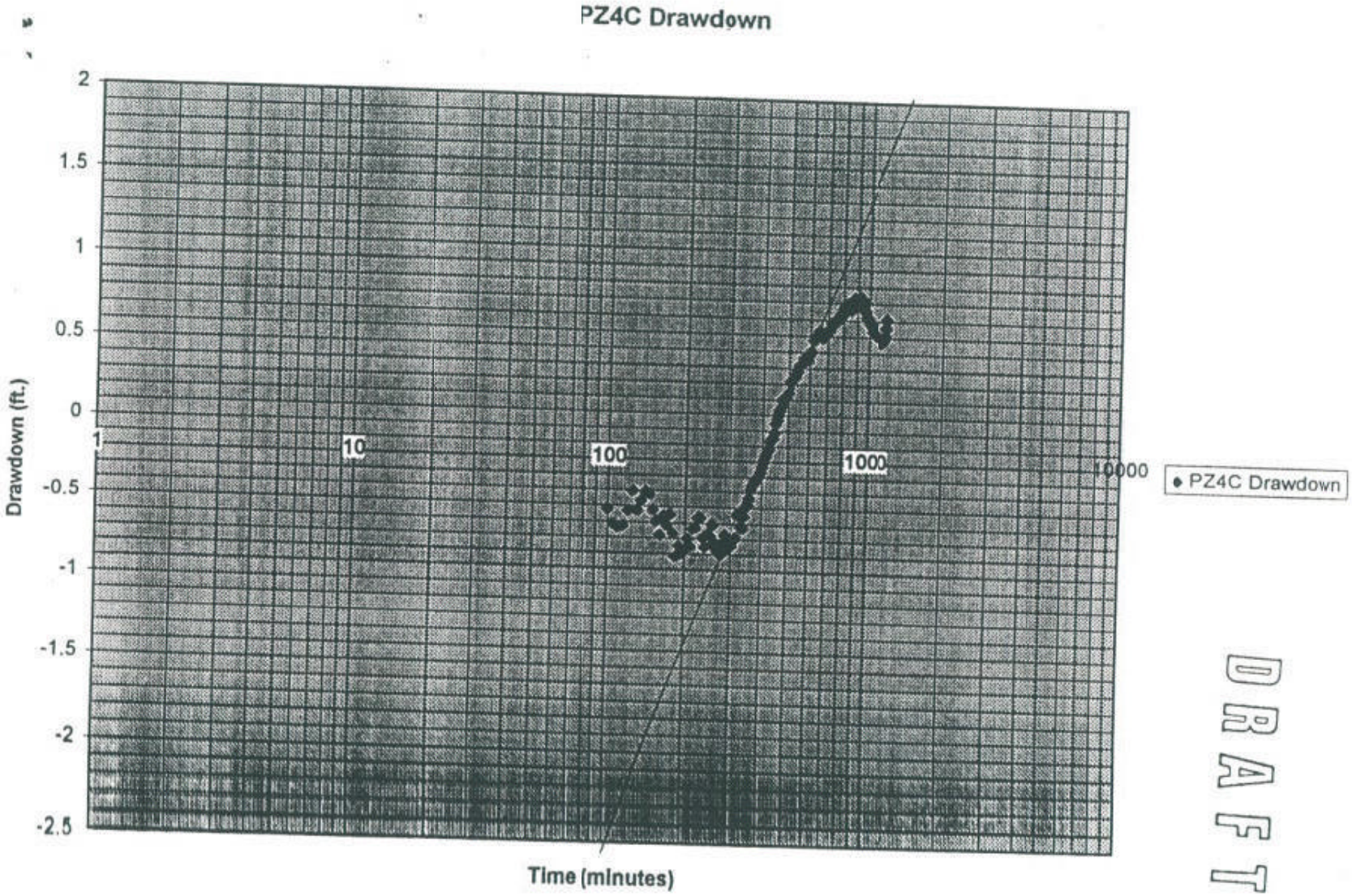
$$T = \frac{2.3Q}{4\pi(h_o - h)} = \frac{2.3(27\ ft^3/day)}{4(\pi)(5.4)} = 1.637\ ft^2/day$$

$K = .0042\ ft/day$

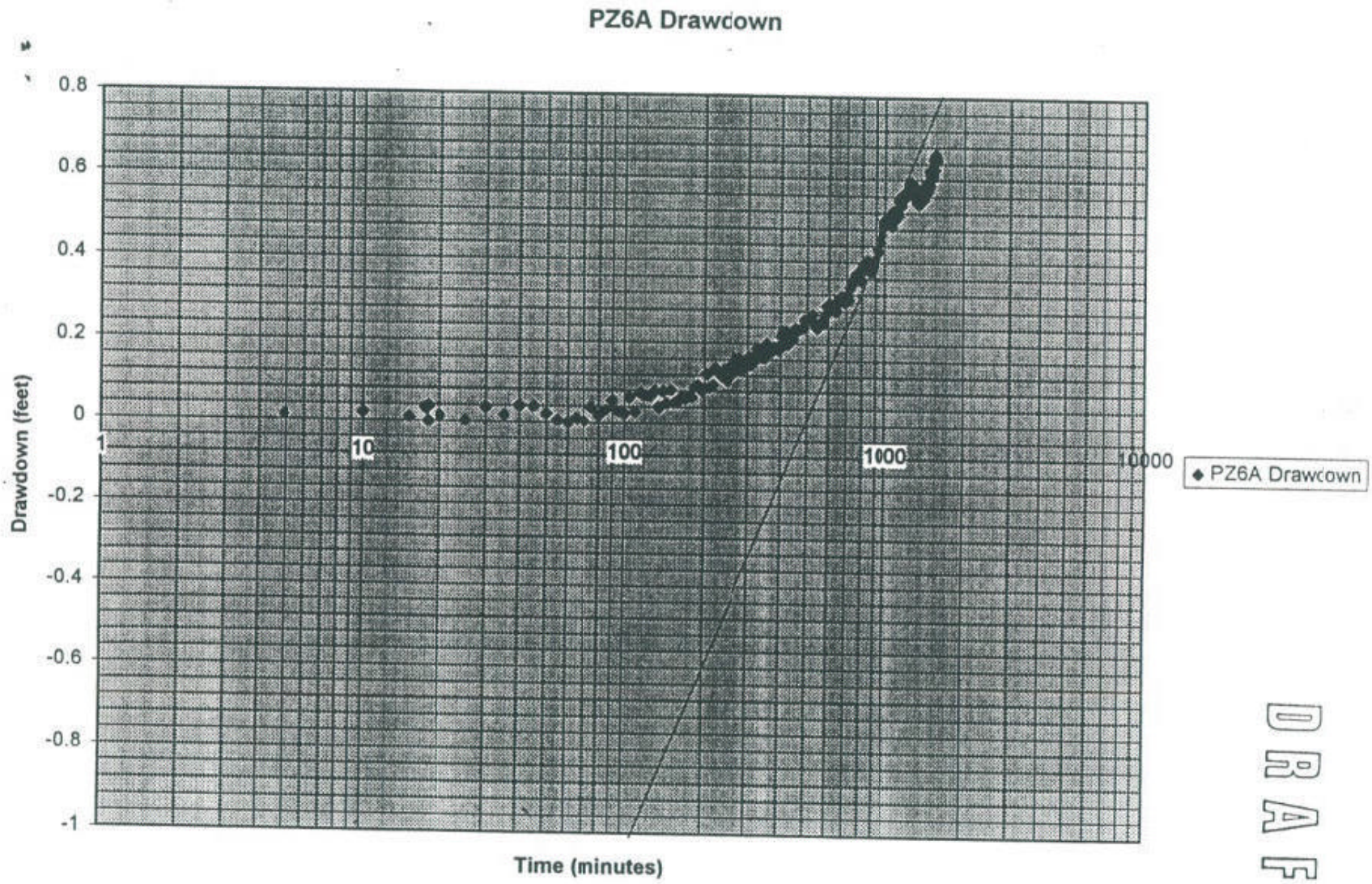
$= 4.8\ e^{-8}\ ft/sec$

$= 1.47\ e^{-6}\ cm/sec$

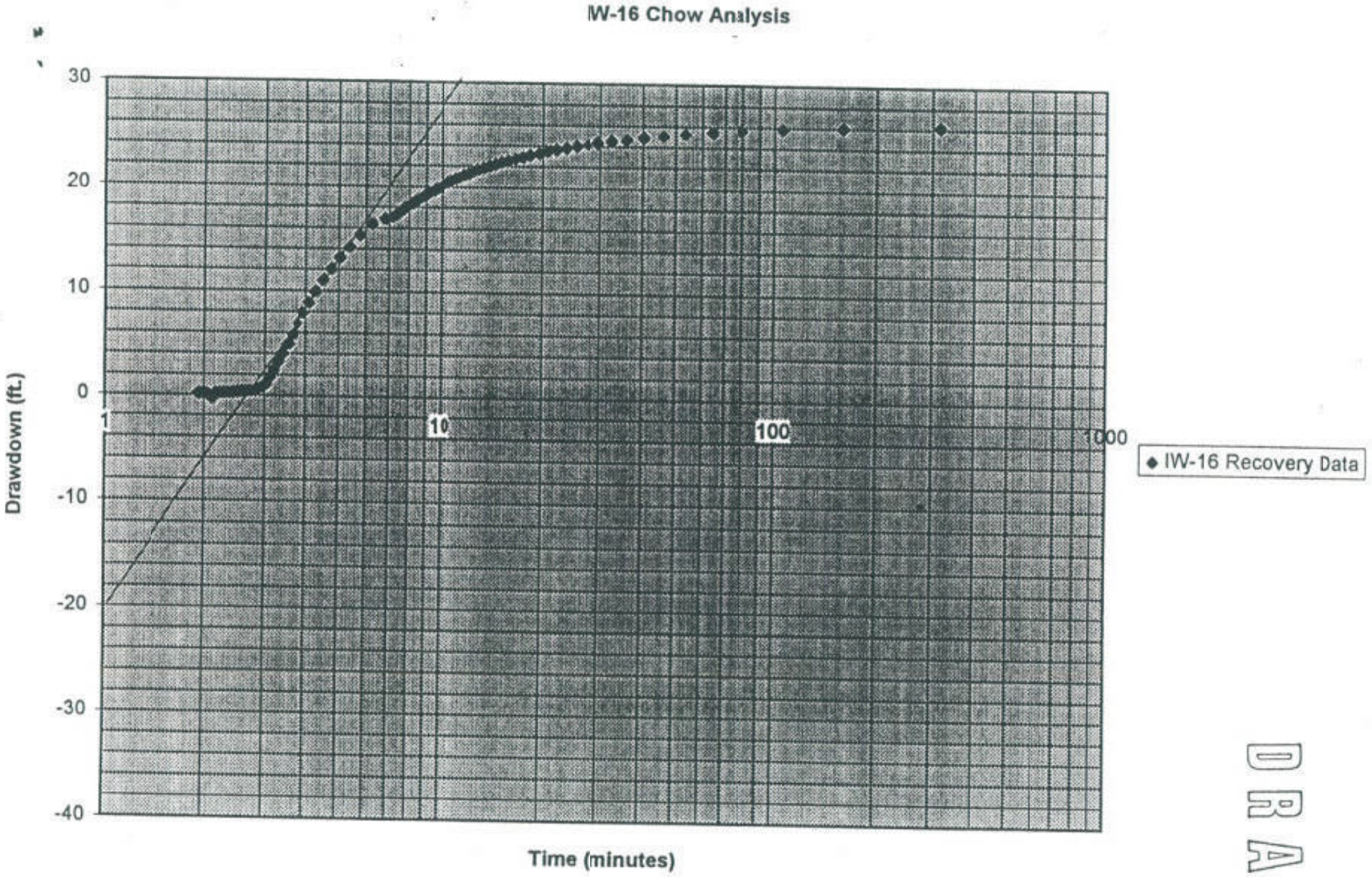
DRAFT


PZ4C Drawdown
2
1.5
1
0.5
0
-0.5
-1
-1.5
-2
-2.5
Drawdown (ft.)
1
10
100
1000
10000
Time (minutes)
PZ4C Drawdown

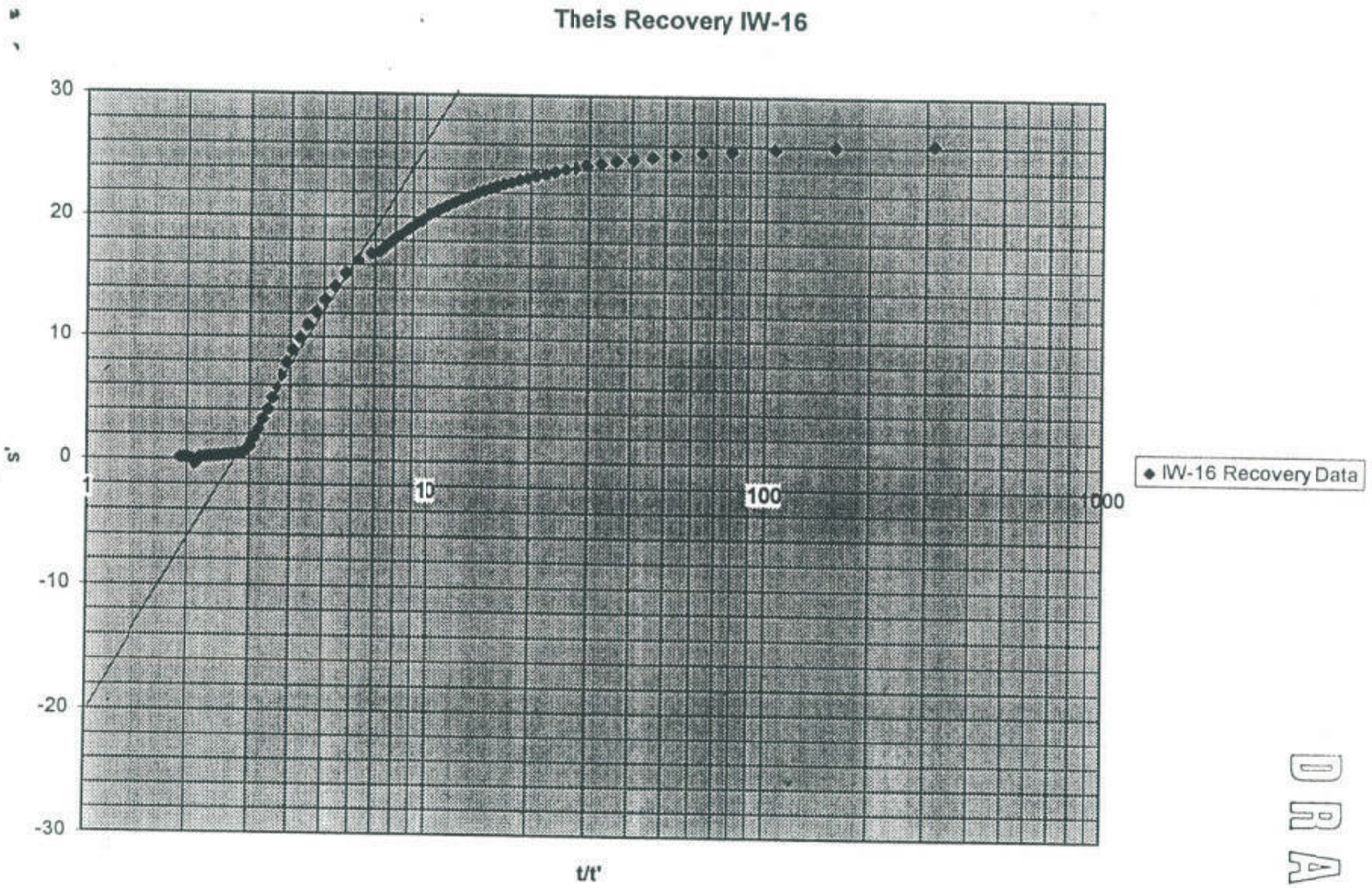
DRAFT


PZ6A Drawdown
Drawdown (feet)
0.8
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
-0.8
-1
1
10
100
1000
10000
Time (minutes)
PZ6A Drawdown

DRAFT


IW-16 Chow Analysis
30
20
10
0
-10
-20
-30
-40
Drawdown (ft.)
1
10
100
1000
Time (minutes)
◆ IW-16 Recovery Data

DRAFT


Theis Recovery IW-16
30
20
10
0
-10
-20
-30
s'
1
10
100
1000
t/t'
IW-16 Recovery Data

DRAFT

Dec-96

943-3680

FALLING HEAD TEST
MONSANTO ANNISTON FACILITY
WELL PZ-7

	Units		
Static Water Depth	Feet	33.08	Feet Below TOC
Riser Diameter	Inches	2.00	
Sandpack Diameter	Inches	8.000	
Top of Sandpack Depth	Feet	44.00	Feet Below TOC
Bottom of Screen	Feet	50.00	Feet Below TOC

Minutes	Seconds	Elapsed Time (min)	Depth to Water (ft.)	Head	Head Ratio H/Ho		LOG HEAD RATIO
0	0	0	28.257808	4.82	1.000		0.000
120	0	120	28.600612	4.48	0.929		-0.032
240	0	240	28.882201	4.20	0.871		-0.060
360	0	360	29.137687	3.94	0.818	*	-0.087
480	0	480	29.374231	3.71	0.768		-0.114
600	0	600	29.576204	3.50	0.726		-0.139
720	0	720	29.736901	3.34	0.693		-0.159
840	0	840	29.857021	3.22	0.668		-0.175
960	0	960	29.969518	3.11	0.645		-0.190
1080	0	1080	30.143461	2.94	0.609		-0.215
1200	0	1200	30.289222	2.79	0.579		-0.238
1320	0	1320	30.393172	2.69	0.557		-0.254
1440	0	1440	30.498277	2.58	0.535		-0.271
1560	0	1560	30.535699	2.54	0.528		-0.278
1680	0	1680	30.646348	2.43	0.505		-0.297
1800	0	1800	30.764158	2.32	0.480		-0.319
1920	0	1920	30.853555	2.23	0.462		-0.336
2040	0	2040	30.924472	2.16	0.447		-0.350
2160	0	2160	30.976202	2.10	0.436		-0.360
2280	0	2280	31.030732	2.05	0.425		-0.372
2400	0	2400	31.119205	1.96	0.407		-0.391
2520	0	2520	31.246255	1.83	0.380		-0.420
2640	0	2640	31.351822	1.73	0.358		-0.446
2760	0	2760	31.398253	1.68	0.349		-0.457
2880	0	2880	31.446149	1.63	0.338		-0.471
3000	0	3000	31.488574	1.59	0.330		-0.481
3120	0	3120	31.543783	1.54	0.319		-0.497
3240	0	3240	31.618396	1.46	0.303		-0.518
3360	0	3360	31.673836	1.41	0.292		-0.535
3480	0	3480	31.747063	1.33	0.276		-0.558
3600	0	3600	31.770394	1.31	0.272		-0.566
3720	0	3720	31.7995	1.28	0.266		-0.576
3840	0	3840	31.839232	1.24	0.257		-0.590
3960	0	3960	31.943644	1.14	0.236	*	-0.628
4080	0	4080	32.033503	1.05	0.217		-0.664
4200	0	4200	32.090098	0.99	0.205		-0.688
4320	0	4320	32.136298	0.94	0.196		-0.708

Dec-96

943-3680

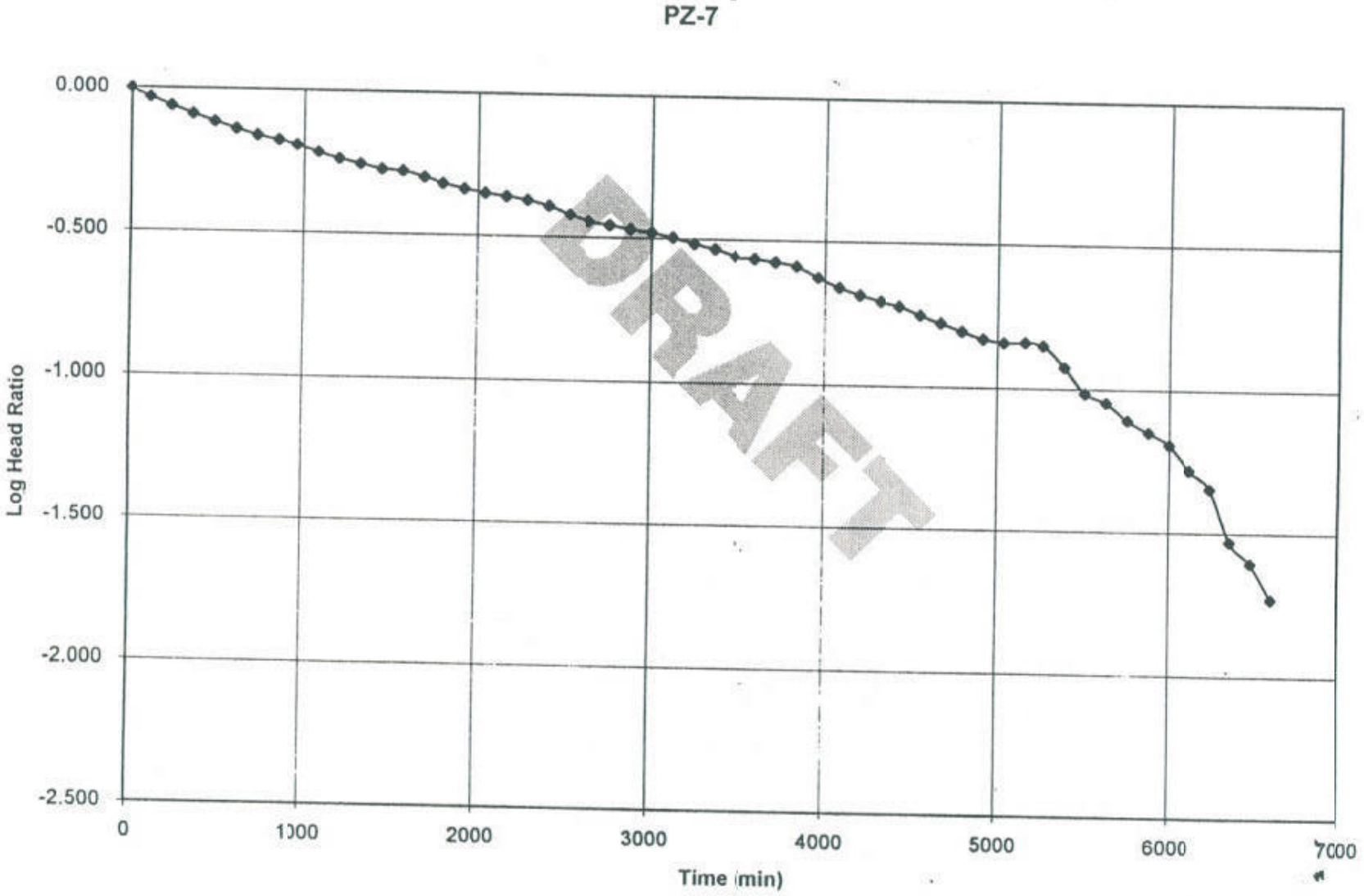
FALLING HEAD TEST
MONSANTO ANNISTON FACILITY
WELL PZ-7

	Units		
Static Water Depth	Feet	33.08	Feet Below TOC
Riser Diameter	Inches	2.00	
Sandpack Diameter	Inches	8.000	
Top of Sandpack Depth	Feet	44.00	Feet Below TOC
Bottom of Screen	Feet	50.00	Feet Below TOC

Minutes	Seconds	Elapsed Time (min)	Depth to Water (ft.)	Head	Head Ratio H/Ho		LOG HEAD RATIO
4440	0	4440	32.170255	0.91	0.189		-0.724
4560	0	4560	32.228236	0.85	0.177		-0.753
4680	0	4680	32.278746	0.80	0.167		-0.778
4800	0	4800	32.327797	0.75	0.156		-0.807
4920	0	4920	32.371918	0.71	0.147		-0.833
5040	0	5040	32.390629	0.69	0.143		-0.845
5160	0	5160	32.386933	0.69	0.144		-0.842
5280	0	5280	32.40472	0.68	0.140		-0.854
5400	0	5400	32.50867	0.57	0.118		-0.926
5520	0	5520	32.614699	0.47	0.096		-1.016
5640	0	5640	32.647963	0.43	0.090		-1.048
5760	0	5760	32.703005	0.38	0.078		-1.108
5880	0	5880	32.738515	0.34	0.071		-1.150
6000	0	6000	32.769931	0.31	0.064		-1.192
6120	0	6120	32.826757	0.25	0.053		-1.280
6240	0	6240	32.861638	0.22	0.045		-1.344
6360	0	6360	32.937637	0.14	0.030		-1.530
6480	0	6480	32.960275	0.12	0.025		-1.605
6600	0	6600	32.990305	0.09	0.019		-1.730
6720	0	6720	33.014098	0.07	0.014		-1.864
6840	0	6840	33.112042	-0.03	-0.007		-2.178
6960	0	6960	33.205135	-0.13	-0.026		-1.586
7080	0	7080	33.223153	-0.14	-0.030		-1.527
7200	0	7200	33.243019	-0.16	-0.034		-1.471
7320	0	7320	33.265888	-0.19	-0.039		-1.414
7440	0	7440	33.32872	-0.25	-0.052		-1.288
7560	0	7560	33.436597	-0.36	-0.074		-1.131
7680	0	7680	33.463393	-0.38	-0.080		-1.100

DRAFT

* INDICATES THE BEST FIT LINE PASSES THROUGH THESE POINTS
WHICH ARE USED TO CALCULATE HYDRAULIC CONDUCTIVITY
K = 2.9361E-07


PZ-7
0.000
-0.500
-1.000
-1.500
-2.000
-2.500
Log Head Ratio
0
1000
2000
3000
4000
5000
6000
7000
Time (min)
DRAFT

Dec-96

943-3680

FALLING HEAD TEST
MONSANTO ANNISTON FACILITY
WELL DMW-16

	Units		
Static Water Depth	Feet	33.08	Feet Below TOC
Riser Diameter	Inches	2.00	
Sandpack Diameter	Inches	8.000	
Top of Sandpack Depth	Feet	54.00	Feet Below TOC
Bottom of Screen	Feet	60.00	Feet Below TOC

Minutes	Seconds	Elapsed Time (min)	Depth to Water (ft.)	Head	Head Ratio H/Ho		Log Head Ratio
0	0	0	28.257808	4.82	1		0
120	0	120	28.600612	4.48	0.929		-0.032
240	0	240	28.882201	4.20	0.871		-0.060
360	0	360	29.137687	3.94	0.818	*	-0.087
480	0	480	29.374231	3.71	0.768		-0.114
600	0	600	29.578204	3.50	0.726		-0.139
720	0	720	29.736901	3.34	0.693		-0.159
840	0	840	29.857021	3.22	0.668		-0.175
960	0	960	29.969518	3.11	0.645		-0.190
1080	0	1080	30.143461	2.94	0.609		-0.215
1200	0	1200	30.289222	2.79	0.579		-0.238
1320	0	1320	30.393172	2.69	0.557		-0.254
1440	0	1440	30.498277	2.58	0.535		-0.271
1560	0	1560	30.535099	2.54	0.528		-0.278
1680	0	1680	30.646348	2.43	0.505		-0.297
1800	0	1800	30.764158	2.32	0.480		-0.319
1920	0	1920	30.853555	2.23	0.462		-0.336
2040	0	2040	30.924472	2.16	0.447		-0.350
2160	0	2160	30.975292	2.10	0.436		-0.360
2280	0	2280	31.030732	2.05	0.425		-0.372
2400	0	2400	31.119205	1.96	0.407		-0.391
2520	0	2520	31.246255	1.83	0.380		-0.420
2640	0	2640	31.351822	1.73	0.358		-0.446
2760	0	2760	31.398253	1.68	0.349		-0.457
2880	0	2880	31.448149	1.63	0.338		-0.471
3000	0	3000	31.488574	1.59	0.330		-0.481
3120	0	3120	31.543783	1.54	0.319		-0.497
3240	0	3240	31.618396	1.46	0.303		-0.518
3360	0	3360	31.673836	1.41	0.292		-0.535
3480	0	3480	31.747063	1.33	0.276		-0.558
3600	0	3600	31.770394	1.31	0.272		-0.566
3720	0	3720	31.7995	1.28	0.266		-0.576
3840	0	3840	31.839232	1.24	0.257		-0.590
3960	0	3960	31.943644	1.14	0.236		-0.628
4080	0	4080	32.033503	1.05	0.217		-0.664

Dec 06

943-3680

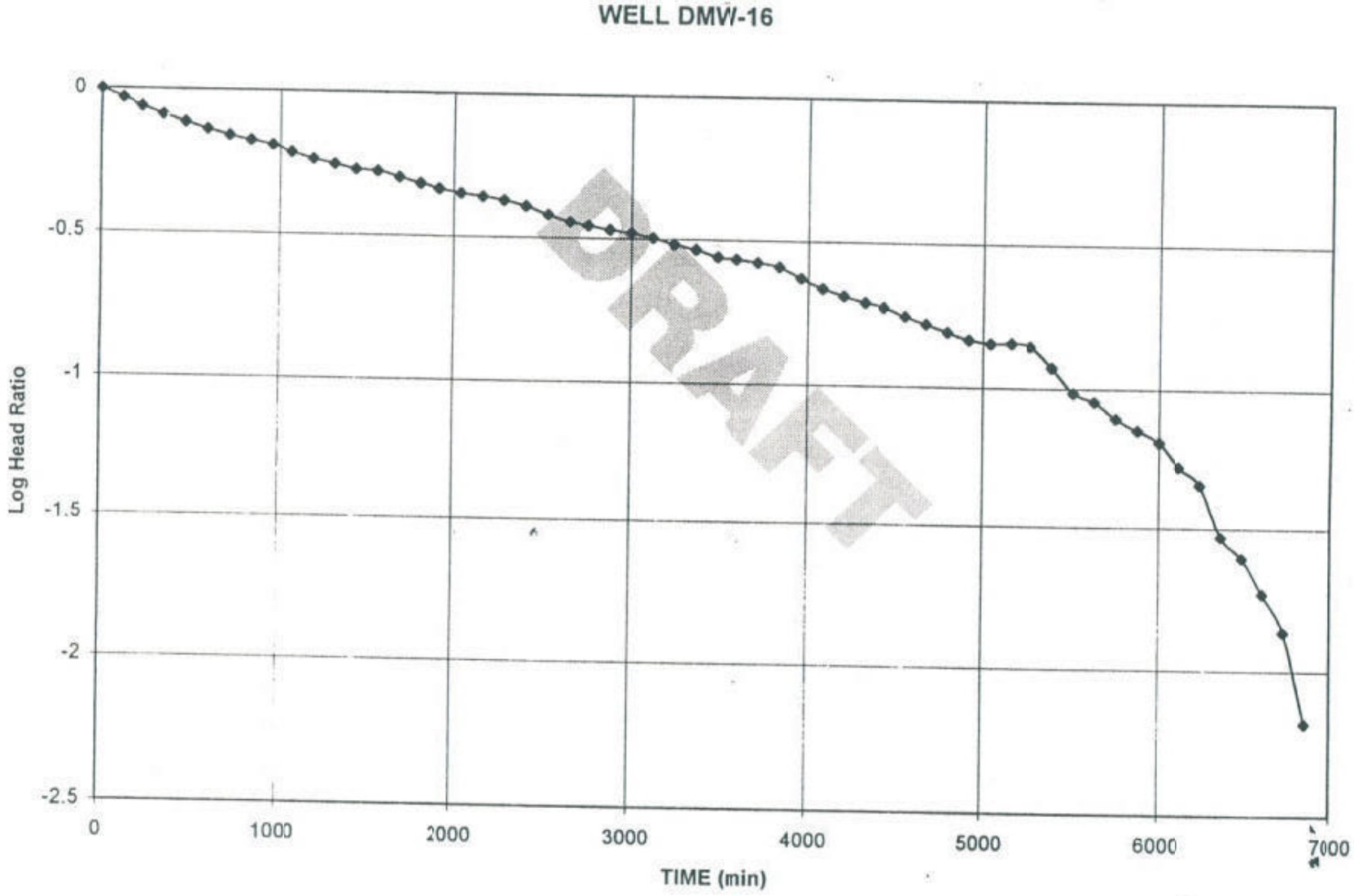
FALLING HEAD TEST
MONSANTO ANNISTON FACILITY
WELL DMW-16

	Units		
Static Water Depth	Feet	33.08	Feet Below TOC
Riser Diameter	Inches	2.00	
Sandpack Diameter	Inches	8.000	
Top of Sandpack Depth	Feet	54.00	Feet Below TOC
Bottom of Screen	Feet	60.00	Feet Below TOC

Minutes	Seconds	Elapsed Time (min)	Depth to Water (ft.)	Head	Head Ratio H/Ho		Log Head Ratio .
4200	0	4200	32.090098	0.99	0.205		-0.688
4320	0	4320	32.138298	0.94	0.196		-0.709
4440	0	4440	32.170255	0.91	0.189		-0.724
4560	0	4560	32.228236	0.85	0.177		-0.753
4680	0	4680	32.276746	0.80	0.167		-0.778
4800	0	4800	32.327797	0.75	0.156		-0.807
4920	0	4920	32.371918	0.71	0.147		-0.833
5040	0	5040	32.390629	0.69	0.143		-0.845
5160	0	5160	32.386933	0.69	0.144	*	-0.842
5280	0	5280	32.40472	0.68	0.140		-0.854
5400	0	5400	32.50867	0.57	0.118		-0.926
5520	0	5520	32.614699	0.47	0.096		-1.016
5640	0	5640	32.647963	0.43	0.090		-1.048
5760	0	5760	32.703865	0.38	0.078		-1.108
5880	0	5880	32.738515	0.34	0.071		-1.150
6000	0	6000	32.769931	0.31	0.064		-1.192
6120	0	6120	32.826757	0.25	0.053		-1.280
6240	0	6240	32.861638	0.22	0.045		-1.344
6360	0	6360	32.937637	0.14	0.030		-1.530
6480	0	6480	32.960275	0.12	0.025		-1.605
6600	0	6600	32.990305	0.09	0.019		-1.730
6720	0	6720	33.014098	0.07	0.014		-1.864
6840	0	6840	33.112042	-0.03	-0.007		-2.178
6960	0	6960	33.205135	-0.13	-0.026		-1.586
7080	0	7080	33.223153	-0.14	-0.030		-1.527
7200	0	7200	33.243019	-0.16	-0.034		-1.471
7320	0	7320	33.265888	-0.19	-0.039		-1.414
7440	0	7440	33.32872	-0.25	-0.052		-1.288
7560	0	7560	33.436597	-0.36	-0.074		-1.131
7680	0	7680	33.463393	-0.38	-0.080		-1.100

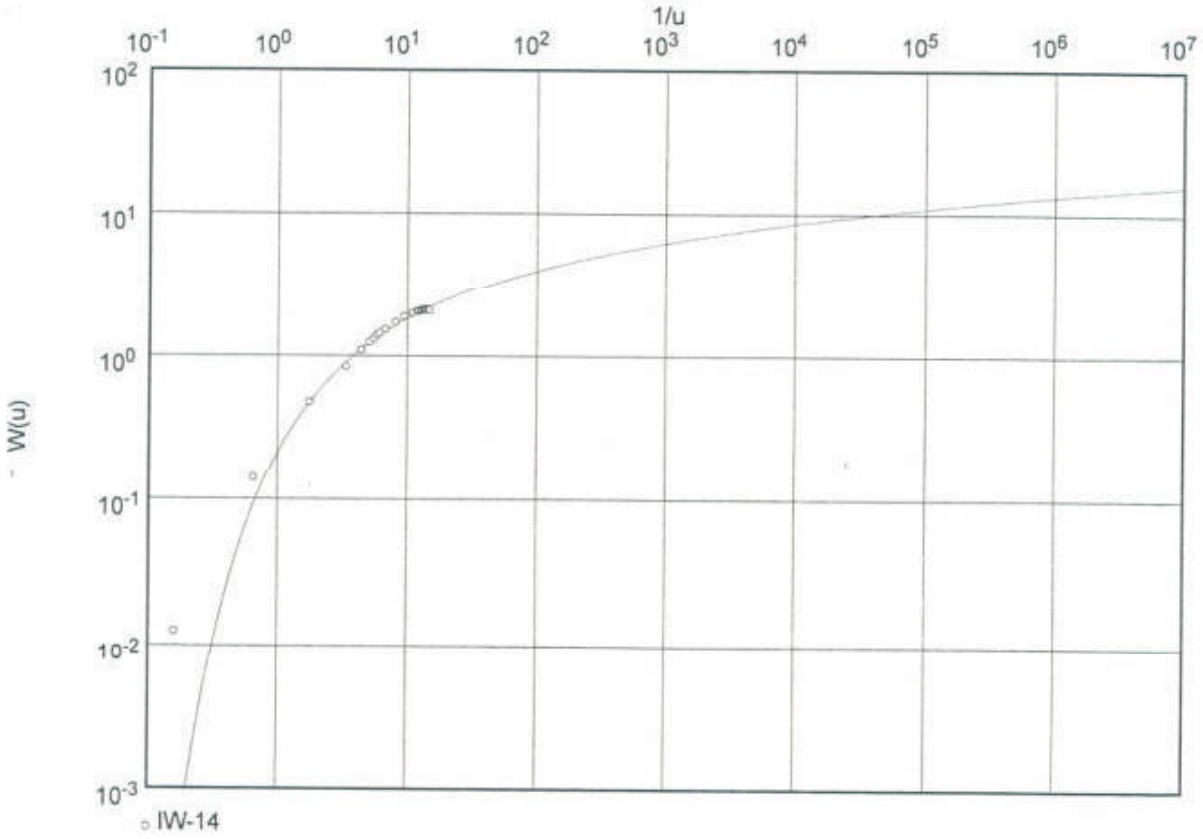
DRAFT

* INDICATES THE BEST FIT LINE PASSES THROUGH THESE POINTS
WHICH ARE USED TO CALCULATE HYDRAULIC CONDUCTIVITY
K = 3.0774E-07


WELL DMW-16
Log Head Ratio
0
-0.5
-1
-1.5
-2
-2.5
0
1000
2000
3000
4000
5000
6000
7000
TIME (min)
DRAFT

Golder Associates Inc. 3730 Chamblee Tucker Rd. Atlanta, GA 30341 ph.(770)496-1893	Pumping test analysis Theis analysis method Unconfined aquifer	Date: 10-29-98	Page 1
		Project: Solutia/RFI/AL	
		Evaluated by: CDH	

Pumping Test No. IW-14	Test conducted on: 10-12-98
IW-14	
Discharge 0.25 U.S.gal/min	



Transmissivity [ft²/d]: 7.98×10^{-1}

Hydraulic conductivity [ft/d]: 3.99×10^{-2}

Aquifer thickness [ft]: 20.00

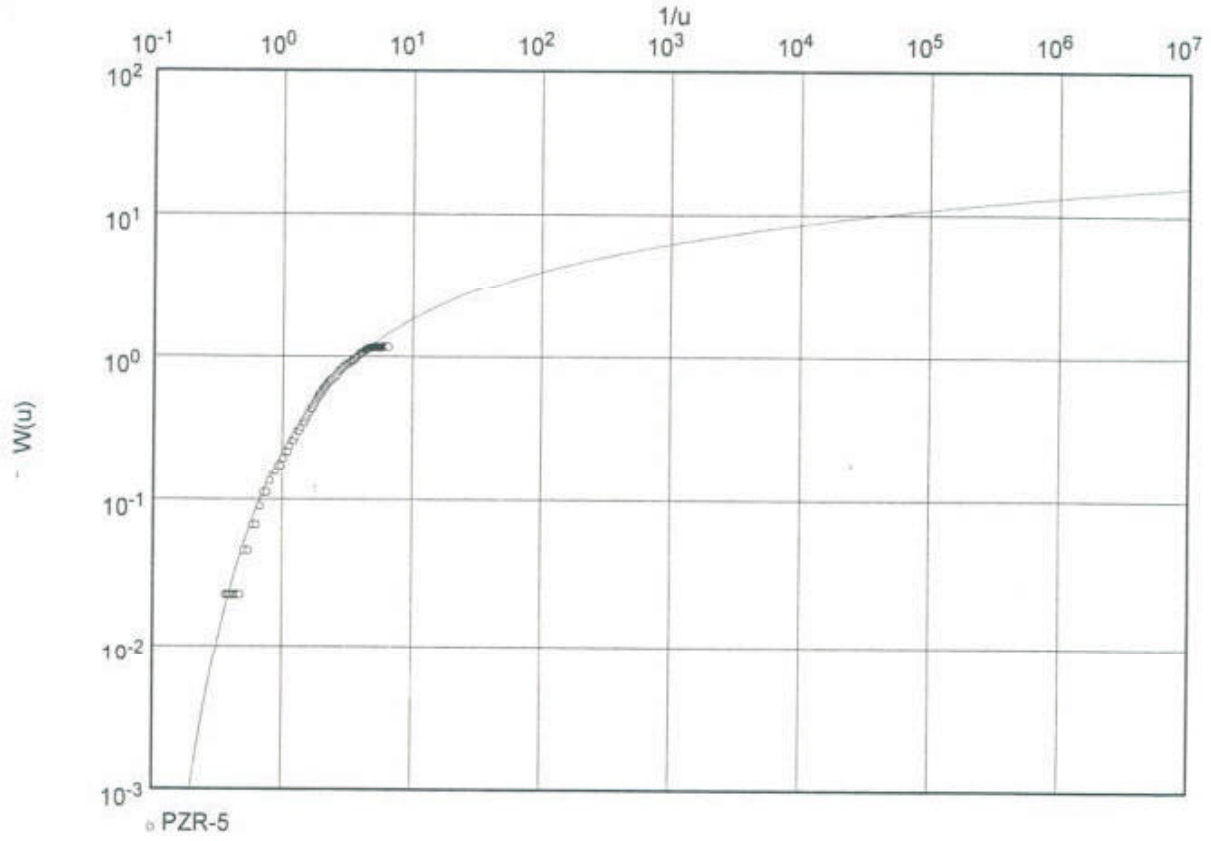
Golder Associates Inc. 3730 Chamblee Tucker Rd. Atlanta, GA 30341 ph.(770)496-1893	Pumping test analysis Theis analysis method Unconfined aquifer	Date: 10-29-98	Page 2
		Project: Solutia/RFI/AL	
		Evaluated by: CDH	

Pumping Test No. IW-14	Test conducted on: 10-12-98
IW-14	IW-14
Discharge 0.25 U.S.gal/min	Distance from the pumping well 1.00 ft
Static water level: 17.03 ft below datum	

	Pumping test duration [d]	Water level [ft]	Drawdown [ft]	Corrected drawdown [ft]
2	0.02292	17.09	0.06	0.06
3	0.09375	17.71	0.68	0.67
4	0.25278	19.51	2.48	2.33
5	0.48472	21.62	4.59	4.06
6	0.64236	23.28	6.25	5.27
7	0.73889	24.34	7.31	5.97
8	0.79722	24.94	7.91	6.35
9	0.84375	25.50	8.47	6.68
10	0.88542	25.91	8.88	6.91
11	0.97431	26.71	9.68	7.34
12	1.16667	28.54	11.51	8.20
13	1.36528	30.59	13.56	8.96
14	1.58125	32.57	15.54	9.50
15	1.72500	33.89	16.86	9.75
16	1.75417	34.21	17.18	9.80
17	1.83125	34.89	17.86	9.89
18	1.88681	35.48	18.45	9.94
19	1.93264	36.05	19.02	9.98
20	1.98889	36.68	19.65	10.00
21	2.02917	37.15	20.12	10.00
22	2.11042	37.08	20.95	9.98
23	2.14931	38.45	21.42	9.95
24	2.15764	38.57	21.54	9.94

Golder Associates Inc. 3730 Chamblee Tucker Rd. Atlanta, GA 30341 ph.(770)496-1893	Pumping test analysis Theis analysis method Unconfined aquifer	Date: 10-28-98	Page 1
		Project: Solutia/RFI/AL	
		Evaluated by: CDH	

Pumping Test No. IW-14	Test conducted on: 10-12-98
PZR-5	
Discharge 0.25 U.S.gal/min	



Transmissivity [ft²/d]: 8.57×10^{-1}

Hydraulic conductivity [ft/d]: 2.14×10^{-2}

Aquifer thickness [ft]: 40.00

Golder Associates Inc. 3730 Chamblee Tucker Rd. Atlanta, GA 30341 ph.(770)496-1893	Pumping test analysis Theis analysis method Unconfined aquifer	Date: 10-28-98	Page 2
		Project: Solutia/RFI/AL	
		Evaluated by: CDH	

Pumping Test No. IW-14	Test conducted on: 10-12-98
PZR-5	PZR-5
Discharge 0.25 U.S.gal/min	Distance from the pumping well 12.50 ft
Static water level: 16.70 ft below datum	

	Pumping test duration [d]	Water level [ft]	Drawdown [ft]	Corrected drawdown [ft]
2	0.02222	16.70	0.00	0.00
3	0.02229	16.70	0.00	0.00
4	0.02236	16.70	0.00	0.00
5	0.02243	16.70	0.00	0.00
6	0.02250	16.60	-0.10	-0.10
7	0.02257	16.70	0.00	0.00
8	0.02264	16.60	-0.10	-0.10
9	0.02271	16.70	0.00	0.00
10	0.02278	16.70	0.00	0.00
11	0.02285	16.60	-0.10	-0.10
12	0.02292	16.70	0.00	0.00
13	0.02299	16.70	0.00	0.00
14	0.02306	16.60	-0.10	-0.10
15	0.02778	16.70	0.00	0.00
16	0.03472	16.60	-0.10	-0.10
17	0.04167	16.60	-0.10	-0.10
18	0.04861	16.60	-0.10	-0.10
19	0.05556	16.60	-0.10	-0.10
20	0.06250	16.70	0.00	0.00
21	0.06944	16.70	0.00	0.00
22	0.07639	16.70	0.00	0.00
23	0.08333	16.70	0.00	0.00
24	0.09028	16.70	0.00	0.00
25	0.09722	16.70	0.00	0.00
26	0.10417	16.70	0.00	0.00
27	0.11111	16.70	0.00	0.00
28	0.11806	16.70	0.00	0.00
29	0.12500	16.70	0.00	0.00
30	0.13194	16.70	0.00	0.00
31	0.13889	16.70	0.00	0.00
32	0.14583	16.70	0.00	0.00
33	0.15278	16.70	0.00	0.00
34	0.15972	16.70	0.00	0.00
35	0.16667	16.70	0.00	0.00
36	0.17361	16.70	0.00	0.00
37	0.18056	16.80	0.10	0.10
38	0.18750	16.80	0.10	0.10
39	0.19444	16.80	0.10	0.10
40	0.20139	16.80	0.10	0.10
41	0.20833	16.80	0.10	0.10
42	0.21528	16.80	0.10	0.10
43	0.22222	16.80	0.10	0.10
44	0.22917	16.80	0.10	0.10
45	0.23611	16.80	0.10	0.10
46	0.25000	16.90	0.20	0.20
47	0.27083	16.90	0.20	0.20
48	0.29167	17.00	0.30	0.30
49	0.31250	17.00	0.30	0.30
50	0.33333	17.10	0.40	0.40

Golder Associates Inc. 3730 Chamblee Tucker Rd. Atlanta, GA 30341 ph.(770)496-1893	Pumping test analysis Theis analysis method Unconfined aquifer	Date: 10-28-98	Page 3
		Project: Solutia/RFI/AL	
		Evaluated by: CDH	

Pumping Test No. IW-14	Test conducted on: 10-12-98
PZR-5	PZR-5
Discharge 0.25 U.S.gal/min	Distance from the pumping well 12.50 ft

Static water level: 16.70 ft below datum

	Pumping test duration [d]	Water level [ft]	Drawdown [ft]	Corrected drawdown [ft]
51	0.35417	17.20	0.50	0.50
52	0.37500	17.20	0.50	0.50
53	0.39583	17.30	0.60	0.60
54	0.41667	17.40	0.70	0.69
55	0.43750	17.40	0.70	0.69
56	0.45833	17.50	0.80	0.79
57	0.47917	17.50	0.80	0.79
58	0.50000	17.60	0.90	0.89
59	0.52083	17.70	1.00	0.99
60	0.54167	17.70	1.00	0.99
61	0.56250	17.80	1.10	1.08
62	0.58333	17.90	1.20	1.18
63	0.60417	17.90	1.20	1.18
64	0.62500	18.00	1.30	1.28
65	0.64583	18.10	1.40	1.38
66	0.66667	18.10	1.40	1.38
67	0.68750	18.20	1.50	1.47
68	0.70833	18.30	1.60	1.57
69	0.72917	18.30	1.60	1.57
70	0.75000	18.40	1.70	1.66
71	0.77083	18.50	1.80	1.76
72	0.79167	18.60	1.90	1.85
73	0.81250	18.70	2.00	1.95
74	0.83333	18.70	2.00	1.95
75	0.85417	18.80	2.10	2.04
76	0.87500	18.90	2.20	2.14
77	0.89583	19.00	2.30	2.23
78	0.91667	19.10	2.40	2.33
79	0.93750	19.20	2.50	2.42
80	0.95833	19.20	2.50	2.42
81	0.97917	19.30	2.60	2.52
82	1.00000	19.40	2.70	2.61
83	1.02083	19.50	2.80	2.70
84	1.04167	19.50	2.80	2.70
85	1.06250	19.60	2.90	2.79
86	1.08333	19.70	3.00	2.89
87	1.10417	19.80	3.10	2.98
88	1.12500	19.80	3.10	2.98
89	1.14583	19.90	3.20	3.07
90	1.15979	19.90	3.20	3.07
91	1.15986	19.90	3.20	3.07
92	1.15993	19.90	3.20	3.07
93	1.16000	19.90	3.20	3.07
94	1.16007	19.90	3.20	3.07
95	1.16014	19.90	3.20	3.07
96	1.16021	19.90	3.20	3.07
97	1.16028	19.90	3.20	3.07
98	1.16035	19.90	3.20	3.07
99	1.16042	19.90	3.20	3.07
100	1.16049	19.90	3.20	3.07

Golder Associates Inc. 3730 Chamblee Tucker Rd. Atlanta, GA 30341 ph.(770)496-1893	Pumping test analysis Theis analysis method Unconfined aquifer	Date: 10-28-98	Page 4
		Project: Solutia/RFI/AL	
		Evaluated by: CDH	

Pumping Test No. IW-14	Test conducted on: 10-12-98
PZR-5	PZR-5
Discharge 0.25 U.S.gal/min	Distance from the pumping well 12.50 ft

Static water level: 16.70 ft below datum

	Pumping test duration [d]	Water level [ft]	Drawdown [ft]	Corrected drawdown [ft]
101	1.16056	19.90	3.20	3.07
102	1.16063	19.90	3.20	3.07
103	1.16069	19.90	3.20	3.07
104	1.16076	19.90	3.20	3.07
105	1.16083	19.90	3.20	3.07
106	1.16090	19.90	3.20	3.07
107	1.16097	19.90	3.20	3.07
108	1.16104	19.90	3.20	3.07
109	1.16111	19.90	3.20	3.07
110	1.16118	19.90	3.20	3.07
111	1.16125	19.90	3.20	3.07
112	1.16132	19.90	3.20	3.07
113	1.16139	19.90	3.20	3.07
114	1.16146	19.90	3.20	3.07
115	1.16153	19.90	3.20	3.07
116	1.16160	19.90	3.20	3.07
117	1.16167	19.90	3.20	3.07
118	1.16174	19.90	3.20	3.07
119	1.16181	19.90	3.20	3.07
120	1.16187	19.90	3.20	3.07
121	1.16194	19.90	3.20	3.07
122	1.16201	19.90	3.20	3.07
123	1.16208	19.90	3.20	3.07
124	1.16215	19.90	3.20	3.07
125	1.16222	19.90	3.20	3.07
126	1.16229	19.90	3.20	3.07
127	1.16236	19.90	3.20	3.07
128	1.16243	19.90	3.20	3.07
129	1.16250	19.90	3.20	3.07
130	1.16257	19.90	3.20	3.07
131	1.16264	19.90	3.20	3.07
132	1.16271	19.90	3.20	3.07
133	1.16278	19.90	3.20	3.07
134	1.16285	19.90	3.20	3.07
135	1.16292	19.90	3.20	3.07
136	1.16299	19.90	3.20	3.07
137	1.16306	19.90	3.20	3.07
138	1.16312	19.90	3.20	3.07
139	1.16319	19.90	3.20	3.07
140	1.16326	19.90	3.20	3.07
141	1.16333	19.90	3.20	3.07
142	1.16340	19.90	3.20	3.07
143	1.16347	19.90	3.20	3.07
144	1.16354	19.90	3.20	3.07
145	1.16361	19.90	3.20	3.07
146	1.16368	19.90	3.20	3.07
147	1.16375	19.90	3.20	3.07
148	1.16382	19.90	3.20	3.07
149	1.16389	19.90	3.20	3.07
150	1.16396	19.90	3.20	3.07

Golder Associates Inc. 3730 Chamblee Tucker Rd. Atlanta, GA 30341 ph.(770)496-1893	Pumping test analysis Theis analysis method Unconfined aquifer	Date: 10-28-98	Page 5
		Project: Solutia/RFI/AL	
		Evaluated by: CDH	

Pumping Test No. IW-14	Test conducted on: 10-12-98
PZR-5	PZR-5
Discharge 0.25 U.S.gal/min	Distance from the pumping well 12.50 ft
Static water level: 16.70 ft below datum	

	Pumping test duration [d]	Water level [ft]	Drawdown [ft]	Corrected drawdown [ft]
151	1.16403	19.90	3.20	3.07
152	1.16410	19.90	3.20	3.07
153	1.16417	19.90	3.20	3.07
154	1.16424	19.90	3.20	3.07
155	1.16431	19.90	3.20	3.07
156	1.16437	19.90	3.20	3.07
157	1.16444	19.90	3.20	3.07
158	1.16451	19.90	3.20	3.07
159	1.16458	19.90	3.20	3.07
160	1.16465	19.90	3.20	3.07
161	1.16472	19.90	3.20	3.07
162	1.16479	19.90	3.20	3.07
163	1.16486	19.90	3.20	3.07
164	1.16493	19.90	3.20	3.07
165	1.16500	19.90	3.20	3.07
166	1.16507	19.90	3.20	3.07
167	1.16514	19.90	3.20	3.07
168	1.16521	19.90	3.20	3.07
169	1.16528	19.90	3.20	3.07
170	1.16535	19.90	3.20	3.07
171	1.16542	19.90	3.20	3.07
172	1.16549	19.90	3.20	3.07
173	1.16556	19.90	3.20	3.07
174	1.16563	19.90	3.20	3.07
175	1.16569	19.90	3.20	3.07
176	1.16576	19.90	3.20	3.07
177	1.16583	19.90	3.20	3.07
178	1.16590	19.90	3.20	3.07
179	1.16597	19.90	3.20	3.07
180	1.16604	19.90	3.20	3.07
181	1.16611	19.90	3.20	3.07
182	1.16618	19.90	3.20	3.07
183	1.16625	19.90	3.20	3.07
184	1.16632	19.90	3.20	3.07
185	1.16639	19.90	3.20	3.07
186	1.16646	19.90	3.20	3.07
187	1.16653	19.90	3.20	3.07
188	1.16660	19.90	3.20	3.07
189	1.16667	19.90	3.20	3.07
190	1.16674	19.90	3.20	3.07
191	1.16681	19.90	3.20	3.07
192	1.16688	19.90	3.20	3.07
193	1.16694	19.90	3.20	3.07
194	1.16701	19.90	3.20	3.07
195	1.16708	19.90	3.20	3.07
196	1.16715	19.90	3.20	3.07
197	1.16722	19.90	3.20	3.07
198	1.16729	19.90	3.20	3.07
199	1.16736	19.90	3.20	3.07
200	1.16743	19.90	3.20	3.07

Golder Associates Inc. 3730 Chamblee Tucker Rd. Atlanta, GA 30341 ph.(770)496-1893	Pumping test analysis Theis analysis method Unconfined aquifer	Date: 10-28-98	Page 6
		Project: Solutia/RFI/AL	
		Evaluated by: CDH	

Pumping Test No. IW-14	Test conducted on: 10-12-98
PZR-5	PZR-5
Discharge 0.25 U.S.gal/min	Distance from the pumping well 12.50 ft

Static water level: 16.70 ft below datum

	Pumping test duration [d]	Water level [ft]	Drawdown [ft]	Corrected drawdown [ft]
201	1.16750	19.90	3.20	3.07
202	1.16757	19.90	3.20	3.07
203	1.16764	19.90	3.20	3.07
204	1.16771	19.90	3.20	3.07
205	1.16778	19.90	3.20	3.07
206	1.16785	19.90	3.20	3.07
207	1.16792	19.90	3.20	3.07
208	1.16799	19.90	3.20	3.07
209	1.16806	19.90	3.20	3.07
210	1.16813	19.90	3.20	3.07
211	1.16819	19.90	3.20	3.07
212	1.16826	19.90	3.20	3.07
213	1.16833	19.90	3.20	3.07
214	1.16840	19.90	3.20	3.07
215	1.16847	19.90	3.20	3.07
216	1.16854	19.90	3.20	3.07
217	1.16861	19.90	3.20	3.07
218	1.16868	19.90	3.20	3.07
219	1.16875	19.90	3.20	3.07
220	1.16882	19.90	3.20	3.07
221	1.16889	19.90	3.20	3.07
222	1.16896	19.90	3.20	3.07
223	1.16903	19.90	3.20	3.07
224	1.16910	19.90	3.20	3.07
225	1.16917	19.90	3.20	3.07
226	1.16924	19.90	3.20	3.07
227	1.16931	19.90	3.20	3.07
228	1.16938	19.90	3.20	3.07
229	1.16944	19.90	3.20	3.07
230	1.16951	19.90	3.20	3.07
231	1.20833	20.00	3.30	3.16
232	1.25000	20.10	3.40	3.26
233	1.29167	20.20	3.50	3.35
234	1.33333	20.40	3.70	3.53
235	1.37500	20.50	3.80	3.62
236	1.41667	20.60	3.90	3.71
237	1.45833	20.70	4.00	3.80
238	1.50000	20.80	4.10	3.89
239	1.54167	20.90	4.20	3.98
240	1.58333	20.90	4.20	3.98
241	1.62500	21.00	4.30	4.07
242	1.66667	21.10	4.40	4.16
243	1.70833	21.10	4.40	4.16
244	1.75000	21.20	4.50	4.25
245	1.79167	21.30	4.60	4.34
246	1.83333	21.40	4.70	4.42
247	1.87500	21.50	4.80	4.51
248	1.91667	21.60	4.90	4.60
249	1.95833	21.70	5.00	4.69
250	2.00000	21.70	5.00	4.69

Golder Associates Inc.
3730 Chamblee Tucker Rd.
Atlanta, GA 30341
ph.(770)496-1893

Pumping test analysis
Theis analysis method
Unconfined aquifer

Project: Solutia/RFI/AL

Evaluated by: CDH

Pumping Test No. IW 14	Test conducted on: 10-12-98
PZR-5	PZR-5
Discharge 0.25 U.S.gal/min	Distance from the pumping well 12.50 ft

Static water level: 16.70 ft below datum

	Pumping test duration [d]	Water level [ft]	Drawdown [ft]	Corrected drawdown [ft]
251	2.04167	21.80	5.10	4.77
252	2.08333	21.90	5.20	4.86
253	2.11076	21.90	5.20	4.86
254	2.11083	21.90	5.20	4.86
255	2.11090	21.90	5.20	4.86
256	2.11097	21.90	5.20	4.86
257	2.11104	21.90	5.20	4.86
258	2.11111	21.90	5.20	4.86
259	2.11118	21.90	5.20	4.86
260	2.11125	21.90	5.20	4.86
261	2.11132	21.90	5.20	4.86
262	2.14521	22.00	5.30	4.95
263	2.14528	22.00	5.30	4.95
264	2.14535	22.00	5.30	4.95
265	2.14542	22.00	5.30	4.95
266	2.14549	22.00	5.30	4.95
267	2.14556	22.00	5.30	4.95
268	2.14562	22.00	5.30	4.95
269	2.14569	22.00	5.30	4.95
270	2.14583	22.00	5.30	4.95
271	2.16667	22.00	5.30	4.95
272	2.18750	22.00	5.30	4.95
273	2.20833	22.10	5.40	5.04
274	2.22917	22.10	5.40	5.04
275	2.25000	22.10	5.40	5.04
276	2.27083	22.10	5.40	5.04
277	2.29167	22.10	5.40	5.04
278	2.31250	22.20	5.50	5.12
279	2.33333	22.20	5.50	5.12
280	2.35417	22.20	5.50	5.12
281	2.37500	22.20	5.50	5.12
282	2.39583	22.20	5.50	5.12
283	2.41667	22.20	5.50	5.12
284	2.43750	22.20	5.50	5.12
285	2.45833	22.20	5.50	5.12
286	2.47917	22.20	5.50	5.12
287	2.50000	22.30	5.60	5.21
288	2.52083	22.30	5.60	5.21
289	2.54167	22.30	5.60	5.21
290	2.56250	22.30	5.60	5.21
291	2.58333	22.30	5.60	5.21
292	2.60417	22.30	5.60	5.21
293	2.62500	22.30	5.60	5.21
294	2.64583	22.20	5.50	5.12
295	2.66667	22.20	5.50	5.12
296	2.68750	22.20	5.50	5.12
297	2.70833	22.20	5.50	5.12
298	2.75000	22.20	5.50	5.12
299	2.79167	22.20	5.50	5.12
300	2.83333	22.20	5.50	5.12

Golder Associates Inc. 3730 Chamblee Tucker Rd. Atlanta, GA 30341 ph.(770)496-1893	Pumping test analysis Theis analysis method Unconfined aquifer	Date: 10-28-98	Page 8
		Project: Solutia/RFI/AL	
		Evaluated by: CDH	

Pumping Test No. IW-14	Test conducted on: 10-12-98
PZR-5	PZR-5
Discharge 0.25 U.S.gal/min	Distance from the pumping well 12.50 ft
Static water level: 16.70 ft below datum	

	Pumping test duration [d]	Water level [ft]	Drawdown [ft]	Corrected drawdown [ft]
301	2.87500	22.30	5.60	5.21
302	2.91667	22.30	5.60	5.21
303	2.95833	22.30	5.60	5.21
304	3.00000	22.30	5.60	5.21
305	3.04167	22.30	5.60	5.21
306	3.08333	22.30	5.60	5.21
307	3.12500	22.30	5.60	5.21
308	3.16667	22.30	5.60	5.21
309	3.20833	22.30	5.60	5.21

Golder Associates

SUBJECT	Solutia / RFI / AL		
Job No. Ref.	983-3223	Made by CDH Checked JSR Reviewed JSR	Date December 1, 1998 Sheet 1 of 1

* Calculate groundwater flux across extraction systems using Darcy's Law.

South Landfill IW-5, 6, 7, 8, 9, 10, 11, 12, 13

Groundwater Flux

$Q = (9.4 \times 10^{-2}\ ft/day)(800 \times 30)(50/800)$

$= 9.4 \times 10^{-2}\ ft/day\ (24000\ ft^2)\ (0.0625)$

$= 141\ ft^3/day\ (7.48)$

$= 1054.68\ gal/day$

$Q = 384,958\ gal/yr.$ = Groundwater Flux

1996 total system discharge - 872,126 gallons

Q = Flow $Q = kAi$
K = Hydraulic Conductivity
A = Cross-Sectional Area
i = hydraulic gradient

A = 800' in aerial extent
30' of saturated aquifer

i - determined from Sept 1998 shallow potentiometric surface map

k - from RFI/CS results

Plant Site - IW-14, 15

Groundwater Flux

$Q = kAi$

$Q = (3.0 \times 10^{-2}\ ft/day)(150' \times 40')\ (30/800)$

$= (3.0 \times 10^{-2} ft/day)(6000\ ft^2)\ (0.0375)$

$= 6.75\ ft^3/day\ (7.48)$

$= 50.49\ gal/day$

$= 18,429\ gal/yr$ = Groundwater Flux

* 1996 total system discharge = 486,286 gallons

A = 150' aerial extent
40' saturated aquifer

* Note - IW-15 not reported after 1997, so IW-14 discharge was doubled to estimate the total 1996 system discharge

---

OLD AL IW-16, 17, 18, 19, 20, 21

Groundwater Flux

$Q = (6 \times 10^{-2}\ ft/day)\ (150' \times 40')\ (20/1300)$

$Q = kAi$

$= (6 \times 10^{-2} ft/day)(1800\ ft^3)\ (0.0154)$

$= 166\ ft^3/day\ (7.48)$

$= 1244\ gal/day$

$= 454,1\ gal/yr$ = Groundwater Flux

1996 total system discharge - 668,141 gallons

A = 450' aerial extent
40' saturated aquifer

APPENDIX F

Geotechnical Laboratory Data

SOLUTIA / RFI-CS / AL
SUMMARY OF SOIL DATA

Sample Identification	Sample Type	Sample Depth	Soil Classification	Natural Moisture %	Atterberg Limits				Grain Size Distribution			Gs	Unit Weight		Permeability (cm/sec)	Porosity %
					L.L.	P.I.	P.I.	L.I.	% Finer No. 4 Sieve	% Finer No. 200 Sieve	% Finer .005 mm		Moisture %	Dry (lb/cuft)		
OWR - 1D	UD	20.0-22.0	CL	16.6	35	17	18	-0.03	91.3	53.8	33.0	2.70	16.6	110.8	6.6E-08	34
OWR - 1D	UD	60.0-62.0	MH	37.5	55	31	24	0.28	84.3	70.3	48.0	2.76	37.5	83.6	8.0E-09	51
OWR - 2D	UD	20.0-22.0	SC	13.8	32	17	15	-0.24	87.3	36.4	26.5	2.74	13.8	121.6	8.8E-07	29
OWR - 2D	UD	80.0-82.0	CH	35.9	63	31	32	0.16	100.0	87.3	56.5	2.82	35.9	86.6	1.7E-08	51
OWR - 2D	UD	100.0-102.0'	MH	36.9	59	32	27	0.18	100.0	85.0	47.0	2.79	36.9	82.4	2.5E-07	53
OWR - 3D	UD	60.0-62.0	ML	23.5	NP	NP	NP	NP	100.0	77.4	30.0	2.82	23.5	100.0	1.7E-06	43
OWR - 4D	UD	19.0-21.0	CH	29.0	51	28	23	0.03	100.0	64.4	44.0	2.77	29.0	94.0	8.7E-07	46
OWR - 4D	UD	40.0-42.0	CH	40.4	76	34	42	0.16	100.0	96.8	82.0	2.84	40.4	81.8	5.7E-08	54
OWR - 4D	UD	60.0-62.0	MH	43.7	55	31	24	0.51	100.0	97.4	56.5	2.79	43.7	77.1	2.6E-07	56
OWR - 4D	UD	80.0-82.0	CH	42.2	53	21	32	0.68	100.0	93.1	69.0	2.79	42.2	78.6	3.6E-08	55
OWR - 5D	UD	20.0-22.0	MH	26.6	51	33	18	-0.33	100.0	71.9	24.5	2.89	-	-	-	-
OWR - 5D	UD	38.0-40.0	ML	33.3	49	36	13	-0.23	100.0	77.9	34.0	2.84	33.3	90.3	1.7E-06	49
OWR - 5D	UD	60.0-65.0	MH	43.1	56	31	25	0.47	100.0	99.5	54.5	2.68	43.1	77.3	1.2E-06	54
OWR - 6D	UD	20.0-22.0	CH	27.4	64	32	32	-0.13	100.0	85.4	68.0	2.82	27.4	97.5	1.1E-07	45
OWR - 6D	UD	23.0-25.0	CH	32.5	73	29	44	0.08	100.0	94.4	83.0	2.70	32.5	89.6	1.8E-08	47
OWR - 6D	UD	60.0-62.0	MH	46.1	61	32	29	0.48	100.0	80.2	64.0	2.83	46.1	77.6	4.4E-08	56
OWR - 7D	UD	28.0-29.5	CH	28.0	51	27	24	0.06	98.6	72.4	54.5	2.85	28.0	96.8	3.9E-08	46

ABBREVIATIONS: LIQUID LIMIT (LL)
PLASTIC LIMIT (PL)
PLASTICITY INDEX (PI)
LIQUIDITY INDEX (LI)
SPECIFIC GRAVITY (Gs)
MOISTURE (Mc)

NOTES: UD = UNDISTURBED SAMPLE

SOLUTIA / RFI-CS / AL
SUMMARY OF SOIL DATA

Sample Identification	Sample Type	Sample Depth	Soil Classification	Natural Moisture %	Atterberg Limits				Grain Size Distribution			Gs	Unit Weight		Permeability (cm/sec)	Porosty %
					L.L.	P.L.	P.I.	L.I.	% Finer No. 4 Sieve	% Finer No. 200 Sieve	% Finer .005 mm		Moisture %	Dry (lb/cuft)		
OWR - 7D	UD	40.0-42.0'	CH	30.0	67	30	37	0.01	100.0	96.7	71.8	2.87	30.0	93.1	4.0E-08	48
OWR - 7D	UD	60.0-62.0'	CH	30.9	53	29	24	0.09	100.0	88.9	61.0	2.79	30.9	85.6	1.1E-06	51
OWR - 1S	UD	30.0-32.0'	CH	29.5	52	26	26	0.01	100.0	83.1	62.3	2.78	29.5	95.3	3.8E-08	45
OWR - 2S	UD	30.0-32.0'	SM	17.9	35	25	10	-0.67	99.7	41.3	29.5	2.71	17.9	108.7	3.2E-07	36
OWR - 3S	UD	30.0-32.0'	CH	39.1	77	32	45	0.15	100.0	92.0	79.3	2.84	39.1	84.4	4.9E-08	52
OWR - 8S	UD	20.0-22.0'	ML	22.4	48	28	20	-0.28	98.1	63.1	44.5	2.76	22.4	102.8	1.0E-07	40
OWR - 8S	UD	30.0-32.0'	MH	31.8	54	31	23	0.06	93.7	64.6	48.5	2.80	31.8	93.6	3.8E-08	47
OWR - 9S	UD	20.0-22.0'	MH	28.0	66	35	31	-0.22	86.1	61.2	53.0	2.83	28.0	97.0	1.3E-07	45
OWR - 9S	UD	40.0-42.0'	ML	21.3	35	27	8	-0.71	81.1	53.7	30.5	2.82	21.3	100.2	9.5E-07	43
PZR - 1	UD	40.0-42.0'	ML	22.6	NP	NP	NP	NP	100.0	60.5	18.0	2.82	22.6	101.1	4.3E-05	43
PZR - 2	UD	58.0-60.0'	ML	24.1	43	30	13	-0.49	100.0	73.9	24.5	2.81	24.1	99.9	1.3E-07	43
PZR - 3	UD	20.0-22.0'	CH	25.3	53	28	25	-0.10	98.0	76.4	58.0	2.77	25.3	98.6	2.0E-07	43
PZR - 3	UD	55.0-57.0'	ML	28.2	47	30	17	-0.09	100.0	88.8	49.0	2.79	28.2	94.7	8.1E-05	46
PZR - 4	UD	58.0-60.0'	ML	31.0	37	29	8	0.30	100.0	76.4	30.0	2.73	31.0	88.7	3.6E-05	48
PZR - 5	UD	40.0-42.0'	CL	16.9	29	19	10	-0.23	98.5	60.4	28.0	2.73	16.9	112.7	3.3E-08	34
PZR - 6	UD	20.0-22.0'	CL	15.9	34	21	13	-0.36	100.0	75.8	38.5	2.74	15.9	113.4	8.2E-08	34
PZR - 6	UD	39.0-41.0'	ML	17.2	36	25	11	-0.67	100.0	62.5	23.0	2.87	17.2	105.7	4.2E-07	41

ABBREVIATIONS: LIQUID LIMIT (LL)
PLASTIC LIMIT (PL)
PLASTICITY INDEX (PI)
LIQUIDITY INDEX (LI)
SPECIFIC GRAVITY (Gs)
MOISTURE (Mc)

NOTES: UD = UNDISTURBED SAMPLE

ATTERBERG LIMITS
ASTM D-4318

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR - 1D / -
PROJECT NUMBER	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	20.0 - 22.0'

SAMPLE PREPARATION
Wet or Dry: Dry Minus #40 Sieve: Yes

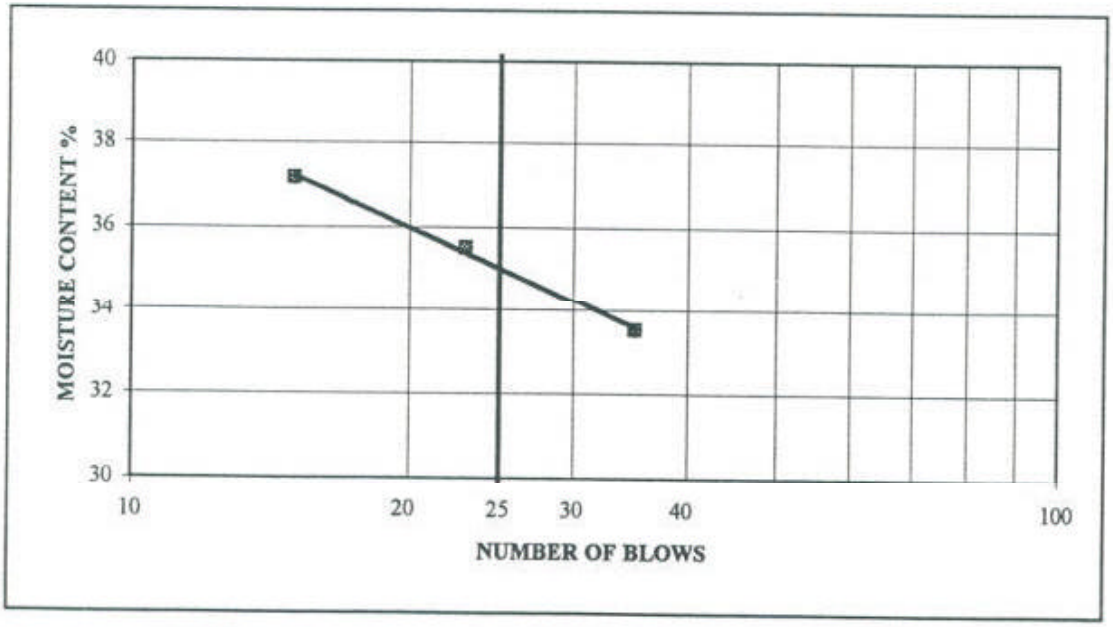
PLASTIC LIMIT DETERMINATION

					NATURAL MOISTURE
Weight of Wet Soil & Tare (gm)	(W1)	30.45	22.06	27.27	205.56
Weight of Dry Soil & Tare (gm)	(W2)	27.73	20.51	25.01	183.72
Weight of Tare (gm)	(W3)	11.98	11.40	11.70	51.85
Weight of Water (gm)	(W4=W1-W2)	2.72	1.55	2.26	21.84
Weight of Dry Soil (gm)	(W5=W2-W3)	15.75	9.11	13.31	131.87
Water Content %	(W4/W5)*100	17.27	17.01	16.98	16.56

LIQUID LIMIT DETERMINATION

Number of Blows		35	23	15
Weight of Wet Soil & Tare (gm)	(W6)	17.75	19.84	16.85
Weight of Dry Soil & Tare (gm)	(W7)	14.37	15.76	13.45
Weight of Tare (gm)	(W8)	4.29	4.27	4.30
Weight of Water (gm)	(W9=W6-W7)	3.38	4.08	3.40
Weight of Dry Soil (gm)	(W10=W7-W8)	10.08	11.49	9.15
Water Content %	(W9/W10)*100	33.53	35.51	37.16

NOTE:



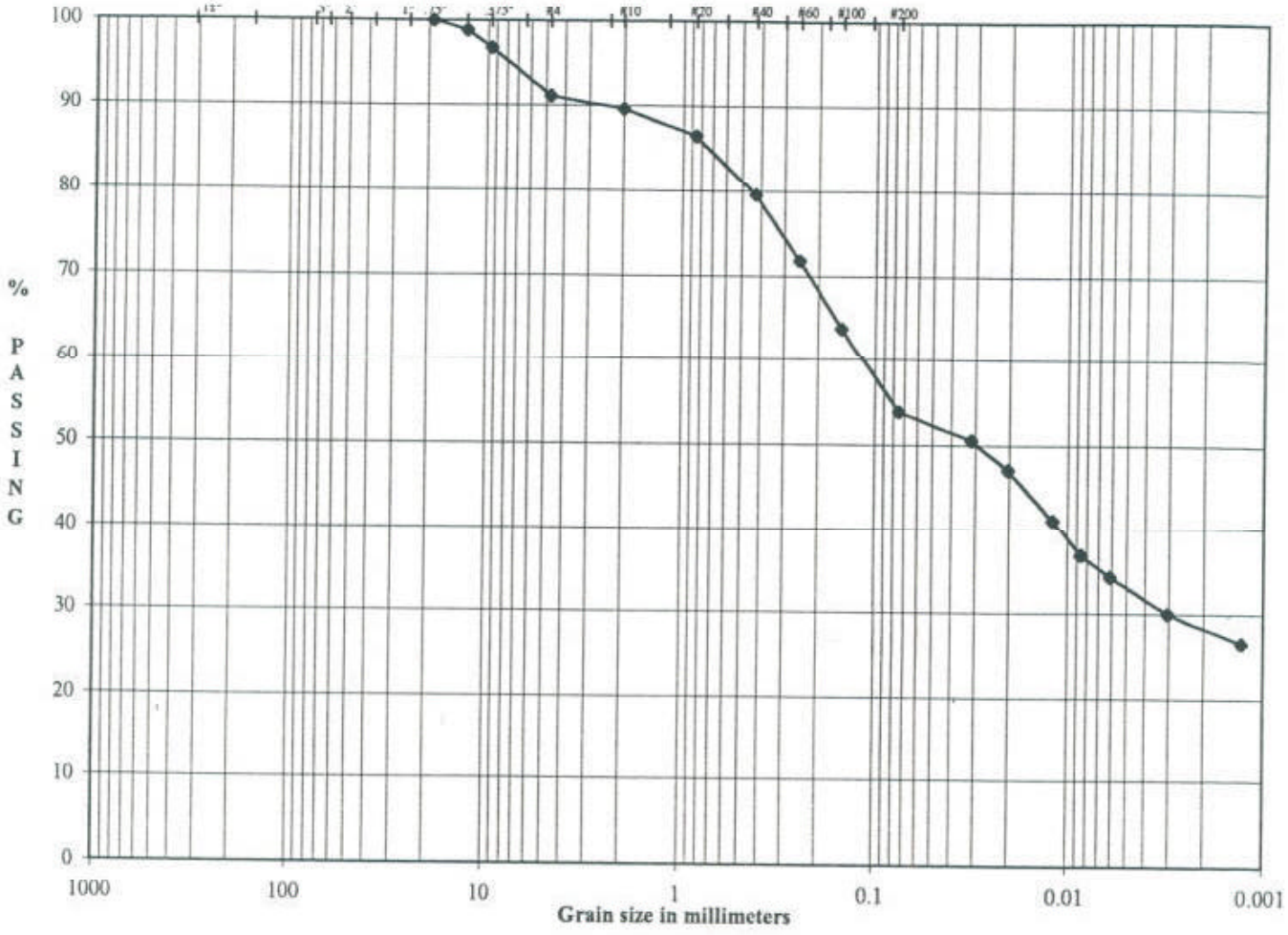
LIQUID LIMIT (WI)	35.03	35
PLASTIC LIMIT (Wp)	17.09	17
PLASTICITY INDEX (Ip)		18
LIQUIDITY INDEX (I)		-0.03
MOISTURE CONTENT		16.56

DESCRIPTION: Yellowish Brown and Black, SILTY CLAY, and medium to fine sand, little fine gravel.

USCS: CL

TECH	GM
DATE	6/8/98
CHECK	
REVIEW	

PARTICLE SIZE DISTRIBUTION ASTM D 421 AND D 422
US STANDARD SIEVE OPENING SIZES



Boulders	Cobbles	Coarse	Fine	Cor	Med	Fine	SILT OR CLAY
		Gravel		SAND			FINES

SAMPLE ID	OWR - 1D
SAMPLE TYPE	UD
SAMPLE DEPTH	20.0 - 22.0'

LL	35
PL	17
PI	18

DESCRIPTION	Yellowish Brown and Black, SILTY CLAY, and medium to fine sand, little fine gravel.
USCS	CL

SOLUTIA / RFI-CS / AL
983-3223

TECH	JDR
DATE	6/4/98
CHECK	
REVIEW	

ASTM GRAIN SIZE ANALYSIS
ASTM C117, C136, D421, D422, D1140 and D2217

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR - 1D -
PROJECT NO.	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	20.0 - 22.0'

AS RECEIVED WATER CONTENT

Tare No.		-
Wt. Wet Soil & Tare (gm)	(W1)	205.56
Wt. Dry Soil & Tare (gm)	(W2)	183.72
Weight of Tare (gm)	(W3)	51.85
Weight of Water (gm)	(W4=W1-W2)	21.84
Weight of Dry Soil (gm)	(W5=W2-W3)	131.87
Moisture Content (%)	(W4/W5)*100	16.56

Hygroscopic Moisture For Sieve Sample

Wet Soil & Tare (gm)	62.69
Dry Soil & Tare (gm)	62.28
Tare Weight (gm)	3.17
Moisture Content (%)	0.69

Total Weight of Sample Used For Sieve Analysis Corrected For Hygroscopic Moisture

Weight + Tare, Before Separating On The #4 Sieve (gm)	783.86	
Tare Weight (gm)	236.17	
Total Weight (gm)	543.92	(W6)

Plus #4 Material Sieve

TARE WEIGHT: 0.00

	(Wt+Tare)	(((Wt-Tare)/W6)*100)	%PASSING		
12.0"				12.0"	cobbles
3.0"				3.0"	coarse gravel
2.5"				2.5"	coarse gravel
2.0"				2.0"	coarse gravel
1.5"				1.5"	coarse gravel
1.0"				1.0"	coarse gravel
0.75"	0.00	0.0	100.0	0.75"	fine gravel
0.50"	5.84	1.1	98.9	0.50"	fine gravel
0.375"	17.39	3.2	96.8	0.375"	fine gravel
#4	48.71	9.0	91.0	#4	coarse sand

HYDROMETER ANALYSIS

Specific Gravity	(assumed)	
Specific Gravity	(tested)	2.701
Amount Dispersing Agent (ml)		125.00
Type Dispersion Device		Mechanical
Length of Dispersion Period		1 Minute

Weight of Sample Used For Hydrometer Test

Weight of Sample Wet or Dry (gm)	53.02
Calculated Dry Wt. used in test (gm)	52.65
Hydrometer Bulb Number	624378
% Pass #4 Sieve For Whole Sample	91.04

TARE WEIGHT: 203.14

HYDROMETER BACKSIEVE (Percent Passing #10 - #200 Sieves)

	(Wt+Tare)	Cumul Wt. Retained	% PASSING		
#10	204.01	0.87	89.5	#10	medium sand
#20	205.79	2.65	86.5	#20	medium sand
#40	209.82	6.68	79.5	#40	fine sand
#60	214.30	11.16	71.7	#60	fine sand
#100	218.88	15.74	63.8	#100	fine sand
#200	224.67	21.53	53.8	#200	fines

HYDROMETER CALCULATIONS

DATE	TIME	ET (min)	READING R	TEMP T	TEMP.COR. K	HYD.COR. Cc	READING C	EFFECTIVE LENGTH	A
6/5/98	8:17								
6/5/98	8:19	2.00	35.0	22.50	0.013	5.50	29.50	11.5	0.99
6/5/98	8:22	5.00	33.0	22.50	0.013	5.50	27.50	11.9	0.99
6/5/98	8:32	15.00	29.5	22.50	0.013	5.50	24.00	12.4	0.99
6/5/98	8:47	30.00	27.0	22.50	0.013	5.50	21.50	12.9	0.99
6/5/98	9:17	60.00	25.5	22.50	0.013	5.50	20.00	13.0	0.99
6/5/98	12:27	250.00	23.0	22.50	0.013	5.50	17.50	13.5	0.99
6/6/98	8:17	1440.00	21.0	22.50	0.013	5.50	15.50	13.8	0.99

GRAIN SIZE PERCENTAGES

Particle Diameter	% PASSING		
0.0314	50.5	% COBBLES	0.00
0.0202	47.1	% COARSE GRAVEL	0.00
0.0119	41.1	% FINE GRAVEL	8.96
0.0086	36.8	% COARSE SAND	1.50
0.0061	34.2	% MEDIUM SAND	10.05
0.0030	30.0	% FINE SAND	25.68
0.0013	26.5	% FINES	53.82
		% TOTAL SAMPLE	100.00

Description: Yellowish Brown and Black, SILTY CLAY, and medium to fine sand, little fine gravel.

USCS: CL

35	LL
17	PL
18	PI

TECH	JDR
DATE	6/4/98
CHECK	
REVIEW	

UNIT WEIGHT DETERMINATION
ASTM D 2937

PROJECT NAME	SOLUTIA / RFI-CS / AL	**SAMPLE ID**	OWR - 1D
PROJECT NUMBER	983-3223	**SAMPLE TYPE**	UD
		SAMPLE DEPTH	20.0-22.0'

WEIGHT OF SOIL (g)	670.78
LENGTH OF SAMPLE (in)	3.042
DIAMETER OF SAMPLE (in)	2.877
AREA OF SAMPLE (in^2)	6.50
VOLUME OF SAMPLE (in^3)	19.78
VOLUME OF SAMPLE (cm^3)	324.13

WET UNIT WEIGHT (pcf)	129.2

WEIGHT WET SOIL & TARE (g)	205.56
WEIGHT DRY SOIL & TARE (g)	183.72
WEIGHT OF WATER (g)	21.84
WEIGHT OF TARE (g)	51.85
WEIGHT OF DRY SOIL (g)	131.87
WATER CONTENT (%)	16.56

DRY UNIT WEIGHT (pcf)	110.8

SPECIFIC GRAVITY	2.701
VOLUME OF SOLIDS (cm^3)	213.06
VOLUME OF VOIDS (cm^3)	111.07
POROSITY (%)	34

TECH	GM
DATE	6/10/98
CHECK	
REVIEW	

FLOW PUMP #2

FLEXIBLE WALL PERMEABILITY
ASTM D 5084
METHOD D, CONSTANT RATE OF FLOW

PROJECT TITLE	SOLUTIA / RFI-CS / AL		
PROJECT NUMBER	983-3223		
SAMPLE ID	OWR - 1D	-	20.0-22.0'
SAMPLE TYPE	UD		

BOARD #	1
CELL #	1
Flow Pump Speed	10
Technician	GM

COMMENTS

Sample Data, Initial			
Height, inches	3.042	B-Value, f	1.00
Diameter, inches	2.877	Cell Pres.	94.0
Area, cm²	41.94	Bot. Pres.	80.0
Volume, cm³	324.06	Top Pres.	80.0
Mass, g	670.78	Tot. B.P.	80.0
Moisture Content, %	16.56	Head, max.	75.97
Dry Density, pcf	110.81	Head, min.	75.97
Spec. Gravity	2.701	Max. Grad.	9.87
Volume Solids, cm³	213.06	Min. Grad.	9.87
Volume Voids, cm³	111.00		
Void Ratio	0.52		
Saturation, %	85.9%		

Sample Data, Final	
Height, inches	3.030
Diameter, inches	2.871
Area, cm²	41.77
Volume, cm³	321.44
Mass, g	675.81
Moisture Content, %	18.14
Dry Density, pcf	111.05
Volume Solids, cm³	211.79
Volume Voids, cm³	109.65
Void Ratio	0.52
Saturation, %	94.6%

WATER CONTENTS		Trimmings Initial	Sample Final
Wt Soil & Tare, i	g	205.56	726.34
Wt Soil & Tare, f	g	183.72	622.61
Wt Tare	g	51.85	50.77
Wt Moisture Lost	g	21.84	103.73
Wt Dry Soil	g	131.87	571.84
Water Content	%	16.56%	18.14%

Flow Pump Rate: 2.80E-05 cm³/sec

USCS: CL

DESCRIPTION: Yellowish Brown and Black, SILTY CLAY, and medium to fine sand, little fine gravel

TIME FUNCTIONS, SECONDS								cP				
DATE	DAY	HOUR	MIN	TEMP (°C)	dt (min)	dt,acc (min)	dt (sec)	dtacc (sec)	Reading (psi)	Head (cm)	Gradient	Permeability (cm/sec)
6/5/98	35951	15	30	21.3	0	0	0	)	1.08	75.97	9.87	6.6E-08
6/5/98	35951	15	35	21.3	5	5	300	300	1.08	75.97	9.87	6.6E-08
6/5/98	35951	15	40	21.3	5	10	300	600	1.08	75.97	9.87	6.6E-08
6/5/98	35951	15	45	21.3	5	15	300	900	1.08	75.97	9.87	6.6E-08
6/5/98	35951	15	50	21.3	5	20	300	1200	1.08	75.97	9.87	6.6E-08 *
6/5/98	35951	15	55	21.3	5	25	300	1500	1.08	75.97	9.87	6.6E-08 *
6/5/98	35951	16	0	21.3	5	30	300	1800	1.08	75.97	9.87	6.6E-08 *

*TRANSCRIBED FROM ORIGINAL DATA SHEETS

PERMEABILITY REPORTED AS ** 6.6E-08 cm/sec **

DATE 6/5/98
CHECK
REVIEW

ATTERBERG LIMITS
ASTM D-4318

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR-1D -
PROJECT NUMBER	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	60.0 - 62.0'

SAMPLE PREPARATION

Wet or Dry: Dry

Minus #40 Sieve: Yes

PLASTIC LIMIT DETERMINATION

Weight of Wet Soil & Tare (gm)	(W1)	21.36	21.20	22.19
Weight of Dry Soil & Tare (gm)	(W2)	19.01	18.90	19.80
Weight of Tare (gm)	(W3)	11.42	11.43	11.99
Weight of Water (gm)	(W4=W1-W2)	2.35	2.30	2.39
Weight of Dry Soil (gm)	(W5=W2-W3)	7.59	7.47	7.81
Water Content %	(W4/W5)*100	30.96	30.79	30.60

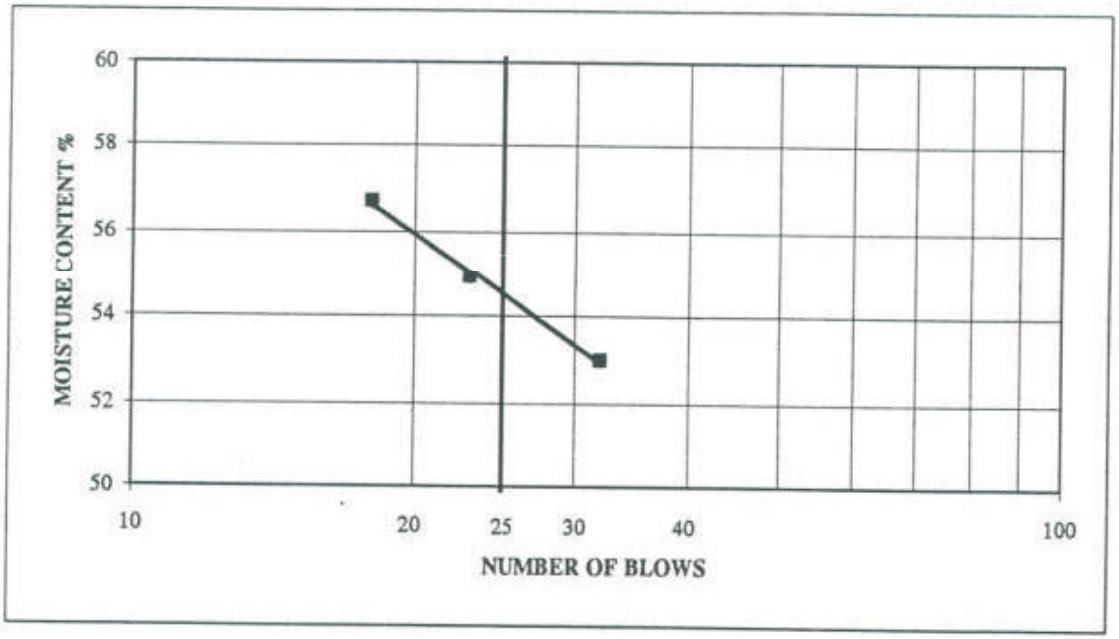
NATURAL MOISTURE

634.39
461.39
0.00
173.00
461.39
37.50

LIQUID LIMIT DETERMINATION

Number of Blows		32	23	18
Weight of Wet Soil & Tare (gm)	(W6)	17.54	17.32	19.57
Weight of Dry Soil & Tare (gm)	(W7)	12.95	12.72	14.92
Weight of Tare (gm)	(W8)	4.29	4.34	6.72
Weight of Water (gm)	(W9=W6-W7)	4.59	4.60	4.65
Weight of Dry Soil (gm)	(W10=W7-W8)	8.66	8.38	8.20
Water Content %	(W9/W10)*100	53.00	54.89	56.71

NOTE:



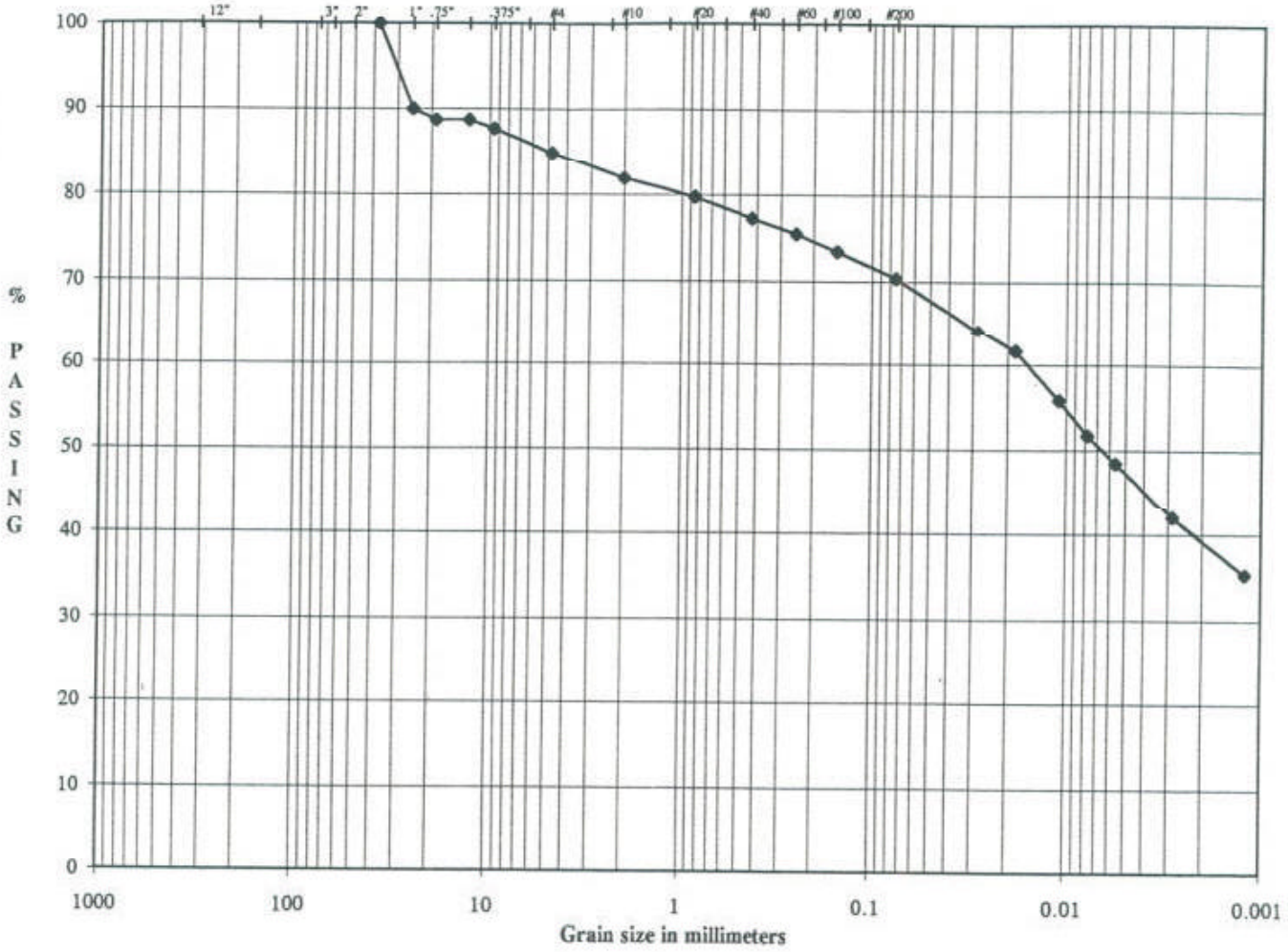
LIQUID LIMIT (WI)	54.52	55
PLASTIC LIMIT (Wp)	30.78	31
PLASTICITY INDEX (Ip)		24
LIQUIDITY INDEX (I)		0.28
MOISTURE CONTENT		37.50

DESCRIPTION: Yellowish Brown, CLAYEY SILT, some coarse to fine gravel, some coarse to fine sand.

USCS: MH

TECH	TF/SW
DATE	6/25/98
CHECK	
REVIEW	

PARTICLE SIZE DISTRIBUTION ASTM D 421 AND D 422
US STANDARD SIEVE OPENING SIZES



Boulders	Cobbles	Gravel: Coarse	Gravel: Fine	SAND: Coarse	SAND: Med	SAND: Fine	FINES: SILT OR CLAY

SAMPLE ID	OWR - 1D
SAMPLE TYPE	UD
SAMPLE DEPTH	60.0 - 62.0'

LL	55
PL	31
PI	24

DESCRIPTION	Yellowish Brown, CLAYEY SILT, some coarse to fine gravel, some coarse to fine sand.
USCS	MH

SOLUTIA / RFI-CS / AL
983-3223

TECH	JDR
DATE	6/24/98
CHECK	
REVIEW	

ASTM GRAIN SIZE ANALYSIS
ASTM C117, C136, D421, D422, D1140 and D2217

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR - 1D
PROJECT NO.	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	60.0 - 62.0'

AS RECEIVED WATER CONTENT

Tare No.		-
Wt. Wet Soil & Tare (gm)	(W1)	634.39
Wt. Dry Soil & Tare (gm)	(W2)	461.39
Weight of Tare (gm)	(W3)	0.00
Weight of Water (gm)	(W4=W1-W2)	173.00
Weight of Dry Soil (gm)	(W5=W2-W3)	461.39
Moisture Content (%)	(W4/W5)*100	37.50

Hygroscopic Moisture For Sieve Sample

Wet Soil & Tare (gm)	53.45
Dry Soil & Tare (gm)	48.31
Tare Weight (gm)	3.21
Moisture Content (%)	11.40

Total Weight of Sample Used For Sieve Analysis Corrected For Hygroscopic Moisture

Weight + Tare, Before Separating On The #4 Sieve (gm)	933.50	
Tare Weight (gm)	225.40	
Total Weight (gm)	635.66	(W6)

Plus #4 Material Sieve

TARE WEIGHT: 203.12

	(Wt+Tare)	(((Wt-Tare)/W6)*100)	%PASSING		
12.0"				12.0"	cobbles
3.0"				3.0"	coarse gravel
2.5"				2.5"	coarse gravel
2.0"				2.0"	coarse gravel
1.5"	203.12	0.0	100.0	1.5"	coarse gravel
1.0"	266.92	10.0	90.0	1.0"	coarse gravel
0.75"	275.22	11.3	88.7	0.75"	fine gravel
0.50"	275.22	11.3	88.7	0.50"	fine gravel
0.375"	281.79	12.4	87.6	0.375"	fine gravel
#4	299.64	15.2	84.8	#4	coarse sand

HYDROMETER ANALYSIS

Specific Gravity	(assumed)	
Specific Gravity	(tested)	2.761
Amount Dispersing Agent (ml)		125.00
Type Dispersion Device		Mechanical
Length of Dispersion Period		1 Minute

Weight of Sample Used For Hydrometer Test

Weight of Sample Wet or Dry (gm)	50.30
Calculated Dry Wt. used in test (gm)	50.54
Hydrometer Bulb Number	624378
% Pass #4 Sieve For Whole Sample	84.82

TARE WEIGHT: 203.14

HYDROMETER BACKSIEVE (Percent Passing #10 - #200 Sieves)

	(Wt+Tare)	Cumul Wt. Retained	% PASSING		
#10	204.90	1.76	81.9	#10	medium sand
#20	206.18	3.04	79.7	#20	medium sand
#40	207.62	4.48	77.3	#40	fine sand
#60	208.72	5.58	75.5	#60	fine sand
#100	209.94	6.80	73.4	#100	fine sand
#200	211.79	8.65	70.3	#200	fines

HYDROMETER CALCULATIONS

DATE	TIME	ET	READING	TEMP	TEMP.COR.	HYD.COR.	READING	EFFECTIVE	
6/25/98	9:49	(min)	R	T	K	Cc	C	LENGTH	A
6/25/98	9:51	2.00	44.5	23.00	0.013	5.50	39.00	9.9	0.98
6/25/98	9:54	5.00	43.0	23.00	0.013	5.50	37.50	10.2	0.98
6/25/98	10:04	15.00	39.5	23.00	0.013	5.50	34.00	10.7	0.98
6/25/98	10:19	30.00	37.0	23.00	0.013	5.50	31.50	11.2	0.98
6/25/98	10:49	60.00	35.0	23.00	0.013	5.50	29.50	11.5	0.98
6/25/98	13:59	250.00	31.0	23.00	0.013	5.50	25.50	12.2	0.98
6/26/98	9:49	1440.00	27.0	23.00	0.013	5.50	21.50	12.9	0.98

Particle Diameter	% PASSING
0.0283	64.1
0.0183	61.7
0.0108	55.9
0.0078	51.8
0.0056	48.5
0.0028	41.9
0.0012	35.4

GRAIN SIZE PERCENTAGES

% COBBLES	0.00
% COARSE GRAVEL	11.34
% FINE GRAVEL	3.84
% COARSE SAND	2.95
% MEDIUM SAND	4.56
% FINE SAND	7.00
% FINES	70.30
% TOTAL SAMPLE	100.00

Description: Yellowish Brown, CLAYEY SILT, some coarse to fine gravel, some coarse to fine sand.

USCS: MH

55	LL
31	PL
24	PI

TECH	JDR
DATE	6/24/98
CHECK	
REVIEW	

UNIT WEIGHT DETERMINATION
ASTM D 2937

PROJECT NAME	SOLUTIA / RFI-CS / AL	**SAMPLE ID**	OWR - 1D
PROJECT NUMBER	983-3223	**SAMPLE TYPE**	UD
		SAMPLE DEPTH	60.0-62.0'

WEIGHT OF SOIL (g)	634.39
LENGTH OF SAMPLE (in)	3.278
DIAMETER OF SAMPLE (in)	2.857
AREA OF SAMPLE (in^2)	6.41
VOLUME OF SAMPLE (in^3)	21.01
VOLUME OF SAMPLE (cm^3)	344.29

WET UNIT WEIGHT (pcf)	115.0

WEIGHT WET SOIL & TARE (g)	634.39
WEIGHT DRY SOIL & TARE (g)	461.39
WEIGHT OF WATER (g)	173.00
WEIGHT OF TARE (g)	0.00
WEIGHT OF DRY SOIL (g)	461.39
WATER CONTENT (%)	37.50

DRY UNIT WEIGHT (pcf)	83.6

SPECIFIC GRAVITY	2.761
VOLUME OF SOLIDS (cm^3)	167.10
VOLUME OF VOIDS (cm^3)	177.19
POROSITY (%)	51

TECH	GM
DATE	6/29/98
CHECK	GM
REVIEW	PWM

FLOW PUMP #1

FLEXIBLE WALL PERMEABILITY
ASTM D 5084
METHOD D, CONSTANT RATE OF FLOW

PROJECT TITLE	SOLUTIA / RFI-CS / AL		
PROJECT NUMBER	983-3123		
SAMPLE ID	OWR- 1D	-	60.0-62.0'
SAMPLE TYPE	UD		

BOARD #	7
CELL #	7
Flow Pump Speed	12
Technician	PWM

COMMENTS

Sample Data, Initial			
Height, inches	3.278	B-Value, f	1.00
Diameter, inches	2.857	Cell Pres.	112.0
Area, cm²	41.36	Bot. Pres.	70.0
Volume, cm³	344.37	Top Pres.	70.0
Mass, g	634.39	Tot. B.P.	70.0
Moisture Content, %	37.50	Head, max.	163.89
Dry Density, pcf	83.61	Head, min.	163.89
Spec. Gravity	2.761	Max. Grad.	20.07
Volume Solids, cm³	167.11	Min. Grad.	20.07
Volume Voids, cm³	177.26		
Void Ratio	1.06		
Saturation, %	97.6%		

Sample Data, Final	
Height, inches	3.215
Diameter, inches	2.770
Area, cm²	38.88
Volume, cm³	317.49
Mass, g	609.36
Moisture Content, %	32.07
Dry Density, pcf	90.68
Volume Solids, cm³	167.11
Volume Voids, cm³	150.38
Void Ratio	0.90
Saturation, %	98.4%

WATER CONTENTS		Trimmings Initial	Sample Final
Wt Soil & Tare, i	g	634.39	666.1[illegible]
Wt Soil & Tare, f	g	461.39	516.99
Wt Tare	g	0.00	51.82
Wt Moisture Lost	g	173.00	149.1[illegible]
Wt Dry Soil	g	461.39	465.1[illegible]
Water Content	%	37.50%	32.07%

Flow Pump Rate: 630E-06 cm³/sec

USCS: MH

DESCRIPTION: Yellowish Brown, CLAYEY SILT, some coarse to fine gravel, some coarse to fine sand.

TIME FUNCTIONS, SECONDS								dP				
DATE	DAY	HOUR	MIN	TEMP (°C)	dt (min)	dt,acc (min)	dt (sec)	dt,acc (sec)	Reading (psi)	Head (cm)	Gradient	Permeability (cm/sec)
6/25/98	3597[illegible]	12	20	20.4	0	0	0	0	2.33	163.89	20.07	8.0E-09
6/25/98	3597[illegible]	12	25	20.4	5	5	300	300	2.33	163.89	20.07	8.0E-09
6/25/98	3597[illegible]	12	30	20.4	5	10	300	600	2.33	163.89	20.07	8.0E-09
6/25/98	3597[illegible]	12	35	20.4	5	15	300	900	2.33	163.89	20.07	8.0E-09 *
6/25/98	3597[illegible]	12	40	20.4	5	20	300	1200	2.33	163.89	20.07	8.0E-09 *
6/25/98	3597[illegible]	12	45	20.4	5	25	300	1500	2.33	163.89	20.07	8.0E-09 *
6/25/98	3597[illegible]	12	50	20.4	5	30	300	1800	2.33	163.89	20.07	8.0E-09 *

*TRANSCRIBED FROM ORIGINAL DATA SHEETS

PERMEABILITY REPORTED AS ** 8.0E-09 cm/sec **

DATE 6/25/98
CHECK
REVIEW

ATTERBERG LIMITS
ASTM D-4318

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR - 2D -
PROJECT NUMBER	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	20.0 - 22.0'

SAMPLE PREPARATION

Wet or Dry: Dry

Minus #40 Sieve: Yes

PLASTIC LIMIT DETERMINATION

Weight of Wet Soil & Tare (gm)	(W1)	25.00	26.65	20.61
Weight of Dry Soil & Tare (gm)	(W2)	22.96	24.45	19.22
Weight of Tare (gm)	(W3)	11.26	11.74	11.22
Weight of Water (gm)	(W4=W1-W2)	2.04	2.20	1.39
Weight of Dry Soil (gm)	(W5=W2-W3)	11.70	12.71	8.00
Water Content %	(W4/W5)*100	17.44	17.31	17.38

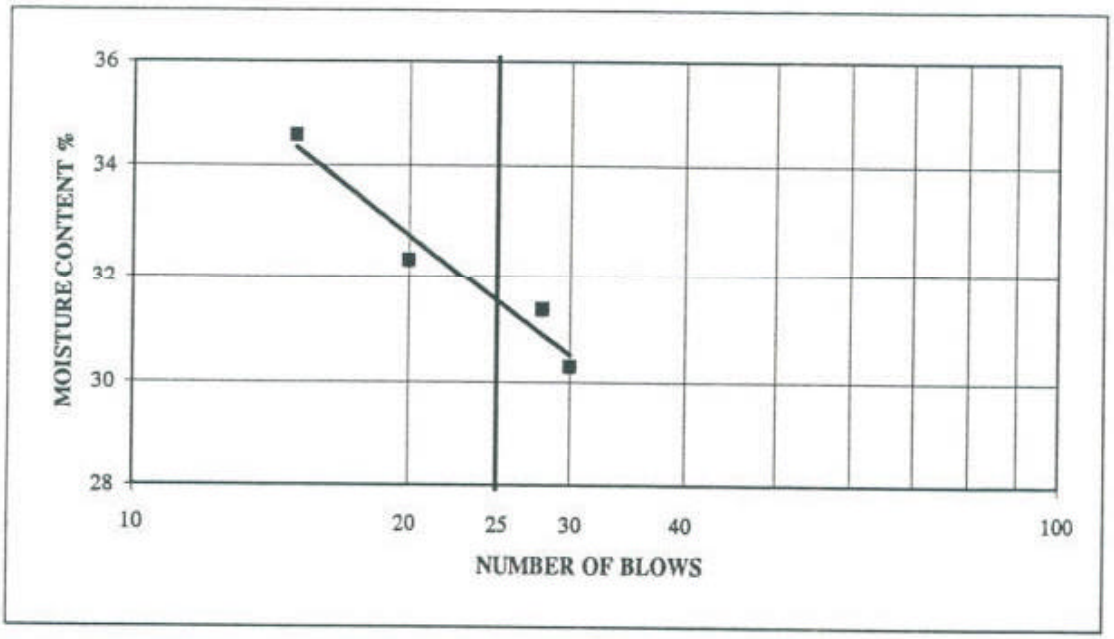
NATURAL MOISTURE

799.90
702.79
0.00
97.11
702.79
13.82

LIQUID LIMIT DETERMINATION

Number of Blows		30	28	20	15
Weight of Wet Soil & Tare (gm)	(W6)	18.38	16.56	17.35	18.18
Weight of Dry Soil & Tare (gm)	(W7)	15.10	13.63	14.16	14.61
Weight of Tare (gm)	(W8)	4.27	4.28	4.28	4.28
Weight of Water (gm)	(W9=W6-W7)	3.28	2.93	3.19	3.57
Weight of Dry Soil (gm)	(W10=W7-W8)	10.83	9.35	9.88	10.33
Water Content %	(W9/W10)*100	30.29	31.34	32.29	34.56

NOTE:



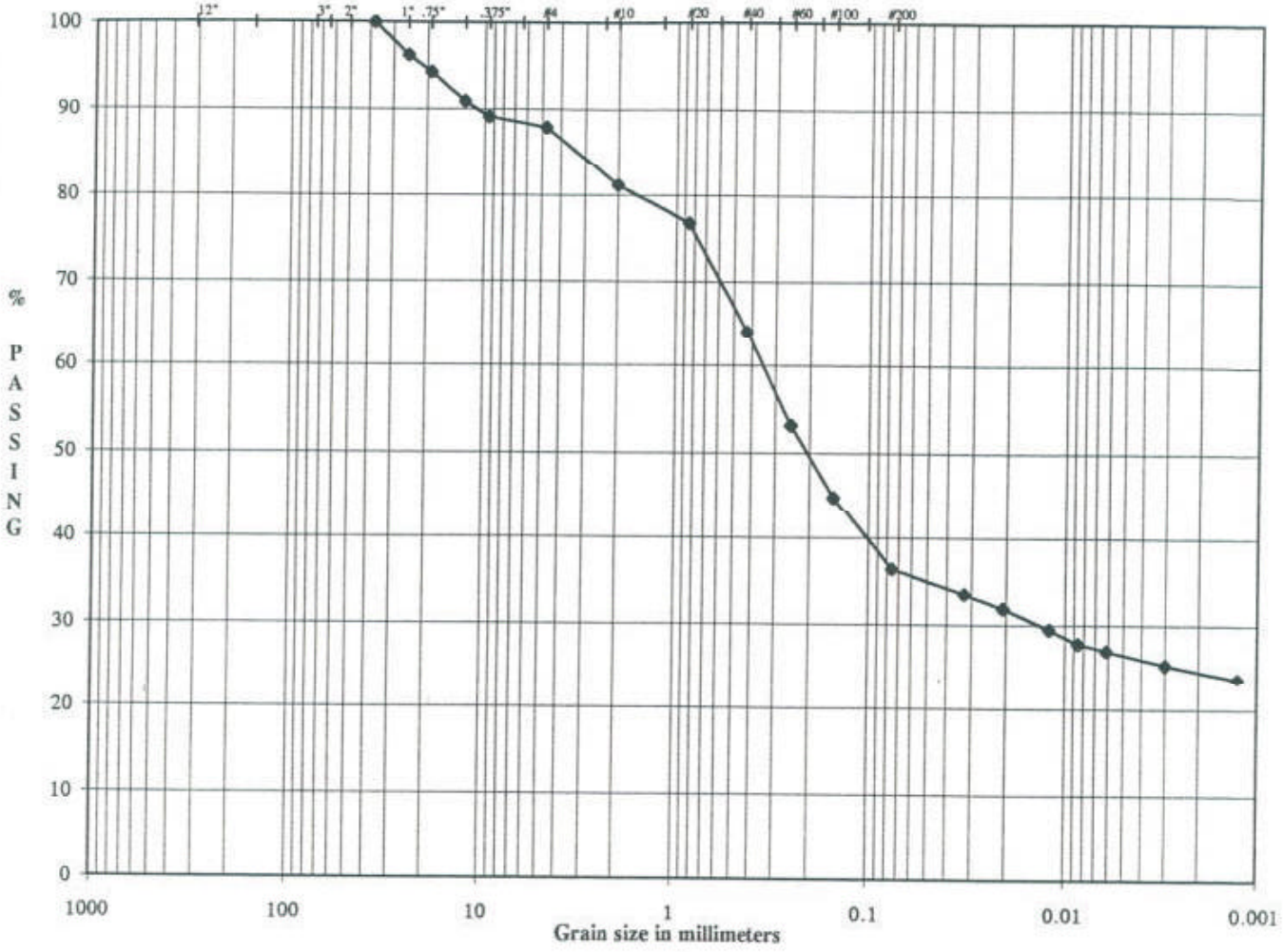
LIQUID LIMIT (WI)	31.51	32
PLASTIC LIMIT (Wp)	17.37	17
PLASTICITY INDEX (Ip)		15
LIQUIDITY INDEX (I)		-0.24
MOISTURE CONTENT		13.82

DESCRIPTION: Reddish Brown, COARSE TO FINE SAND, and silty clay, some coarse to fine gravel.

USCS: SC

TECH	TF
DATE	6/25/98
CHECK	
REVIEW	

PARTICLE SIZE DISTRIBUTION ASTM D 421 AND D 422
US STANDARD SIEVE OPENING SIZES



Boulders	Cobbles	Coarse	Fine	Cor	Med	Fine	SILT OR CLAY
		Gravel		SAND			FINES

SAMPLE ID	OWR - 2D
SAMPLE TYPE	UD
SAMPLE DEPTH	20.0 - 22.0'

LL	32
PL	17
PI	15

DESCRIPTION	Reddish Brown, COARSE TO FINE SAND, and silty clay, some coarse to fine gravel.
USCS	SC

SOLUTIA / RFI-CS / AL
983-3223

TECH	JDR
DATE	6/24/98
CHECK	
REVIEW	

ASTM GRAIN SIZE ANALYSIS
ASTM C117, C136, D421, D422, D1140 and D2217

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR - 2D -
PROJECT NO.	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	20.0 - 22.0'

AS RECEIVED WATER CONTENT

Tare No.		-
Wt. Wet Soil & Tare (gm)	(W1)	799.90
Wt. Dry Soil & Tare (gm)	(W2)	702.79
Weight of Tare (gm)	(W3)	0.00
Weight of Water (gm)	(W4=W1-W2)	97.11
Weight of Dry Soil (gm)	(W5=W2-W3)	702.79
Moisture Content (%)	(W4/W5)*100	13.82

Hygroscopic Moisture For Sieve Sample

Wet Soil & Tare (gm)	71.75
Dry Soil & Tare (gm)	70.99
Tare Weight (gm)	3.24
Moisture Content (%)	1.12

Total Weight of Sample Used For Sieve Analysis Corrected For Hygroscopic Moisture

Weight + Tare, Before Separating On The #4 Sieve (gm)	1129.90	
Tare Weight (gm)	234.50	
Total Weight (gm)	885.47	(W6)

Plus #4 Material Sieve

TARE WEIGHT: 203.12

	(Wt+Tare)	(((Wt-Tare)/W6)*100)	%PASSING		
12.0"				12.0"	cobbles
3.0"				3.0"	coarse gravel
2.5"				2.5"	coarse gravel
2.0"				2.0"	coarse gravel
1.5"	203.12	0.0	100.0	1.5"	coarse gravel
1.0"	236.50	3.8	96.2	1.0"	coarse gravel
0.75"	253.93	5.7	94.3	0.75"	fine gravel
0.50"	283.91	9.1	90.9	0.50"	fine gravel
0.375"	299.58	10.9	89.1	0.375"	fine gravel
#4	310.52	12.1	87.9	#4	coarse sand

HYDROMETER ANALYSIS

Specific Gravity	(assumed)	
Specific Gravity	(tested)	2.742
Amount Dispersing Agent (ml)		125.00
Type Dispersion Device		Mechanical
Length of Dispersion Period		1 Minute

Weight of Sample Used For Hydrometer Test

Weight of Sample Wet or Dry (gm)	53.83
Calculated Dry Wt. used in test (gm)	53.23
Hydrometer Bulb Number	624378
% Pass #4 Sieve For Whole Sample	87.87

TARE WEIGHT: 203.14

HYDROMETER BACKSIEVE (Percent Passing #10 - #200 Sieves)

	(Wt+Tare)	Cumul Wt. Retained	% PASSING		
#10	207.21	4.07	81.2	#10	medium sand
#20	209.90	6.76	76.7	#20	medium sand
#40	217.53	14.39	64.1	#40	fine sand
#60	224.17	21.03	53.2	#60	fine sand
#100	229.19	26.05	44.9	#100	fine sand
#200	234.32	31.18	36.4	#200	fines

HYDROMETER CALCULATIONS

DATE	TIME	ET (min)	READING R	TEMP T	TEMP.COR. K	HYD.COR. Cc	READING C	EFFECTIVE LENGTH	A
6/25/98	9:57								
6/25/98	9:59	2.00	26.0	23.00	0.013	5.50	20.50	13.0	0.99
6/25/98	10:02	5.00	25.0	23.00	0.013	5.50	19.50	13.2	0.99
6/25/98	10:12	15.00	23.5	23.00	0.013	5.50	18.00	13.3	0.99
6/25/98	10:27	30.00	22.5	23.00	0.013	5.50	17.00	13.5	0.99
6/25/98	10:57	60.00	22.0	23.00	0.013	5.50	16.50	13.7	0.99
6/25/98	14:07	250.00	21.0	23.00	0.013	5.50	15.50	13.8	0.99
6/26/98	9:57	1440.00	20.0	23.00	0.013	5.50	14.50	14.0	0.99

Particle Diameter	% PASSING
0.0326	33.5
0.0208	31.9
0.0121	29.4
0.0086	27.8
0.0061	27.0
0.0030	25.3
0.0013	23.7

GRAIN SIZE PERCENTAGES

% COBBLES	0.00
% COARSE GRAVEL	5.74
% FINE GRAVEL	6.39
% COARSE SAND	6.72
% MEDIUM SAND	17.04
% FINE SAND	27.72
% FINES	36.40
% TOTAL SAMPLE	100.00

Description: Reddish Brown, COARSE TO FINE SAND, and silty clay, some coarse to fine gravel.

USCS: SC

32	LL
17	PL
15	PI

TECH	JDR
DATE	6/24/98
CHECK	
REVIEW	

UNIT WEIGHT DETERMINATION
ASTM D 2937

PROJECT NAME	SOLUTIA / RFI-CS / AL	**SAMPLE ID**	OWR - 2D
PROJECT NUMBER	983-3223	**SAMPLE TYPE**	UD
		SAMPLE DEPTH	20.0 - 22.0'

WEIGHT OF SOIL (g)	799.90
LENGTH OF SAMPLE (in)	3.376
DIAMETER OF SAMPLE (in)	2.882
AREA OF SAMPLE (in^2)	6.52
VOLUME OF SAMPLE (in^3)	22.02
VOLUME OF SAMPLE (cm^3)	360.84

WET UNIT WEIGHT (pcf)	138.4

WEIGHT WET SOIL & TARE (g)	799.90
WEIGHT DRY SOIL & TARE (g)	702.79
WEIGHT OF WATER (g)	97.11
WEIGHT OF TARE (g)	0.00
WEIGHT OF DRY SOIL (g)	702.79
WATER CONTENT (%)	13.82

DRY UNIT WEIGHT (pcf)	121.6

SPECIFIC GRAVITY	2.742
VOLUME OF SOLIDS (cm^3)	256.30
VOLUME OF VOIDS (cm^3)	104.54
POROSITY (%)	29

TECH	GM
DATE	6/29/98
CHECK	
REVIEW	

FLOW PUMP #1

FLEXIBLE WALL PERMEABILITY
ASTM D 5084
METHOD B, CONSTANT RATE OF FLOW

PROJECT TITLE	SOLUTIA / RFI-CS / AL		
PROJECT NUMBER	983-3223		
SAMPLE ID	OWR -2D	-	20.0-22.0'
SAMPLE TYPE	UD		

BOARD #	6
CELL #	6
Flow Pump Speed	7
Technician	PWM

COMMENTS

Sample Data, Initial			
Height, inches	3.376	B-Value, f	0.99
Diameter, inches	2.882	Cell Pres.	85.0
Area, cm²	42.05	Bot. Pres.	80.0
Volume, cm³	360.90	Top Pres.	80.0
Mass, g	799.90	Tot. B.P.	80.0
Moisture Content, %	13.82	Head, max.	70.34
Dry Density, pcf	121.51	Head, min.	70.34
Spec. Gravity	2.742	Max. Grad.	8.20
Volume Solids, cm³	256.31	Min. Grad.	8.20
Volume Voids, cm³	104.59		
Void Ratio	0.41		
Saturation, %	92.8%		

Sample Data, Final	
Height, inches	3.377
Diameter, inches	2.852
Area, cm²	41.22
Volume, cm³	353.53
Mass, g	803.22
Moisture Content, %	14.29
Dry Density, pcf	124.05
Volume Solids, cm³	256.31
Volume Voids, cm³	97.21
Void Ratio	0.38
Saturation, %	103.3%

WATER CONTENTS		Trimmings Initial	Sample Final
Wt Soil & Tare, i	g	799.90	846.17
Wt Soil & Tare, f	g	702.79	745.79
Wt Tare	g	0.00	43.16
Wt Moisture Lost	g	97.11	100.38
Wt Dry Soil	g	702.79	702.63
Water Content	%	13.82%	14.29%

DESCRIPTION

Reddish Brown, COARSE TO FINE SAND, and silty clay, some coarse to fine gravel.

Flow Pump Rate: 3.00E-04 cm³/sec

USCS: SC

TIME FUNCTIONS, SECONDS								dP				
DATE	DAY	HOUR	MIN	TEMP (°C)	dt (min)	dt,acc (min)	dt (sec)	dt,acc (sec)	Reading (psi)	Head (cm)	Gradient	Permeability (cm/sec)
6/25/98	35971	14	0	20.4	0	0	0	0	1.00	70.34	8.20	8.8E-07
6/25/98	35971	14	5	20.4	5	5	300	300	1.00	70.34	8.20	8.8E-07
6/25/98	35971	14	10	20.4	5	10	300	600	1.00	70.34	8.20	8.8E-07
6/25/98	35971	14	15	20.4	5	15	300	900	1.00	70.34	8.20	8.8E-07 *
6/25/98	35971	14	20	20.4	5	20	300	1200	1.00	70.34	8.20	8.8E-07 *
6/25/98	35971	14	25	20.4	5	25	300	1500	1.00	70.34	8.20	8.8E-07 *
6/25/98	35971	14	30	20.4	5	30	300	1800	1.00	70.34	8.20	8.8E-07 *

*TRANSCRIBED FROM ORIGINAL DATA SHEETS

PERMEABILITY REPORTED AS ** 8.8E-07 cm/sec **

DATE 6/25/98
CHECK
REVIEW

ATTERBERG LIMITS
ASTM D-4318

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR - 2D -
PROJECT NUMBER	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	80.0 - 82.0'

SAMPLE PREPARATION

Wet or Dry: Dry

Minus #40 Sieve: Yes

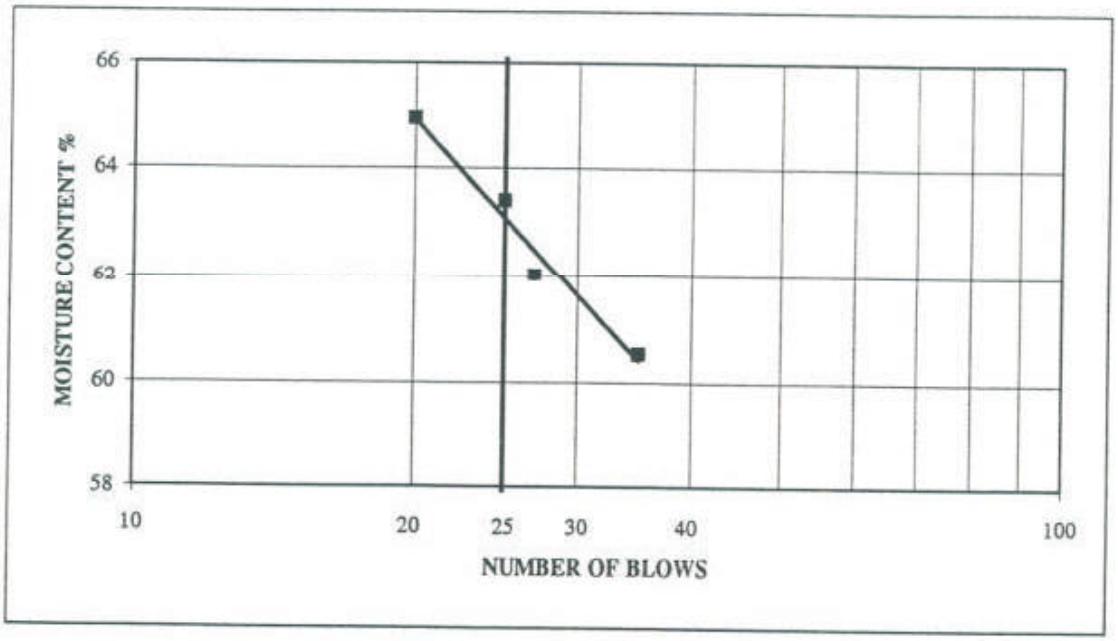
PLASTIC LIMIT DETERMINATION

					NATURAL MOISTURE
Weight of Wet Soil & Tare (gm)	(W1)	22.43	22.73	20.72	631.35
Weight of Dry Soil & Tare (gm)	(W2)	19.83	20.16	18.53	464.75
Weight of Tare (gm)	(W3)	11.40	11.81	11.41	0.00
Weight of Water (gm)	(W4=W1-W2)	2.60	2.57	2.19	166.60
Weight of Dry Soil (gm)	(W5=W2-W3)	8.43	8.35	7.12	464.75
Water Content %	(W4/W5)*100	30.84	30.78	30.76	35.85

LIQUID LIMIT DETERMINATION

Number of Blows		35	27	25	20
Weight of Wet Soil & Tare (gm)	(W6)	20.76	16.73	16.68	18.70
Weight of Dry Soil & Tare (gm)	(W7)	14.55	11.96	11.86	13.04
Weight of Tare (gm)	(W8)	4.29	4.27	4.26	4.32
Weight of Water (gm)	(W9=W6-W7)	6.21	4.77	4.82	5.66
Weight of Dry Soil (gm)	(W10=W7-W8)	10.26	7.69	7.60	8.72
Water Content %	(W9/W10)*100	60.53	62.03	63.42	64.91

NOTE:



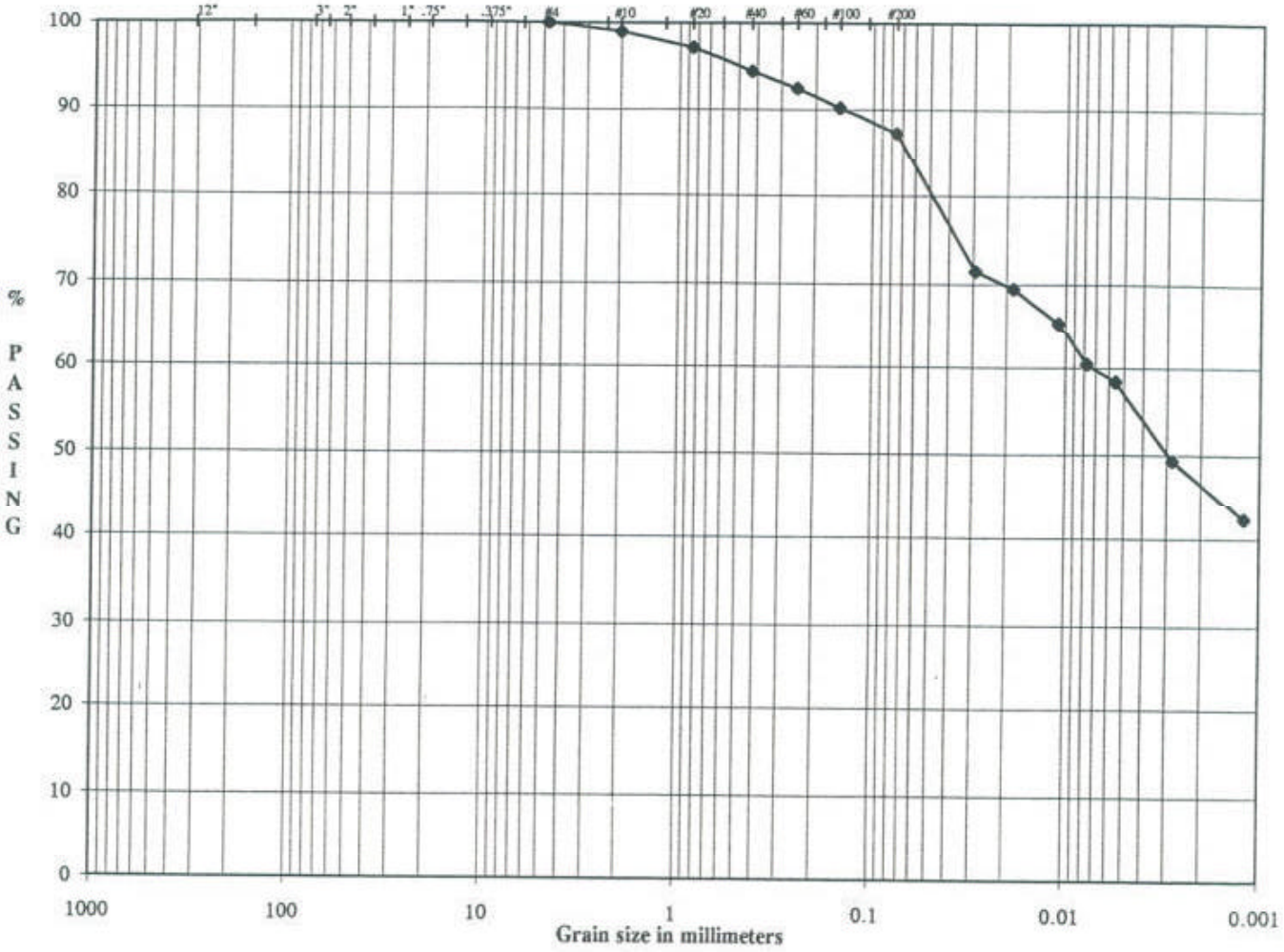
LIQUID LIMIT (Wl)	63.10	63
PLASTIC LIMIT (Wp)	30.79	31
PLASTICITY INDEX (Ip)		32
LIQUIDITY INDEX (I)		0.16
MOISTURE CONTENT		35.85

DESCRIPTION: Red and Brown, SILTY CLAY, some medium to fine sand.

USCS: CH

TECH	TF
DATE	6/25/98
CHECK	GM
REVIEW	PWM

PARTICLE SIZE DISTRIBUTION ASTM D 421 AND D 422
US STANDARD SIEVE OPENING SIZES



Boulders	Cobbles	Coarse	Fine	Cor	Med	Fine	SILT OR CLAY
		Gravel		SAND			FINES

SAMPLE ID	OWR - 2D
SAMPLE TYPE	UD
SAMPLE DEPTH	80.0 - 82.0'

LL	63
PL	31
PI	32

DESCRIPTION	Red and Brown, SILTY CLAY, some medium to fine sand.
USCS	CH

SOLUTIA / RFI-CS / AL
983-3223

TECH	JDR
DATE	6/24/98
CHECK	
REVIEW	

ASTM GRAIN SIZE ANALYSIS
ASTM C117, C136, D421, D422, D1140 and D2217

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR - 2D -
PROJECT NO.	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	80.0 - 82.0'

AS RECEIVED WATER CONTENT

Tare No.		-
Wt. Wet Soil & Tare (gm)	(W1)	631.35
Wt. Dry Soil & Tare (gm)	(W2)	464.75
Weight of Tare (gm)	(W3)	0.00
Weight of Water (gm)	(W4=W1-W2)	166.60
Weight of Dry Soil (gm)	(W5=W2-W3)	464.75
Moisture Content (%)	(W4/W5)*100	35.85

Hygroscopic Moisture For Sieve Sample

Wet Soil & Tare (gm)	47.95
Dry Soil & Tare (gm)	43.62
Tare Weight (gm)	3.19
Moisture Content (%)	10.71

Total Weight of Sample Used For Sieve Analysis Corrected For Hygroscopic Moisture

Weight + Tare, Before Separating On The #4 Sieve (gm)	592.30	
Tare Weight (gm)	0.00	
Total Weight (gm)	535.00	(W6)

Plus #4 Material Sieve

TARE WEIGHT: 0.00

	(Wt+Tare)	(((Wt-Tare)/W6)*100)	%PASSING		
12.0"				12.0"	cobbles
3.0"				3.0"	coarse gravel
2.5"				2.5"	coarse gravel
2.0"				2.0"	coarse gravel
1.5"				1.5"	coarse gravel
1.0"				1.0"	coarse gravel
0.75"				0.75"	fine gravel
0.50"				0.50"	fine gravel
0.375"				0.375"	fine gravel
#4	0.00	0.0	100.0	#4	coarse sand

HYDROMETER ANALYSIS

Specific Gravity	(assumed)	
Specific Gravity	(tested)	2.824
Amount Dispersing Agent (ml)		125.00
Type Dispersion Device		Mechanical
Length of Dispersion Period		1 Minute

Weight of Sample Used For Hydrometer Test

Weight of Sample Wet or Dry (gm)	53.35
Calculated Dry Wt. used in test (gm)	48.19
Hydrometer Bulb Number	624378
% Pass #4 Sieve For Whole Sample	100.00

TARE WEIGHT: 203.14

HYDROMETER BACKSIEVE (Percent Passing #10 - #200 Sieves)

	(Wt+Tare)	Cumul Wt. Retained	% PASSING		
#10	203.62	0.48	99.0	#10	medium sand
#20	204.51	1.37	97.2	#20	medium sand
#40	205.85	2.71	94.4	#40	fine sand
#60	206.81	3.67	92.4	#60	fine sand
#100	207.87	4.73	90.2	#100	fine sand
#200	209.27	6.13	87.3	#200	fines

HYDROMETER CALCULATIONS

DATE	TIME	ET (min)	READING R	TEMP T	TEMP.COR. K	HYD.COR. Cc	READING C	EFFECTIVE LENGTH	A
6/25/98	9:45								
6/25/98	9:47	2.00	41.0	23.00	0.013	5.50	35.50	10.6	0.97
6/25/98	9:50	5.00	40.0	23.00	0.013	5.50	34.50	10.7	0.97
6/25/98	10:00	15.00	38.0	23.00	0.013	5.50	32.50	11.1	0.97
6/25/98	10:15	30.00	35.5	23.00	0.013	5.50	30.00	11.4	0.97
6/25/98	10:45	60.00	34.5	23.00	0.013	5.50	29.00	11.5	0.97
6/25/98	13:55	250.00	30.0	23.00	0.013	5.50	24.50	12.4	0.97
6/26/98	9:45	1440.00	26.5	23.00	0.013	5.50	21.00	12.9	0.97

Particle Diameter	% PASSING
0.0290	71.5
0.0184	69.4
0.0108	65.4
0.0078	60.4
0.0055	58.4
0.0028	49.3
0.0012	42.3

GRAIN SIZE PERCENTAGES

% COBBLES	0.00
% COARSE GRAVEL	0.00
% FINE GRAVEL	0.00
% COARSE SAND	1.00
% MEDIUM SAND	4.63
% FINE SAND	7.10
% FINES	87.28
% TOTAL SAMPLE	100.00

Description: Red and Brown, SILTY CLAY, some medium to fine sand.

USCS: CH

63	LL
31	PL
32	PI

TECH	JDR
DATE	6/24/98
CHECK	
REVIEW	PWM

UNIT WEIGHT DETERMINATION
ASTM D 2937

PROJECT NAME	SOLUTIA / RFI-CS / AL	**SAMPLE ID**	OWR - 2D
PROJECT NUMBER	983-3223	**SAMPLE TYPE**	UD
		SAMPLE DEPTH	80.0 - 82.0'

WEIGHT OF SOIL (g)	631.35
LENGTH OF SAMPLE (in)	3.209
DIAMETER OF SAMPLE (in)	2.849
AREA OF SAMPLE (in^2)	6.37
VOLUME OF SAMPLE (in^3)	20.46
VOLUME OF SAMPLE (cm^3)	335.28

WET UNIT WEIGHT (pcf)	117.6

WEIGHT WET SOIL & TARE (g)	631.35
WEIGHT DRY SOIL & TARE (g)	464.75
WEIGHT OF WATER (g)	166.60
WEIGHT OF TARE (g)	0.00
WEIGHT OF DRY SOIL (g)	464.75
WATER CONTENT (%)	35.85

DRY UNIT WEIGHT (pcf)	86.6

SPECIFIC GRAVITY	2.824
VOLUME OF SOLIDS (cm^3)	164.57
VOLUME OF VOIDS (cm^3)	170.71
POROSITY (%)	51

TECH	GM
DATE	7/1/98
CHECK	
REVIEW	

FLOW PUMP #2

FLEXIBLE WALL PERMEABILITY
ASTM D 5084
METHOD D, CONSTANT RATE OF FLOW

PROJECT TITLE	SOLUTIA / RFI-CS / AL			BOARD #	3
PROJECT NUMBER	983-3213			CELL #	3
SAMPLE ID	OWR - 2D		80.0-82.0'	Flow Pump Speed	11
SAMPLE TYPE	UD			Technician	PWM

COMMENTS

Sample Data, Initial				Sample Data, Final	
Height, inches	3.209	B-Value, f	1.00	Height, inches	3.130
Diameter, inches	2.849	Cell Pres.	116.0	Diameter, inches	2.824
Area, cm²	41.11	Bot. Pres.	50.0	Area, cm²	40.41
Volume, cm³	335.23	Top Pres.	50.0	Volume, cm³	321.27
Mass, g	631.35	Tot. B.P.	50.0	Mass, g	615.80
Moisture Content, %	35.85	Head, max.	156.15	Moisture Content, %	32.50
Dry Density, pcf	86.51	Head, min.	156.15	Dry Density, pcf	90.27
Spec. Gravity	2.824	Max. Grad.	19.64	Volume Solids, cm³	164.58
Volume Solids, cm³	164.57	Min. Grad.	19.64	Volume Voids, cm³	156.69
Volume Voids, cm³	170.66			Void Ratio	0.95
Void Ratio	1.04			Saturation, %	96.4%
Saturation, %	97.6%				

WATER CONTENTS		Trimmings Initial	Sample Final
Wt Soil & Tare, i	g	631.35	658.97
Wt Soil & Tare, f	g	464.75	507.93
Wt Tare	g	0.00	43.17
Wt Moisture Lost	g	166.60	151.04
Wt Dry Soil	g	464.75	464.76
Water Content	%	35.85%	32.50%

Flow Pump Rate: 1.40E-05 cm³/sec

USCS: MH

DESCRIPTION: Red and Brown, SILTY CLAY, some medium to fine sand.

TIME FUNCTIONS, SECONDS								dP				
DATE	DAY	HOUR	MIN	TEMP (°C)	dt (min)	dt,acc (min)	dt (sec)	dt,acc (sec)	Reading (psi)	Head (cm)	Gradient	Permeability (cm/sec)
6/27/98	35973	8	0	21.7	0	0	0	0	2.22	156.15	19.64	1.7E-08
6/27/98	35973	8	5	21.7	5	5	300	300	2.22	156.15	19.64	1.7E-08
6/27/98	35973	8	10	21.7	5	10	300	600	2.22	156.15	19.64	1.7E-08
6/27/98	35973	8	15	21.7	5	15	300	900	2.22	156.15	19.64	1.7E-08
6/27/98	35973	8	20	21.7	5	20	300	1200	2.22	156.15	19.64	1.7E-08 *
6/27/98	35973	8	25	21.7	5	25	300	1500	2.22	156.15	19.64	1.7E-08 *
6/27/98	35973	8	30	21.7	5	30	300	1800	2.22	156.15	19.64	1.7E-08 *

*TRANSCRIBED FROM ORIGINAL DATA SHEETS

PERMEABILITY REPORTED AS ** 1.7E-08 cm/sec **

DATE 6/27/98
CHECK GM
REVIEW PWM

ATTERBERG LIMITS
ASTM D-4318

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR - 2D -
PROJECT NUMBER	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	100.0 - 102.0'

SAMPLE PREPARATION
Wet or Dry: Dry Minus #40 Sieve: Yes

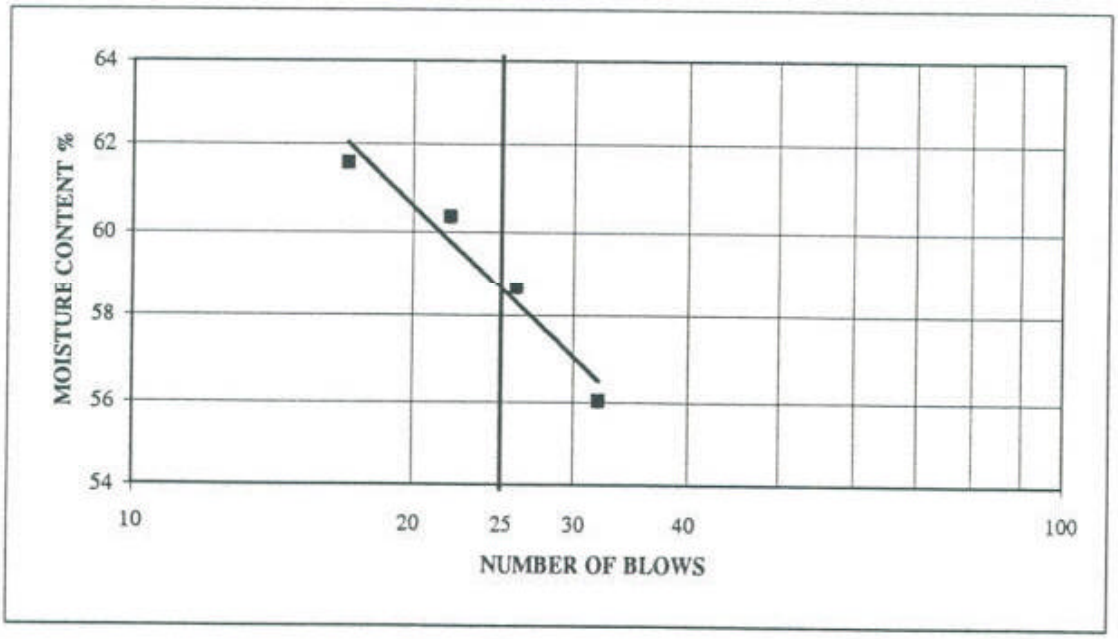
PLASTIC LIMIT DETERMINATION

					NATURAL MOISTURE
Weight of Wet Soil & Tare (gm)	(W1)	23.08	21.14	19.49	629.54
Weight of Dry Soil & Tare (gm)	(W2)	20.24	18.78	17.59	459.85
Weight of Tare (gm)	(W3)	11.39	11.41	11.69	0.00
Weight of Water (gm)	(W4=W1-W2)	2.84	2.36	1.90	169.69
Weight of Dry Soil (gm)	(W5=W2-W3)	8.85	7.37	5.90	459.85
Water Content %	(W4/W5)*100	32.09	32.02	32.20	36.90

LIQUID LIMIT DETERMINATION

Number of Blows		32	26	22	17
Weight of Wet Soil & Tare (gm)	(W6)	19.54	17.45	19.73	20.37
Weight of Dry Soil & Tare (gm)	(W7)	14.94	12.57	13.93	15.13
Weight of Tare (gm)	(W8)	6.73	4.25	4.32	6.62
Weight of Water (gm)	(W9=W6-W7)	4.60	4.88	5.80	5.24
Weight of Dry Soil (gm)	(W10=W7-W8)	8.21	8.32	9.61	8.51
Water Content %	(W9/W10)*100	56.03	58.65	60.35	61.57

NOTE:



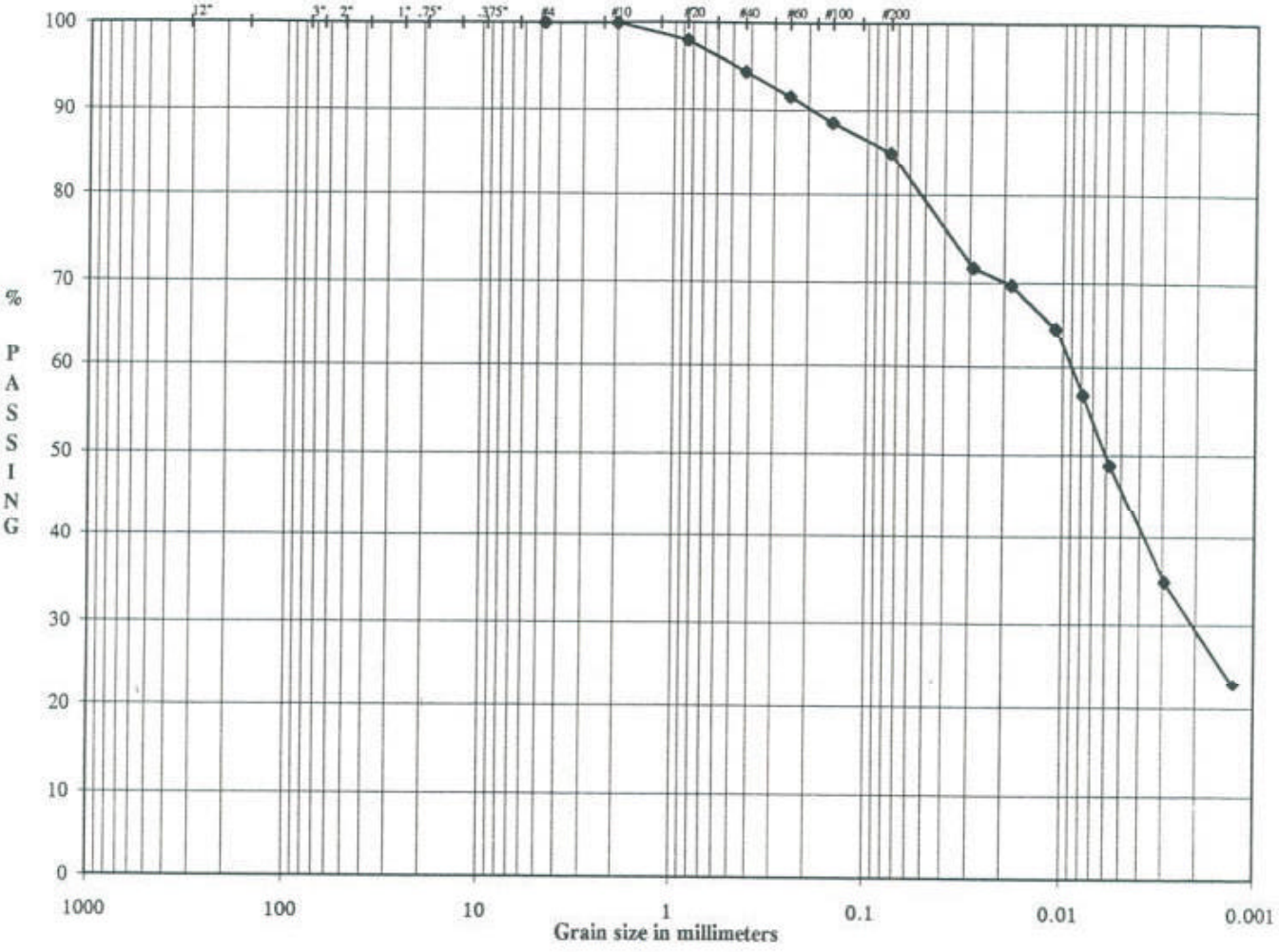
LIQUID LIMIT (WI)	58.66	59
PLASTIC LIMIT (Wp)	32.11	32
PLASTICITY INDEX (Ip)		27
LIQUIDITY INDEX (I)		0.18
MOISTURE CONTENT		36.90

DESCRIPTION: Red, CLAYEY SILT, some medium to fine sand.

USCS: MH

TECH: TF/SW
DATE: 8/25/98
CHECK:
REVIEW:

PARTICLE SIZE DISTRIBUTION ASTM D 421 AND D 422
US STANDARD SIEVE OPENING SIZES



Boulders	Cobbles	Coarse	Fine	Cor	Med	Fine	SILT OR CLAY
		Gravel		SAND			FINES

SAMPLE ID	OWR - 2D
SAMPLE TYPE	UD
SAMPLE DEPTH	100.0 - 102.0'

LL	59
PL	32
PI	27

DESCRIPTION	Red, CLAYEY SILT, some medium to fine sand.
USCS	MH

SOLUTIA / RFI-CS / AL
983-3223

TECH	JDR
DATE	6/24/98
CHECK	
REVIEW	

ASTM GRAIN SIZE ANALYSIS
ASTM C117, C136, D421, D422, D1140 and D2217

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR - 2D -
PROJECT NO.	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	100.0 - 102.0'

AS RECEIVED WATER CONTENT

Tare No.		-
Wt. Wet Soil & Tare (gm)	(W1)	629.54
Wt. Dry Soil & Tare (gm)	(W2)	459.85
Weight of Tare (gm)	(W3)	0.00
Weight of Water (gm)	(W4=W1-W2)	169.69
Weight of Dry Soil (gm)	(W5=W2-W3)	459.85
Moisture Content (%)	(W4/W5)*100	36.90

Hygroscopic Moisture For Sieve Sample

Wet Soil & Tare (gm)	31.78
Dry Soil & Tare (gm)	29.68
Tare Weight (gm)	3.16
Moisture Content (%)	7.92

Total Weight of Sample Used For Sieve Analysis Corrected For Hygroscopic Moisture

Weight + Tare, Before Separating On The #4 Sieve (gm)	622.93	
Tare Weight (gm)	235.12	
Total Weight (gm)	359.35	(W6)

Plus #4 Material Sieve

TARE WEIGHT: 0.00

	(Wt+Tare)	(((Wt-Tare)/W6)*100)	%PASSING		
12.0"				12.0"	cobbles
3.0"				3.0"	coarse gravel
2.5"				2.5"	coarse gravel
2.0"				2.0"	coarse gravel
1.5"				1.5"	coarse gravel
1.0"				1.0"	coarse gravel
0.75"				0.75"	fine gravel
0.50"				0.50"	fine gravel
0.375"				0.375"	fine gravel
#4	0.00	0.0	100.0	#4	coarse sand

HYDROMETER ANALYSIS

Specific Gravity	(assumed)	
Specific Gravity	(tested)	2.793
Amount Dispersing Agent (ml)		125.00
Type Dispersion Device		Mechanical
Length of Dispersion Period		1 Minute

Weight of Sample Used For Hydrometer Test

Weight of Sample Wet or Dry (gm)	53.13
Calculated Dry Wt. used in test (gm)	49.23
Hydrometer Bulb Number	624378
% Pass #4 Sieve For Whole Sample	100.00

TARE WEIGHT: 203.14

HYDROMETER BACKSIEVE (Percent Passing #10 - #200 Sieves)

	(Wt + Tare)	Cumul Wt. Retained	% PASSING		
#10	203.18	0.04	99.9	#10	medium sand
#20	204.13	0.99	98.0	#20	medium sand
#40	205.90	2.76	94.4	#40	fine sand
#60	207.32	4.18	91.5	#60	fine sand
#100	208.82	5.68	88.5	#100	fine sand
#200	210.54	7.40	85.0	#200	fines

HYDROMETER CALCULATIONS

DATE	TIME	ET (min)	READING R	TEMP T	TEMP.COR. K	HYD.COR. Cc	READING C	EFFECTIVE LENGTH	A
6/25/98	9:47								
6/25/98	9:49	2.00	41.5	23.00	0.013	5.50	36.00	10.4	0.98
6/25/98	9:52	5.00	40.5	23.00	0.013	5.50	35.00	10.6	0.98
6/25/98	10:02	15.00	38.0	23.00	0.013	5.50	32.50	11.1	0.98
6/25/98	10:17	30.00	34.0	23.00	0.013	5.50	28.50	11.7	0.98
6/25/98	10:47	60.00	30.0	23.00	0.013	5.50	24.50	12.4	0.98
6/25/98	13:57	250.00	23.0	23.00	0.013	5.50	17.50	13.5	0.98
6/26/98	9:47	1440.00	17.0	23.00	0.013	5.50	11.50	14.5	0.98

GRAIN SIZE PERCENTAGES

Particle Diameter	% PASSING
0.0287	71.7
0.0183	69.7
0.0108	64.7
0.0079	56.7
0.0057	48.8
0.0029	34.8
0.0013	22.9

% COBBLES	0.00
% COARSE GRAVEL	0.00
% FINE GRAVEL	0.00
% COARSE SAND	0.08
% MEDIUM SAND	5.52
% FINE SAND	9.42
% FINES	84.97
% TOTAL SAMPLE	100.00

Description: Red, CLAYEY SILT, some medium to fine sand.

USCS: MH

59	LL
32	PL
27	PI

TECH	JDR
DATE	6/24/98
CHECK	
REVIEW	

UNIT WEIGHT DETERMINATION
ASTM D 2937

PROJECT NAME	SOLUTIA / RFI-CS / AL	**SAMPLE ID**	OWR - 2D
PROJECT NUMBER	983-3223	**SAMPLE TYPE**	UD
		SAMPLE DEPTH	100.0-102.0'

WEIGHT OF SOIL (g)	629.54
LENGTH OF SAMPLE (in)	3.274
DIAMETER OF SAMPLE (in)	2.876
AREA OF SAMPLE (in^2)	6.50
VOLUME OF SAMPLE (in^3)	21.27
VOLUME OF SAMPLE (cm^3)	348.55

WET UNIT WEIGHT (pcf)	112.8

WEIGHT WET SOIL & TARE (g)	629.54
WEIGHT DRY SOIL & TARE (g)	459.85
WEIGHT OF WATER (g)	169.69
WEIGHT OF TARE (g)	0.00
WEIGHT OF DRY SOIL (g)	459.85
WATER CONTENT (%)	36.90

DRY UNIT WEIGHT (pcf)	82.4

SPECIFIC GRAVITY	2.793
VOLUME OF SOLIDS (cm^3)	164.65
VOLUME OF VOIDS (cm^3)	183.90
POROSITY (%)	53

TECH	GM
DATE	6/29/98
CHECK	
REVIEW	

FLOW PUMP #2

FLEXIBLE WALL PERMEABILITY
ASTM D 5084
METHOD D, CONSTANT RATE OF FLOW

PROJECT TITLE	SOLUTIA / RFI-CS / AL		BOARD #	2	COMMENTS
PROJECT NUMBER	983-3213		CELL #	2	
SAMPLE ID	OWR - 2D	100.0-102.0'	Flow Pump Speed	8	
SAMPLE TYPE	UD		Technician	PWM	

Sample Data, Initial				Sample Data, Final	
Height, inches	3.274	B-Value, f	0.99	Height, inches	3.281
Diameter, inches	2.875	Cell Pres.	110.0	Diameter, inches	2.869
Area, cm²	41.91	Bot. Pres.	40.0	Area, cm²	41.71
Volume, cm³	348.54	Top Pres.	40.0	Volume, cm³	347.58
Mass, g	629.54	Tot. B.P.	40.0	Mass, g	639.28
Moisture Content, %	36.90	Head, max.	111.14	Moisture Content, %	39.02
Dry Density, pcf	82.31	Head, min.	111.14	Dry Density, pcf	82.55
Spec. Gravity	2.793	Max. Grad.	13.34	Volume Solids, cm³	164.64
Volume Solids, cm³	164.64	Min. Grad.	13.34	Volume Voids, cm³	182.94
Volume Voids, cm³	183.89			Void Ratio	1.11
Void Ratio	1.12			Saturation, %	98.1%
Saturation, %	92.3%				

WATER CONTENTS		Trimmings Initial	Sample Final
Wt Soil & Tare, i	g	629.54	690.91
Wt Soil & Tare, f	g	459.85	511.52
Wt Tare	g	0.00	51.77
Wt Moisture Lost	g	169.69	179.39
Wt Dry Soil	g	459.85	459.75
Water Content	%	36.90%	39.02%

Flow Pump Rate: 1.40E-04 cm³/sec

USCS: MH

DESCRIPTION: Red, CLAYEY SILT, some medium to fine sand.

TIME FUNCTIONS, SECONDS								dP				
DATE	DAY	HOUR	MIN	TEMP (°C)	dt (min)	dt,acc (min)	dt (sec)	dt,acc (sec)	Reading (psi)	Head (cm)	Gradient	Permeability (cm/sec)
6/25/98	35971	13	50	20.7	0	0	0	0	1.58	111.14	13.34	2.5E-07
6/25/98	35971	13	55	20.7	5	5	300	300	1.58	111.14	13.34	2.5E-07
6/25/98	35971	14	0	20.7	5	10	300	600	1.58	111.14	13.34	2.5E-07
6/25/98	35971	14	5	20.7	5	15	300	900	1.58	111.14	13.34	2.5E-07 *
6/25/98	35971	14	10	20.7	5	20	300	1200	1.58	111.14	13.34	2.5E-07 *
6/25/98	35971	14	15	20.7	5	25	300	1500	1.58	111.14	13.34	2.5E-07 *
6/25/98	35971	14	20	20.7	5	30	300	1800	1.58	111.14	13.34	2.5E-07 *

*TRANSCRIBED FROM ORIGINAL DATA SHEETS

PERMEABILITY REPORTED AS ** 2.5E-07 cm/sec **

DATE 6/25/98
CHECK
REVIEW PWM

ATTERBERG LIMITS
ASTM D-4318

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR-3D -
PROJECT NUMBER	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	60.0 - 62.0'

SAMPLE PREPARATION
Wet or Dry: Dry

Minus #40 Sieve: Yes

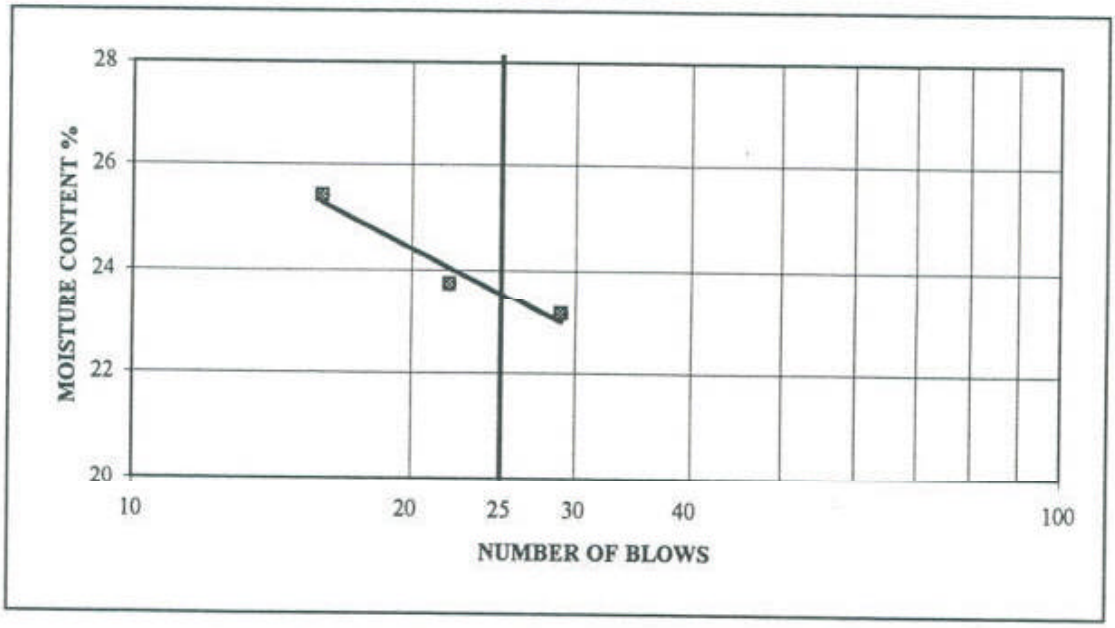
PLASTIC LIMIT DETERMINATION

					NATURAL MOISTURE
Weight of Wet Soil & Tare (gm)	(W1)	26.13	32.01	26.19	249.45
Weight of Dry Soil & Tare (gm)	(W2)	23.38	28.13	23.38	211.76
Weight of Tare (gm)	(W3)	11.78	11.85	11.41	51.45
Weight of Water (gm)	(W4=W1-W2)	2.75	3.88	2.81	37.69
Weight of Dry Soil (gm)	(W5=W2-W3)	11.60	16.28	11.97	160.31
Water Content %	(W4/W5)*100	23.71	23.83	23.48	23.51

LIQUID LIMIT DETERMINATION

Number of Blows		29	22	16
Weight of Wet Soil & Tare (gm)	(W6)	16.47	19.47	20.81
Weight of Dry Soil & Tare (gm)	(W7)	14.62	16.56	17.47
Weight of Tare (gm)	(W8)	6.62	4.30	4.32
Weight of Water (gm)	(W9=W6-W7)	1.85	2.91	3.34
Weight of Dry Soil (gm)	(W10=W7-W8)	8.00	12.26	13.15
Water Content %	(W9/W10)*100	23.13	23.74	25.40

NOTE:



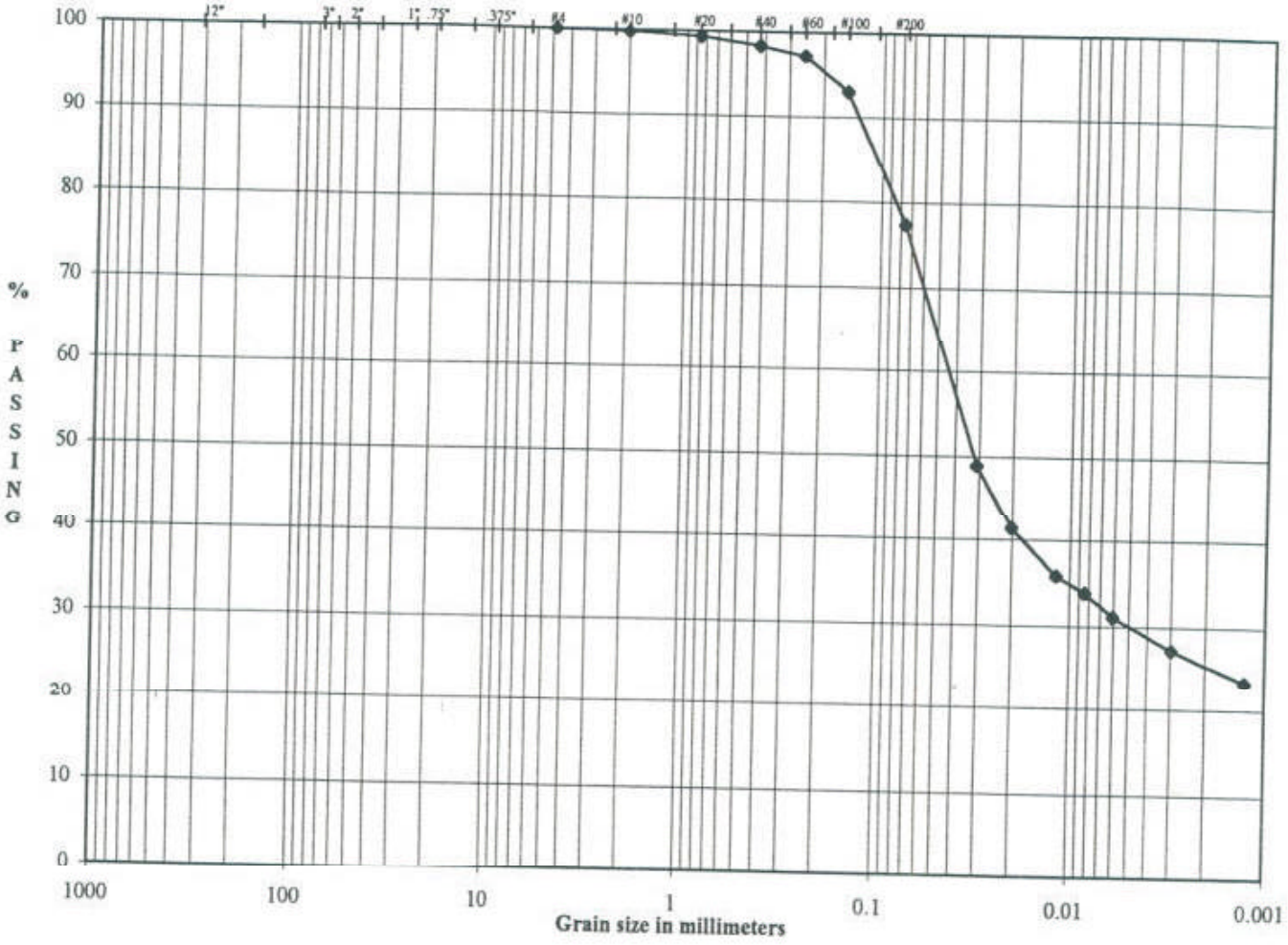
LIQUID LIMIT (WI)	23.54	NP
PLASTIC LIMIT (Wp)	23.67	NP
PLASTICITY INDEX (Ip)		NP
LIQUIDITY INDEX (I)		NP
MOISTURE CONTENT		23.51

DESCRIPTION: Brownish Yellow, CLAYEY SILT, some fine sand.

USCS: ML

TECH	TF
DATE	6/25/98
CHECK	
REVIEW	

PARTICLE SIZE DISTRIBUTION ASTM D 421 AND D 422
US STANDARD SIEVE OPENING SIZES



Boulders	Cobbles	Coarse Gravel	Fine Gravel	Cor SAND	Med SAND	Fine SAND	SILT OR CLAY FINES

SAMPLE ID	OWR - 3D
SAMPLE TYPE	UD
SAMPLE DEPTH	60.0 - 62.0'

LL	NP
PL	NP
PI	NP

DESCRIPTION	Brownish Yellow, CLAYEY SILT, some fine sand.
USCS	ML

SOLUTIA / RFI-CS / AL
983-3223

TECH	JDR
DATE	6/24/98
CHECK	
REVIEW	

ASTM GRAIN SIZE ANALYSIS
ASTM C117, C136, D421, D422, D1140 and D2217

PROJECT TITLE	SOLUTIA / RFI-CS / AL
PROJECT NO.	983-3223
SAMPLE ID	OWR - 3D
SAMPLE TYPE	UD
SAMPLE DEPTH	60.0 - 62.0'

AS RECEIVED WATER CONTENT

Tare No.		-
Wt. Wet Soil & Tare (gm)	(W1)	249.45
Wt. Dry Soil & Tare (gm)	(W2)	211.76
Weight of Tare (gm)	(W3)	51.45
Weight of Water (gm)	(W4=W1-W2)	37.69
Weight of Dry Soil (gm)	(W5=W2-W3)	160.31
Moisture Content (%)	(W4/W5)*100	23.51

Hygroscopic Moisture For Sieve Sample

Wet Soil & Tare (gm)	62.53
Dry Soil & Tare (gm)	60.92
Tare Weight (gm)	3.22
Moisture Content (%)	2.79

Total Weight of Sample Used For Sieve Analysis Corrected For Hygroscopic Moisture

Weight + Tare, Before Separating On The #4 Sieve (gm)	676.65	
Tare Weight (gm)	235.20	
Total Weight (gm)	429.47	(W6)

Plus #4 Material Sieve

TARE WEIGHT: 0.00

	(Wt+Tare)	(((Wt-Tare)/W6)*100)	%PASSING		
12.0"				12.0"	cobbles
3.0"				3.0"	coarse gravel
2.5"				2.5"	coarse gravel
2.0"				2.0"	coarse gravel
1.5"				1.5"	coarse gravel
1.0"				1.0"	coarse gravel
0.75"				0.75"	fine gravel
0.50"				0.50"	fine gravel
0.375"				0.375"	fine gravel
#4	0.00	0.0	100.0	#4	coarse sand

HYDROMETER ANALYSIS

Specific Gravity	(assumed)	
Specific Gravity	(tested)	2.822
Amount Dispersing Agent (ml)		125.00
Type Dispersion Device		Mechanical
Length of Dispersion Period		1 Minute

Weight of Sample Used For Hydrometer Test

Weight of Sample Wet or Dry (gm)	52.95
Calculated Dry Wt. used in test (gm)	51.51
Hydrometer Bulb Number	624378
% Pass #4 Sieve For Whole Sample	100.00

TARE WEIGHT: 203.14

HYDROMETER BACKSIEVE (Percent Passing #10 - #200 Sieves)

	(Wt+Tare)	Cumul Wt. Retained	% PASSING		
#10	203.25	0.11	99.8	#10	medium sand
#20	203.50	0.36	99.3	#20	medium sand
#40	203.99	0.85	98.3	#40	fine sand
#60	204.58	1.44	97.2	#60	fine sand
#100	206.76	3.62	93.0	#100	fine sand
#200	214.79	11.65	77.4	#200	fines

HYDROMETER CALCULATIONS

DATE	TIME	ET (min)	READING R	TEMP T	TEMP.COR. K	HYD.COR. Cc	READING C	EFFECTIVE LENGTH	A
6/25/98	9:55								
6/25/98	9:57	2.00	31.5	23.00	0.013	5.50	26.00	12.0	0.97
6/25/98	10:00	5.00	27.5	23.00	0.013	5.50	22.00	12.7	0.97
6/25/98	10:10	15.00	24.5	23.00	0.013	5.50	19.00	13.2	0.97
6/25/98	10:25	30.00	23.5	23.00	0.013	5.50	18.00	13.3	0.97
6/25/98	10:55	60.00	22.0	23.00	0.013	5.50	16.50	13.7	0.97
6/25/98	14:05	250.00	20.0	23.00	0.013	5.50	14.50	14.0	0.97
6/26/98	9:55	1440.00	18.0	23.00	0.013	5.50	12.50	14.3	0.97

GRAIN SIZE PERCENTAGES

Particle Diameter	% PASSING		
0.0309	49.0	% COBBLES	0.00
0.0201	41.4	% COARSE GRAVEL	0.00
0.0118	35.8	% FINE GRAVEL	0.00
0.0084	33.9	% COARSE SAND	0.21
0.0060	31.1	% MEDIUM SAND	1.44
0.0030	27.3	% FINE SAND	20.97
0.0013	23.5	% FINES	77.38
		% TOTAL SAMPLE	100.00

Description: Brownish Yellow, CLAYEY SILT, some fine sand.

USCS: ML

NP	LL
NP	PL
NP	PI

TECH	JDR
DATE	6/24/98
CHECK	
REVIEW	

UNIT WEIGHT DETERMINATION
ASTM D 2937

PROJECT NAME	SOLUTIA / RFI-CS / AL	**SAMPLE ID**	OWR - 3D
PROJECT NUMBER	983-3223	**SAMPLE TYPE**	UD
		SAMPLE DEPTH	60.0 - 62.0'

WEIGHT OF SOIL (g)	586.25
LENGTH OF SAMPLE (in)	2.812
DIAMETER OF SAMPLE (in)	2.861
AREA OF SAMPLE (in^2)	6.43
VOLUME OF SAMPLE (in^3)	18.08
VOLUME OF SAMPLE (cm^3)	296.28

WET UNIT WEIGHT (pcf)	123.5

WEIGHT WET SOIL & TARE (g)	249.45
WEIGHT DRY SOIL & TARE (g)	211.76
WEIGHT OF WATER (g)	37.69
WEIGHT OF TARE (g)	51.45
WEIGHT OF DRY SOIL (g)	160.31
WATER CONTENT (%)	23.51

DRY UNIT WEIGHT (pcf)	100.0

SPECIFIC GRAVITY	2.822
VOLUME OF SOLIDS (cm^3)	168.20
VOLUME OF VOIDS (cm^3)	128.08
POROSITY (%)	43

TECH	GM
DATE	6/29/98
CHECK	
REVIEW	

FLOW PUMP #2

FLEXIBLE WALL PERMEABILITY
ASTM D 5084
METHOD D, CONSTANT RATE OF FLOW

PROJECT TITLE	SOLUTIA / RFI-CS / AL		
PROJECT NUMBER	983-3223		
SAMPLE ID	OWR - 3D	-	60.0-62.0'
SAMPLE TYPE	UD		

BOARD #	5
CELL #	5
Flow Pump Speed	6
Technician	PWM

COMMENTS

Sample Data, Initial			
Height, inches	2.812	B-Value, f	1.00
Diameter, inches	2.861	Cell Pres.	112.0
Area, cm²	41.48	Bot. Pres.	70.0
Volume, cm³	296.24	Top Pres.	70.0
Mass, g	586.25	Tot. B.P.	70.0
Moisture Content, %	23.51	Head, max.	53.46
Dry Density, pcf	99.98	Head, min.	53.46
Spec. Gravity	2.822	Max. Grad.	7.49
Volume Solids, cm³	168.20	Min. Grad.	7.49
Volume Voids, cm³	128.04		
Void Ratio	0.76		
Saturation, %	87.2%		

Sample Data, Final	
Height, inches	2.809
Diameter, inches	2.863
Area, cm²	41.53
Volume, cm³	296.34
Mass, g	590.41
Moisture Content, %	24.80
Dry Density, pcf	99.61
Volume Solids, cm³	167.64
Volume Voids, cm³	128.70
Void Ratio	0.77
Saturation, %	81.2%

WATER CONTENTS		Trimmings Initial	Sample Final
Wt Soil & Tare, i	g	249.45	633.48
Wt Soil & Tare, f	g	211.76	516.18
Wt Tare	g	51.45	43.28
Wt Moisture Lost	g	37.69	117.30
Wt Dry Soil	g	160.31	472.90
Water Content	%	23.51%	24.80%

DESCRIPTION

Brownish Yellow, CLAYEY SILT, some fine sand.

Flow Pump Rate: 5.30E-04 cm³/sec

USCS: ML

TIME FUNCTIONS, SECONDS								dP				
DATE	DAY	HOUR	MIN	TEMP (°C)	dt (min)	dt,acc (min)	dt (sec)	dt,acc (sec)	Reading (psi)	Head (cm)	Gradient	Permeability (cm/sec)
6/25/98	35971	8	15	20.4	0	0	0	0	0.76	53.46	7.49	1.7E-06
6/25/98	35971	8	20	20.4	5	5	300	300	0.76	53.46	7.49	1.7E-06
6/25/98	35971	8	25	20.4	5	10	300	600	0.76	53.46	7.49	1.7E-06
6/25/98	35971	8	30	20.4	5	15	300	900	0.76	53.46	7.49	1.7E-06 "
6/25/98	35971	8	35	20.4	5	20	300	1200	0.76	53.46	7.49	1.7E-06 "
6/25/98	35971	8	40	20.4	5	25	300	1500	0.76	53.46	7.49	1.7E-06 "
6/25/98	35971	8	45	20.4	5	30	300	1800	0.76	53.46	7.49	1.7E-06 "

*TRANSCRIBED FROM ORIGINAL DATA SHEETS

PERMEABILITY REPORTED AS** 1.7E-06 cm/sec **

DATE 6/25/98
CHECK
REVIEW

ATTERBERG LIMITS
ASTM D-4318

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR-4D -
PROJECT NUMBER	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	19.0 - 21.0'

SAMPLE PREPARATION
Wet or Dry: Dry Minus #40 Sieve: Yes

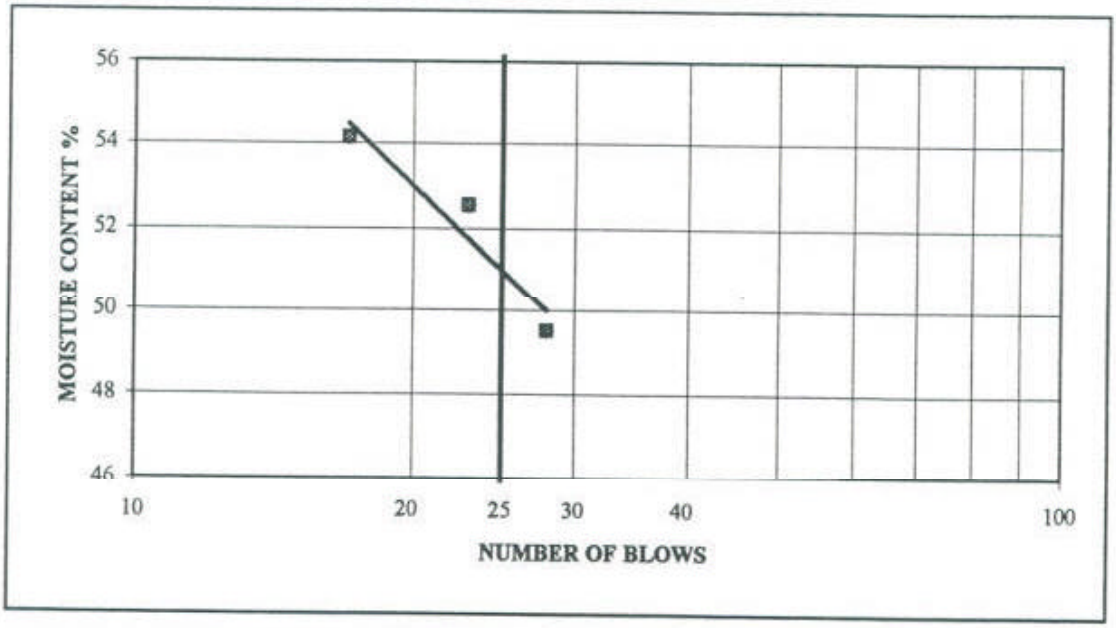
PLASTIC LIMIT DETERMINATION

					NATURAL MOISTURE
Weight of Wet Soil & Tare (gm)	(W1)	26.94	24.19	25.65	658.32
Weight of Dry Soil & Tare (gm)	(W2)	23.50	21.43	22.50	510.34
Weight of Tare (gm)	(W3)	11.40	11.70	11.33	0.00
Weight of Water (gm)	(W4=W1-W2)	3.44	2.76	3.15	147.98
Weight of Dry Soil (gm)	(W5=W2-W3)	12.10	9.73	11.17	510.34
Water Content %	(W4/W5)*100	28.43	28.37	28.20	29.00

LIQUID LIMIT DETERMINATION

Number of Blows		28	23	17
Weight of Wet Soil & Tare (gm)	(W6)	16.62	17.37	14.07
Weight of Dry Soil & Tare (gm)	(W7)	12.54	12.88	10.60
Weight of Tare (gm)	(W8)	4.30	4.33	4.19
Weight of Water (gm)	(W9=W6-W7)	4.08	4.49	3.47
Weight of Dry Soil (gm)	(W10=W7-W8)	8.24	8.55	6.41
Water Content %	(W9/W10)*100	49.51	52.55	54.13

NOTE:



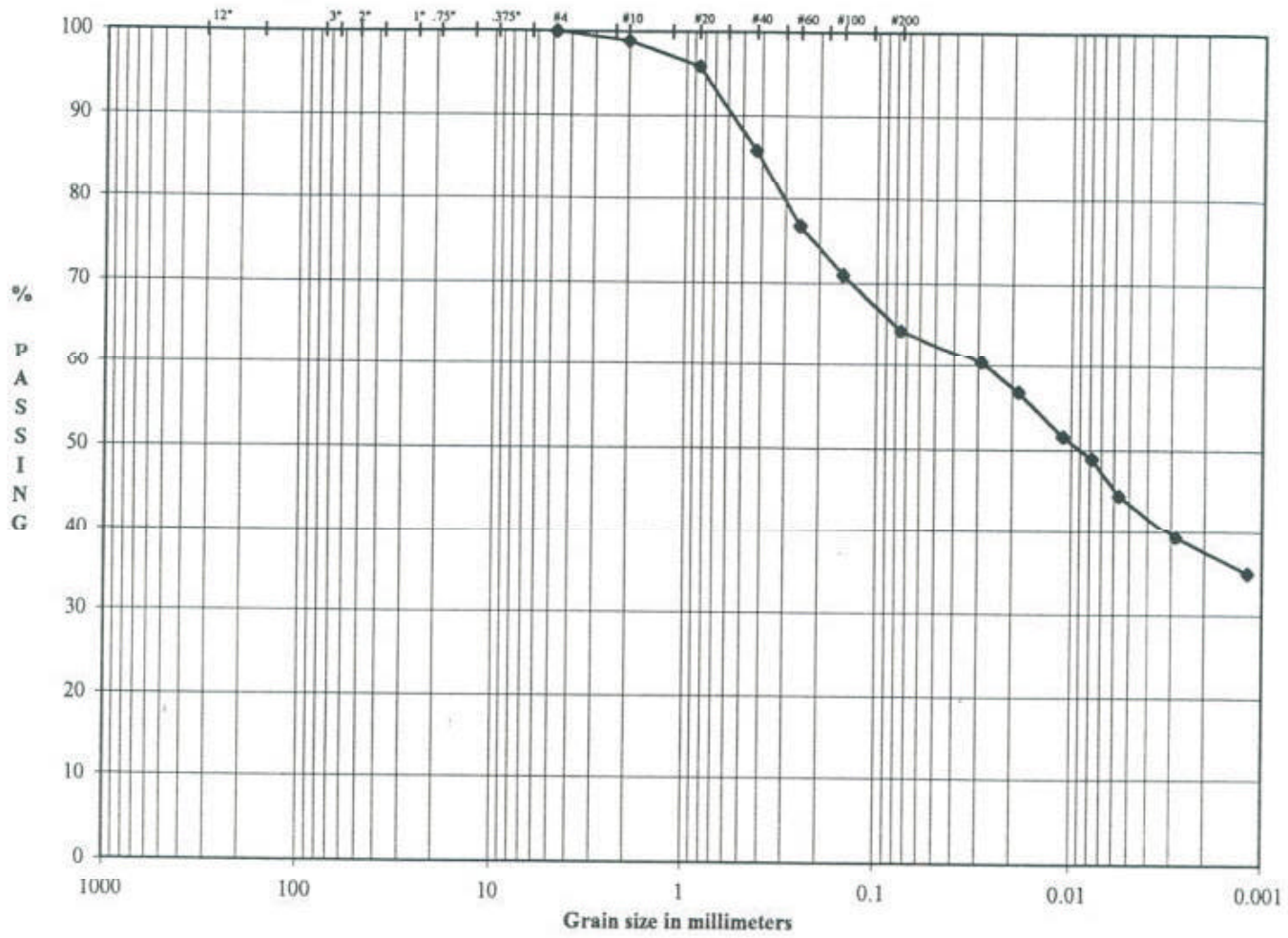
LIQUID LIMIT (WI)	51.01	51
PLASTIC LIMIT (Wp)	28.33	28
PLASTICITY INDEX (Ip)		23
LIQUIDITY INDEX (I)		0.03
MOISTURE CONTENT		29.00

DESCRIPTION: Reddish Yellow and Black, SILTY CLAY, and medium to fine sand.

USCS: CH

TECH	JDR
DATE	6/8/98
CHECK	
REVIEW	

PARTICLE SIZE DISTRIBUTION ASTM D 421 AND D 422
US STANDARD SIEVE OPENING SIZES



Boulders	Cobbles	Coarse Gravel	Fine Gravel	Cor SAND	Med SAND	Fine SAND	SILT OR CLAY FINES

SAMPLE ID	OWR - 4D
SAMPLE TYPE	UD
SAMPLE DEPTH	19.0 - 21.0'

LL	51
PL	28
PI	23

DESCRIPTION	Reddish Yellow and Black, SILTY CLAY, and medium to fine sand.
USCS	CH

SOLUTIA / RFI-CS / AL
983-3223

TECH	JDR
DATE	6/4/98
CHECK	
REVIEW	

ASTM GRAIN SIZE ANALYSIS
ASTM C117, C136, D421, D422, D1140 and D2217

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR - 4D
PROJECT NO	093-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	19.0 - 21.0'

AS RECEIVED WATER CONTENT

Tare No.		-
Wt. Wet Soil & Tare (gm)	(W1)	658.32
Wt. Dry Soil & Tare (gm)	(W2)	510.34
Weight of Tare (gm)	(W3)	0.00
Weight of Water (gm)	(W4=W1-W2)	147.98
Weight of Dry Soil (gm)	(W5=W2-W3)	510.34
Moisture Content (%)	(W4/W5)*100	29.00

Hygroscopic Moisture For Sieve Sample

Wet Soil & Tare (gm)	67.39
Dry Soil & Tare (gm)	66.27
Tare Weight (gm)	3.22
Moisture Content (%)	1.78

Total Weight of Sample Used For Sieve Analysis Corrected For Hygroscopic Moisture

Weight + Tare, Before Separating On The #4 Sieve (gm)	805.37	
Tare Weight (gm)	219.08	
Total Weight (gm)	576.06	(W6)

Plus #4 Material Sieve

TARE WEIGHT: 0.00

	(Wt+Tare)	(((Wt-Tare)/W6)*100)	%PASSING		
12.0"				12.0"	cobbles
3.0"				3.0"	coarse gravel
2.5"				2.5"	coarse gravel
2.0"				2.0"	coarse gravel
1.5"				1.5"	coarse gravel
1.0"				1.0"	coarse gravel
0.75"				0.75"	fine gravel
0.50"				0.50"	fine gravel
0.375"				0.375"	fine gravel
#4	0.00	0.0	100.0	#4	coarse sand

HYDROMETER ANALYSIS

Specific Gravity	(assumed)	
Specific Gravity	(tested)	2.770
Amount Dispersing Agent (ml)		125.00
Type Dispersion Device		Mechanical
Length of Dispersion Period		1 Minute

Weight of Sample Used For Hydrometer Test

Weight of Sample Wet or Dry (gm)	57.07
Calculated Dry Wt. used in test (gm)	56.07
Hydrometer Bulb Number	624378
% Pass #4 Sieve For Whole Sample	100.00

TARE WEIGHT: 203.14

HYDROMETER BACKSIEVE (Percent Passing #10 - #200 Sieves)

	(Wt+Tare)	Cumul Wt. Retained	% PASSING		
#10	203.73	0.59	98.9	#10	medium sand
#20	205.43	2.29	95.9	#20	medium sand
#40	211.07	7.93	85.9	#40	fine sand
#60	216.16	13.02	76.8	#60	fine sand
#100	219.39	16.25	71.0	#100	fine sand
#200	223.13	19.99	64.4	#200	fines

HYDROMETER CALCULATIONS

DATE	TIME	ET (min)	READING R	TEMP T	TEMP.COR. K	HYD.COR. Cc	READING C	EFFECTIVE LENGTH	A
6/5/98	8:21								
6/5/98	8:23	2.00	40.0	25.50	0.013	5.50	34.50	10.7	0.98
6/5/98	8:26	5.00	38.0	25.50	0.013	5.50	32.50	11.1	0.98
6/5/98	8:36	15.00	35.0	25.50	0.013	5.50	29.50	11.5	0.98
6/5/98	8:51	30.00	33.5	25.50	0.013	5.50	28.00	11.7	0.98
6/5/98	9:21	60.00	31.0	25.50	0.013	5.50	25.50	12.2	0.98
6/5/98	12:31	250.00	28.0	25.50	0.013	5.50	22.50	12.7	0.98
6/6/98	8:21	1440.00	25.5	25.50	0.013	5.50	20.00	13.0	0.98

GRAIN SIZE PERCENTAGES

Particle Diameter	% PASSING
0.0289	60.3
0.0186	56.8
0.0109	51.6
0.0078	48.9
0.0056	44.6
0.0028	39.3
0.0012	35.0

% COBBLES	0.00
% COARSE GRAVEL	0.00
% FINE GRAVEL	0.00
% COARSE SAND	1.05
% MEDIUM SAND	13.09
% FINE SAND	21.51
% FINES	64.35
% TOTAL SAMPLE	100.00

Description: Reddish Yellow and Black, SILTY CLAY, and medium to fine sand.

USCS: CH

51	LL
28	PL
23	PI

TECH	JDR
DATE	6/4/98
CHECK	
REVIEW	

UNIT WEIGHT DETERMINATION
ASTM D 2937

PROJECT NAME	SOLUTIA / RFI-CS / AL	**SAMPLE ID**	OWR - 4D
PROJECT NUMBER	983-3223	**SAMPLE TYPE**	UD
		SAMPLE DEPTH	19.0-21.0'

WEIGHT OF SOIL (g)	658.32
LENGTH OF SAMPLE (in)	3.218
DIAMETER OF SAMPLE (in)	2.860
AREA OF SAMPLE (in^2)	6.42
VOLUME OF SAMPLE (in^3)	20.67
VOLUME OF SAMPLE (cm^3)	338.72

WET UNIT WEIGHT (pcf)	121.3

WEIGHT WET SOIL & TARE (g)	658.32
WEIGHT DRY SOIL & TARE (g)	510.34
WEIGHT OF WATER (g)	147.98
WEIGHT OF TARE (g)	0.00
WEIGHT OF DRY SOIL (g)	510.34
WATER CONTENT (%)	29.00

DRY UNIT WEIGHT (pcf)	94.0

SPECIFIC GRAVITY	2.770
VOLUME OF SOLIDS (cm^3)	184.23
VOLUME OF VOIDS (cm^3)	154.49
POROSITY (%)	46

TECH	GM
DATE	6/10/98
CHECK	GM
REVIEW	PWM

FLOW PUMP #1

FLEXIBLE WALL PERMEABILITY
ASTM D 5084
METHOD D, CONSTANT RATE OF FLOW

PROJECT TITLE	SOLUTIA / RFI-CS / AL		
PROJECT NUMBER	983 3223		
SAMPLE ID	OWR - 4D	-	19.0-21.5'
SAMPLE TYPE	UD		

BOARD #	4
CELL #	4
Flow Pump Speed	6
Technician	GM

COMMENTS

Sample Data, Initial			
Height, inches	3.218	B-Value, f	0.98
Diameter, inches	2.860	Cell Pres.	94.0
Area, cm²	41.45	Bot. Pres.	80.0
Volume, cm³	338.77	Top Pres.	80.0
Mass, g	658.32	Tot. B.P.	80.0
Moisture Content, %	29.00	Head, max.	131.54
Dry Density, pcf	94.00	Head, min.	131.54
Spec. Gravity	2.770	Max. Grad.	16.14
Volume Solids, cm³	184.24	Min. Grad.	16.14
Volume Voids, cm³	154.54		
Void Ratio	0.84		
Saturation, %	95.8%		

Sample Data, Fina	
Height, inches	3.208
Diameter, inches	2.855
Area, cm²	41.30
Volume, cm³	336.54
Mass, g	658.18
Moisture Content, %	28.97
Dry Density, pcf	94.63
Volume Solids, cm³	184.24
Volume Voids, cm³	152.30
Void Ratio	0.83
Saturation, %	97.1%

WATER CONTENTS		Trimmings Initial	Sample Final
Wt Soil & Tare, i	g	658.32	709.81
Wt Soil & Tare, f	g	510.34	562.02
Wt Tare	g	0.00	51.80
Wt Moisture Lost	g	147.98	147.79
Wt Dry Soil	g	510.34	510.22
Water Content	%	29.00%	28.97%

DESCRIPTION

Reddish Yellow and Black, SILTY CLAY, and medium to fine sand.

Flow Pump Rate: 5.90E-04 cm³/sec

USCS: CH

TIME FUNCTIONS, SECONDS								dP					
DATE	DAY	HOUR	MIN	TEMP (°C)	dt (min)	dt,acc (min)	dt (sec)	dt,acc (sec)	Reading (psi)	Head (cm)	Gradient	Permeability (cm/sec)	
6/5/98	35951	9	0	20.8	0	0	0	0	1.87	131.54	16.14	8.7E-07	
6/5/98	35951	9	5	20.8	5	5	300	300	1.87	131.54	16.14	8.7E-07	
6/5/98	35951	9	10	20.8	5	10	300	600	1.87	131.54	16.14	8.7E-07	
6/5/98	35951	9	15	20.8	5	15	300	900	1.87	131.54	16.14	8.7E-07	*
6/5/98	35951	9	20	20.8	5	20	300	1200	1.87	131.54	16.14	8.7E-07	*
6/5/98	35951	9	25	20.8	5	25	300	1500	1.87	131.54	16.14	8.7E-07	*
6/5/98	35951	9	30	20.8	5	30	300	1800	1.87	131.54	16.14	8.7E-07	*

*TRANSCRIBED FROM ORIGINAL DATA SHEETS

PERMEABILITY REPORTED AS ** 8.7E-07 cm/sec **

DATE 6/5/98
CHECK GM
REVIEW

ATTERBERG LIMITS
ASTM D-4318

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR-4D -
PROJECT NUMBER	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	40.0 - 42.0'

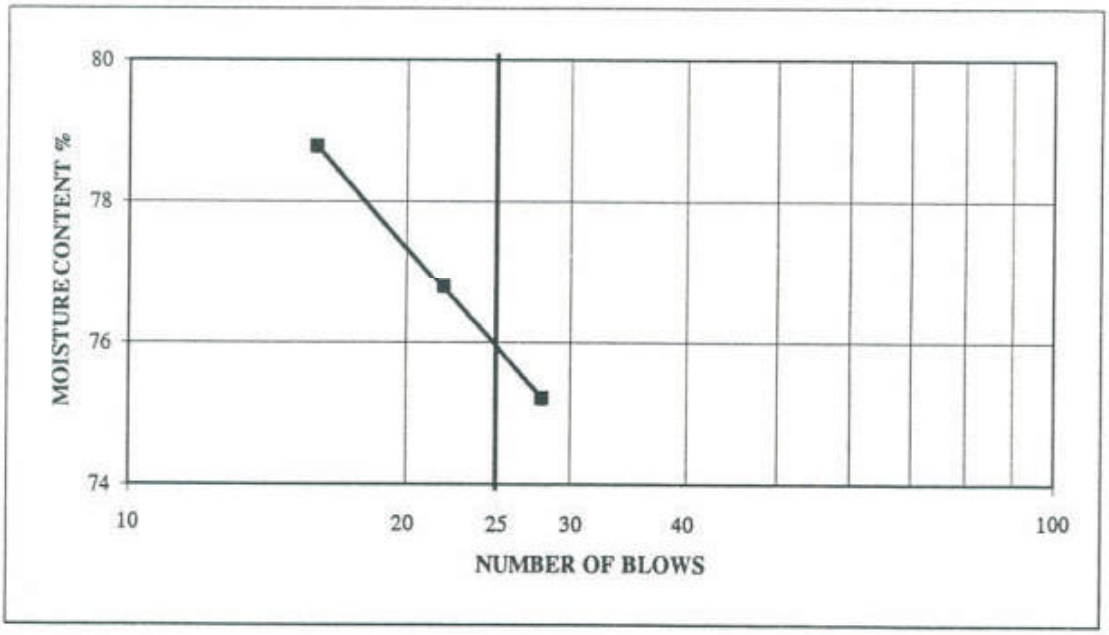
SAMPLE PREPARATION
Wet or Dry: Dry Minus #40 Sieve: Yes

PLASTIC LIMIT DETERMINATION

					NATURAL MOISTURE
Weight of Wet Soil & Tare (gm)	(W1)	24.66	24.25	23.66	594.48
Weight of Dry Soil & Tare (gm)	(W2)	21.39	21.02	20.60	423.42
Weight of Tare (gm)	(W3)	11.64	11.41	11.44	0.00
Weight of Water (gm)	(W4=W1-W2)	3.27	3.23	3.06	171.06
Weight of Dry Soil (gm)	(W5=W2-W3)	9.75	9.61	9.16	423.42
Water Content %	(W4/W5)*100	33.54	33.61	33.41	40.40

LIQUID LIMIT DETERMINATION

					NOTE:
Number of Blows		28	22	16	
Weight of Wet Soil & Tare (gm)	(W6)	17.40	16.76	17.18	
Weight of Dry Soil & Tare (gm)	(W7)	11.78	11.34	11.51	
Weight of Tare (gm)	(W8)	4.31	4.28	4.31	
Weight of Water (gm)	(W9=W6-W7)	5.62	5.42	5.67	
Weight of Dry Soil (gm)	(W10=W7-W8)	7.47	7.06	7.20	
Water Content %	(W9/W10)*100	75.23	76.77	78.75	



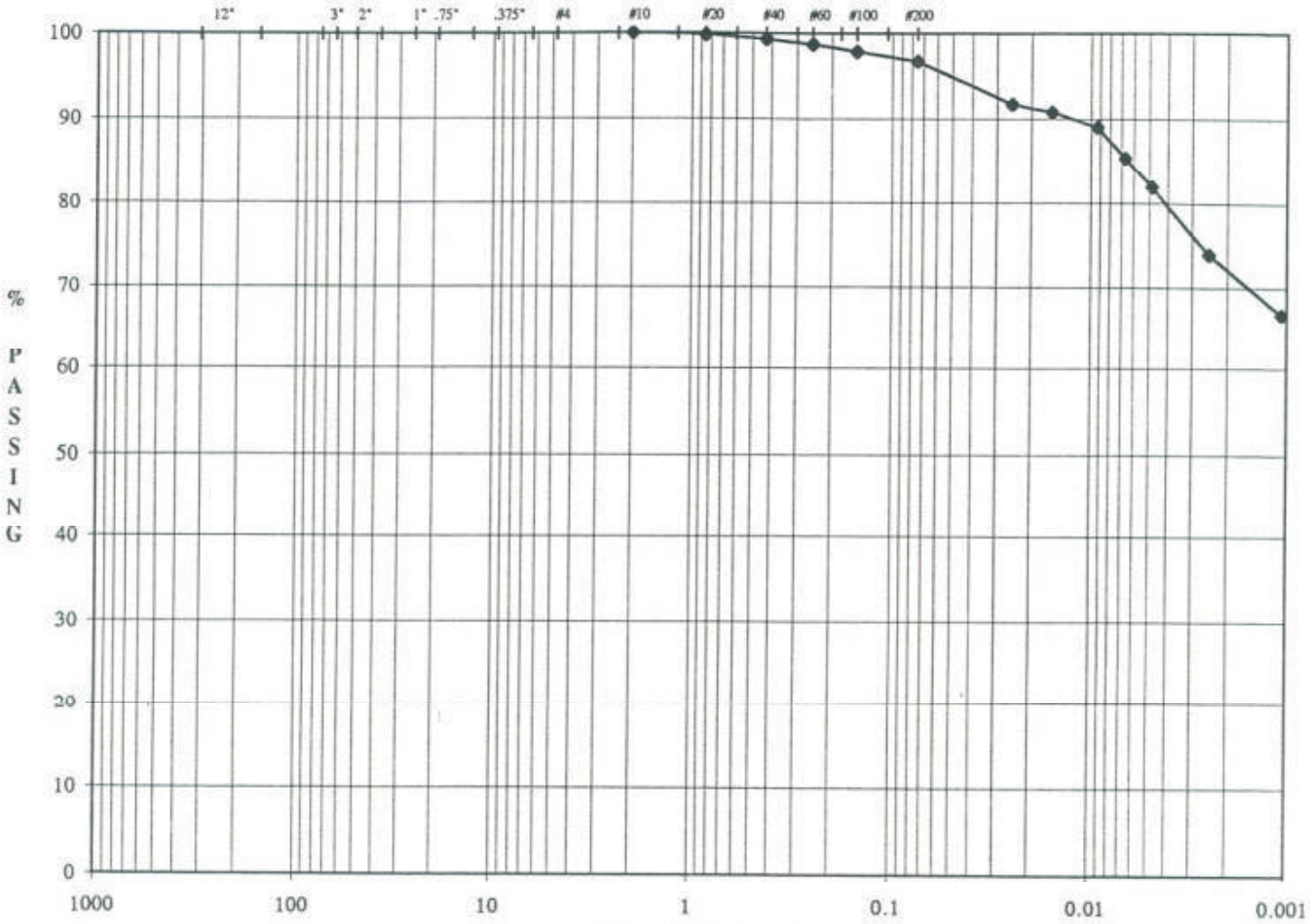
LIQUID LIMIT (Wl)	75.95	76
PLASTIC LIMIT (Wp)	33.52	34
PLASTICITY INDEX (Ip)		42
LIQUIDITY INDEX (I)		0.16
MOISTURE CONTENT		40.40

DESCRIPTION: Reddish and Yellowish Brown, SILTY CLAY, trace medium to fine sand.

USCS: CH

TECH	JDR/GM
DATE	6/8/98
CHECK	
REVIEW	

PARTICLE SIZE DISTRIBUTION ASTM D 421 AND D 422
US STANDARD SIEVE OPENING SIZES



Boulders	Cobbles	Gravel		SAND			SILT OR CLAY
		Coarse	Fine	Cor	Med	Fine	FINES

SAMPLE ID	OWR - 4D
SAMPLE TYPE	UD
SAMPLE DEPTH	40.0 - 42.0'

LL	76
PL	34
PI	42

DESCRIPTION	Reddish and Yellowish Brown, SILTY CLAY, trace medium to fine sand.
USCS	CH

SOLUTIA / RFI-CS / AL
983 3223

TECH	JDR
DATE	9/4/98
CHECK	
REVIEW	

ASTM GRAIN SIZE ANALYSIS
ASTM C117, C136, D421, D422, D1140 and D2217

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR - 4D
PROJECT NO	083.3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	40.0 - 42.0'

AS RECEIVED WATER CONTENT

Tare No.		-
Wt. Wet Soil & Tare (gm)	(W1)	594.48
Wt. Dry Soil & Tare (gm)	(W2)	423.42
Weight of Tare (gm)	(W3)	0.00
Weight of Water (gm)	(W4=W1-W2)	171.06
Weight of Dry Soil (gm)	(W5=W2-W3)	423.42
Moisture Content (%)	(W4/W5)*100	40.40

Hygroscopic Moisture For Sieve Sample

Wet Soil & Tare (gm)	66.28
Dry Soil & Tare (gm)	65.15
Tare Weight (gm)	3.23
Moisture Content (%)	1.82

Total Weight of Sample Used For Sieve Analysis Corrected For Hygroscopic Moisture

Weight + Tare, Before Separating On The #4 Sieve (gm)	726.52	
Tare Weight (gm)	233.78	
Total Weight (gm)	483.91	(W6)

Plus #4 Material Sieve

TARE WEIGHT: 0.00

	(Wt+Tare)	(((Wt-Tare)/W6)*100)	%PASSING		
12.0"				12.0"	cobbles
3.0"				3.0"	coarse gravel
2.5"				2.5"	coarse gravel
2.0"				2.0"	coarse gravel
1.5"				1.5"	coarse gravel
1.0"				1.0"	coarse gravel
0.75"				0.75"	fine gravel
0.50"				0.50"	fine gravel
0.375"				0.375"	fine gravel
#4	0.00	0.0	100.0	#4	coarse sand

HYDROMETER ANALYSIS

Specific Gravity	(assumed)	
Specific Gravity	(tested)	2.835
Amount Dispersing Agent (ml)		125.00
Type Dispersion Device		Mechanical
Length of Dispersion Period		1 Minute

Weight of Sample Used For Hydrometer Test

Weight of Sample Wet or Dry (gm)	55.48
Calculated Dry Wt. used in test (gm)	54.49
Hydrometer Bulb Number	624378
% Pass #4 Sieve For Whole Sample	100.00

TARE WEIGHT: 203.14

HYDROMETER BACKSIEVE (Percent Passing #10 - #200 Sieves)

	(Wt+Tare)	Cumul Wt. Retained	% PASSING		
#10	203.14	0.00	100.0	#10	medium sand
#20	203.24	0.10	99.8	#20	medium sand
#40	203.51	0.37	99.3	#40	fine sand
#60	203.85	0.71	98.7	#60	fine sand
#100	204.28	1.14	97.9	#100	fine sand
#200	204.90	1.76	96.8	#200	fines

HYDROMETER CALCULATIONS

DATE	TIME	ET	READING	TEMP	TEMP.COR.	HYD.COR.	READING	EFFECTIVE	
6/8/98	8:15	(min)	R	T	K	Cc	C	LENGTH	A
6/8/98	8:17	2.00	57.0	22.00	0.013	5.50	51.50	7.9	0.97
6/8/98	8:20	5.00	56.5	22.00	0.013	5.50	51.00	7.9	0.97
6/8/98	8:30	15.00	55.5	22.00	0.013	5.50	50.00	8.1	0.97
6/8/98	8:45	30.00	53.5	22.00	0.013	5.50	48.00	8.4	0.97
6/8/98	9:15	60.00	51.5	22.00	0.013	5.50	46.00	8.8	0.97
6/8/98	12:25	250.00	47.0	22.00	0.013	5.50	41.50	9.6	0.97
6/9/98	8:15	1440.00	43.0	22.00	0.013	5.50	37.50	10.2	0.97

GRAIN SIZE PERCENTAGES

Particle Diameter	% PASSING		
0.0250	91.7	% COBBLES	0.00
0.0158	90.8	% COARSE GRAVEL	0.00
0.0093	89.0	% FINE GRAVEL	0.00
0.0067	85.5	% COARSE SAND	0.00
0.0048	81.9	% MEDIUM SAND	0.68
0.0025	73.9	% FINE SAND	2.55
0.0011	66.8	% FINES	96.77
		% TOTAL SAMPLE	100.00

Description: Reddish and Yellowish Brown, SILTY CLAY, trace medium to fine sand.

USCS: CH

76	LL
34	PL
42	PI

TECH	JDR
DATE	6/4/98
CHECK	
REVIEW	

UNIT WEIGHT DETERMINATION
ASTM D 2937

PROJECT NAME	SOLUTIA / RFI-CS / AL	**SAMPLE ID**	OWR - 4D
PROJECT NUMBER	983-3223	**SAMPLE TYPE**	UD
		SAMPLE DEPTH	40.0-42.0'

WEIGHT OF SOIL (g)	594.48
LENGTH OF SAMPLE (in)	3.073
DIAMETER OF SAMPLE (in)	2.859
AREA OF SAMPLE (in^2)	6.42
VOLUME OF SAMPLE (in^3)	19.73
VOLUME OF SAMPLE (cm^3)	323.32

WET UNIT WEIGHT (pcf)	114.8

WEIGHT WET SOIL & TARE (g)	594.48
WEIGHT DRY SOIL & TARE (g)	423.42
WEIGHT OF WATER (g)	171.06
WEIGHT OF TARE (g)	0.00
WEIGHT OF DRY SOIL (g)	423.42
WATER CONTENT (%)	40.40

DRY UNIT WEIGHT (pcf)	81.8

SPECIFIC GRAVITY	2.835
VOLUME OF SOLIDS (cm^3)	149.35
VOLUME OF VOIDS (cm^3)	173.97
POROSITY (%)	54

TECH	GM
DATE	6/10/98
CHECK	GM
REVIEW	

FLOW PUMP #2

FLEXIBLE WALL PERMEABILITY
ASTM D 5084
METHOD D, CONSTANT RATE OF FLOW

PROJECT TITLE	SOLUTIA / RFI-CS / AL		
PROJECT NUMBER	983-3223		
SAMPLE ID	OWR-4D	-	40.0-42.0'
SAMPLE TYPE	UD		

BOARD #	9
CELL #	9
Flow Pump Speed	9
Technician	PWM

COMMENTS

Sample Data, Initial			
Height, inches	3.073	B-Value, f	1.00
Diameter, inches	2.859	Cell Pres.	108.0
Area, cm²	41.42	Bot. Pres.	80.0
Volume, cm³	323.28	Top Pres.	80.0
Mass, g	594.48	Tot. B.P.	80.0
Moisture Content, %	40.40	Head, max.	180.07
Dry Density, pcf	81.73	Head, min.	180.07
Spec. Gravity	2.835	Max. Grad.	23.16
Volume Solids, cm³	149.35	Min. Grad.	23.16
Volume Voids, cm³	173.93		
Void Ratio	1.16		
Saturation, %	98.4%		

Sample Data, Final	
Height, inches	3.061
Diameter, inches	2.868
Area, cm²	41.68
Volume, cm³	324.05
Mass, g	593.59
Moisture Content, %	40.19
Dry Density, pcf	81.53
Volume Solids, cm³	149.35
Volume Voids, cm³	174.70
Void Ratio	1.17
Saturation, %	97.4%

WATER CONTENTS		Trimmings Initial	Sample Final
Wt Soil & Tare, i	g	594.48	636.13
Wt Soil & Tare, f	g	423.42	466.01
Wt Tare	g	0.00	42.71
Wt Moisture Last	g	171.06	170.11
Wt Dry Soil	g	423.42	423.29
Water Content	%	40.40%	40.19%

Flow Pump Rate: 5.70E-05 cm³/sec

USCS: CH

DESCRIPTION: Reddish and Yellowish Brown, SILTY CLAY, trace medium to fine sand.

TIME FUNCTIONS, SECONDS								dF				
DATE	DAY	HOUR	MIN	TEMP (°C)	dt (min)	dt,acc (min)	dt (sec)	dt,acc (sec)	Reading (psi)	Head (cm)	Gradient	Permeability (cm/sec)
6/8/98	35954	10	30	21.3	0	0	0	0	2.56	180.07	23.16	5.7E-08
6/8/98	35954	10	35	21.3	5	5	300	300	2.56	180.07	23.16	5.7E-08
6/8/98	35954	10	40	21.3	5	10	300	600	2.56	180.07	23.16	5.7E-08
6/8/98	35954	10	45	21.3	5	15	300	900	2.56	180.07	23.16	5.7E-08 *
6/8/98	35954	10	50	21.3	5	20	300	1200	2.56	180.07	23.16	5.7E-08 *
6/8/98	35954	10	55	21.3	5	25	300	1500	2.56	180.07	23.16	5.7E-08 *
6/8/98	35954	11	0	21.3	5	30	300	1800	2.56	180.07	23.16	5.7E-08 *

*TRANSCRIBED FROM ORIGINAL DATA SHEETS

PERMEABILITY REPORTED AS ** 5.7E-08 cm/sec **

DATE 6/8/98
CHECK
REVIEW

ATTERBERG LIMITS
ASTM D-4318

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR-4D -
PROJECT NUMBER	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	60.0 - 62.0'

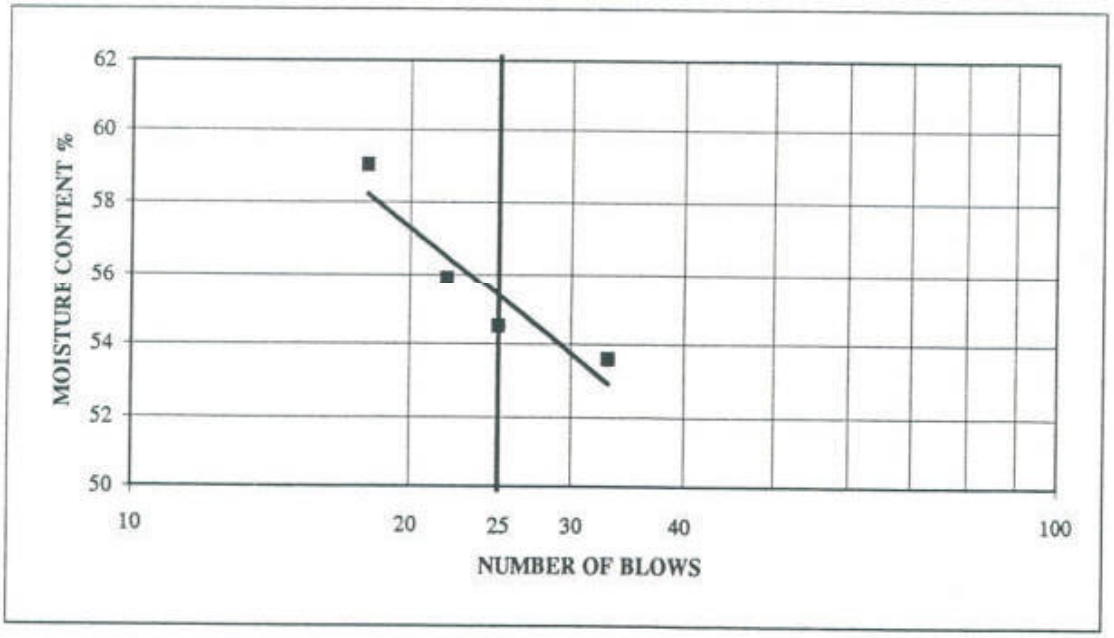
SAMPLE PREPARATION
Wet or Dry: Dry Minus #40 Sieve: Yes

PLASTIC LIMIT DETERMINATION

					NATURAL MOISTURE
Weight of Wet Soil & Tare (gm)	(W1)	27.59	29.75	26.59	279.01
Weight of Dry Soil & Tare (gm)	(W2)	23.73	25.38	22.97	210.02
Weight of Tare (gm)	(W3)	11.41	11.44	11.48	52.07
Weight of Water (gm)	(W4=W1-W2)	3.86	4.37	3.62	68.99
Weight of Dry Soil (gm)	(W5=W2-W3)	12.32	13.94	11.49	157.95
Water Content %	(W4/W5)*100	31.33	31.35	31.51	43.68

LIQUID LIMIT DETERMINATION

Number of Blows		33	25	22	18	NOTE:
Weight of Wet Soil & Tare (gm)	(W6)	16.48	13.95	13.01	16.44	
Weight of Dry Soil & Tare (gm)	(W7)	12.22	10.54	9.88	12.84	
Weight of Tare (gm)	(W8)	4.27	4.28	4.28	6.74	
Weight of Water (gm)	(W9=W6-W7)	4.26	3.41	3.13	3.60	
Weight of Dry Soil (gm)	(W10=W7-W8)	7.95	6.26	5.60	6.10	
Water Content %	(W9/W10)*100	53.58	54.47	55.89	59.02	



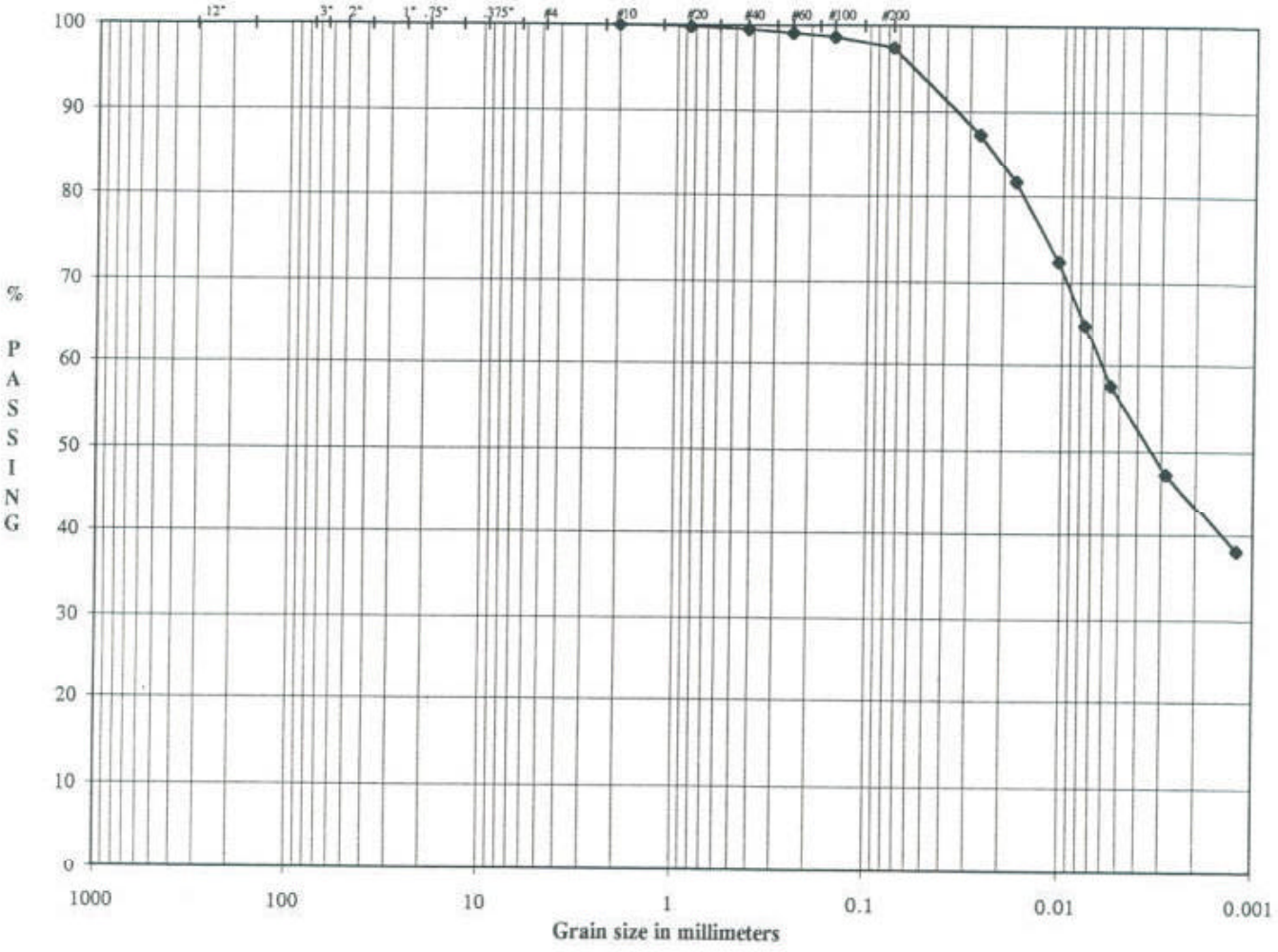
LIQUID LIMIT (WI)	55.35	55
PLASTIC LIMIT (Wp)	31.4	31
PLASTICITY INDEX (Ip)		24
LIQUIDITY INDEX (I)		0.51
MOISTURE CONTENT		43.68

DESCRIPTION: Yellowish and Reddish Brown, CLAYEY SILT, trace medium to fine sand.

USCS: MH

TECH: JDR/GM
DATE: 6/8/98
CHECK:
REVIEW:

PARTICLE SIZE DISTRIBUTION ASTM D 421 AND D 422
US STANDARD SIEVE OPENING SIZES



Boulders	Cobbles	Coarse	Fine	Cor	Med	Fine	SILT OR CLAY
		Gravel		SAND			FINES

SAMPLE ID	OWR - 4D
SAMPLE TYPE	UD
SAMPLE DEPTH	60.0 - 62.0'

LL	55
PL	31
PI	24

DESCRIPTION	Yellowish and Reddish Brown, CLAYEY SILT, trace medium to fine sand.
USCS	MH

SOLUTIA / RFI-CS / AL
983-3223

TECH	JDR
DATE	6/8/98
CHECK	
REVIEW	

ASTM GRAIN SIZE ANALYSIS
ASTM C117, C136, D421, D422, D1140 and D2217

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR - 4D
PROJECT NO.	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	60.0 - 62.0'

AS RECEIVED WATER CONTENT

Tare No.		-
Wt. Wet Soil & Tare (gm)	(W1)	279.01
Wt. Dry Soil & Tare (gm)	(W2)	210.02
Weight of Tare (gm)	(W3)	52.07
Weight of Water (gm)	(W4 = W1-W2)	68.99
Weight of Dry Soil (gm)	(W5 = W2-W3)	157.95
Moisture Content (%)	(W4/W5)*100	43.68

Hygroscopic Moisture For Sieve Sample

Wet Soil & Tare (gm)	55.66
Dry Soil & Tare (gm)	53.75
Tare Weight (gm)	3.23
Moisture Content (%)	3.78

Total Weight of Sample Used For Sieve Analysis Corrected For Hygroscopic Moisture

Weight + Tare, Before Separating On The #4 Sieve (gm)	760.67	
Tare Weight (gm)	237.32	
Total Weight (gm)	504.28	(W6)

Plus #4 Material Sieve

TARE WEIGHT: 0.00

	(Wt+Tare)	(((Wt-Tare)/W6)*100)	%PASSING		
12.0"				12.0"	cobbles
3.0"				3.0"	coarse gravel
2.5"				2.5"	coarse gravel
2.0"				2.0"	coarse gravel
1.5"				1.5"	coarse gravel
1.0"				1.0"	coarse gravel
0.75"				0.75"	fine gravel
0.50"				0.50"	fine gravel
0.375"				0.375"	fine gravel
#4	0.00	0.0	100.0	#4	coarse sand

HYDROMETER ANALYSIS

Specific Gravity	(assumed)	
Specific Gravity	(tested)	2.789
Amount Dispersing Agent (ml)		125.00
Type Dispersion Device		Mechanical
Length of Dispersion Period		1 Minute

Weight of Sample Used For Hydrometer Test

Weight of Sample Wet or Dry (gm)	54.78
Calculated Dry Wt. used in test (gm)	52.78
Hydrometer Bulb Number	624378
% Pass #4 Sieve For Whole Sample	100.00

TARE WEIGHT: 203.14

HYDROMETER BACKSIEVE (Percent Passing #10 - #200 Sieves)

	(Wt+Tare)	Cumul Wt. Retained	% PASSING		
#10	203.14	0.00	100.0	#10	medium sand
#20	203.26	0.12	99.8	#20	medium sand
#40	203.41	0.27	99.5	#40	fine sand
#60	203.62	0.48	99.1	#60	fine sand
#100	203.85	0.71	98.7	#100	fine sand
#200	204.52	1.38	97.4	#200	fines

HYDROMETER CALCULATIONS

DATE	TIME	ET	READING	TEMP	TEMP.COR.	HYD.COR.	READING	EFFECTIVE	
6/8/98	8:25	(min)	R	T	K	Cc	C	LENGTH	A
6/8/98	8:27	2.00	52.5	22.00	0.013	5.50	47.00	8.6	0.98
6/8/98	8:30	5.00	49.5	22.00	0.013	5.50	44.00	9.1	0.98
6/8/98	8:40	15.00	44.5	22.00	0.013	5.50	39.00	9.9	0.98
6/8/98	8:55	30.00	40.5	22.00	0.013	5.50	35.00	10.6	0.98
6/8/98	9:25	60.00	36.5	22.00	0.013	5.50	31.00	11.2	0.98
6/8/98	12:35	250.00	31.0	22.00	0.013	5.50	25.50	12.2	0.98
6/9/98	8:25	1440.00	26.0	22.00	0.013	5.50	20.50	13.0	0.98

GRAIN SIZE PERCENTAGES

Particle Diameter	% PASSING		
0.0265	87.3	% COBBLES	0.00
0.0173	81.7	% COARSE GRAVEL	0.00
0.0104	72.4	% FINE GRAVEL	0.00
0.0076	65.0	% COARSE SAND	0.51
0.0055	57.6	% MEDIUM SAND	2.10
0.0028	47.3	% FINE SAND	97.39
0.0012	38.1	% FINES	100.00
		% TOTAL SAMPLE	100.00

Description: Yellowish and Reddish Brown, CLAYEY SILT, trace medium to fine sand.

USCS: MH

55	LL
31	PL
24	PI

TECH	JDR
DATE	6/8/98
CHECK	
REVIEW	

UNIT WEIGHT DETERMINATION
ASTM D 2937

PROJECT NAME	SOLUTIA / RFI-CS / AL	**SAMPLE ID**	OWR - 4D
PROJECT NUMBER	983-3223	**SAMPLE TYPE**	UD
		SAMPLE DEPTH	60.0-62.0'

WEIGHT OF SOIL (g)	582.05
LENGTH OF SAMPLE (in)	3.080
DIAMETER OF SAMPLE (in)	2.876
AREA OF SAMPLE (in^2)	6.50
VOLUME OF SAMPLE (in^3)	20.01
VOLUME OF SAMPLE (cm^3)	327.90

WET UNIT WEIGHT (pcf)	110.8

WEIGHT WET SOIL & TARE (g)	279.01
WEIGHT DRY SOIL & TARE (g)	210.02
WEIGHT OF WATER (g)	68.99
WEIGHT OF TARE (g)	52.07
WEIGHT OF DRY SOIL (g)	157.95
WATER CONTENT (%)	43.68

DRY UNIT WEIGHT (pcf)	77.1

SPECIFIC GRAVITY	2.789
VOLUME OF SOLIDS (cm^3)	145.25
VOLUME OF VOIDS (cm^3)	182.65
POROSITY (%)	56

TECH	GM
DATE	6/10/98
CHECK	
REVIEW	

FLOW PUMP #2

FLEXIBLE WALL PERMEABILITY
ASTM D 5084
METHOD D, CONSTANT RATE OF FLOW

PROJECT TITLE	SOLUTIA / RFI-CS / AL		
PROJECT NUMBER	983-3223		
SAMPLEID	OWR - 4D	-	60.0-62.0
SAMPLETYPE	UD		

BOARD #	1
CELL #	1
Flow Pump Speed	8
Technician	PWM

COMMENTS

Sample Data, Initial			
Height, inches	3.080	B-Value, f	1.00
Diameter, inches	2.876	Cell Pres.	112.0
Area, cm²	41.91	Bot. Pres.	70.0
Volume, cm³	327.88	Top Pres.	70.0
Mass, g	582.05	Tot. B.P.	70.0
Moisture Content, %	43.68	Head, max.	96.37
Dry Density, pcf	77.10	Head, min.	96.37
Spec. Gravity	2.789	Max. Grad.	12.43
Volume Solids, cm³	145.25	Min. Grad.	12.43
Volume Voids, cm³	182.63		
Void Ratio	126		
Saturation, %	969%		

Sample Data, Final	
Height, inches	3.053
Diameter, inches	2.859
Area, cm²	41.42
Volume, cm³	321.18
Mass, g	578.88
Moisture Content, %	43.37
Dry Density, pcf	78.44
Volume Solids, cm³	144.77
Volume Voids, cm³	176.41
Void Ratio	1.22
Saturation, %	99.3%

WATER CONTENTS		Trimmings Initial	Sample Final
Wt Soil & Tare, i	g	279.01	629.94
Wt Soil & Tare, f	g	210.02	454.88
Wt Tare	g	52.07	51.28
Wt Moisture Lost	g	68.99	175.06
Wt Dry Soil	g	157.95	403.60
Water Content	%	43.68%	43.37%

DESCRIPTION

Yellowish and Reddish Brown, CLAYEY SILT, trace medium to fine sand.

Flow Pump Rate: 1.40E-04 cm³/sec

USCS: MH

TIMEFUNCTIONS, SECONDS								cP					
DATE	DAY	HOUR	MIN	TEMP (°C)	dt (min)	dt,acc (min)	dt (sec)	dt,acc (sec)	Reading (psi)	Head (cm)	Gradient	Permeability (cm/sec)	
6/8/98	35954	14	25	21.4	0	0	0	0	1.37	96.37	12.43	2.6E-07	
6/8/98	35954	14	30	21.4	5	5	300	300	1.37	96.37	12.43	2.6E-07	
6/8/98	35954	14	35	21.4	5	10	300	600	1.37	96.37	12.43	2.6E-07	
6/8/98	35954	14	40	21.4	5	15	300	900	1.37	96.37	12.43	2.6E-07	*
6/8/98	35954	14	45	21.4	5	20	300	1200	1.37	96.37	12.43	2.6E-07	*
6/8/98	35954	14	50	21.4	5	25	300	1500	1.37	96.37	12.43	2.6E-07	*
6/8/98	35954	14	55	21.4	5	30	300	1800	1.37	96.37	12.43	2.6E-07	*

*TRANSCRIBED FROM ORIGINAL DATA SHEETS

PERMEABILITY REPORTED AS ** 2.6E-07 cm/sec **

DATE 6/8/98
CHECK
REVIEW

ATTERBERG LIMITS
ASTM D-4318

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR-4D -
PROJECT NUMBER	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	80.0 - 82.0'

SAMPLE PREPARATION
Wet or Dry: Dry Minus #40 Sieve: Yes

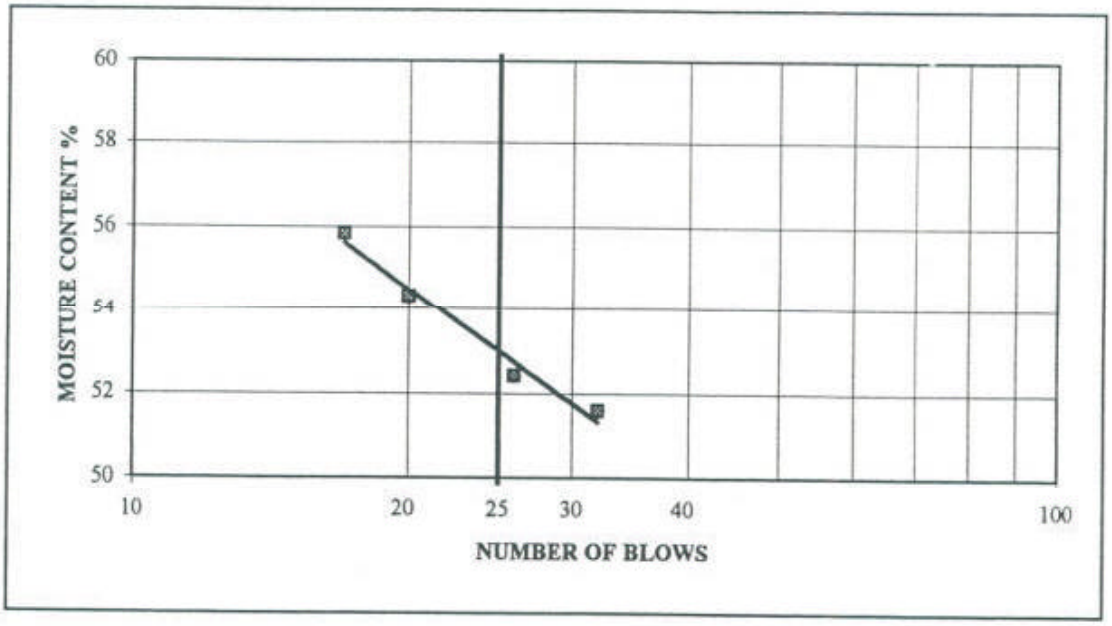
PLASTIC LIMIT DETERMINATION

					NATURAL MOISTURE
Weight of Wet Soil & Tare (gm)	(W1)	23.14	22.50	22.36	602.75
Weight of Dry Soil & Tare (gm)	(W2)	21.12	20.61	20.41	423.77
Weight of Tare (gm)	(W3)	11.40	11.39	10.82	0.00
Weight of Water (gm)	(W4=W1-W2)	2.02	1.89	1.95	178.98
Weight of Dry Soil (gm)	(W5=W2-W3)	9.72	9.22	9.59	423.77
Water Content %	(W4/W5)*100	20.78	20.50	20.33	42.24

LIQUID LIMIT DETERMINATION

Number of Blows		32	26	20	17
Weight of Wet Soil & Tare (gm)	(W6)	16.23	16.02	16.51	15.75
Weight of Dry Soil & Tare (gm)	(W7)	12.98	12.00	12.20	11.64
Weight of Tare (gm)	(W8)	6.68	4.33	4.27	4.28
Weight of Water (gm)	(W9=W6-W7)	3.25	4.02	4.31	4.11
Weight of Dry Soil (gm)	(W10=W7-W8)	6.30	7.67	7.93	7.36
Water Content %	(W9/W10)*100	51.59	52.41	54.35	55.84

NOTE:



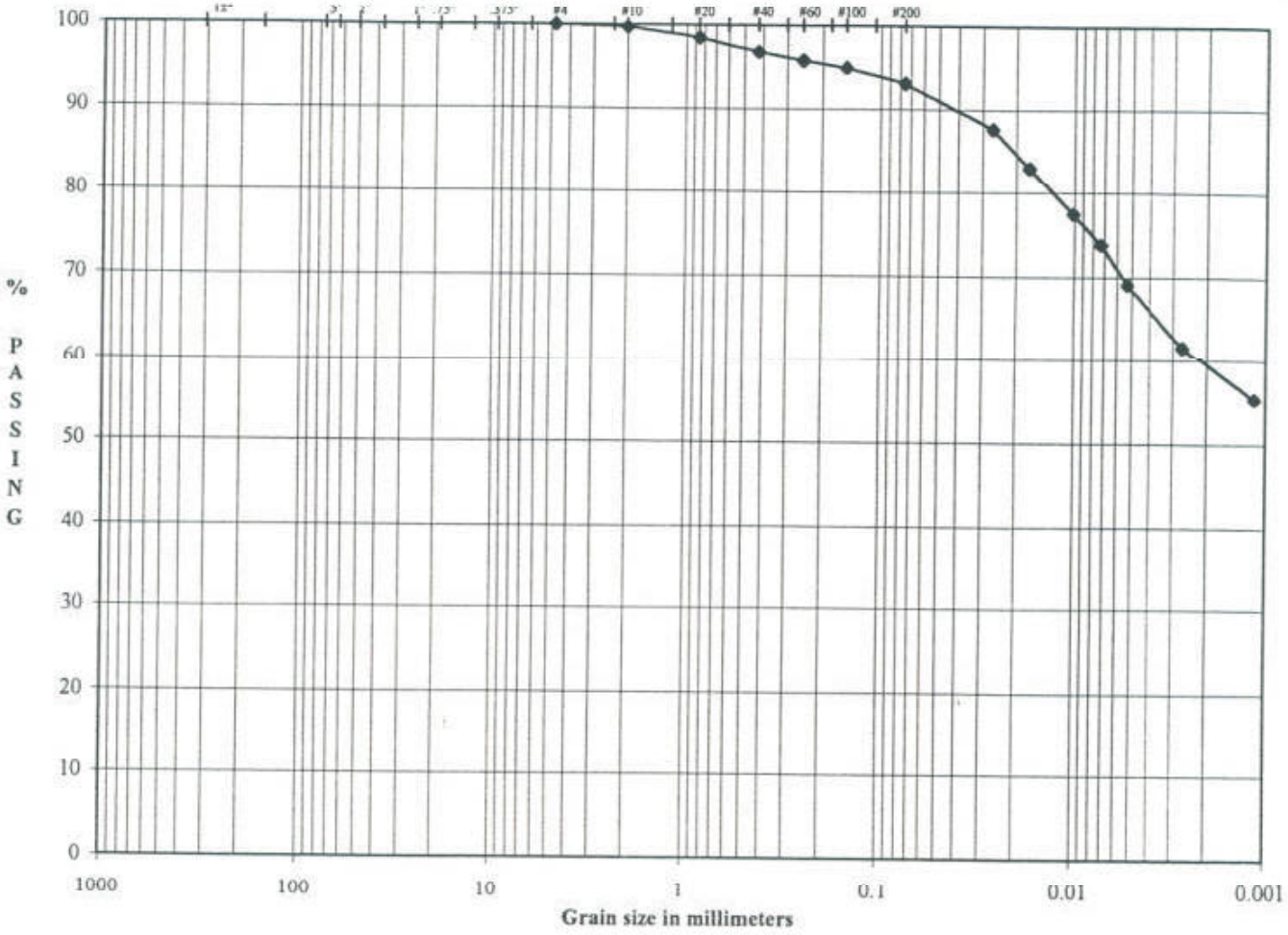
LIQUID LIMIT (WI)	53.00	53
PLASTIC LIMIT (Wp)	20.54	21
PLASTICITY INDEX (Ip)		32
LIQUIDITY INDEX (I)		0.68
MOISTURE CONTENT		42.24

DESCRIPTION: Reddish Brown, SILTY CLAY, little medium to fine sand.

USCS: CH

TECH	SW/GM
DATE	6/8/98
CHECK	
REVIEW	

PARTICLE SIZE DISTRIBUTION ASTM D 421 AND D 422
US STANDARD SIEVE OPENING SIZES



Boulders	Cobbles	Coarse	Fine	Cor	Med	Fine	SILT OR CLAY
		Gravel		SAND			FINES

SAMPLE ID	OWR - 4D
SAMPLE TYPE	UD
SAMPLE DEPTH	80.0 - 82.0'

LL	53
PL	21
PI	32

DESCRIPTION	Reddish Brown, SILTY CLAY, little medium to fine sand.
USCS	CH

SOLUTIA / RFI-CS / AL
983-3223

TECH	JDR
DATE	6/4/98
CHECK	
REVIEW	

ASTM GRAIN SIZE ANALYSIS
ASTM C117, C136, D421, D422, D1140 and D2217

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR - 4D
PROJECT NO.	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	80.0 - 82.0'

AS RECEIVED WATER CONTENT

Tare No.		-
Wt. Wet Soil & Tare (gm)	(W1)	602.75
Wt. Dry Soil & Tare (gm)	(W2)	423.77
Weight of Tare (gm)	(W3)	0.00
Weight of Water (gm)	(W4=W1-W2)	178.98
Weight of Dry Soil (gm)	(W5=W2-W3)	423.77
Moisture Content (%)	(W4/W5)*100	42.24

Hygroscopic Moisture For Sieve Sample

Wet Soil & Tare (gm)	53.22
Dry Soil & Tare (gm)	51.74
Tare Weight (gm)	3.19
Moisture Content (%)	3.05

Total Weight of Sample Used For Sieve Analysis Corrected For Hygroscopic Moisture

Weight + Tare, Before Separating On The #4 Sieve (gm)	720.52	
Tare Weight (gm)	236.21	
Total Weight (gm)	469.98	(W6)

Plus #4 Material Sieve

TARE WEIGHT: 0.00

	(Wt+Tare)	(((Wt-Tare)/W6)*100)	%PASSING		
12.0"				12.0"	cobbles
3.0"				3.0"	coarse gravel
2.5"				2.5"	coarse gravel
2.0"				2.0"	coarse gravel
1.5"				1.5"	coarse gravel
1.0"				1.0"	coarse gravel
0.75"				0.75"	fine gravel
0.50"				0.50"	fine gravel
0.375"				0.375"	fine gravel
#4	0.00	0.0	100.0	#4	coarse sand

HYDROMETER ANALYSIS

Specific Gravity	(assumed)	
Specific Gravity	(tested)	2.789
Amount Dispersing Agent (ml)		125.00
Type Dispersion Device		Mechanical
Length of Dispersion Period		1 Minute

Weight of Sample Used For Hydrometer Test

Weight of Sample Wet or Dry (gm)	54.75
Calculated Dry Wt. used in test (gm)	53.13
Hydrometer Bulb Number	624378
% Pass #4 Sieve For Whole Sample	100.00

TARE WEIGHT: 203.14

HYDROMETER BACKSIEVE (Percent Passing #10 - #200 Sieves)

	(Wt+Tare)	Cumul Wt. Retained	% PASSING		
#10	203.29	0.15	99.7	#10	medium sand
#20	203.96	0.82	98.5	#20	medium sand
#40	204.85	1.71	96.8	#40	fine sand
#60	205.39	2.25	95.8	#60	fine sand
#100	205.81	2.67	95.0	#100	fine sand
#200	206.79	3.65	93.1	#200	fines

HYDROMETER CALCULATIONS

DATE	TIME	ET (min)	READING R	TEMP T	TEMP.COR. K	HYD.COR. Cc	READING C	EFFECTIVE LENGTH	A
6/8/98	8:21								
6/8/98	8:23	2.00	53.0	22.00	0.013	5.50	47.50	8.6	0.98
6/8/98	8:26	5.00	50.5	22.00	0.013	5.50	45.00	8.9	0.98
6/8/98	8:36	15.00	47.5	22.00	0.013	5.50	42.00	9.4	0.98
6/8/98	8:51	30.00	45.5	22.00	0.013	5.50	40.00	9.7	0.98
6/8/98	9:21	60.00	43.0	22.00	0.013	5.50	37.50	10.2	0.98
6/8/98	12:31	250.00	39.0	22.00	0.013	5.50	33.50	10.9	0.98
6/9/98	8:21	1440.00	35.5	22.00	0.013	5.50	30.00	11.4	0.98

GRAIN SIZE PERCENTAGES

Particle Diameter	% PASSING		
0.0265	87.6	% COBBLES	0.00
0.0171	83.0	% COARSE GRAVEL	0.00
0.0101	77.5	% FINE GRAVEL	0.00
0.0073	73.8	% COARSE SAND	0.28
0.0053	69.2	% MEDIUM SAND	2.94
0.0027	61.8	% FINE SAND	3.65
0.0011	55.3	% FINES	93.13
		% TOTAL SAMPLE	100.00

Description: Reddish Brown, SILTY CLAY, little medium to fine sand.

USCS: CH

53	LL
21	PL
32	PI

TECH	JDR
DATE	6/4/98
CHECK	
REVIEW	

UNIT WEIGHT DETERMINATION
ASTM D 2937

PROJECT NAME	SOLUTIA / RFI-CS / AL	**SAMPLE ID**	OWR - 4D
PROJECT NUMBER	983-3223	**SAMPLE TYPE**	UD
		SAMPLE DEPTH	80.0-82.0'

WEIGHT OF SOIL (g)	602.75
LENGTH OF SAMPLE (in)	3.140
DIAMETER OF SAMPLE (in)	2.886
AREA OF SAMPLE (in^2)	6.54
VOLUME OF SAMPLE (in^3)	20.54
VOLUME OF SAMPLE (cm^3)	336.59

WET UNIT WEIGHT (pcf)	111.8

WEIGHT WET SOIL & TARE (g)	602.75
WEIGHT DRY SOIL & TARE (g)	423.77
WEIGHT OF WATER (g)	178.98
WEIGHT OF TARE (g)	0.00
WEIGHT OF DRY SOIL (g)	423.77
WATER CONTENT (%)	42.24

DRY UNIT WEIGHT (pcf)	78.6

SPECIFIC GRAVITY	2.789
VOLUME OF SOLIDS (cm^3)	151.94
VOLUME OF VOIDS (cm^3)	184.65
POROSITY (%)	55

TECH	GM
DATE	6/10/98
CHECK	
REVIEW	

FLOW PUMP #1

FLEXIELE WALL PERMEABILITY
ASTM D 5084
METHOD B, CONSTANT RATE OF FLOW

PROJECT TITLE	SOLUTIA / RFI-CS / AL		
PROJECT NUMBER	983-3223		
SAMPLE ID	OWR - 4D	-	80.0-82.0'
SAMPLE TYPE	UD		

BOARD #	10
CELL #	10
Flow Pump Speed	10
Technician	PWM

COMMENTS

Sample Data, Initial			
Height, inches	3.140	B-Value, f	100
Diameter, inches	2.886	Cell Pres.	116.0
Area, cm²	42.20	Bot. Pres.	60.0
Volume, cm³	336.60	Top Pres.	60.0
Mass, g	602.75	Tot. B.P.	60.0
Moisture Content, %	42.24	Head, max.	157.56
Dry Density, pcf	78.56	Head, min.	157.56
Spec. Gravity	2.789	Max. Grad.	20.11
Volume Solids, cm³	151.94	Min. Grad.	20.11
Volume Voids, cm³	184.66		
Void Ratio	1.22		
Saturation, %	96.9%		

Sample Data, Final	
Height, inches	3.084
Diameter, inches	2.839
Area, cm²	40.84
Volume, cm³	319.92
Mass, g	589.25
Moisture Content, %	39.05
Dry Density, pcf	82.66
Volume Solids, cm³	151.94
Volume Voids, cm³	167.97
Void Ratio	1.11
Saturation, %	98.5%

WATER CONTENTS		Trimmings Initial	Sample Final
Wt Soil & Tare, i	g	602.75	640.81
Wt Soil & Tare, f	g	423.77	475.33
Wt Tare	g	8.00	51.56
Wt Moisture Lost	g	178.98	165.48
Wt Dry Soil	g	423.77	423.77
Water Content	%	42.24%	39.05%

Flow Pump Rate: 3.00E-05 cm³/sec

USCS: CH

DESCRIPTION: Reddish Brown, SILTY CLAY, little medium to fine sand.

TIME FUNCTIONS, SECONDS								dP				
DATE	DAY	HOUR	MIN	TEMP (°C)	dt (min)	dt,acc (min)	dt (sec)	dt,acc (sec)	Reading (psi)	Head (cm)	Gradient	Permeability (cm/sec)
6/8/98	35954	10	0	21.3	0	0	0	0	2.24	157.56	20.11	3.6E-08
6/8/98	35954	10	5	21.3	5	5	300	300	2.24	157.56	20.11	3.6E-08
6/8/98	35954	10	10	21.3	5	10	300	600	2.24	157.56	20.11	3.6E-08
6/8/98	35954	10	15	21.3	5	15	300	900	2.24	157.56	20.11	3.6E-08
6/8/98	35954	10	20	21.3	5	20	300	1200	2.24	157.56	20.11	3.6E-08 *
6/8/98	35954	10	25	21.3	5	25	300	1500	2.24	157.56	20.11	3.6E-08 *
6/8/98	35954	10	30	21.3	5	30	300	1800	2.24	157.56	20.11	3.6E-08 *

*TRANSCRIBED FROM ORIGINAL DATA SHEETS

PERMEABILITY REPORTED AS ** 3.6E-08 cm/sec **

DATE 6/8/98
CHECK
REVIEW

ATTERBERG LIMITS
ASTM D-4318

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR-5D -
PROJECT NUMBER	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	20.0 - 22.0'

SAMPLE PREPARATION

Wet or Dry: Dry

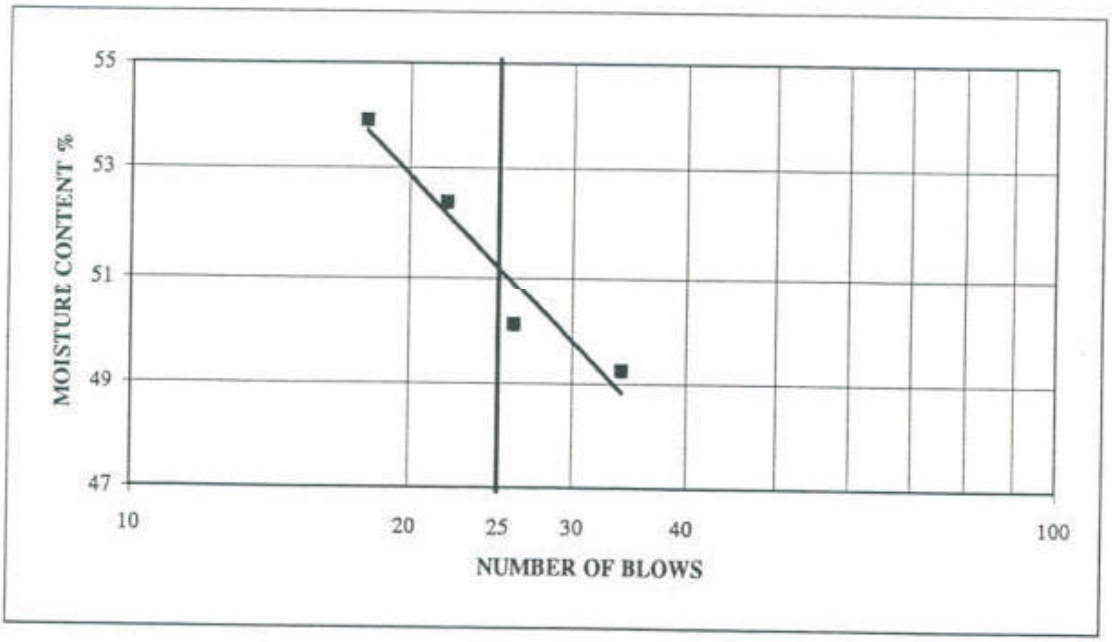
Minus #40 Sieve: Yes

PLASTIC LIMIT DETERMINATION

					NATURAL MOISTURE
Weight of Wet Soil & Tare (gm)	(W1)	25.77	25.13	23.07	614.30
Weight of Dry Soil & Tare (gm)	(W2)	22.25	21.77	20.17	534.30
Weight of Tare (gm)	(W3)	11.49	11.40	11.24	233.80
Weight of Water (gm)	(W4=W1-W2)	3.52	3.36	2.90	80.00
Weight of Dry Soil (gm)	(W5=W2-W3)	10.76	10.37	8.93	300.50
Water Content %	(W4/W5)*100	32.71	32.40	32.47	26.62

LIQUID LIMIT DETERMINATION

Number of Blows		34	26	22	18	NOTE:
Weight of Wet Soil & Tare (gm)	(W6)	26.76	26.98	24.86	25.60	
Weight of Dry Soil & Tare (gm)	(W7)	20.12	20.22	18.59	18.99	
Weight of Tare (gm)	(W8)	6.63	6.72	6.62	6.72	
Weight of Water (gm)	(W9=W6-W7)	6.64	6.76	6.27	6.61	
Weight of Dry Soil (gm)	(W10=W7-W8)	13.49	13.50	11.97	12.27	
Water Content %	(W9/W10)*100	49.22	50.07	52.38	53.87	



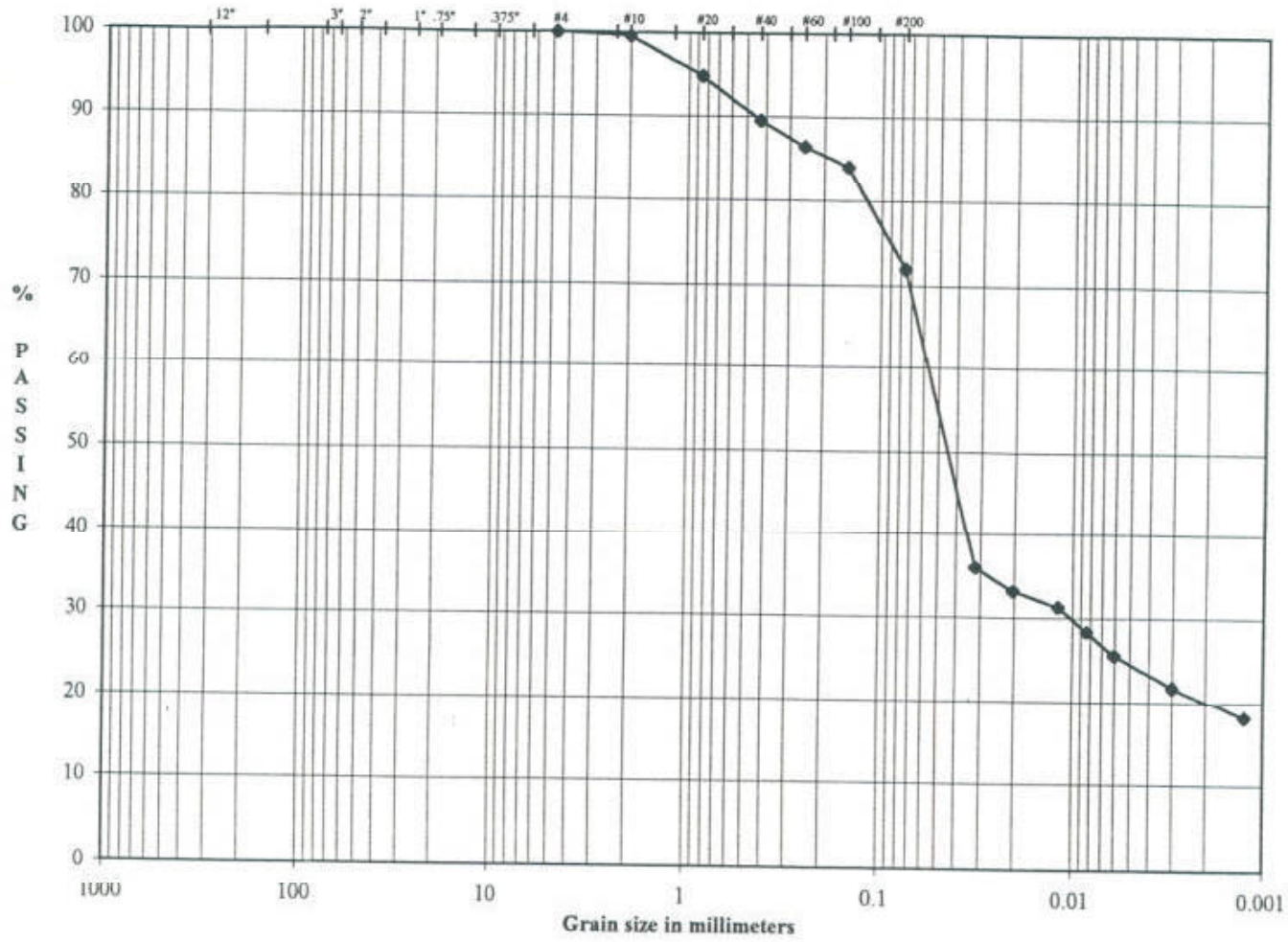
LIQUID LIMIT (WI)	51.18	51
PLASTIC LIMIT (Wp)	32.53	33
PLASTICITY INDEX (Ip)		18
LIQUIDITY INDEX (I)		-0.33
MOISTURE CONTENT		26.62

DESCRIPTION: Dark Reddish Clay, CLAYEY SILT, some medium to fine sand.

USCS: MH

TECH: JDR
DATE: 6/9/98
CHECK:
REVIEW:

PARTICLE SIZE DISTRIBUTION ASTM D 421 AND D 422
US STANDARD SIEVE OPENING SIZES



Boulders	Cobbles	Coarse Gravel	Fine Gravel	Cor SAND	Med SAND	Fine SAND	SILT OR CLAY FINES

SAMPLE ID	OWR - 5D
SAMPLE TYPE	UD
SAMPLE DEPTH	20.0 - 22.0'

LL	51
PL	33
PI	18

DESCRIPTION	Dark Reddish Clay, CLAYEY SILT, some medium to fine sand.
USCS	MH

SOLUTIA / RFI-CS / AL
983-3223

TECH	JDR
DATE	6/8/98
CHECK	
REVIEW	

ASTM GRAIN SIZE ANALYSIS
ASTM C117, C136, D421, D422, D1140 and D2217

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR - 5D
PROJECT NO.	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	20.0 - 22.0'

AS RECEIVED WATER CONTENT

Tare No.		-
Wt. Wet Soil & Tare (gm)	(W1)	614.30
Wt. Dry Soil & Tare (gm)	(W2)	534.30
Weight of Tare (gm)	(W3)	233.80
Weight of Water (gm)	(W4=W1-W2)	80.00
Weight of Dry Soil (gm)	(W5=W2-W3)	300.50
Moisture Content (%)	(W4/W5)*100	26.62

Hygroscopic Moisture For Sieve Sample

Wet Soil & Tare (gm)	206.59
Dry Soil & Tare (gm)	200.53
Tare Weight (gm)	52.28
Moisture Content (%)	4.09

Total Weight of Sample Used For Sieve Analysis Corrected For Hygroscopic Moisture

Weight + Tare, Before Separating On The #4 Sieve (gm)	929.21	
Tare Weight (gm)	236.07	
Total Weight (gm)	665.92	(W6)

Plus #4 Material Sieve

TARE WEIGHT: 0.00

	(Wt+Tare)	(((Wt-Tare)/W6)*100)	%PASSING		
12.0"				12.0"	cobbles
3.0"				3.0"	coarse gravel
2.5"				2.5"	coarse gravel
2.0"				2.0"	coarse gravel
1.5"				1.5"	coarse gravel
1.0"				1.0"	coarse gravel
0.75"				0.75"	fine gravel
0.50"				0.50"	fine gravel
0.375"				0.375"	fine gravel
#4	0.00	0.0	100.0	#4	coarse sand

HYDROMETER ANALYSIS

Specific Gravity	(assumed)	
Specific Gravity	(tested)	2.886
Amount Dispersing Agent (ml)		125.00
Type Dispersion Device		Mechanical
Length of Dispersion Period		1 Minute

Weight of Sample Used For Hydrometer Test

Weight of Sample Wet or Dry (gm)	52.80
Calculated Dry Wt. used in test (gm)	50.73
Hydrometer Bulb Number	624378
% Pass #4 Sieve For Whole Sample	100.00

TARE WEIGHT: 203.14

HYDROMETER BACKSIEVE (Percent Passing #10 - #200 Sieves)

	(Wt+Tare)	Cumul Wt. Retained	% PASSING		
#10	203.35	0.21	99.6	#10	medium sand
#20	205.74	2.60	94.9	#20	medium sand
#40	208.44	5.30	89.6	#40	fine sand
#60	210.01	6.87	86.5	#60	fine sand
#100	211.22	8.08	84.1	#100	fine sand
#200	217.37	14.23	71.9	#200	fines

HYDROMETER CALCULATIONS

DATE	TIME	ET (min)	READING R	TEMP T	TEMP.COR. K	HYD.COR. Cc	READING C	EFFECTIVE LENGTH	A
6/9/98	8:25								
6/9/98	8:27	2.00	24.5	22.50	0.012	5.50	19.00	13.2	0.96
6/9/98	8:30	5.00	23.0	22.50	0.012	5.50	17.50	13.5	0.96
6/9/98	8:40	15.00	22.0	22.50	0.012	5.50	16.50	13.7	0.96
6/9/98	8:55	30.00	20.5	22.50	0.012	5.50	15.00	13.8	0.96
6/9/98	9:25	60.00	19.0	22.50	0.012	5.50	13.50	14.2	0.96
6/9/98	12:35	250.00	17.0	22.50	0.012	5.50	11.50	14.5	0.96
6/10/98	8:25	1440.00	15.0	22.50	0.012	5.50	9.50	14.8	0.96

GRAIN SIZE PERCENTAGES

Particle Diameter	% PASSING		
0.0319	36.0	% COBBLES	0.00
0.0204	33.1	% COARSE GRAVEL	0.00
0.0119	31.2	% FINE GRAVEL	0.00
0.0084	28.4	% COARSE SAND	0.41
0.0060	25.5	% MEDIUM SAND	10.03
0.0030	21.8	% FINE SAND	17.60
0.0013	18.0	% FINES	71.95
		% TOTAL SAMPLE	100.00

Description: Dark Reddish Clay, CLAYEY SILT, some medium to fine sand.

USCS: MH

51	LL
33	PL
18	PI

TECH	JDR
DATE	6/8/98
CHECK	
REVIEW	

ATTERBERG LIMITS
ASTM D-4318

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR-5D -
PROJECT NUMBER	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	38.0 - 40.0'

SAMPLE PREPARATION
Wet or Dry: Dry Minus #40 Sieve: Yes

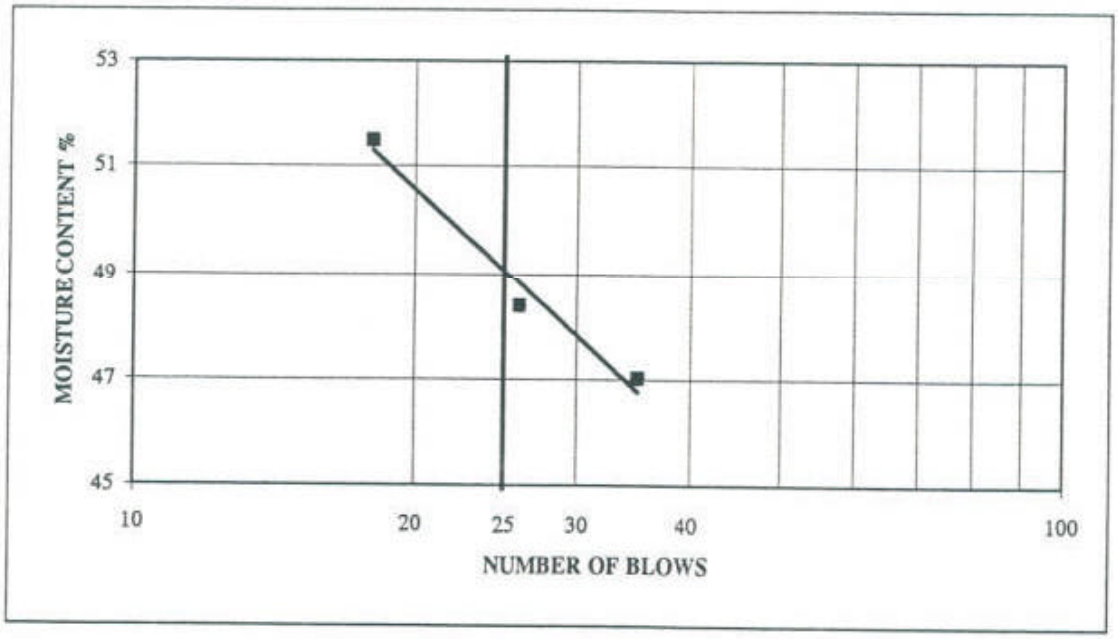
PLASTIC LIMIT DETERMINATION

					NATURAL MOISTURE
Weight of Wet Soil & Tare (gm)	(W1)	20.42	23.73	23.13	644.47
Weight of Dry Soil & Tare (gm)	(W2)	18.02	20.46	20.10	483.54
Weight of Tare (gm)	(W3)	11.39	11.48	11.71	0.00
Weight of Water (gm)	(W4=W1-W2)	2.40	3.27	3.03	160.93
Weight of Dry Soil (gm)	(W5=W2-W3)	6.63	8.98	8.39	483.54
Water Content %	(W4/W5)*100	36.20	36.41	36.11	33.28

LIQUID LIMIT DETERMINATION

Number of Blows		35	26	18
Weight of Wet Soil & Tare (gm)	(W6)	16.12	16.92	17.53
Weight of Dry Soil & Tare (gm)	(W7)	12.34	12.79	12.99
Weight of Tare (gm)	(W8)	4.30	4.25	4.17
Weight of Water (gm)	(W9=W6-W7)	3.78	4.13	4.54
Weight of Dry Soil (gm)	(W10=W7-W8)	8.04	8.54	8.82
Water Content %	(W9/W10)*100	47.01	48.36	51.47

NOTE:



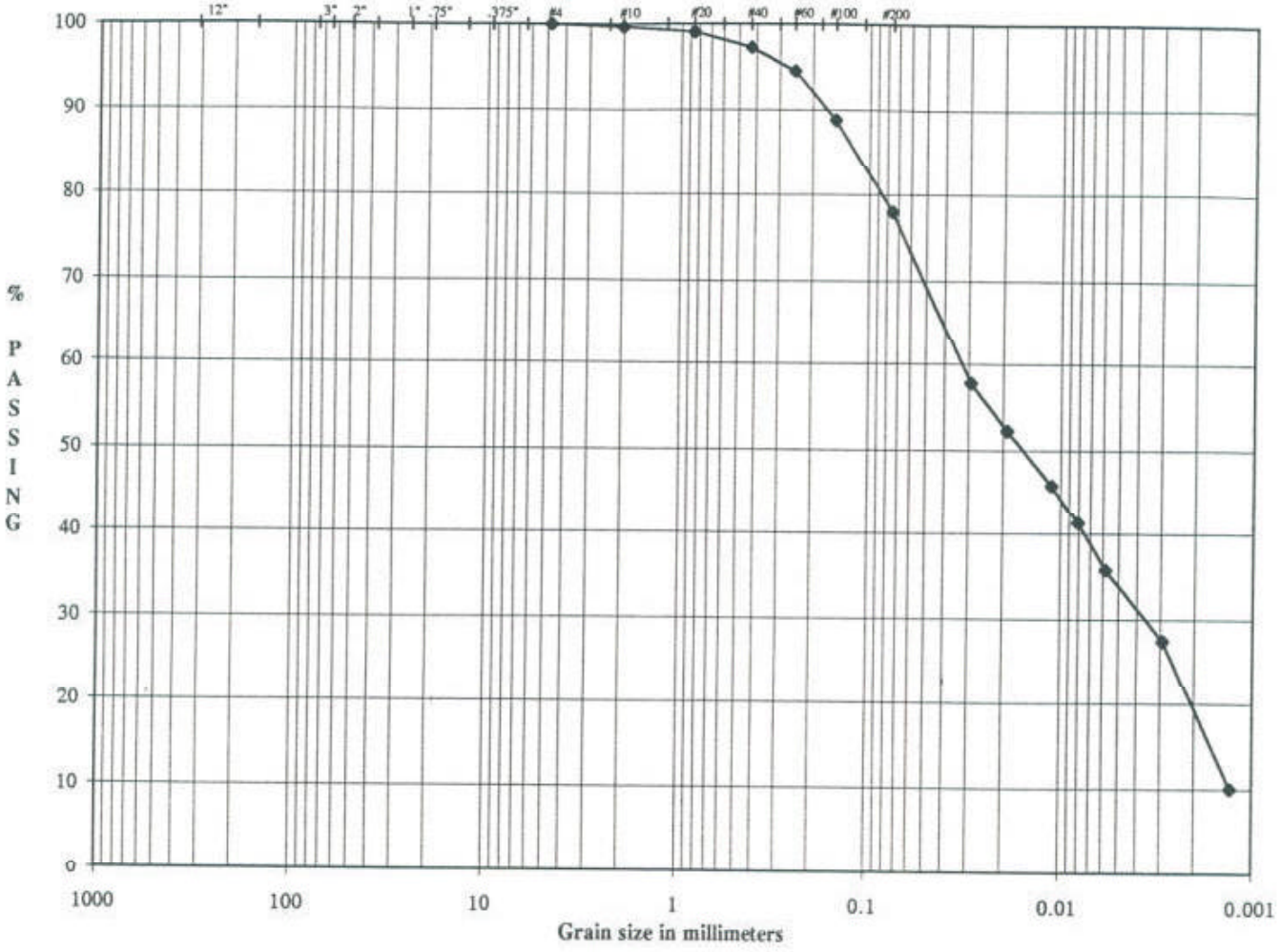
LIQUID LIMIT (WI)	49.06	49
PLASTIC LIMIT (Wp)	36.24	36
PLASTICITY INDEX (Ip)		13
LIQUIDITY INDEX (I)		-0.23
MOISTURE CONTENT		33.28

DESCRIPTION: Dark Red, CLAYEY SILT, some medium to fine sand.

USCS: ML

TECH	TF/SW
DATE	6/25/98
CHECK	
REVIEW	

PARTICLE SIZE DISTRIBUTION ASTM D 421 AND D 422
US STANDARD SIEVE OPENING SIZES



Boulders	Cobbles	Coarse	Fine	Cor	Med	Fine	SILT OR CLAY
		Gravel		SAND			FINES

SAMPLE ID	OWR - 5D
SAMPLE TYPE	UD
SAMPLE DEPTH	38.0 - 40.0'

LL	49
PL	36
PI	13

DESCRIPTION	Dark Red, CLAYEY SILT, some medium to fine sand.
USCS	ML

SOLUTIA / RFI-CS / AL
983-3223

TECH	JDR
DATE	6/24/98
CHECK	
REVIEW	

ASTM GRAIN SIZE ANALYSIS
ASTM C117, C136, D421, D422, D1140 and D2217

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR - 5D
PROJECT NO.	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	38.0 - 40.0'

AS RECEIVED WATER CONTENT

Tare No.		-
Wt. Wet Soil & Tare (gm)	(W1)	644.47
Wt. Dry Soil & Tare (gm)	(W2)	483.54
Weight of Tare (gm)	(W3)	0.00
Weight of Water (gm)	(W4 = W1-W2)	160.93
Weight of Dry Soil (gm)	(W5 = W2-W3)	483.54
Moisture Content (%)	(W4/W5)*100	33.28

Hygroscopic Moisture For Sieve Sample

Wet Soil & Tare (gm)	40.53
Dry Soil & Tare (gm)	38.66
Tare Weight (gm)	3.15
Moisture Content (%)	5.27

Total Weight of Sample Used For Sieve Analysis Corrected For Hygroscopic Moisture

Weight + Tare, Before Separating On The #4 Sieve (gm)	658.21	
Tare Weight (gm)	234.18	
Total Weight (gm)	402.82	(W6)

Plus #4 Material Sieve

TARE WEIGHT: 0.00

	(Wt+Tare)	(((Wt-Tare)/W6)*100)	%PASSING		
12.0"				12.0"	cobbles
3.0"				3.0"	coarse gravel
2.5"				2.5"	coarse gravel
2.0"				2.0"	coarse gravel
1.5"				1.5"	coarse gravel
1.0"				1.0"	coarse gravel
0.75"				0.75"	fine gravel
0.50"				0.50"	fine gravel
0.375"				0.375"	fine gravel
#4	0.00	0.0	100.0	#4	coarse sand

HYDROMETER ANALYSIS

Specific Gravity	(assumed)	
Specific Gravity	(tested)	2.838
Amount Dispersing Agent (ml)		125.00
Type Dispersion Device		Mechanical
Length of Dispersion Period		1 Minute

Weight of Sample Used For Hydrometer Test

Weight of Sample Wet or Dry (gm)	55.03
Calculated Dry Wt. used in test (gm)	52.87
Hydrometer Bulb Number	624378
% Pass #4 Sieve For Whole Sample	100.00

TARE WEIGHT: 203.14

HYDROMETER BACKSIEVE (Percent Passing #10 - #200 Sieves)

	(Wt+Tare)	Cumul Wt. Retained	% PASSING		
#10	203.32	0.18	99.7	#10	medium sand
#20	203.64	0.50	99.1	#20	medium sand
#40	204.58	1.44	97.3	#40	fine sand
#60	206.06	2.92	94.5	#60	fine sand
#100	209.06	5.92	88.8	#100	fine sand
#200	214.80	11.66	77.9	#200	fines

HYDROMETER CALCULATIONS

DATE	TIME	ET (min)	READING R	TEMP T	TEMP.COR. K	HYD.COR. Cc	READING C	EFFECTIVE LENGTH	A
6/25/98	9:51								
6/25/98	9:53	2.00	37.0	23.00	0.012	5.50	31.50	11.2	0.97
6/25/98	9:56	5.00	34.0	23.00	0.012	5.50	28.50	11.7	0.97
6/25/98	10:06	15.00	30.5	23.00	0.012	5.50	25.00	12.2	0.97
6/25/98	10:21	30.00	28.0	23.00	0.012	5.50	22.50	12.7	0.97
6/25/98	10:51	60.00	25.0	23.00	0.012	5.50	19.50	13.2	0.97
6/25/98	14:01	250.00	20.5	23.00	0.012	5.50	15.00	13.8	0.97
6/26/98	9:51	1440.00	11.0	23.00	0.012	5.50	5.50	15.5	0.97

Particle Diameter	% PASSING
0.0293	37.8
0.0190	52.3
0.0112	45.9
0.0081	41.3
0.0058	35.8
0.0029	27.5
0.0013	10.1

GRAIN SIZE PERCENTAGES

% COBBLES	0.00
% COARSE GRAVEL	0.00
% FINE GRAVEL	0.00
% COARSE SAND	0.34
% MEDIUM SAND	2.38
% FINE SAND	19.33
% FINES	77.94
% TOTAL SAMPLE	100.00

Description: Dark Red, CLAYEY SILT, some medium to fine sand.

USCS: ML

49	LL
36	PL
13	PI

TECH	JDR
DATE	6/24/98
CHECK	
REVIEW	

UNIT WEIGHT DETERMINATION
ASTM D 2937

PROJECT NAME	SOLUTIA / RFI-CS / AL	**SAMPLE ID**	OWR - 5D
PROJECT NUMBER	983-3223	**SAMPLE TYPE**	UD
		SAMPLE DEPTH	38.0 - 40.0'

WEIGHT OF SOIL (g)	644.47
LENGTH OF SAMPLE (in)	3.196
DIAMETER OF SAMPLE (in)	2.851
AREA OF SAMPLE (in^2)	6.38
VOLUME OF SAMPLE (in^3)	20.40
VOLUME OF SAMPLE (cm^3)	334.29

WET UNIT WEIGHT (pcf)	120.3

WEIGHT WET SOIL & TARE (g)	644.47
WEIGHT DRY SOIL & TARE (g)	483.54
WEIGHT OF WATER (g)	160.93
WEIGHT OF TARE (g)	0.00
WEIGHT OF DRY SOIL (g)	483.54
WATER CONTENT (%)	33.28

DRY UNIT WEIGHT (pcf)	90.3

SPECIFIC GRAVITY	2.838
VOLUME OF SOLIDS (cm^3)	170.38
VOLUME OF VOIDS (cm^3)	163.91
POROSITY (%)	49

TECH	GM
DATE	6/29/98
CHECK	
REVIEW	

FLOW PUMP #1

FLEXIBLE WALL PERMEABILITY
ASTM D 5084
METHOD D, CONSTANT RATE OF FLOW

PROJECT TITLE	SOLUTIA / RFI-CS / AL		
PROJECT NUMBER	983-3223		
SAMPLE ID	OWR - 5D	-	38.0-40.0'
SAMPLE TYPE	UD		

BOARD #	4
CELL #	4
Flow Pump Speed	5
Technician	PWM

COMMENTS

Sample Data, Initial			
Height, inches	3.196	B-Value, f	1.00
Diameter, inches	2.851	Cell Pres.	107.0
Area, cm²	41.19	Bot. Pres.	80.0
Volume, cm³	334.34	Top Pres.	80.0
Mass, g	644.47	Tot. B.P.	80.0
Moisture Content, %	33.28	Head, max.	160.38
Dry Density, pcf	90.25	Head, min.	160.38
Spec. Gravity	2.838	Max. Grad.	19.66
Volume Solids, cm³	170.38	Min. Grad.	19.66
Volume Voids, cm³	163.96		
Void Ratio	0.96		
Saturation, %	98.2%		

Sample Data, Final	
Height, inches	3.212
Diameter, inches	2.872
Area, cm²	41.80
Volume, cm³	340.99
Mass, g	651.62
Moisture Content, %	34.76
Dry Density, pcf	88.49
Volume Solids, cm³	170.38
Volume Voids, cm³	170.60
Void Ratio	1.00
Saturation, %	98.5%

WATER CONTENTS		Trimmings Initial	Sample Final
Wt Soil & Tare, i	g	644.47	703.24
Wt Soil & Tare, f	g	483.54	535.21
Wt Tare	g	0.00	51.79
Wt Moisture Lost	g	160.93	168.03
Wt Dry Soil	g	483.54	483.42
Water Content	%	33.28%	34.76%

DESCRIPTION

Dark Red, CLAYEY SILT, some medium to fine sand.

Flow Pump Rate 1.40E-03 cm³/sec

USCS ML

TIME FUNCTIONS, SECONDS								dP				
DATE	DAY	HOUR	MIN	TEMP (°C)	dt (min)	dt,acc (min)	dt (sec)	dt,acc (sec)	Reading (psi)	Head (cm)	Gradient	Permeability (cm/sec)
6/26/98	35972	10	0	20.9	0	0	0	0	2.28	160.38	19.66	1.7E-06
6/26/98	35972	10	5	20.9	5	5	300	300	2.28	160.38	19.66	1.7E-06
6/26/98	35972	10	10	20.9	5	10	300	600	2.28	160.38	19.66	1.7E-06
6/26/98	35972	10	15	20.9	5	15	300	900	2.28	160.38	19.66	1.7E-06 *
6/26/98	35972	10	20	20.9	5	20	300	1200	2.28	160.38	19.66	1.7E-06 *
6/26/98	35972	10	25	20.9	5	25	300	1500	2.28	160.38	19.66	1.7E-06 *
6/26/98	35972	10	30	20.9	5	30	300	1800	2.28	160.38	19.66	1.7E-06 *

*TRANSCRIBED FROM ORIGINAL DATA SHEETS

PERMEABILITY REPORTED AS ** 1.7E-06 cm/sec **

DATE 6/26/98
CHECK
REVIEW

ATTERBERG LIMITS
ASTM D-4318

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR - 5D -
PROJECT NUMBER	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	60.0 - 65.0'

SAMPLE PREPARATION

Wet or Dry: Dry

Minus #40 Sieve: Yes

PLASTIC LIMIT DETERMINATION

					NATURAL MOISTURE
Weight of Wet Soil & Tare	(W1)	27.49	23.20	23.26	256.19
Weight of Dry Soil & Tare	(W2)	23.64	20.46	20.29	191.82
Weight of Tare	(W3)	11.40	11.72	10.83	42.34
Weight of Water	(W4=W1-W2)	3.85	2.74	2.97	64.37
Weight of Dry Soil	(W5=W2-W3)	12.24	8.74	9.46	149.48
Water Content	(W4/W5)*100	31.45%	31.35%	31.40%	43.06%

LIQUID LIMIT DETERMINATION

Number of Blows		23	23
Weight of Wet Soil & Tare	(W6)	16.89	19.43
Weight of Dry Soil & Tare	(W7)	12.34	13.95
Weight of Tare	(W8)	4.29	4.24
Weight of Water	(W9=W6-W7)	4.55	5.48
Weight of Dry Soil	W10=W7-W8)	8.05	9.71
Water Content	(W9/W10)*100	56.52%	56.44%

TEST RESULTS

	TRAIL 1	TRIAL 2
BLOWS:	23	23
K VALUE:	0.99	0.99

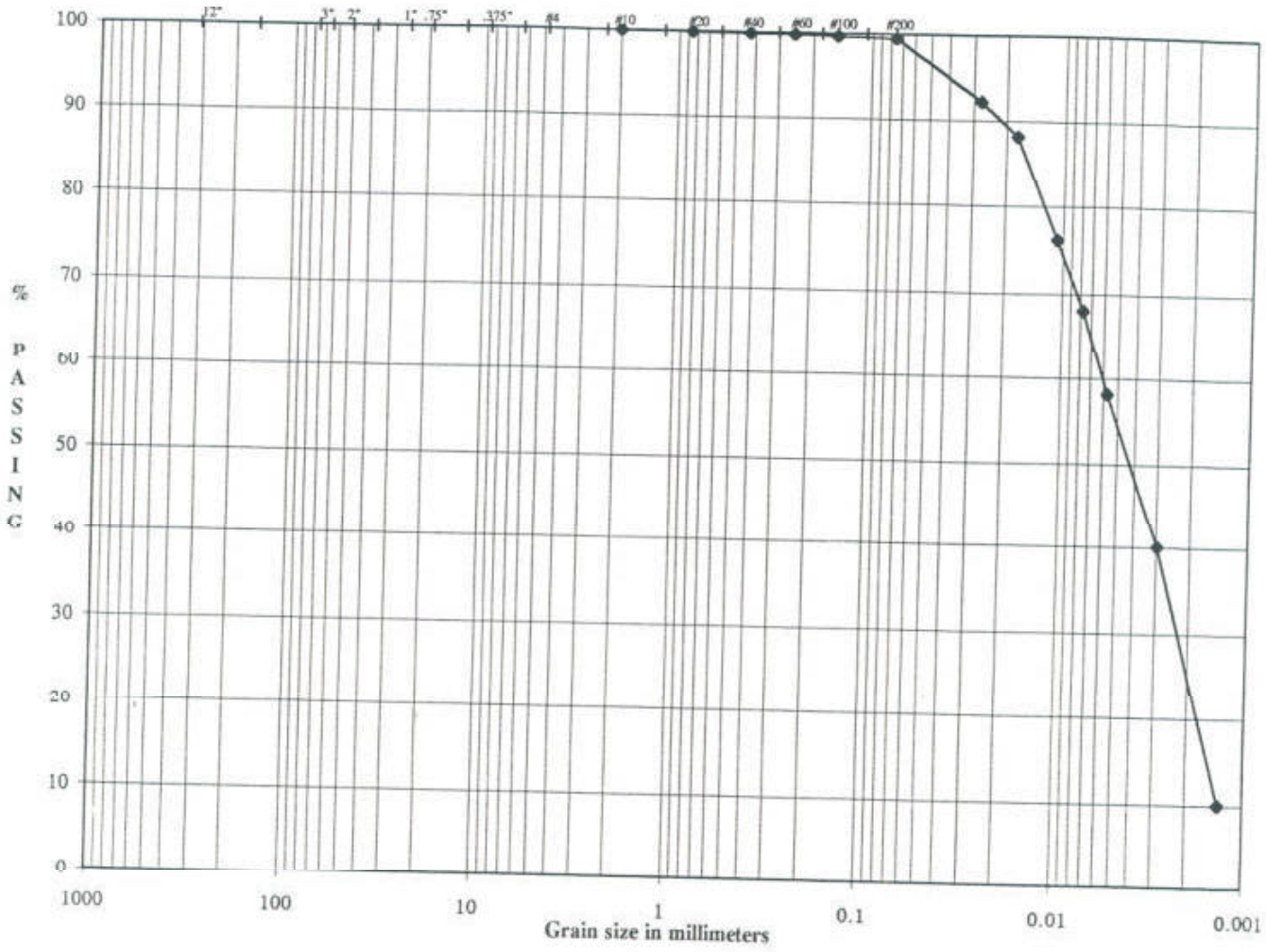
LIQUID LIMIT (WI)	55.91	56
PLASTIC LIMIT (Wp)	31.40	31
PLASTICITY INDEX (Ip)		25
LIQUIDITY INDEX (I)		0.47
MOISTURE CONTENT		43.06%

DESCRIPTION: White, Yellow, and Reddish Gray, CLAYEY SILT, trace medium to fine sand.

USCS: MH

TECH	TF
DATE	6/30/98
CHECK	
REVIEW	

PARTICLE SIZE DISTRIBUTION ASTM D 421 AND D 422
US STANDARD SIEVE OPENING SIZES



Boulders	Cobbles	Coarse Gravel	Fine Gravel	Cor SAND	Med SAND	Fine SAND	SILT OR CLAY FINES

SAMPLE ID	OWR - 5D
SAMPLE TYPE	UD
SAMPLE DEPTH	60.0 - 65.0'

LL	56
PL	31
PI	25

DESCRIPTION	White, Yellow, and Reddish Gray, CLAYEY SILT, trace medium to fine sand.
USCS	MH

SOLUTIA / RFI-CS / AL
983-3223

TECH	TF
DATE	6/29/98
CHECK	
REVIEW	

Golder Construction Services, Inc.

ASTM GRAIN SIZE ANALYSIS
ASTM C117, C136, D421, D422, D1140 and D2217

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR - 5D -
PROJECT NO.	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	60.0 - 65.0'

AS RECEIVED WATER CONTENT

Tare No.		-
Wt. Wet Soil & Tare (gm)	(W1)	256.19
Wt. Dry Soil & Tare (gm)	(W2)	191.82
Weight of Tare (gm)	(W3)	42.34
Weight of Water (gm)	(W4 = W1-W2)	64.37
Weight of Dry Soil (gm)	(W5 = W2-W3)	149.48
Moisture Content (%)	(W4/W5)*100	43.06

Hygroscopic Moisture For Sieve Sample

Wet Soil & Tare (gm)	74.14
Dry Soil & Tare (gm)	68.45
Tare Weight (gm)	3.24
Moisture Content (%)	8.73

Total Weight of Sample Used For Sieve Analysis Corrected For Hygroscopic Moisture

Weight + Tare, Before Separating On The #4 Sieve (gm)	813.14	
Tare Weight (gm)	232.90	
Total Weight (gm)	533.67	(W6)

Plus #4 Material Sieve

TARE WEIGHT: 0.00

	(Wt+Tare)	(((Wt-Tare)/W6)*100)	%PASSING		
12.0"				12.0"	cobbles
3.0"				3.0"	coarse gravel
2.5"				2.5"	coarse gravel
2.0"				2.0"	coarse gravel
1.5"				1.5"	coarse gravel
1.0"				1.0"	coarse gravel
0.75"				0.75"	fine gravel
0.50"				0.50"	fine gravel
0.375"				0.375"	fine gravel
#4	0.00	0.0	100.0	#4	coarse sand

HYDROMETER ANALYSIS

Specific Gravity	(assumed)	
Specific Gravity	(tested)	2.677
Amount Dispersing Agent (ml)		125.00
Type Dispersion Device		Mechanical
Length of Dispersion Period		1 Minute

Weight of Sample Used For Hydrometer Test

Weight of Sample Wet or Dry (gm)	54.29
Calculated Dry Wt. used in test (gm)	49.93
Hydrometer Bulb Number	624378
% Pass #4 Sieve For Whole Sample	100.00

TARE WEIGHT: 203.15

HYDROMETER BACKSIEVE (Percent Passing #10 - #200 Sieves)

	(Wt + Tare)	Cumul Wt. Retained	% PASSING		
#10	203.15	0.00	100.0	#10	medium sand
#20	203.20	0.05	99.9	#20	medium sand
#40	203.23	0.08	99.8	#40	fine sand
#60	203.26	0.11	99.8	#60	fine sand
#100	203.31	0.16	99.7	#100	fine sand
#200	203.42	0.27	99.5	#200	fines

HYDROMETER CALCULATIONS

DATE	TIME	ET (min)	READING R	TEMP T	TEMP.COR. K	HYD.COR. Cc	READING C	EFFECTIVE LENGTH	A
6/30/98	9:55								
6/30/98	9:57	2.00	51.0	23.00	0.013	5.00	46.00	8.8	1.00
6/30/98	10:00	5.00	49.0	23.00	0.013	5.00	44.00	9.1	1.00
6/30/98	10:10	15.00	43.0	23.00	0.013	5.00	38.00	10.1	1.00
6/30/98	10:25	30.00	39.0	23.00	0.013	5.00	34.00	10.7	1.00
6/30/98	10:55	60.00	34.0	23.00	0.013	5.00	29.00	11.5	1.00
6/30/98	14:05	250.00	25.0	23.00	0.013	5.00	20.00	13.0	1.00
7/1/98	9:55	1440.00	10.0	23.00	0.013	5.00	5.00	15.5	1.00

GRAIN SIZE PERCENTAGES

Particle Diameter	% PASSING
0.0273	92.1
0.0175	88.1
0.0107	76.1
0.0078	68.1
0.0057	58.1
0.0030	40.1
0.0013	10.0

% COBBLES	0.00
% COARSE GRAVEL	0.00
% FINE GRAVEL	0.00
% COARSE SAND	0.00
% MEDIUM SAND	0.16
% FINE SAND	0.38
% FINES	99.46
% TOTAL SAMPLE	100.00

Description: White, Yellow, and Reddish Gray, CLAYEY SILT, trace medium to fine sand.

USCS: MH

56	LL
31	PL
25	PI

TECH	TF
DATE	6/29/98
CHECK	
REVIEW	

UNIT WEIGHT DETERMINATION
ASTM D 2937

PROJECT NAME	SOLUTIA / RFI-CS / AL	**SAMPLE ID**	OWR - 5D
PROJECT NUMBER	983-3223	**SAMPLE DEPTH**	60.0-65.0'
		SAMPLE TYPE	UD

WEIGHT OF SOIL (g)	512.75
LENGTH OF SAMPLE (in)	2.725
DIAMETER OF SAMPLE (in)	2.872
AREA OF SAMPLE (in^2)	6.48
VOLUME OF SAMPLE (in^3)	17.65
VOLUME OF SAMPLE (cm^3)	289.23

WET UNIT WEIGHT (pcf)	110.65

WEIGHT WET SOIL & TARE (g)	256.19
WEIGHT DRY SOIL & TARE (g)	191.82
WEIGHT OF WATER (g)	64.37
WEIGHT OF TARE (g)	42.34
WEIGHT OF DRY SOIL (g)	149.48
WATER CONTENT (%)	43.06

DRY UNIT WEIGHT (pcf)	77.35

SPECIFIC GRAVITY	2.677
VOLUME OF SOLIDS (cm^3)	133.89
VOLUME OF VOIDS (cm^3)	155.34
POROSITY (%)	54

TECH	LB
DATE	7/10/98
CHECK	LD
REVIEW	PWM

FLOW PUMP #2

FLEXIBLE WALL PERMEABILITY
ASTM D 5084
METHOD D, CONSTANT RATE OF FLOW

PROJECT TITLE	SOLUTIA / RFI-CS / AL		
PROJECT NUMBER	983-3213		
SAMPLE ID	OWR - 5D	-	60.0-65.0'
SAMPLE TYPE	UD		

BOARD #	3
CELL #	3
Flow Pump Speed	7
Technician	LB

COMMENTS

Sample Data, Initial			
Height, inches	2.725	B-Value, f	1.00
Diameter, inches	2.873	Cell Pres.	100.0
Area, cm²	41.80	Bot. Pres.	80.0
Volume, cm³	289.29	Top Pres.	80.0
Mass, g	512.75	Tot. B.P.	80.0
Moisture Content, %	43.04	Head, max.	36.58
Dry Density, pcf	77.31	Head, min.	36.58
Spec. Gravity	2.677	Max. Grad.	5.27
Volume Solids, cm³	133.88	Min. Grad.	5.27
Volume Voids, cm³	155.40		
Void Ratio	1.16		
Saturation, %	99.3%		

Sample Data, Final	
Height, inches	2.732
Diameter, inches	2.873
Area, cm²	41.82
Volume, cm³	290.23
Mass, g	515.43
Moisture Content, %	44.05
Dry Density, pcf	76.93
Volume Solids, cm³	133.66
Volume Voids, cm³	156.57
Void Ratio	1.17
Saturation, %	100.7%

WATER CONTENTS		Timmings Initial	Sample Final
Wt Soil & Tare, i	g	256.19	566.66
Wt Soil & Tare, f	g	191.82	409.06
Wt Tare	g	42.34	51.28
Wt Moisture Lost	g	64.37	157.60
Wt Dry Soil	g	149.48	357.78
Water Content	%	43.06%	44.05%

DESCRIPTION

White, Yellow, and Reddish Gray, CLAYEY SILT, trace medium to fine sand.

Flow Pump Rate: 2.70E-04 cm³/sec

USCS: MH

TIME FUNCTIONS, SECONDS								dP				
DATE	DAY	HOUR	MIN	TEMP (°C)	dt (min)	dt,acc (min)	dt (sec)	dt,acc (sec)	Reading (psi)	Head (cm)	Gradient	Permeability (cm/sec)
7/8/98	35984	14	20	21.5	0	0	0	0	0.52	36.58	5.27	1.2E-06
7/8/98	35984	14	25	21.5	5	5	300	300	0.52	36.58	5.27	1.2E-06
7/8/98	35984	14	30	21.5	5	10	300	600	0.52	36.58	5.27	1.2E-06
7/8/98	35984	14	35	21.5	5	15	300	900	0.52	36.58	5.27	1.2E-06 *
7/8/98	35984	14	40	21.5	5	20	300	1200	0.52	36.58	5.27	1.2E-06 *
7/8/98	35984	14	45	21.5	5	25	300	1500	0.52	36.58	5.27	1.2E-06 *
7/8/98	35984	14	50	21.5	5	30	300	1800	0.52	36.58	5.27	1.2E-06 *

*TRANSCRIBED FROM ORIGINAL DATA SHEETS

PERMEABILITY REPORTED AS ** 1.2E-06 cm/sec **

DATE 7/8/98
CHECK
REVIEW

ATTERBERG LIMITS
ASTM D-4318

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR-6D -
PROJECT NUMBER	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	20.0 - 22.0'

SAMPLE PREPARATION

Wet or Dry: Dry

Minus #40 Sieve: Yes

PLASTIC LIMIT DETERMINATION

Weight of Wet Soil & Tare (gm)	(W1)	21.20	21.23	20.99
Weight of Dry Soil & Tare (gm)	(W2)	18.82	18.80	18.70
Weight of Tare (gm)	(W3)	11.31	11.07	11.42
Weight of Water (gm)	(W4=W1-W2)	2.38	2.43	2.29
Weight of Dry Soil (gm)	(W5=W2-W3)	7.51	7.73	7.28
Water Content %	(W4/W5)*100	31.69	31.44	31.46

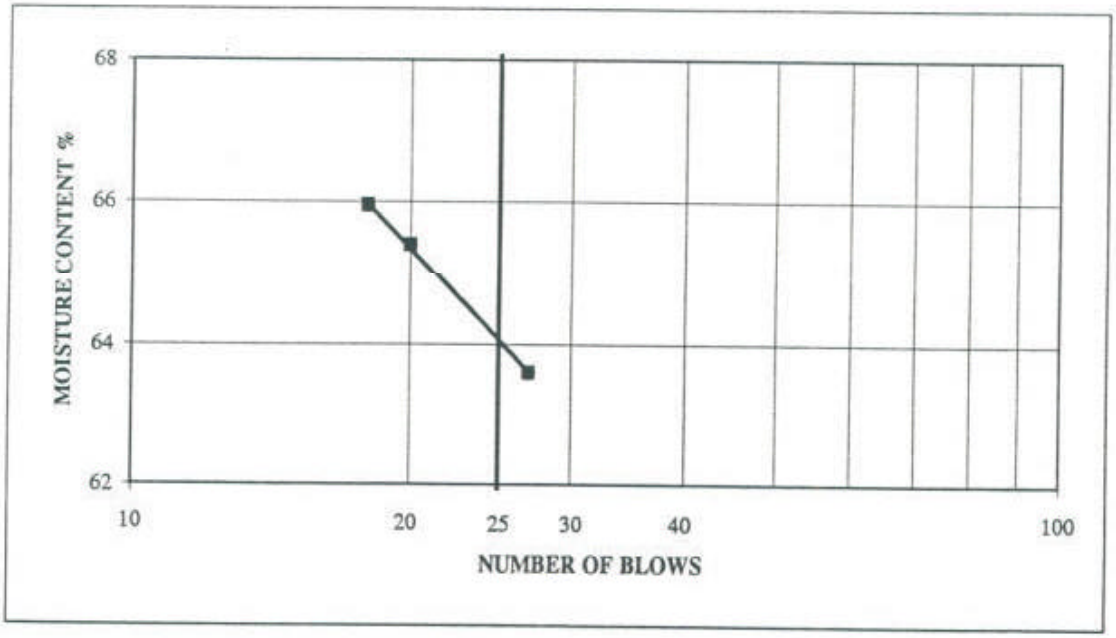
NATURAL MOISTURE

228.06
190.00
51.00
38.06
139.00
27.38

LIQUID LIMIT DETERMINATION

Number of Blows		27	20	18
Weight of Wet Soil & Tare (gm)	(W6)	17.34	18.97	17.28
Weight of Dry Soil & Tare (gm)	(W7)	13.18	14.13	12.07
Weight of Tare (gm)	(W8)	6.64	6.73	4.17
Weight of Water (gm)	(W9=W6-W7)	4.16	4.84	5.21
Weight of Dry Soil (gm)	(W10=W7-W8)	6.54	7.40	7.90
Water Content %	(W9/W10)*100	63.61	65.41	65.95

NOTE:



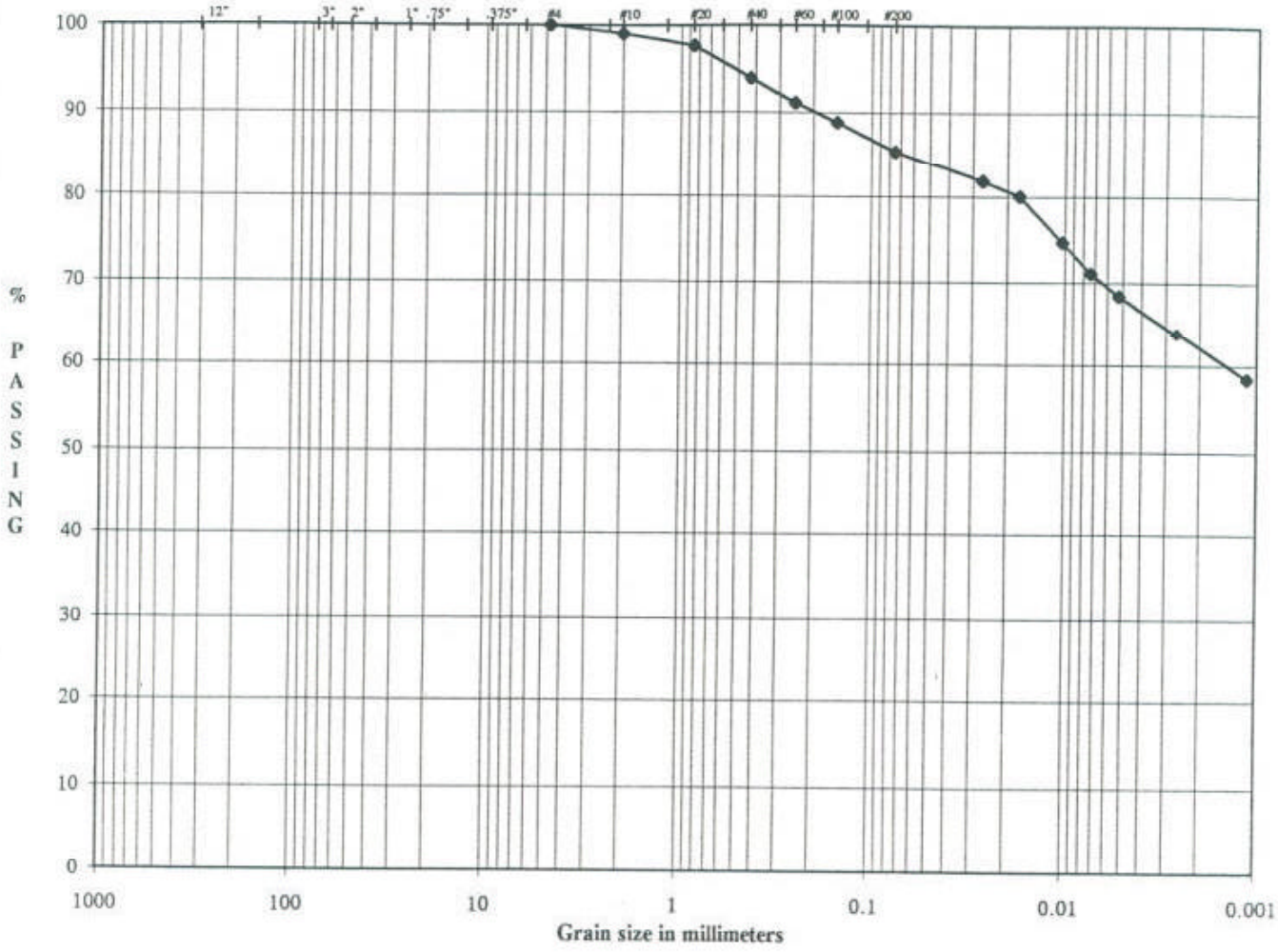
LIQUID LIMIT (WI)	64.07	64
PLASTIC LIMIT (Wp)	31.53	32
PLASTICITY INDEX (Ip)		32
LIQUIDITY INDEX (I)		-0.13
MOISTURE CONTENT		27.38

DESCRIPTION: Reddish Yellow, SILTY CLAY, some medium to fine sand.

USCS: CH

TECH	GM
DATE	6/8/98
CHECK	
REVIEW	

PARTICLE SIZE DISTRIBUTION ASTM D 421 AND D 422
US STANDARD SIEVE OPENING SIZES



Boulders	Cobbles	Gravel: Coarse	Gravel: Fine	SAND: Cor	SAND: Med	SAND: Fine	SILT OR CLAY
		Gravel		SAND			FINES

SAMPLE ID	OWR - 6D
SAMPLE TYPE	UD
SAMPLE DEPTH	20.0 - 22.0'

LL	64
PL	32
PI	32

DESCRIPTION	Reddish Yellow, SILTY CLAY, some medium to fine sand.
USCS	CH

SOLUTIA / RFI-CS / AL
983-3223

TECH	JDR
DATE	6/8/98
CHECK	
REVIEW	

ASTM GRAIN SIZE ANALYSIS
ASTM C117, C136, D421, D422, D1140 and D2217

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR - 6D
PROJECT NO.	983 3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	20.0 - 22.0'

AS RECEIVED WATER CONTENT

Tare No.		-
Wt. Wet Soil & Tare (gm)	(W1)	228.06
Wt. Dry Soil & Tare (gm)	(W2)	190.00
Weight of Tare (gm)	(W3)	51.00
Weight of Water (gm)	(W4=W1-W2)	38.06
Weight of Dry Soil (gm)	(W5=W2-W3)	139.00
Moisture Content (%)	(W4/W5)*100	27.38

Hygroscopic Moisture For Sieve Sample

Wet Soil & Tare (gm)	66.94
Dry Soil & Tare (gm)	65.79
Tare Weight (gm)	3.21
Moisture Content (%)	1.84

Total Weight of Sample Used For Sieve Analysis Corrected For Hygroscopic Moisture

Weight + Tare, Before Separating On The #4 Sieve (gm)	851.24	
Tare Weight (gm)	236.01	
Total Weight (gm)	604.13	(W6)

Plus #4 Material Sieve

TARE WEIGHT: 0.00

	(Wt+Tare)	(((Wt-Tare)/W6)*100)	%PASSING		
12.0"				12.0"	cobbles
3.0"				3.0"	coarse gravel
2.5"				2.5"	coarse gravel
2.0"				2.0"	coarse gravel
1.5"				1.5"	coarse gravel
1.0"				1.0"	coarse gravel
0.75"				0.75"	fine gravel
0.50"				0.50"	fine gravel
0.375"				0.375"	fine gravel
#4	0.00	0.0	100.0	#4	coarse sand

HYDROMETER ANALYSIS

Specific Gravity	(assumed)	
Specific Gravity	(tested)	2.817
Amount Dispersing Agent (ml)		125.00
Type Dispersion Device		Mechanical
Length of Dispersion Period		1 Minute

Weight of Sample Used For Hydrometer Test

Weight of Sample Wet or Dry (gm)	54.88
Calculated Dry Wt. used in test (gm)	53.89
Hydrometer Bulb Number	624378
% Pass #4 Sieve For Whole Sample	100.00

TARE WEIGHT: 203.14

HYDROMETER BACKSIEVE (Percent Passing #10 - #200 Sieves)

	(Wt+Tare)	Cumul Wt. Retained	% PASSING		
#10	203.66	0.52	99.0	#10	medium sand
#20	204.41	1.27	97.6	#20	medium sand
#40	206.43	3.29	93.9	#40	fine sand
#60	207.94	4.80	91.1	#60	fine sand
#100	209.16	6.02	88.8	#100	fine sand
#200	211.01	7.87	85.4	#200	fines

HYDROMETER CALCULATIONS

DATE	TIME	ET	READING	TEMP	TEMP.COR.	HYD.COR.	READING	EFFECTIVE	
6/8/98	8:33	(min)	R	T	K	Cc	C	LENGTH	A
6/8/98	8:35	2.00	51.0	22.00	0.013	5.50	45.50	8.9	0.97
6/8/98	8:38	5.00	50.0	22.00	0.013	5.50	44.50	9.1	0.97
6/8/98	8:48	15.00	47.0	22.00	0.013	5.50	41.50	9.6	0.97
6/8/98	9:03	30.00	45.0	22.00	0.013	5.50	39.50	9.9	0.97
6/8/98	9:33	60.00	43.5	22.00	0.013	5.50	38.00	10.1	0.97
6/8/98	12:43	250.00	41.0	22.00	0.013	5.50	35.50	10.6	0.97
6/9/98	8:33	1440.00	38.0	22.00	0.013	5.50	32.50	11.1	0.97

Particle Diameter	% PASSING
0.0270	81.9
0.0173	80.1
0.0102	74.7
0.0074	71.1
0.0053	68.4
0.0026	63.9
0.0011	58.5

GRAIN SIZE PERCENTAGES

% COBBLES	0.00
% COARSE GRAVEL	0.00
% FINE GRAVEL	0.00
% COARSE SAND	0.96
% MEDIUM SAND	5.14
% FINE SAND	8.50
% FINES	85.40
% TOTAL SAMPLE	100.00

Description: Reddish Yellow, SILTY CLAY, some medium to fine sand.

USCS: CH

64	LL
32	PL
32	PI

TECH	JDR
DATE	6/8/98
CHECK	
REVIEW	

UNIT WEIGHT DETERMINATION
ASTM D 2937

PROJECT NAME	SOLUTIA / RFI-CS / AL	**SAMPLE ID**	OWR - 6D
PROJECT NUMBER	983-3223	**SAMPLE TYPE**	UD
		SAMPLE DEPTH	20.0-22.0'

WEIGHT OF SOIL (g)	667.85
LENGTH OF SAMPLE (in)	3.166
DIAMETER OF SAMPLE (in)	2.870
AREA OF SAMPLE (in^2)	6.47
VOLUME OF SAMPLE (in^3)	20.48
VOLUME OF SAMPLE (cm^3)	335.61

WET UNIT WEIGHT (pcf)	124.2

WEIGHT WET SOIL & TARE (g)	228.06
WEIGHT DRY SOIL & TARE (g)	190.00
WEIGHT OF WATER (g)	38.06
WEIGHT OF TARE (g)	51.00
WEIGHT OF DRY SOIL (g)	139.00
WATER CONTENT (%)	27.38

DRY UNIT WEIGHT (pcf)	97.5

SPECIFIC GRAVITY	2.817
VOLUME OF SOLIDS (cm^3)	186.12
VOLUME OF VOIDS (cm^3)	149.49
POROSITY (%)	45

TECH	GM
DATE	6/10/98
CHECK	GM
REVIEW	PLM

FLOW PUMP #2

FLEXIBLE WALL PERMEABILITY
ASTM D 5084
METHOD D, CONSTANT RATE OF FLOW

PROJECT TITLE	SOLUTIA / RFI-CS / AL		
PROJECT NUMBER	983-3223		
SAMPLE ID	OWR - 6D	-	20.0-22.0'
SAMPLE TYPE	UD		

BOARD #	8
CELL #	8
Flow Pump Speed	9
Technician	PWM

COMMENTS

Sample Data, Initial			
Height, inches	3.166	B-Value, f	1.00
Diameter, inches	2.870	Cell Pres.	94.0
Area, cm²	41.74	Bot. Pres.	80.0
Volume, cm³	335.63	Top Pres.	80.0
Mass, g	667.85	Tot. B.P.	80.0
Moisture Content, %	27.38	Head, max.	92.85
Dry Density, pcf	97.47	Head, min.	92.85
Spec. Gravity	2.811	Max. Grad.	11.55
Volume Solids, cm³	186.18	Min. Grad.	11.55
Volume Voids, cm³	149.51		
Void Ratio	0.80		
Saturation, %	96.0%		

Sample Data, Final	
Height, inches	3.165
Diameter, inches	2.873
Area, cm²	41.82
Volume, cm³	336.23
Mass, g	670.51
Moisture Content, %	28.07
Dry Density, pcf	97.17
Volume Solids, cm³	185.86
Volume Voids, cm³	150.37
Void Ratio	0.81
Saturation, %	97.7%

WATER CONTENTS		Trimmings Initial	Sample Final
Wt Soil & Tare, i	g	228.06	721.93
Wt Soil & Tare, f	g	190.00	575.05
Wt Tare	g	51.00	51.70
Wt Moisture Lost	g	38.06	146.88
Wt Dry Soil	g	139.00	523.35
Water Content	%	27.38%	28.07%

DESCRIPTION

Reddish Yellow, SILTY CLAY, some medium to fine sand.

Flow Pump Rate 5.70E-05 cm³/sec

USCS CH

TIME FUNCTIONS, SECONDS								dP				
DATE	DAY	HOUR	MIN	TEMP (°C)	dt (min)	dt,acc (min)	dt (sec)	dt,acc (sec)	Reading (psi)	Head (cm)	Gradient	Permeability (cm/sec)
6/8/98	35954	9	30	21.3	0	0	0	0	1.32	92.85	11.55	1.1E-07
6/8/98	35954	9	35	21.3	5	5	300	300	1.32	92.85	11.55	1.1E-07
6/8/98	35954	9	40	21.3	5	10	300	600	1.32	92.85	11.55	1.1E-07
6/8/98	35954	9	45	21.3	5	15	300	900	1.32	92.85	11.55	1.1E-07 *
6/8/98	35954	9	50	21.3	5	20	300	1200	1.32	92.85	11.55	1.1E-07 *
6/8/98	35954	9	55	21.3	5	25	300	1500	1.32	92.85	11.55	1.1E-07 *
6/8/98	35954	10	0	21.3	5	30	300	1800	1.32	92.85	11.55	1.1E-07 *

*TRANSCRIBED FROM ORIGINAL DATA SHEETS

PERMEABILITY REPORTED AS ** 1.1E-07 cm/sec **

DATE 6/8/98
CHECK
REVIEW

ATTERBERG LIMITS
ASTM D-4318

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR-6D -
PROJECT NUMBER	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	23.0 - 25.0'

SAMPLE PREPARATION

Wet or Dry: Dry

Minus #40 Sieve: Yes

PLASTIC LIMIT DETERMINATION

Weight of Wet Soil & Tare (gm)	(W1)	22.56	24.06	20.57
Weight of Dry Soil & Tare (gm)	(W2)	20.13	21.20	18.50
Weight of Tare (gm)	(W3)	11.75	11.34	11.42
Weight of Water (gm)	(W4=W1-W2)	2.43	2.86	2.07
Weight of Dry Soil (gm)	(W5=W2-W3)	8.38	9.86	7.08
Water Content %	(W4/W5)*100	29.00	29.01	29.24

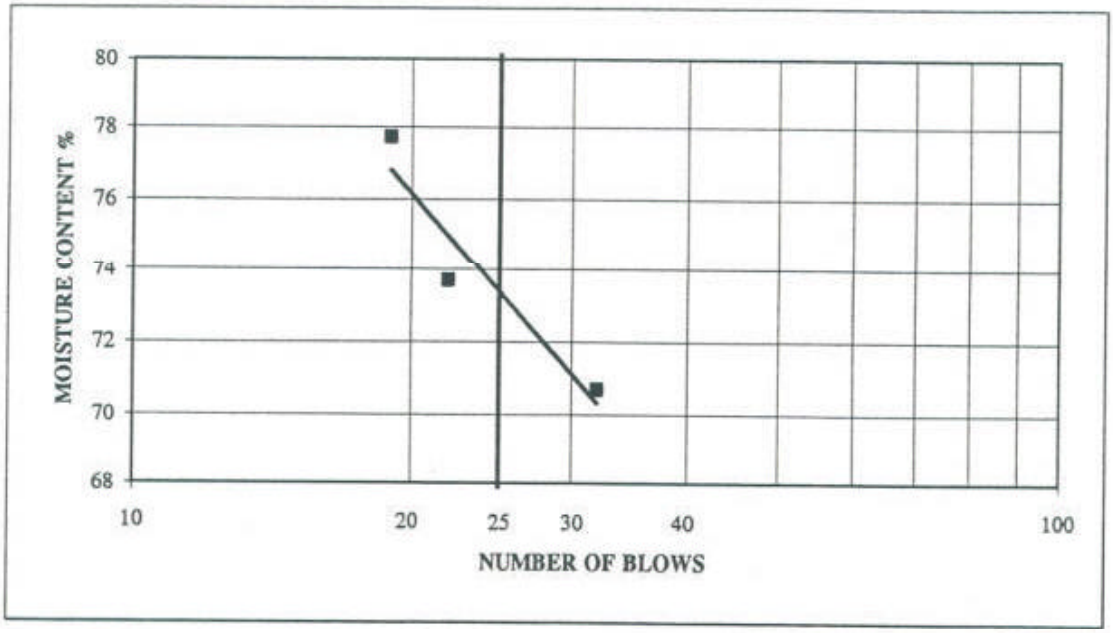
NATURAL MOISTURE

265.73
213.27
51.76
52.46
161.51
32.48

LIQUID LIMIT DETERMINATION

Number of Blows		32	22	19
Weight of Wet Soil & Tare (gm)	(W6)	15.81	19.38	17.45
Weight of Dry Soil & Tare (gm)	(W7)	11.06	12.97	11.69
Weight of Tare (gm)	(W8)	4.34	4.27	4.28
Weight of Water (gm)	(W9=W6-W7)	4.75	6.41	5.76
Weight of Dry Soil (gm)	(W10=W7-W8)	6.72	8.70	7.41
Water Content %	(W9/W10)*100	70.68	73.68	77.73

NOTE:



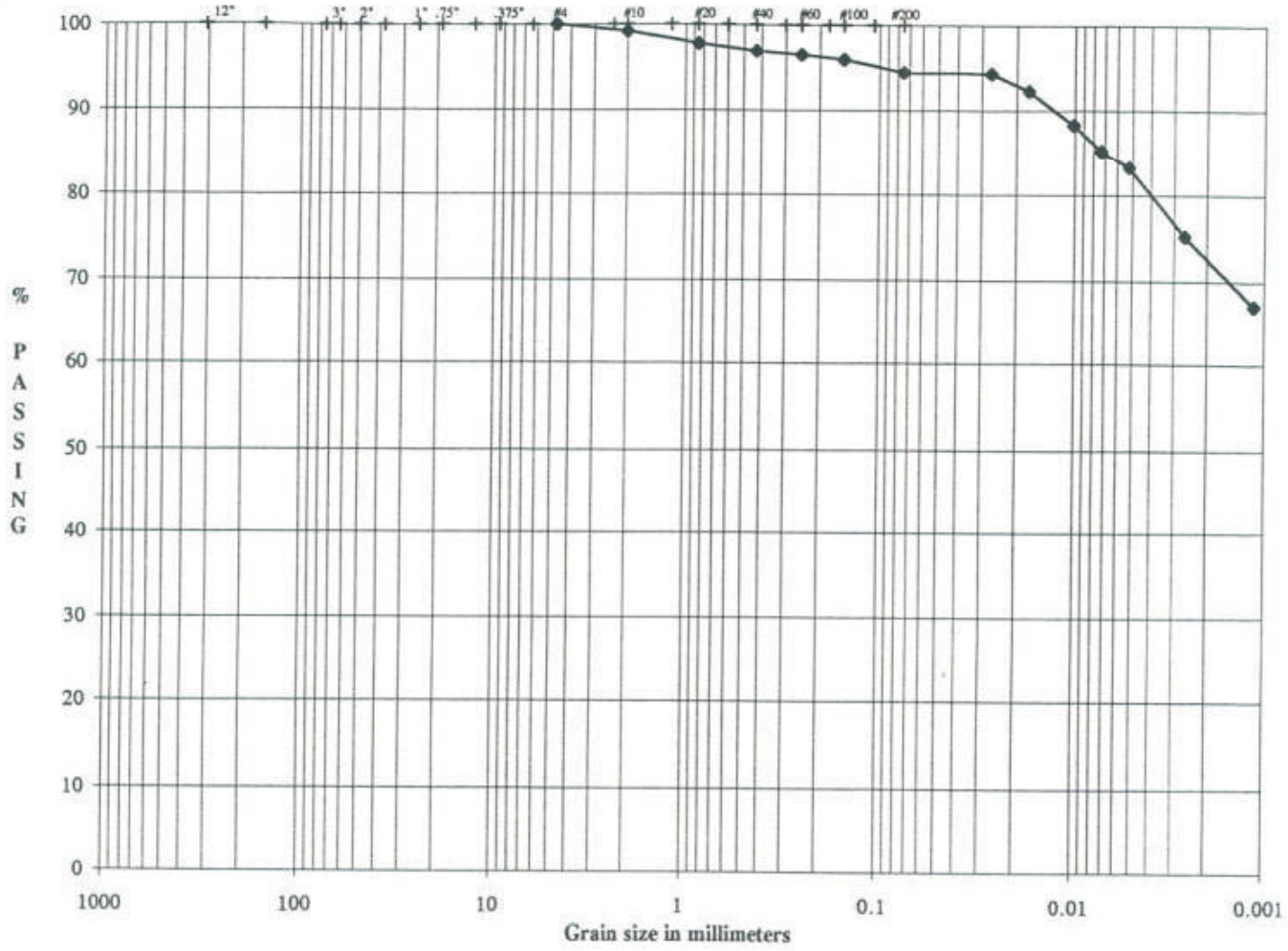
LIQUID LIMIT (WI)	73.39	73
PLASTIC LIMIT (Wp)	29.08	29
PLASTICITY INDEX (Ip)		44
LIQUIDITY INDEX (I)		0.08
MOISTURE CONTENT		32.48

DESCRIPTION: Brownish Yellow, SILTY CLAY, little coarse to fine sand.

USCS: CH

TECH	TF
DATE	6/25/98
CHECK	
REVIEW	

PARTICLE SIZE DISTRIBUTION ASTM D 421 AND D 422
US STANDARD SIEVE OPENING SIZES



Boulders	Cobbles	Coarse	Fine	Cor	Med	Fine	SILT OR CLAY
		Gravel		SAND			FINES

SAMPLE ID	OWR - 6D
SAMPLE TYPE	UD
SAMPLE DEPTH	23.0 - 25.0'

LL	73
PL	29
PI	44

DESCRIPTION	Brownish Yellow, SILTY CLAY, little coarse to fine sand.
USCS	CH

SOLUTIA / RFI-CS / AL
983-3223

TECH	JDR
DATE	6/24/98
CHECK	
REVIEW	

ASTM GRAIN SIZE ANALYSIS
ASTM C117, C136, D421, D422, D1140 and D2217

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR - 6D
PROJECT NO.	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	23.0 - 25.0'

AS RECEIVED WATER CONTENT

Tare No.		-
Wt. Wet Soil & Tare (gm)	(W1)	265.73
Wt. Dry Soil & Tare (gm)	(W2)	213.27
Weight of Tare (gm)	(W3)	51.76
Weight of Water (gm)	(W4=W1-W2)	52.46
Weight of Dry Soil (gm)	(W5=W2-W3)	161.51
Moisture Content (%)	(W4/W5)*100	32.48

Hygroscopic Moisture For Sieve Sample

Wet Soil & Tare (gm)	46.07
Dry Soil & Tare (gm)	42.83
Tare Weight (gm)	3.25
Moisture Content (%)	8.19

Total Weight of Sample Used For Sieve Analysis Corrected For Hygroscopic Moisture

Weight + Tare, Before Separating On The #4 Sieve (gm)	715.22	
Tare Weight (gm)	218.45	
Total Weight (gm)	459.18	(W6)

Plus #4 Material Sieve

TARE WEIGHT: 0.00

	(Wt+Tare)	(((Wt-Tare)/W6)*100)	%PASSING		
12.0"				12.0"	cobbles
3.0"				3.0"	coarse gravel
2.5"				2.5"	coarse gravel
2.0"				2.0"	coarse gravel
1.5"				1.5"	coarse gravel
1.0"				1.0"	coarse gravel
0.75"				0.75"	fine gravel
0.50"				0.50"	fine gravel
0.375"				0.375"	fine gravel
#4	0.00	0.0	100.0	#4	coarse sand

HYDROMETER ANALYSIS

Specific Gravity	(assumed)	
Specific Gravity	(tested)	2.698
Amount Dispersing Agent (ml)		125.00
Type Dispersion Device		Mechanical
Length of Dispersion Period		1 Minute

Weight of Sample Used For Hydrometer Test

Weight of Sample Wet or Dry (gm)	53.94
Calculated Dry Wt. used in test (gm)	49.86
Hydrometer Bulb Number	624378
% Pass #4 Sieve For Whole Sample	100.00

TARE WEIGHT: 203.14

HYDROMETER BACKSIEVE (Percent Passing #10 - #200 Sieves)

	(Wt+Tare)	Cumul Wt. Retained	% PASSING		
#10	203.56	0.42	99.2	#10	medium sand
#20	204.26	1.12	97.8	#20	medium sand
#40	204.69	1.55	96.9	#40	fine sand
#60	204.88	1.74	96.5	#60	fine sand
#100	205.17	2.03	95.9	#100	fine sand
#200	205.93	2.79	94.4	#200	fine

HYDROMETER CALCULATIONS

DATE	TIME	ET (min)	READING R	TEMP T	TEMP.COR. K	HYD.COR. Cc	READING C	EFFECTIVE LENGTH	A
6/25/98	9:58								
6/25/98	10:00	2.00	52.5	23.00	0.013	5.50	47.00	8.6	1.00
6/25/98	10:03	5.00	51.5	23.00	0.013	5.50	46.00	8.8	1.00
6/25/98	10:13	15.00	49.5	23.00	0.013	5.50	44.00	9.1	1.00
6/25/98	10:28	30.00	48.0	23.00	0.013	5.50	42.50	9.4	1.00
6/25/98	10:58	60.00	47.0	23.00	0.013	5.50	41.50	9.6	1.00
6/25/98	14:08	250.00	43.0	23.00	0.013	5.50	37.50	10.2	1.00
6/26/98	9:58	1440.00	39.0	23.00	0.013	5.50	33.50	10.9	1.00

Particle Diameter	% PASSING
0.0270	94.3
0.0172	92.3
0.0101	88.2
0.0073	85.2
0.0052	83.2
0.0026	75.2
0.0011	67.2

GRAIN SIZE PERCENTAGES

% COBBLES	0.00
% COARSE GRAVEL	0.00
% FINE GRAVEL	0.00
% COARSE SAND	0.84
% MEDIUM SAND	2.27
% FINE SAND	2.49
% FINES	94.40
% TOTAL SAMPLE	100.00

Description: Brownish Yellow, SILTY CLAY, little coarse to fine sand.

USCS: CH

73	LL
29	PL
44	PI

TECH	JDR
DATE	6/24/98
CHECK	
REVIEW	

UNIT WEIGHT DETERMINATION
ASTM D 2937

PROJECT NAME	SOLUTIA / RFI-CS / AL	**SAMPLE ID**	OWR - 6D
PROJECT NUMBER	983-3223	**SAMPLE TYPE**	UD
		SAMPLE DEPTH	23.0 - 25.0'

WEIGHT OF SOIL (g)	665.77
LENGTH OF SAMPLE (in)	3.348
DIAMETER OF SAMPLE (in)	2.851
AREA OF SAMPLE (in^2)	6.38
VOLUME OF SAMPLE (in^3)	21.37
VOLUME OF SAMPLE (cm^3)	350.19

WET UNIT WEIGHT (pcf)	118.7

WEIGHT WET SOIL & TARE (g)	265.73
WEIGHT DRY SOIL & TARE (g)	213.27
WEIGHT OF WATER (g)	52.46
WEIGHT OF TARE (g)	51.76
WEIGHT OF DRY SOIL (g)	161.51
WATER CONTENT (%)	32.48

DRY UNIT WEIGHT (pcf)	89.6

SPECIFIC GRAVITY	2.698
VOLUME OF SOLIDS (cm^3)	186.27
VOLUME OF VOIDS (cm^3)	163.92
POROSITY (%)	47

TECH	GM
DATE	6/29/98
CHECK	
REVIEW	

FLOW PUMP #1

FLEXIBLE WALL PERMEABILITY
ASTM D 5084
METHOD D, CONSTANT RATE OF FLOW

PROJECT TITLE	SOLUTIA / RFI-CS / AL		
PROJECT NUMBER	983-3223		
SAMPLE ID	OWR - 6D	-	23.0-25.0'
SAMPLE TYPE	UD		

BOARD #	1
CELL #	1
Flow Pump Speed	11
Technician	PWM

COMMENTS

Sample Data, Initial			
Height, inches	3.348	B-Value, f	0.99
Diameter, inches	2.851	Cell Pres.	97.0
Area, cm²	41.19	Bot. Pres.	80.0
Volume, cm³	350.24	Top Pres.	80.0
Mass, g	665.77	Tot. B.P.	80.0
Moisture Content, %	32.48	Head, max.	172.33
Dry Density, pcf	89.52	Head, min.	172.33
Spec. Gravity	2.698	Max. Grad.	20.00
Volume Solids, cm³	186.25	Min. Grad.	20.00
Volume Voids, cm³	163.98		
Void Ratio	0.88		
Saturation, %	99.5%		

Sample Data, Final	
Height, inches	3.392
Diameter, inches	2.872
Area, cm²	41.80
Volume, cm³	360.09
Mass, g	678.60
Moisture Content, %	36.17
Dry Density, pcf	86.36
Volume Solids, cm³	184.71
Volume Voids, cm³	175.38
Void Ratio	0.95
Saturation, %	102.8%

WATER CONTENTS		Trimmings Initial	Sample Final
Wt Soil & Tare, i	g	165.73	730.60
Wt Soil & Tare, f	g	113.27	550.38
Wt Tare	g	51.76	52.08
Wt Moisture Lost	g	52.46	180.22
Wt Dry Soil	g	161.51	498.30
Water Content	%	32.48%	36.17%

DESCRIPTION

Brownish Yellow, SILTY CLAY, little coarse to fine sand.

Flow Pump Rate: 1.50E-05 cm³/sec

USCS: CH

TIME FUNCTIONS, SECONDS								dP				
DATE	DAY	HOUR	MIN	TEMP (°C)	dt (min)	dt,acc (min)	dt (sec)	dt,acc (sec)	Reading (psi)	Head (cm)	Gradient	Permeability (cm/sec)
6/25/98	35971	12	30	20.4	0	0	0	0	2.45	172.33	20.00	1.8E-08
6/25/98	35971	12	35	20.4	5	5	300	300	2.45	172.33	20.00	1.8E-08
6/25/98	35971	12	40	20.4	5	10	300	600	2.45	172.33	20.00	1.8E-08
6/25/98	35971	12	45	20.4	5	15	300	900	2.45	172.33	20.00	1.8E-08 *
6/25/98	35971	12	50	20.4	5	20	300	1200	2.45	172.33	20.00	1.8E-08 *
6/25/98	35971	12	55	20.4	5	25	300	1500	2.45	172.33	20.00	1.8E-08 *
6/25/98	35971	13	0	20.4	5	30	300	1800	2.45	172.33	20.00	1.8E-08 *

*TRANSCRIBED FROM ORIGINAL DATA SHEETS

PERMEABILITY REPORTED AS ** 1.8E-08 cm/sec **

DATE 6/25/98
CHECK
REVIEW

ATTERBERG LIMITS
ASTM D-4318

PROJECT TITLE	SOLUTIA / RFI-CS / AL	**SAMPLE ID**	OWR-6D -
PROJECT NUMBER	983-3223	**SAMPLE TYPE**	UD
		SAMPLE DEPTH	60.0 - 62.0'

SAMPLE PREPARATION

Wet or Dry: Dry

Minus #40 Sieve: Yes

PLASTIC LIMIT DETERMINATION

				NATURAL MOISTURE
Weight of Wet Soil & Tare	(W1)	23.51	23.14	602.85
Weight of Dry Soil & Tare	(W2)	20.54	20.36	412.62
Weight of Tare	(W3)	11.33	11.76	0.00
Weight of Water	(W4=W1-W2)	2.97	2.78	190.23
Weight of Dry Soil	(W5=W2-W3)	9.21	8.60	412.62
Water Content	(W4/W5)*100	32.25%	32.33%	46.10%

LIQUID LIMIT DETERMINATION

Number of Blows		24	24
Weight of Wet Soil & Tare	(W6)	19.11	14.25
Weight of Dry Soil & Tare	(W7)	14.32	11.38
Weight of Tare	(W8)	6.58	6.72
Weight of Water	(W9=W6-W7)	4.79	2.87
Weight of Dry Soil	W10=W7-W8)	7.74	4.66
Water Content	(W9/W10)*100	61.89%	61.59%

TEST RESULTS

	TRAIL 1	TRIAL 2
BLOWS:	24	24
K VALUE:	0.995	0.995

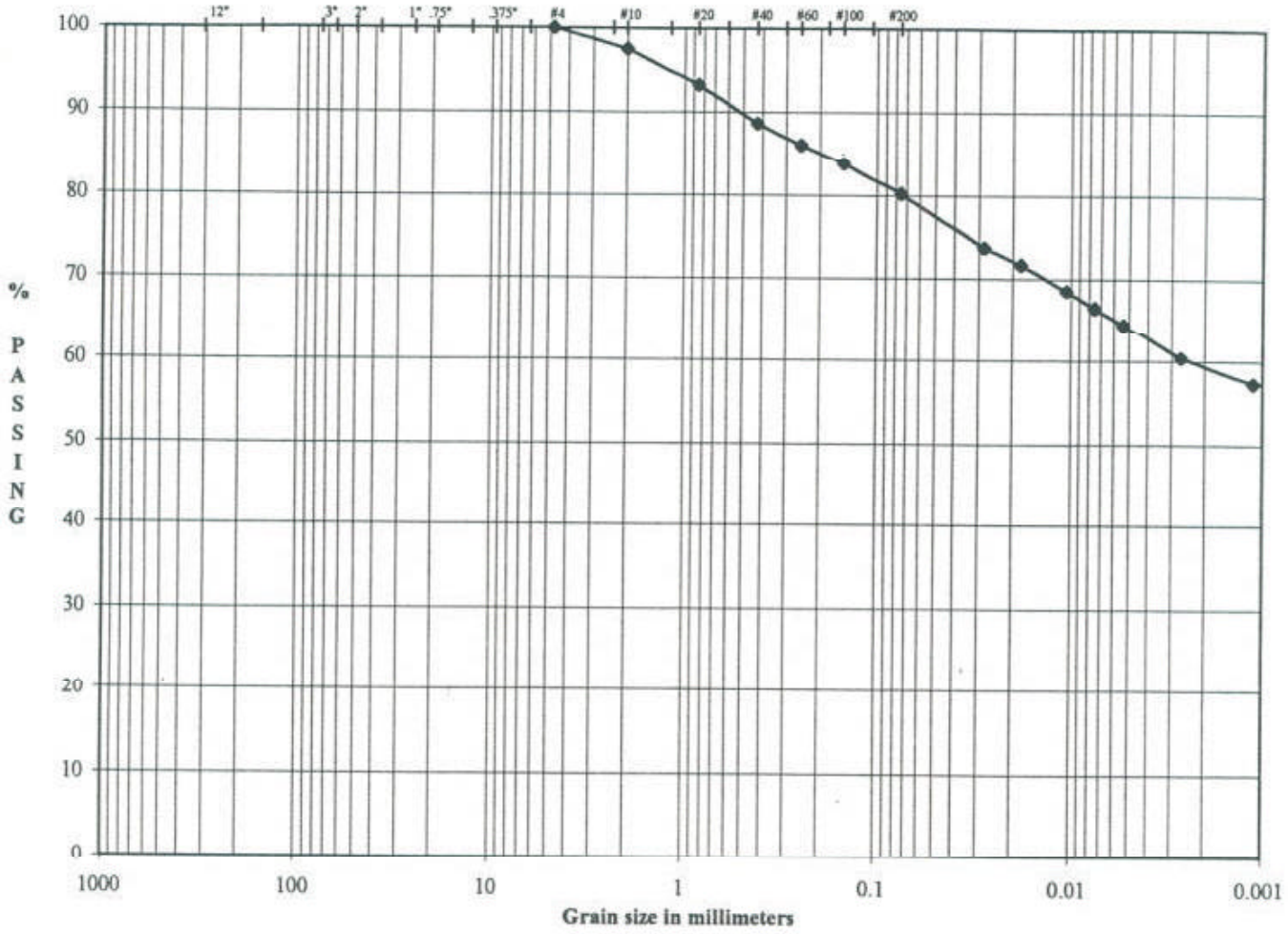
LIQUID LIMIT (Wl)	61.43	61
PLASTIC LIMIT (Wp)	32.29	32
PLASTICITY INDEX (Ip)		29
LIQUIDITY INDEX (I)		0.48
MOISTURE CONTENT		46.10%

DESCRIPTION: Yellowish Brown, CLAYEY SILT, some coarse to fine sand.

USCS: MH

TECH	TF/SW
DATE	6/26/98
CHECK	
REVIEW	

PARTICLE SIZE DISTRIBUTION ASTM D 421 AND D 422
US STANDARD SIEVE OPENING SIZES



Boulders	Cobbles	Coarse	Fine	Cor	Med	Fine	SILT OR CLAY
		Gravel		SAND			FINES

SAMPLE ID	OWR - 6D
SAMPLE TYPE	UD
SAMPLE DEPTH	60.0 - 62.0

LL	61
PL	32
PI	29

DESCRIPTION	Yellowish Brown, CLAYEY SILT, some coarse to fine sand.
USCS	MH

SOLUTIA / RFI-CS / AL
983-3223

TECH	JDR
DATE	6/25/98
CHECK	
REVIEW	

ASTM GRAIN SIZE ANALYSIS
ASTM C117, C136, D421, D422, D1140 and D2217

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR - 6D
PROJECT NO.	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	60.0 - 62.0'

AS RECEIVED WATER CONTENT

Tare No.		-
Wt. Wet Soil & Tare (gm)	(W1)	602.85
Wt. Dry Soil & Tare (gm)	(W2)	412.62
Weight of Tare (gm)	(W3)	0.00
Weight of Water (gm)	(W4=W1-W2)	190.23
Weight of Dry Soil (gm)	(W5=W2-W3)	412.62
Moisture Content (%)	(W4/W5)*100	46.10

Hygroscopic Moisture For Sieve Sample

Wet Soil & Tare (gm)	31.48
Dry Soil & Tare (gm)	27.31
Tare Weight (gm)	3.22
Moisture Content (%)	17.31

Total Weight of Sample Used For Sieve Analysis Corrected For Hygroscopic Moisture

Weight + Tare, Before Separating On The #4 Sieve (gm)	580.78	
Tare Weight (gm)	234.51	
Total Weight (gm)	295.17	(W6)

Plus #4 Material Sieve

TARE WEIGHT: 0.00

	(Wt+Tare)	(((Wt-Tare)/W6)*100)	%PASSING		
12.0"				12.0"	cobbles
3.0"				3.0"	coarse gravel
2.5"				2.5"	coarse gravel
2.0"				2.0"	coarse gravel
1.5"				1.5"	coarse gravel
1.0"				1.0"	coarse gravel
0.75"				0.75"	fine gravel
0.50"				0.50"	fine gravel
0.375"				0.375"	fine gravel
#4	0.00	0.0	100.0	#4	coarse sand

HYDROMETER ANALYSIS

Specific Gravity	(assumed)	
Specific Gravity	(tested)	2.825
Amount Dispersing Agent (ml)		125.00
Type Dispersion Device		Mechanical
Length of Dispersion Period		1 Minute

Weight of Sample Used For Hydrometer Test

Weight of Sample Wet or Dry (gm)	55.57
Calculated Dry Wt. used in test (gm)	47.37
Hydrometer Bulb Number	624378
% Pass #4 Sieve For Whole Sample	100.00

TARE WEIGHT: 203.14

HYDROMETER BACKSIEVE (Percent Passing #10 - #200 Sieves)

	(Wt+Tare)	Cumul Wt. Retained	% PASSING		
#10	204.30	1.16	97.6	#10	medium sand
#20	206.34	3.20	93.2	#20	medium sand
#40	208.53	5.39	88.6	#40	fine sand
#60	209.75	6.61	86.0	#60	fine sand
#100	210.84	7.70	83.7	#100	fine sand
#200	212.53	9.39	80.2	#200	fines

HYDROMETER CALCULATIONS

DATE	TIME	ET (min)	READING R	TEMP T	TEMP.COR. K	HYD.COR. Cc	READING C	EFFECTIVE LENGTH	A
6/26/98	9:14								
6/26/98	9:16	2.00	41.5	23.00	0.012	5.50	36.00	10.4	0.97
6/26/98	9:19	5.00	40.5	23.00	0.012	5.50	35.00	10.6	0.97
6/26/98	9:29	15.00	39.0	23.00	0.012	5.50	33.50	10.9	0.97
6/26/98	9:44	30.00	38.0	23.00	0.012	5.50	32.50	11.1	0.97
6/26/98	10:14	60.00	37.0	23.00	0.012	5.50	31.50	11.2	0.97
6/26/98	13:24	250.00	35.0	23.00	0.012	5.50	29.50	11.5	0.97
6/27/98	9:14	1440.00	33.5	23.00	0.012	5.50	28.00	11.7	0.97

GRAIN SIZE PERCENTAGES

Particle Diameter	% PASSING		
0.0283	73.7	% COBBLES	0.00
0.0181	71.7	% COARSE GRAVEL	0.00
0.0106	68.6	% FINE GRAVEL	0.00
0.0075	66.6	% COARSE SAND	2.45
0.0054	64.5	% MEDIUM SAND	8.93
0.0027	60.4	% FINE SAND	8.44
0.0011	57.3	% FINES	80.18
		% TOTAL SAMPLE	100.00

Description: Yellowish Brown, CLAYEY SILT, some coarse to fine sand.

USCS: MH

61	LL
32	PL
29	PI

TECH	JDR
DATE	6/25/98
CHECK	
REVIEW	

FLOW PUMP #2

FLEXIBLE WALL PERMEABILITY
ASTM D 5084
METHOD D, CONSTANT RATE OF FLOW

PROJECT TITLE	SOLUTIA / RFI-CS / AL		BOARD #	2	COMMENTS
PROJECT NUMBER	983-3213		CELL #	2	
SAMPLE ID	OWR - 2D	100.0-102.0'	Flow Pump Speed	8	
SAMPLE TYPE	UD		Technician	PWM	

Sample Data, Initial				Sample Data, Final	
Height, inches	3.274	B-Value, f	0.99	Height, inches	3.281
Diameter, inches	2.875	Cell Pres.	110.0	Diameter, inches	2.869
Area, cm²	41.91	Bot. Pres.	40.0	Area, cm²	41.71
Volume, cm³	348.54	Top Pres.	40.0	Volume, cm³	347.58
Mass, g	629.54	Tot. B.P.	40.0	Mass, g	639.28
Moisture Content, %	36.90	Head, max.	111.14	Moisture Content, %	39.02
Dry Density, pcf	82.31	Head, min.	111.14	Dry Density, pcf	82.55
Spec. Gravity	2.793	Max. Grad.	13.34	Volume Solids, cm³	164.64
Volume Solids, cm³	164.64	Min. Grad.	13.34	Volume Voids, cm³	182.94
Volume Voids, cm³	183.89			Void Ratio	1.11
Void Ratio	1.12			Saturation, %	98.1%
Saturation, %	92.3%				

WATER CONTENTS		Trimmings Initial	Sample Final
Wt Soil & Tare, i	g	629.54	690.91
Wt Soil & Tare, f	g	459.85	511.52
Wt Tare	g	0.00	51.77
Wt Moisture Lost	g	169.69	179.39
Wt Dry Soil	g	459.85	459.75
Water Content	%	36.90%	39.02%

Flow Pump Rate: 1.40E-04 cm³/sec

USCS: MH

DESCRIPTION: Red, CLAYEY SILT, some medium to fine sand.

TIME FUNCTIONS, SECONDS								dP				
DATE	DAY	HOUR	MIN	TEMP (°C)	dt (min)	dt,acc (min)	dt (sec)	dt,acc (sec)	Reading (psi)	Head (cm)	Gradient	Permeability (cm/sec)
6/25/98	35971	13	50	20.7	0	0	0	0	1.58	111.14	13.34	2.5E-07
6/25/98	35971	13	55	20.7	5	5	300	300	1.58	111.14	13.34	2.5E-07
6/25/98	35971	14	0	20.7	5	10	300	600	1.58	111.14	13.34	2.5E-07
6/25/98	35971	14	5	20.7	5	15	300	900	1.58	111.14	13.34	2.5E-07 *
6/25/98	35971	14	10	20.7	5	20	300	1200	1.58	111.14	13.34	2.5E-07 *
6/25/98	35971	14	15	20.7	5	25	300	1500	1.58	111.14	13.34	2.5E-07 *
6/25/98	35971	14	20	20.7	5	30	300	1800	1.58	111.14	13.34	2.5E-07 *

*TRANSCRIBED FROM ORIGINAL DATA SHEETS

PERMEABILITY REPORTED AS ** 2.5E-07 cm/sec **

DATE 6/25/98
CHECK
REVIEW PWM

ATTERBERG LIMITS
ASTM D-4318

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR-3D -
PROJECT NUMBER	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	60.0 - 62.0'

SAMPLE PREPARATION
Wet or Dry: Dry

Minus #40 Sieve: Yes

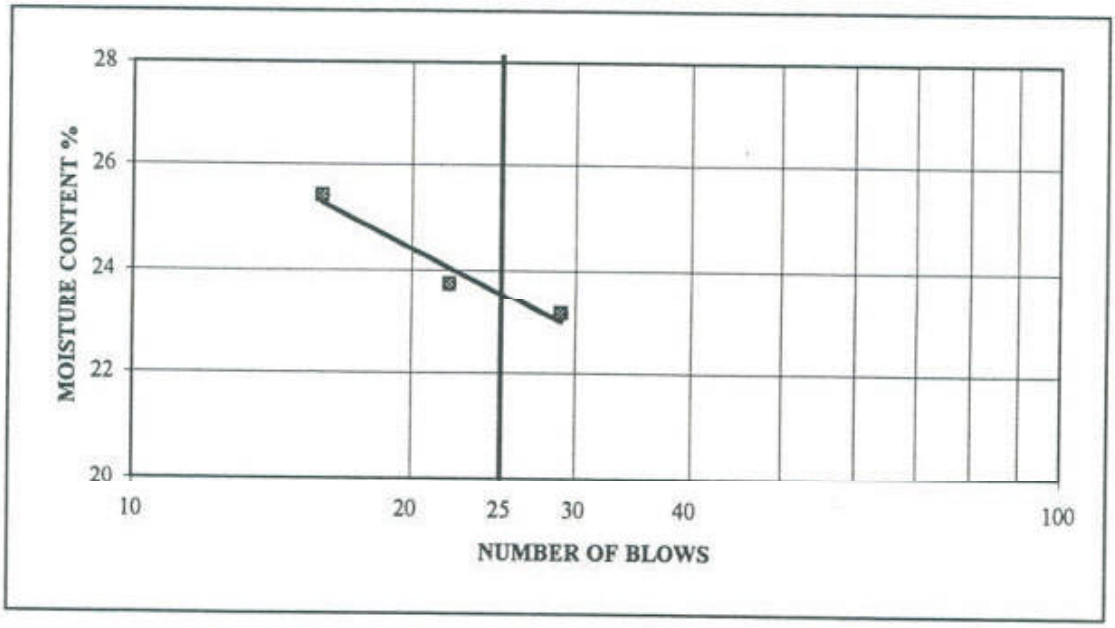
PLASTIC LIMIT DETERMINATION

					NATURAL MOISTURE
Weight of Wet Soil & Tare (gm)	(W1)	26.13	32.01	26.19	249.45
Weight of Dry Soil & Tare (gm)	(W2)	23.38	28.13	23.38	211.76
Weight of Tare (gm)	(W3)	11.78	11.85	11.41	51.45
Weight of Water (gm)	(W4=W1-W2)	2.75	3.88	2.81	37.69
Weight of Dry Soil (gm)	(W5=W2-W3)	11.60	16.28	11.97	160.31
Water Content %	(W4/W5)*100	23.71	23.83	23.48	23.51

LIQUID LIMIT DETERMINATION

Number of Blows		29	22	16
Weight of Wet Soil & Tare (gm)	(W6)	16.47	19.47	20.81
Weight of Dry Soil & Tare (gm)	(W7)	14.62	16.56	17.47
Weight of Tare (gm)	(W8)	6.62	4.30	4.32
Weight of Water (gm)	(W9=W6-W7)	1.85	2.91	3.34
Weight of Dry Soil (gm)	(W10=W7-W8)	8.00	12.26	13.15
Water Content %	(W9/W10)*100	23.13	23.74	25.40

NOTE:



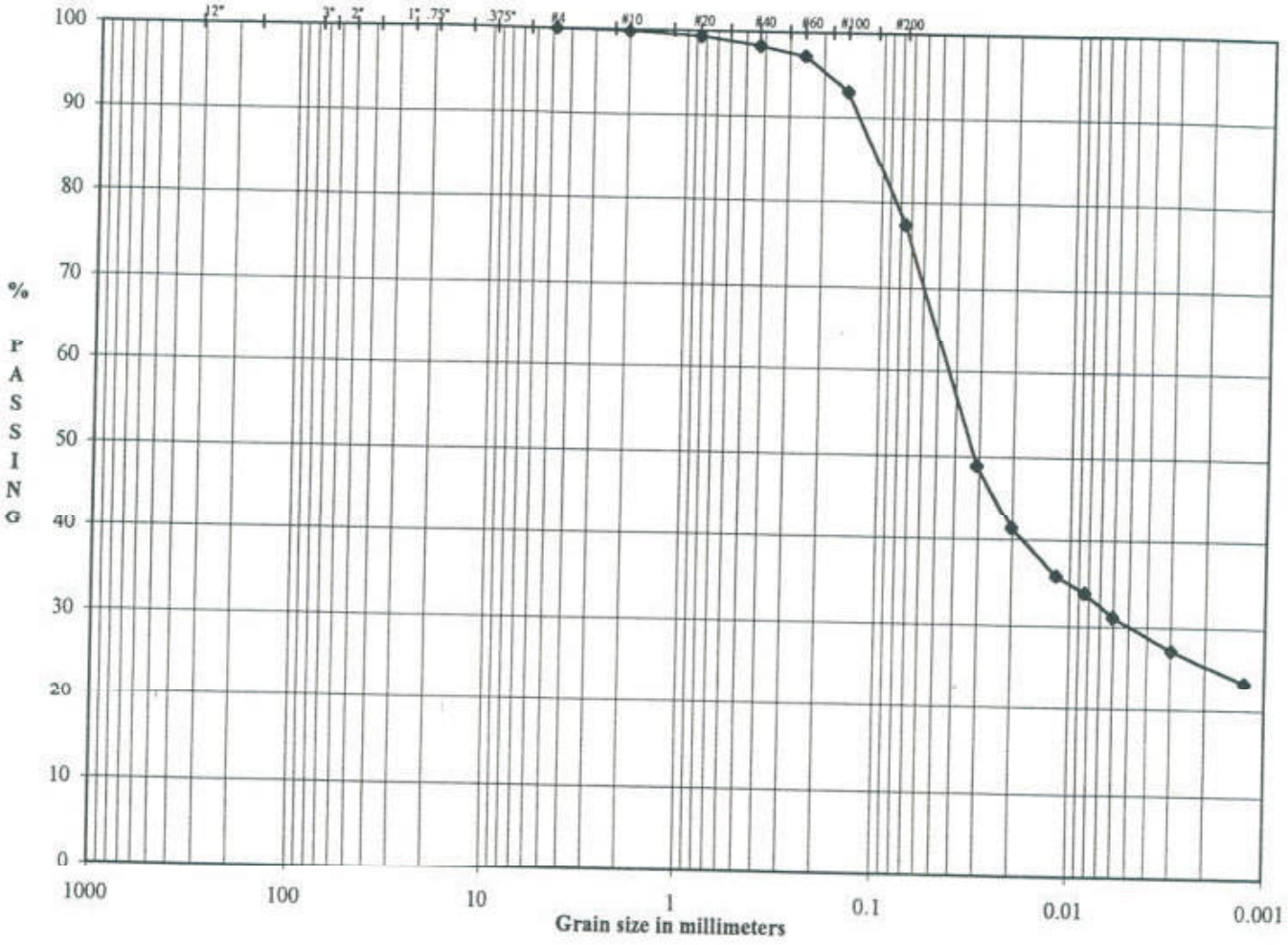
LIQUID LIMIT (WI)	23.54	NP
PLASTIC LIMIT (Wp)	23.67	NP
PLASTICITY INDEX (Ip)		NP
LIQUIDITY INDEX (I)		NP
MOISTURE CONTENT		23.51

DESCRIPTION: Brownish Yellow, CLAYEY SILT, some fine sand.

USCS: ML

TECH	TF
DATE	6/25/98
CHECK	
REVIEW	

PARTICLE SIZE DISTRIBUTION ASTM D 421 AND D 422
US STANDARD SIEVE OPENING SIZES



Boulders	Cobbles	Coarse Gravel	Fine Gravel	Cor SAND	Med SAND	Fine SAND	SILT OR CLAY FINES

SAMPLE ID	OWR - 3D
SAMPLE TYPE	UD
SAMPLE DEPTH	60.0 - 62.0'

LL	NP
PL	NP
PI	NP

DESCRIPTION	Brownish Yellow, CLAYEY SILT, some fine sand.
USCS	ML

SOLUTIA / RFI-CS / AL
983-3223

TECH	JDR
DATE	6/24/98
CHECK	
REVIEW	

ASTM GRAIN SIZE ANALYSIS
ASTM C117, C136, D421, D422, D1140 and D2217

PROJECT TITLE	SOLUTIA / RFI-CS / AL
PROJECT NO.	983-3223
SAMPLE ID	OWR - 3D
SAMPLE TYPE	UD
SAMPLE DEPTH	60.0 - 62.0'

AS RECEIVED WATER CONTENT

Tare No.		-
Wt. Wet Soil & Tare (gm)	(W1)	249.45
Wt. Dry Soil & Tare (gm)	(W2)	211.76
Weight of Tare (gm)	(W3)	51.45
Weight of Water (gm)	(W4=W1-W2)	37.69
Weight of Dry Soil (gm)	(W5=W2-W3)	160.31
Moisture Content (%)	(W4/W5)*100	23.51

Hygroscopic Moisture For Sieve Sample

Wet Soil & Tare (gm)	62.53
Dry Soil & Tare (gm)	60.92
Tare Weight (gm)	3.22
Moisture Content (%)	2.79

Total Weight of Sample Used For Sieve Analysis Corrected For Hygroscopic Moisture

Weight + Tare, Before Separating On The #4 Sieve (gm)	676.65	
Tare Weight (gm)	235.20	
Total Weight (gm)	429.47	(W6)

Plus #4 Material Sieve

TARE WEIGHT: 0.00

	(Wt+Tare)	(((Wt-Tare)/W6)*100)	%PASSING		
12.0"				12.0"	cobbles
3.0"				3.0"	coarse gravel
2.5"				2.5"	coarse gravel
2.0"				2.0"	coarse gravel
1.5"				1.5"	coarse gravel
1.0"				1.0"	coarse gravel
0.75"				0.75"	fine gravel
0.50"				0.50"	fine gravel
0.375"				0.375"	fine gravel
#4	0.00	0.0	100.0	#4	coarse sand

HYDROMETER ANALYSIS

Specific Gravity	(assumed)	
Specific Gravity	(tested)	2.822
Amount Dispersing Agent (ml)		125.00
Type Dispersion Device		Mechanical
Length of Dispersion Period		1 Minute

Weight of Sample Used For Hydrometer Test

Weight of Sample Wet or Dry (gm)	52.95
Calculated Dry Wt. used in test (gm)	51.51
Hydrometer Bulb Number	624378
% Pass #4 Sieve For Whole Sample	100.00

TARE WEIGHT: 203.14

HYDROMETER BACKSIEVE (Percent Passing #10 - #200 Sieves)

	(Wt+Tare)	Cumul Wt. Retained	% PASSING		
#10	203.25	0.11	99.8	#10	medium sand
#20	203.50	0.36	99.3	#20	medium sand
#40	203.99	0.85	98.3	#40	fine sand
#60	204.58	1.44	97.2	#60	fine sand
#100	206.76	3.62	93.0	#100	fine sand
#200	214.79	11.65	77.4	#200	fines

HYDROMETER CALCULATIONS

DATE	TIME	ET (min)	READING R	TEMP T	TEMP.COR. K	HYD.COR. Cc	READING C	EFFECTIVE LENGTH	A
6/25/98	9:55								
6/25/98	9:57	2.00	31.5	23.00	0.013	5.50	26.00	12.0	0.97
6/25/98	10:00	5.00	27.5	23.00	0.013	5.50	22.00	12.7	0.97
6/25/98	10:10	15.00	24.5	23.00	0.013	5.50	19.00	13.2	0.97
6/25/98	10:25	30.00	23.5	23.00	0.013	5.50	18.00	13.3	0.97
6/25/98	10:55	60.00	22.0	23.00	0.013	5.50	16.50	13.7	0.97
6/25/98	14:05	250.00	20.0	23.00	0.013	5.50	14.50	14.0	0.97
6/26/98	9:55	1440.00	18.0	23.00	0.013	5.50	12.50	14.3	0.97

GRAIN SIZE PERCENTAGES

Particle Diameter	% PASSING		
0.0309	49.0	% COBBLES	0.00
0.0201	41.4	% COARSE GRAVEL	0.00
0.0118	35.8	% FINE GRAVEL	0.00
0.0084	33.9	% COARSE SAND	0.21
0.0060	31.1	% MEDIUM SAND	1.44
0.0030	27.3	% FINE SAND	20.97
0.0013	23.5	% FINES	77.38
		% TOTAL SAMPLE	100.00

Description: Brownish Yellow, CLAYEY SILT, some fine sand.

USCS: ML

NP	LL
NP	PL
NP	PI

TECH	JDR
DATE	6/24/98
CHECK	
REVIEW	

UNIT WEIGHT DETERMINATION
ASTM D 2937

PROJECT NAME	SOLUTIA / RFI-CS / AL	**SAMPLE ID**	OWR - 3D
PROJECT NUMBER	983-3223	**SAMPLE TYPE**	UD
		SAMPLE DEPTH	60.0 - 62.0'

WEIGHT OF SOIL (g)	586.25
LENGTH OF SAMPLE (in)	2.812
DIAMETER OF SAMPLE (in)	2.861
AREA OF SAMPLE (in^2)	6.43
VOLUME OF SAMPLE (in^3)	18.08
VOLUME OF SAMPLE (cm^3)	296.28

WET UNIT WEIGHT (pcf)	123.5

WEIGHT WET SOIL & TARE (g)	249.45
WEIGHT DRY SOIL & TARE (g)	211.76
WEIGHT OF WATER (g)	37.69
WEIGHT OF TARE (g)	51.45
WEIGHT OF DRY SOIL (g)	160.31
WATER CONTENT (%)	23.51

DRY UNIT WEIGHT (pcf)	100.0

SPECIFIC GRAVITY	2.822
VOLUME OF SOLIDS (cm^3)	168.20
VOLUME OF VOIDS (cm^3)	128.08
POROSITY (%)	43

TECH	GM
DATE	6/29/98
CHECK	
REVIEW	

FLOW PUMP #2

FLEXIBLE WALL PERMEABILITY
ASTM D 5084
METHOD D, CONSTANT RATE OF FLOW

PROJECT TITLE	SOLUTIA / RFI-CS / AL		
PROJECT NUMBER	983-3223		
SAMPLE ID	OWR - 3D	-	60.0-62.0'
SAMPLE TYPE	UD		

BOARD #	5
CELL #	5
Flow Pump Speed	6
Technician	PWM

COMMENTS

Sample Data, Initial			
Height, inches	2.812	B-Value, f	1.00
Diameter, inches	2.861	Cell Pres.	112.0
Area, cm²	41.48	Bot. Pres.	70.0
Volume, cm³	296.24	Top Pres.	70.0
Mass, g	586.25	Tot. B.P.	70.0
Moisture Content, %	23.51	Head, max.	53.46
Dry Density, pcf	99.98	Head, min.	53.46
Spec. Gravity	2.822	Max. Grad.	7.49
Volume Solids, cm³	168.20	Min. Grad.	7.49
Volume Voids, cm³	128.04		
Void Ratio	0.76		
Saturation, %	87.2%		

Sample Data, Final	
Height, inches	2.809
Diameter, inches	2.863
Area, cm²	41.53
Volume, cm³	296.34
Mass, g	590.41
Moisture Content, %	24.80
Dry Density, pcf	99.61
Volume Solids, cm³	167.64
Volume Voids, cm³	128.70
Void Ratio	0.77
Saturation, %	81.2%

WATER CONTENTS		Trimmings Initial	Sample Final
Wt Soil & Tare, i	g	249.45	633.48
Wt Soil & Tare, f	g	211.76	516.18
Wt Tare	g	51.45	43.28
Wt Moisture Lost	g	37.69	117.30
Wt Dry Soil	g	160.31	472.90
Water Content	%	23.51%	24.80%

DESCRIPTION

Brownish Yellow, CLAYEY SILT, some fine sand.

Flow Pump Rate: 5.30E-04 cm³/sec

USCS: ML

TIME FUNCTIONS, SECONDS								dP				
DATE	DAY	HOUR	MIN	TEMP (°C)	dt (min)	dt,acc (min)	dt (sec)	dt,acc (sec)	Reading (psi)	Head (cm)	Gradient	Permeability (cm/sec)
6/25/98	35971	8	15	20.4	0	0	0	0	0.76	53.46	7.49	1.7E-06
6/25/98	35971	8	20	20.4	5	5	300	300	0.76	53.46	7.49	1.7E-06
6/25/98	35971	8	25	20.4	5	10	300	600	0.76	53.46	7.49	1.7E-06
6/25/98	35971	8	30	20.4	5	15	300	900	0.76	53.46	7.49	1.7E-06 "
6/25/98	35971	8	35	20.4	5	20	300	1200	0.76	53.46	7.49	1.7E-06 "
6/25/98	35971	8	40	20.4	5	25	300	1500	0.76	53.46	7.49	1.7E-06 "
6/25/98	35971	8	45	20.4	5	30	300	1800	0.76	53.46	7.49	1.7E-06 "

*TRANSCRIBED FROM ORIGINAL DATA SHEETS

PERMEABILITY REPORTED AS** 1.7E-06 cm/sec **

DATE 6/25/98
CHECK
REVIEW

ATTERBERG LIMITS
ASTM D-4318

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR-4D -
PROJECT NUMBER	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	19.0 - 21.0'

SAMPLE PREPARATION
Wet or Dry: Dry Minus #40 Sieve: Yes

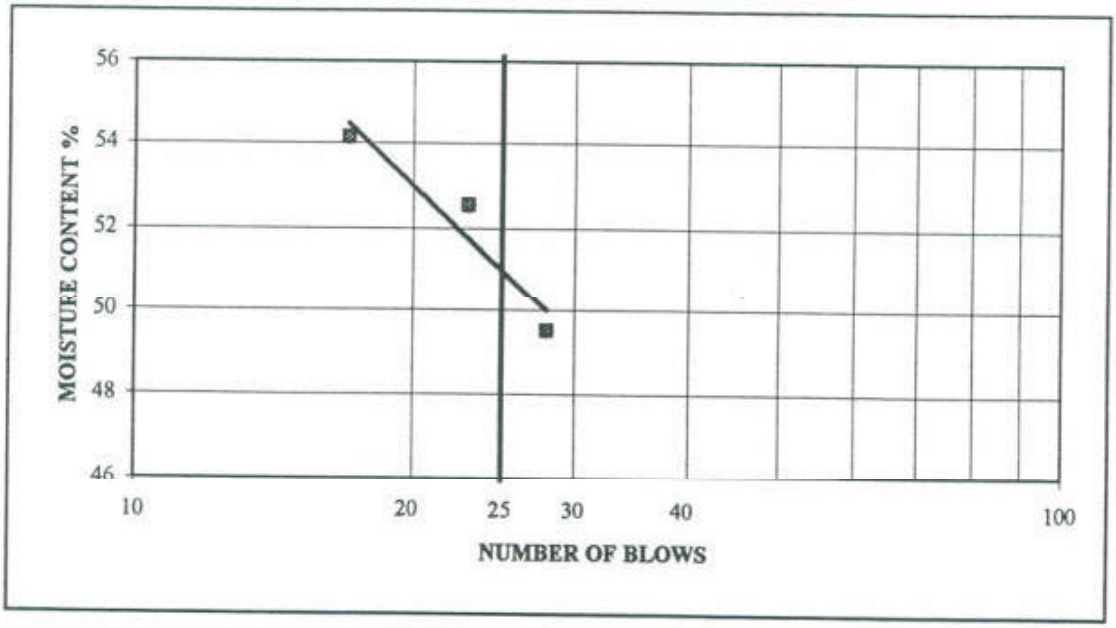
PLASTIC LIMIT DETERMINATION

					NATURAL MOISTURE
Weight of Wet Soil & Tare (gm)	(W1)	26.94	24.19	25.65	658.32
Weight of Dry Soil & Tare (gm)	(W2)	23.50	21.43	22.50	510.34
Weight of Tare (gm)	(W3)	11.40	11.70	11.33	0.00
Weight of Water (gm)	(W4=W1-W2)	3.44	2.76	3.15	147.98
Weight of Dry Soil (gm)	(W5=W2-W3)	12.10	9.73	11.17	510.34
Water Content %	(W4/W5)*100	28.43	28.37	28.20	29.00

LIQUID LIMIT DETERMINATION

Number of Blows		28	23	17
Weight of Wet Soil & Tare (gm)	(W6)	16.62	17.37	14.07
Weight of Dry Soil & Tare (gm)	(W7)	12.54	12.88	10.60
Weight of Tare (gm)	(W8)	4.30	4.33	4.19
Weight of Water (gm)	(W9=W6-W7)	4.08	4.49	3.47
Weight of Dry Soil (gm)	(W10=W7-W8)	8.24	8.55	6.41
Water Content %	(W9/W10)*100	49.51	52.55	54.13

NOTE:



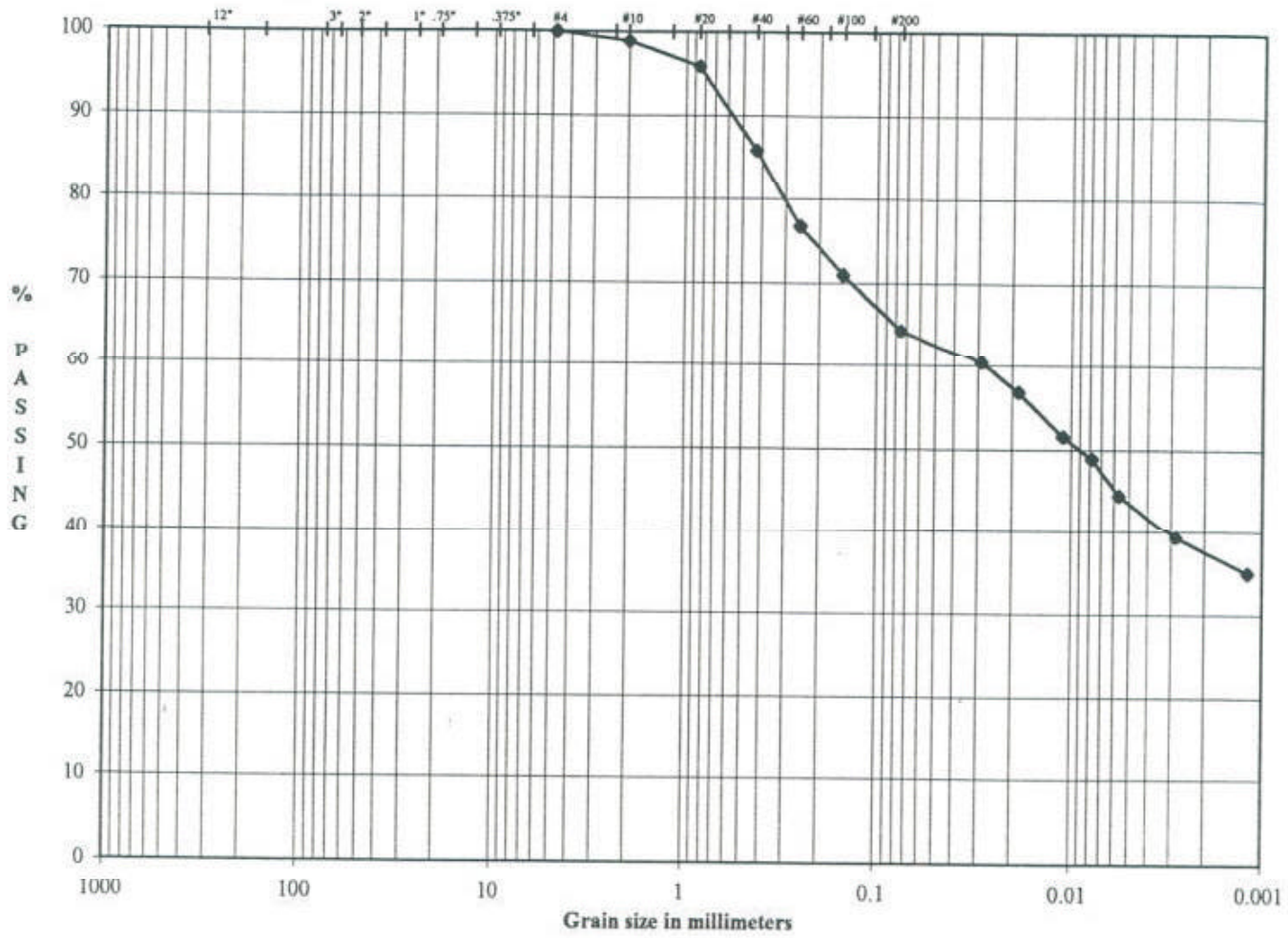
LIQUID LIMIT (WI)	51.01	51
PLASTIC LIMIT (Wp)	28.33	28
PLASTICITY INDEX (Ip)		23
LIQUIDITY INDEX (I)		0.03
MOISTURE CONTENT		29.00

DESCRIPTION: Reddish Yellow and Black, SILTY CLAY, and medium to fine sand.

USCS: CH

TECH	JDR
DATE	6/8/98
CHECK	
REVIEW	

PARTICLE SIZE DISTRIBUTION ASTM D 421 AND D 422
US STANDARD SIEVE OPENING SIZES



Boulders	Cobbles	Coarse Gravel	Fine Gravel	Cor SAND	Med SAND	Fine SAND	SILT OR CLAY FINES

SAMPLE ID	OWR - 4D
SAMPLE TYPE	UD
SAMPLE DEPTH	19.0 - 21.0'

LL	51
PL	28
PI	23

DESCRIPTION	Reddish Yellow and Black, SILTY CLAY, and medium to fine sand.
USCS	CH

SOLUTIA / RFI-CS / AL
983-3223

TECH	JDR
DATE	6/4/98
CHECK	
REVIEW	

ASTM GRAIN SIZE ANALYSIS
ASTM C117, C136, D421, D422, D1140 and D2217

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR - 4D
PROJECT NO	093-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	19.0 - 21.0'

AS RECEIVED WATER CONTENT

Tare No.		-
Wt. Wet Soil & Tare (gm)	(W1)	658.32
Wt. Dry Soil & Tare (gm)	(W2)	510.34
Weight of Tare (gm)	(W3)	0.00
Weight of Water (gm)	(W4=W1-W2)	147.98
Weight of Dry Soil (gm)	(W5=W2-W3)	510.34
Moisture Content (%)	(W4/W5)*100	29.00

Hygroscopic Moisture For Sieve Sample

Wet Soil & Tare (gm)	67.39
Dry Soil & Tare (gm)	66.27
Tare Weight (gm)	3.22
Moisture Content (%)	1.78

Total Weight of Sample Used For Sieve Analysis Corrected For Hygroscopic Moisture

Weight + Tare, Before Separating On The #4 Sieve (gm)	805.37	
Tare Weight (gm)	219.08	
Total Weight (gm)	576.06	(W6)

Plus #4 Material Sieve

TARE WEIGHT: 0.00

	(Wt+Tare)	(((Wt-Tare)/W6)*100)	%PASSING		
12.0"				12.0"	cobbles
3.0"				3.0"	coarse gravel
2.5"				2.5"	coarse gravel
2.0"				2.0"	coarse gravel
1.5"				1.5"	coarse gravel
1.0"				1.0"	coarse gravel
0.75"				0.75"	fine gravel
0.50"				0.50"	fine gravel
0.375"				0.375"	fine gravel
#4	0.00	0.0	100.0	#4	coarse sand

HYDROMETER ANALYSIS

Specific Gravity	(assumed)	
Specific Gravity	(tested)	2.770
Amount Dispersing Agent (ml)		125.00
Type Dispersion Device		Mechanical
Length of Dispersion Period		1 Minute

Weight of Sample Used For Hydrometer Test

Weight of Sample Wet or Dry (gm)	57.07
Calculated Dry Wt. used in test (gm)	56.07
Hydrometer Bulb Number	624378
% Pass #4 Sieve For Whole Sample	100.00

TARE WEIGHT: 203.14

HYDROMETER BACKSIEVE (Percent Passing #10 - #200 Sieves)

	(Wt+Tare)	Cumul Wt. Retained	% PASSING		
#10	203.73	0.59	98.9	#10	medium sand
#20	205.43	2.29	95.9	#20	medium sand
#40	211.07	7.93	85.9	#40	fine sand
#60	216.16	13.02	76.8	#60	fine sand
#100	219.39	16.25	71.0	#100	fine sand
#200	223.13	19.99	64.4	#200	fines

HYDROMETER CALCULATIONS

DATE	TIME	ET (min)	READING R	TEMP T	TEMP.COR. K	HYD.COR. Cc	READING C	EFFECTIVE LENGTH	A
6/5/98	8:21								
6/5/98	8:23	2.00	40.0	25.50	0.013	5.50	34.50	10.7	0.98
6/5/98	8:26	5.00	38.0	25.50	0.013	5.50	32.50	11.1	0.98
6/5/98	8:36	15.00	35.0	25.50	0.013	5.50	29.50	11.5	0.98
6/5/98	8:51	30.00	33.5	25.50	0.013	5.50	28.00	11.7	0.98
6/5/98	9:21	60.00	31.0	25.50	0.013	5.50	25.50	12.2	0.98
6/5/98	12:31	250.00	28.0	25.50	0.013	5.50	22.50	12.7	0.98
6/6/98	8:21	1440.00	25.5	25.50	0.013	5.50	20.00	13.0	0.98

GRAIN SIZE PERCENTAGES

Particle Diameter	% PASSING
0.0289	60.3
0.0186	56.8
0.0109	51.6
0.0078	48.9
0.0056	44.6
0.0028	39.3
0.0012	35.0

% COBBLES	0.00
% COARSE GRAVEL	0.00
% FINE GRAVEL	0.00
% COARSE SAND	1.05
% MEDIUM SAND	13.09
% FINE SAND	21.51
% FINES	64.35
% TOTAL SAMPLE	100.00

Description: Reddish Yellow and Black, SILTY CLAY, and medium to fine sand.

USCS: CH

51	LL
28	PL
23	PI

TECH	JDR
DATE	6/4/98
CHECK	
REVIEW	

UNIT WEIGHT DETERMINATION
ASTM D 2937

PROJECT NAME	SOLUTIA / RFI-CS / AL	**SAMPLE ID**	OWR - 4D
PROJECT NUMBER	983-3223	**SAMPLE TYPE**	UD
		SAMPLE DEPTH	19.0-21.0'

WEIGHT OF SOIL (g)	658.32
LENGTH OF SAMPLE (in)	3.218
DIAMETER OF SAMPLE (in)	2.860
AREA OF SAMPLE (in^2)	6.42
VOLUME OF SAMPLE (in^3)	20.67
VOLUME OF SAMPLE (cm^3)	338.72

WET UNIT WEIGHT (pcf)	121.3

WEIGHT WET SOIL & TARE (g)	658.32
WEIGHT DRY SOIL & TARE (g)	510.34
WEIGHT OF WATER (g)	147.98
WEIGHT OF TARE (g)	0.00
WEIGHT OF DRY SOIL (g)	510.34
WATER CONTENT (%)	29.00

DRY UNIT WEIGHT (pcf)	94.0

SPECIFIC GRAVITY	2.770
VOLUME OF SOLIDS (cm^3)	184.23
VOLUME OF VOIDS (cm^3)	154.49
POROSITY (%)	46

TECH	GM
DATE	6/10/98
CHECK	GM
REVIEW	PWM

FLOW PUMP #1

FLEXIBLE WALL PERMEABILITY
ASTM D 5084
METHOD D, CONSTANT RATE OF FLOW

PROJECT TITLE	SOLUTIA / RFI-CS / AL		
PROJECT NUMBER	983 3223		
SAMPLE ID	OWR - 4D	-	19.0-21.5'
SAMPLE TYPE	UD		

BOARD #	4
CELL #	4
Flow Pump Speed	6
Technician	GM

COMMENTS

Sample Data, Initial			
Height, inches	3.218	B-Value, f	0.98
Diameter, inches	2.860	Cell Pres.	94.0
Area, cm²	41.45	Bot. Pres.	80.0
Volume, cm³	338.77	Top Pres.	80.0
Mass, g	658.32	Tot. B.P.	80.0
Moisture Content, %	29.00	Head, max.	131.54
Dry Density, pcf	94.00	Head, min.	131.54
Spec. Gravity	2.770	Max. Grad.	16.14
Volume Solids, cm³	184.24	Min. Grad.	16.14
Volume Voids, cm³	154.54		
Void Ratio	0.84		
Saturation, %	95.8%		

Sample Data, Fina	
Height, inches	3.208
Diameter, inches	2.855
Area, cm²	41.30
Volume, cm³	336.54
Mass, g	658.18
Moisture Content, %	28.97
Dry Density, pcf	94.63
Volume Solids, cm³	184.24
Volume Voids, cm³	152.30
Void Ratio	0.83
Saturation, %	97.1%

WATER CONTENTS		Trimmings Initial	Sample Final
Wt Soil & Tare, i	g	658.32	709.81
Wt Soil & Tare, f	g	510.34	562.02
Wt Tare	g	0.00	51.80
Wt Moisture Lost	g	147.98	147.79
Wt Dry Soil	g	510.34	510.22
Water Content	%	29.00%	28.97%

DESCRIPTION

Reddish Yellow and Black, SILTY CLAY, and medium to fine sand.

Flow Pump Rate: 5.90E-04 cm³/sec

USCS: CH

TIME FUNCTIONS, SECONDS								dP					
DATE	DAY	HOUR	MIN	TEMP (°C)	dt (min)	dt,acc (min)	dt (sec)	dt,acc (sec)	Reading (psi)	Head (cm)	Gradient	Permeability (cm/sec)	
6/5/98	35951	9	0	20.8	0	0	0	0	1.87	131.54	16.14	8.7E-07	
6/5/98	35951	9	5	20.8	5	5	300	300	1.87	131.54	16.14	8.7E-07	
6/5/98	35951	9	10	20.8	5	10	300	600	1.87	131.54	16.14	8.7E-07	
6/5/98	35951	9	15	20.8	5	15	300	900	1.87	131.54	16.14	8.7E-07	*
6/5/98	35951	9	20	20.8	5	20	300	1200	1.87	131.54	16.14	8.7E-07	*
6/5/98	35951	9	25	20.8	5	25	300	1500	1.87	131.54	16.14	8.7E-07	*
6/5/98	35951	9	30	20.8	5	30	300	1800	1.87	131.54	16.14	8.7E-07	*

*TRANSCRIBED FROM ORIGINAL DATA SHEETS

PERMEABILITY REPORTED AS ** 8.7E-07 cm/sec **

DATE 6/5/98
CHECK GM
REVIEW

ATTERBERG LIMITS
ASTM D-4318

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR-4D -
PROJECT NUMBER	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	40.0 - 42.0'

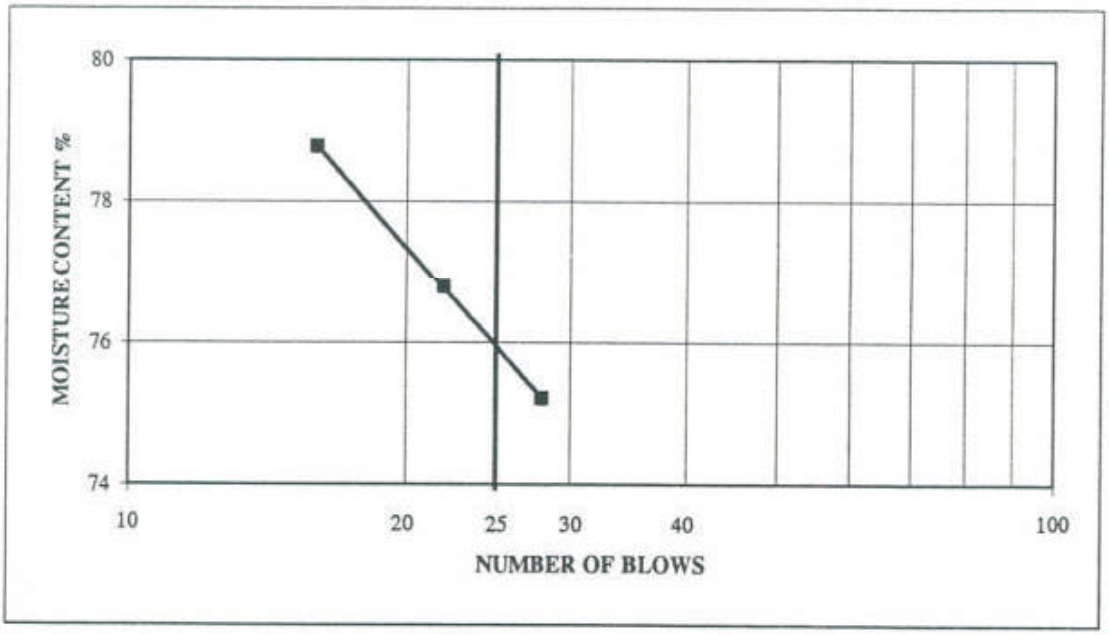
SAMPLE PREPARATION
Wet or Dry: Dry Minus #40 Sieve: Yes

PLASTIC LIMIT DETERMINATION

					NATURAL MOISTURE
Weight of Wet Soil & Tare (gm)	(W1)	24.66	24.25	23.66	594.48
Weight of Dry Soil & Tare (gm)	(W2)	21.39	21.02	20.60	423.42
Weight of Tare (gm)	(W3)	11.64	11.41	11.44	0.00
Weight of Water (gm)	(W4=W1-W2)	3.27	3.23	3.06	171.06
Weight of Dry Soil (gm)	(W5=W2-W3)	9.75	9.61	9.16	423.42
Water Content %	(W4/W5)*100	33.54	33.61	33.41	40.40

LIQUID LIMIT DETERMINATION

					NOTE:
Number of Blows		28	22	16	
Weight of Wet Soil & Tare (gm)	(W6)	17.40	16.76	17.18	
Weight of Dry Soil & Tare (gm)	(W7)	11.78	11.34	11.51	
Weight of Tare (gm)	(W8)	4.31	4.28	4.31	
Weight of Water (gm)	(W9=W6-W7)	5.62	5.42	5.67	
Weight of Dry Soil (gm)	(W10=W7-W8)	7.47	7.06	7.20	
Water Content %	(W9/W10)*100	75.23	76.77	78.75	



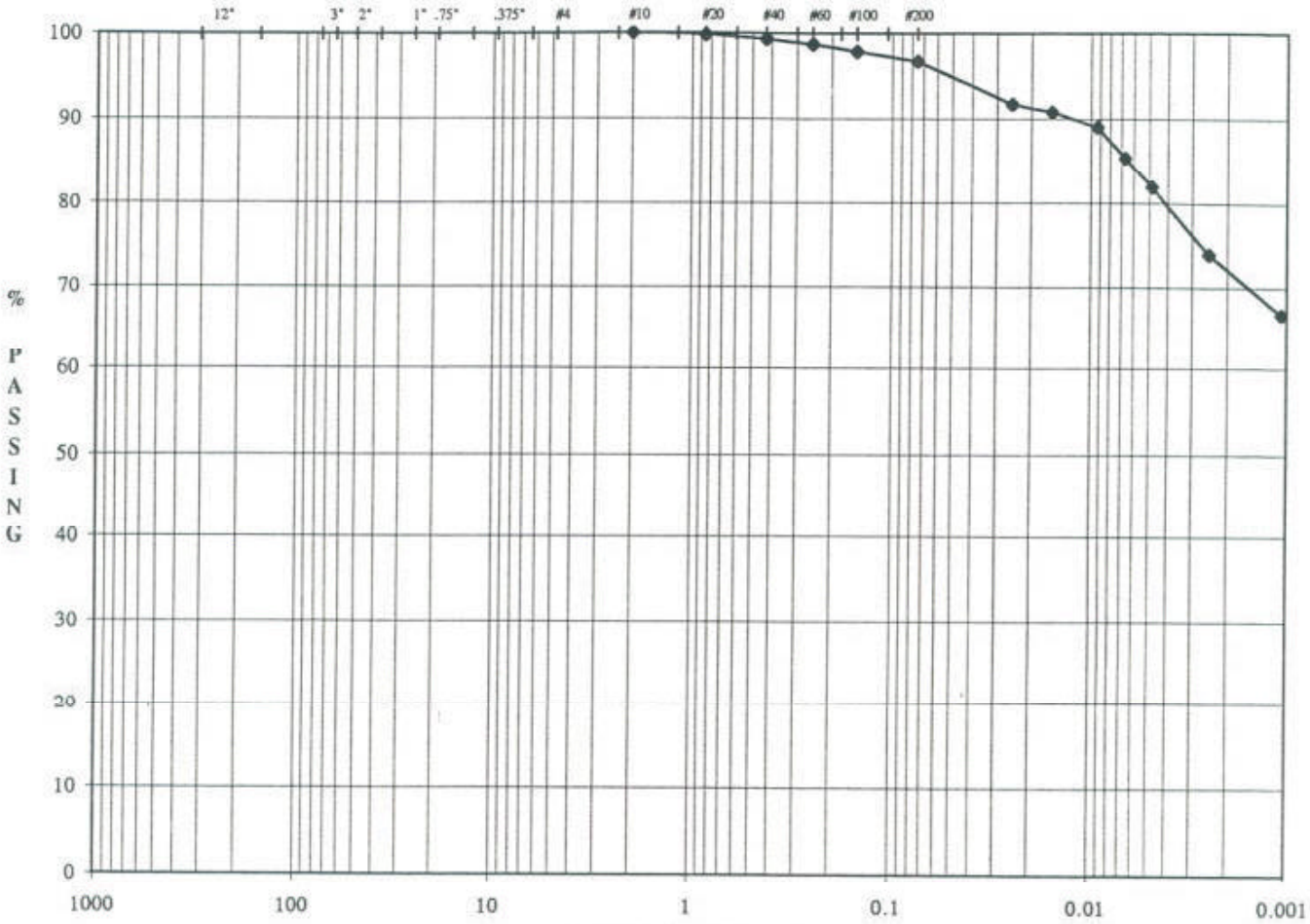
LIQUID LIMIT (Wl)	75.95	76
PLASTIC LIMIT (Wp)	33.52	34
PLASTICITY INDEX (Ip)		42
LIQUIDITY INDEX (I)		0.16
MOISTURE CONTENT		40.40

DESCRIPTION: Reddish and Yellowish Brown, SILTY CLAY, trace medium to fine sand.

USCS: CH

TECH	JDR/GM
DATE	6/8/98
CHECK	
REVIEW	

PARTICLE SIZE DISTRIBUTION ASTM D 421 AND D 422
US STANDARD SIEVE OPENING SIZES



Boulders	Cobbles	Gravel		SAND			SILT OR CLAY
		Coarse	Fine	Cor	Med	Fine	FINES

SAMPLE ID	OWR - 4D
SAMPLE TYPE	UD
SAMPLE DEPTH	40.0 - 42.0'

LL	76
PL	34
PI	42

DESCRIPTION	Reddish and Yellowish Brown, SILTY CLAY, trace medium to fine sand.
USCS	CH

SOLUTIA / RFI-CS / AL
983 3223

TECH	JDR
DATE	9/4/98
CHECK	
REVIEW	

ASTM GRAIN SIZE ANALYSIS
ASTM C117, C136, D421, D422, D1140 and D2217

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR - 4D
PROJECT NO	083.3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	40.0 - 42.0'

AS RECEIVED WATER CONTENT

Tare No.		-
Wt. Wet Soil & Tare (gm)	(W1)	594.48
Wt. Dry Soil & Tare (gm)	(W2)	423.42
Weight of Tare (gm)	(W3)	0.00
Weight of Water (gm)	(W4=W1-W2)	171.06
Weight of Dry Soil (gm)	(W5=W2-W3)	423.42
Moisture Content (%)	(W4/W5)*100	40.40

Hygroscopic Moisture For Sieve Sample

Wet Soil & Tare (gm)	66.28
Dry Soil & Tare (gm)	65.15
Tare Weight (gm)	3.23
Moisture Content (%)	1.82

Total Weight of Sample Used For Sieve Analysis Corrected For Hygroscopic Moisture

Weight + Tare, Before Separating On The #4 Sieve (gm)	726.52	
Tare Weight (gm)	233.78	
Total Weight (gm)	483.91	(W6)

Plus #4 Material Sieve

TARE WEIGHT: 0.00

	(Wt+Tare)	(((Wt-Tare)/W6)*100)	%PASSING		
12.0"				12.0"	cobbles
3.0"				3.0"	coarse gravel
2.5"				2.5"	coarse gravel
2.0"				2.0"	coarse gravel
1.5"				1.5"	coarse gravel
1.0"				1.0"	coarse gravel
0.75"				0.75"	fine gravel
0.50"				0.50"	fine gravel
0.375"				0.375"	fine gravel
#4	0.00	0.0	100.0	#4	coarse sand

HYDROMETER ANALYSIS

Specific Gravity	(assumed)	
Specific Gravity	(tested)	2.835
Amount Dispersing Agent (ml)		125.00
Type Dispersion Device		Mechanical
Length of Dispersion Period		1 Minute

Weight of Sample Used For Hydrometer Test

Weight of Sample Wet or Dry (gm)	55.48
Calculated Dry Wt. used in test (gm)	54.49
Hydrometer Bulb Number	624378
% Pass #4 Sieve For Whole Sample	100.00

TARE WEIGHT: 203.14

HYDROMETER BACKSIEVE (Percent Passing #10 - #200 Sieves)

	(Wt+Tare)	Cumul Wt. Retained	% PASSING		
#10	203.14	0.00	100.0	#10	medium sand
#20	203.24	0.10	99.8	#20	medium sand
#40	203.51	0.37	99.3	#40	fine sand
#60	203.85	0.71	98.7	#60	fine sand
#100	204.28	1.14	97.9	#100	fine sand
#200	204.90	1.76	96.8	#200	fines

HYDROMETER CALCULATIONS

DATE	TIME	ET	READING	TEMP	TEMP.COR.	HYD.COR.	READING	EFFECTIVE	
6/8/98	8:15	(min)	R	T	K	Cc	C	LENGTH	A
6/8/98	8:17	2.00	57.0	22.00	0.013	5.50	51.50	7.9	0.97
6/8/98	8:20	5.00	56.5	22.00	0.013	5.50	51.00	7.9	0.97
6/8/98	8:30	15.00	55.5	22.00	0.013	5.50	50.00	8.1	0.97
6/8/98	8:45	30.00	53.5	22.00	0.013	5.50	48.00	8.4	0.97
6/8/98	9:15	60.00	51.5	22.00	0.013	5.50	46.00	8.8	0.97
6/8/98	12:25	250.00	47.0	22.00	0.013	5.50	41.50	9.6	0.97
6/9/98	8:15	1440.00	43.0	22.00	0.013	5.50	37.50	10.2	0.97

GRAIN SIZE PERCENTAGES

Particle Diameter	% PASSING		
0.0250	91.7	% COBBLES	0.00
0.0158	90.8	% COARSE GRAVEL	0.00
0.0093	89.0	% FINE GRAVEL	0.00
0.0067	85.5	% COARSE SAND	0.00
0.0048	81.9	% MEDIUM SAND	0.68
0.0025	73.9	% FINE SAND	2.55
0.0011	66.8	% FINES	96.77
		% TOTAL SAMPLE	100.00

Description: Reddish and Yellowish Brown, SILTY CLAY, trace medium to fine sand.

USCS: CH

76	LL
34	PL
42	PI

TECH	JDR
DATE	6/4/98
CHECK	
REVIEW	

UNIT WEIGHT DETERMINATION
ASTM D 2937

PROJECT NAME	SOLUTIA / RFI-CS / AL	**SAMPLE ID**	OWR - 4D
PROJECT NUMBER	983-3223	**SAMPLE TYPE**	UD
		SAMPLE DEPTH	40.0-42.0'

WEIGHT OF SOIL (g)	594.48
LENGTH OF SAMPLE (in)	3.073
DIAMETER OF SAMPLE (in)	2.859
AREA OF SAMPLE (in^2)	6.42
VOLUME OF SAMPLE (in^3)	19.73
VOLUME OF SAMPLE (cm^3)	323.32

WET UNIT WEIGHT (pcf)	114.8

WEIGHT WET SOIL & TARE (g)	594.48
WEIGHT DRY SOIL & TARE (g)	423.42
WEIGHT OF WATER (g)	171.06
WEIGHT OF TARE (g)	0.00
WEIGHT OF DRY SOIL (g)	423.42
WATER CONTENT (%)	40.40

DRY UNIT WEIGHT (pcf)	81.8

SPECIFIC GRAVITY	2.835
VOLUME OF SOLIDS (cm^3)	149.35
VOLUME OF VOIDS (cm^3)	173.97
POROSITY (%)	54

TECH	GM
DATE	6/10/98
CHECK	GM
REVIEW	

FLOW PUMP #2

FLEXIBLE WALL PERMEABILITY
ASTM D 5084
METHOD D, CONSTANT RATE OF FLOW

PROJECT TITLE	SOLUTIA / RFI-CS / AL		
PROJECT NUMBER	983-3223		
SAMPLE ID	OWR-4D	-	40.0-42.0'
SAMPLE TYPE	UD		

BOARD #	9
CELL #	9
Flow Pump Speed	9
Technician	PWM

COMMENTS

Sample Data, Initial			
Height, inches	3.073	B-Value, f	1.00
Diameter, inches	2.859	Cell Pres.	108.0
Area, cm²	41.42	Bot. Pres.	80.0
Volume, cm³	323.28	Top Pres.	80.0
Mass, g	594.48	Tot. B.P.	80.0
Moisture Content, %	40.40	Head, max.	180.07
Dry Density, pcf	81.73	Head, min.	180.07
Spec. Gravity	2.835	Max. Grad.	23.16
Volume Solids, cm³	149.35	Min. Grad.	23.16
Volume Voids, cm³	173.93		
Void Ratio	1.16		
Saturation, %	98.4%		

Sample Data, Final	
Height, inches	3.061
Diameter, inches	2.868
Area, cm²	41.68
Volume, cm³	324.05
Mass, g	593.59
Moisture Content, %	40.19
Dry Density, pcf	81.53
Volume Solids, cm³	149.35
Volume Voids, cm³	174.70
Void Ratio	1.17
Saturation, %	97.4%

WATER CONTENTS		Trimmings Initial	Sample Final
Wt Soil & Tare, i	g	594.48	636.13
Wt Soil & Tare, f	g	423.42	466.01
Wt Tare	g	0.00	42.71
Wt Moisture Last	g	171.06	170.11
Wt Dry Soil	g	423.42	423.29
Water Content	%	40.40%	40.19%

Flow Pump Rate: 5.70E-05 cm³/sec

USCS: CH

DESCRIPTION: Reddish and Yellowish Brown, SILTY CLAY, trace medium to fine sand.

TIME FUNCTIONS, SECONDS								dF				
DATE	DAY	HOUR	MIN	TEMP (°C)	dt (min)	dt,acc (min)	dt (sec)	dt,acc (sec)	Reading (psi)	Head (cm)	Gradient	Permeability (cm/sec)
6/8/98	35954	10	30	21.3	0	0	0	0	2.56	180.07	23.16	5.7E-08
6/8/98	35954	10	35	21.3	5	5	300	300	2.56	180.07	23.16	5.7E-08
6/8/98	35954	10	40	21.3	5	10	300	600	2.56	180.07	23.16	5.7E-08
6/8/98	35954	10	45	21.3	5	15	300	900	2.56	180.07	23.16	5.7E-08 *
6/8/98	35954	10	50	21.3	5	20	300	1200	2.56	180.07	23.16	5.7E-08 *
6/8/98	35954	10	55	21.3	5	25	300	1500	2.56	180.07	23.16	5.7E-08 *
6/8/98	35954	11	0	21.3	5	30	300	1800	2.56	180.07	23.16	5.7E-08 *

*TRANSCRIBED FROM ORIGINAL DATA SHEETS

PERMEABILITY REPORTED AS ** 5.7E-08 cm/sec **

DATE 6/8/98
CHECK
REVIEW

ATTERBERG LIMITS
ASTM D-4318

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR-4D -
PROJECT NUMBER	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	60.0 - 62.0'

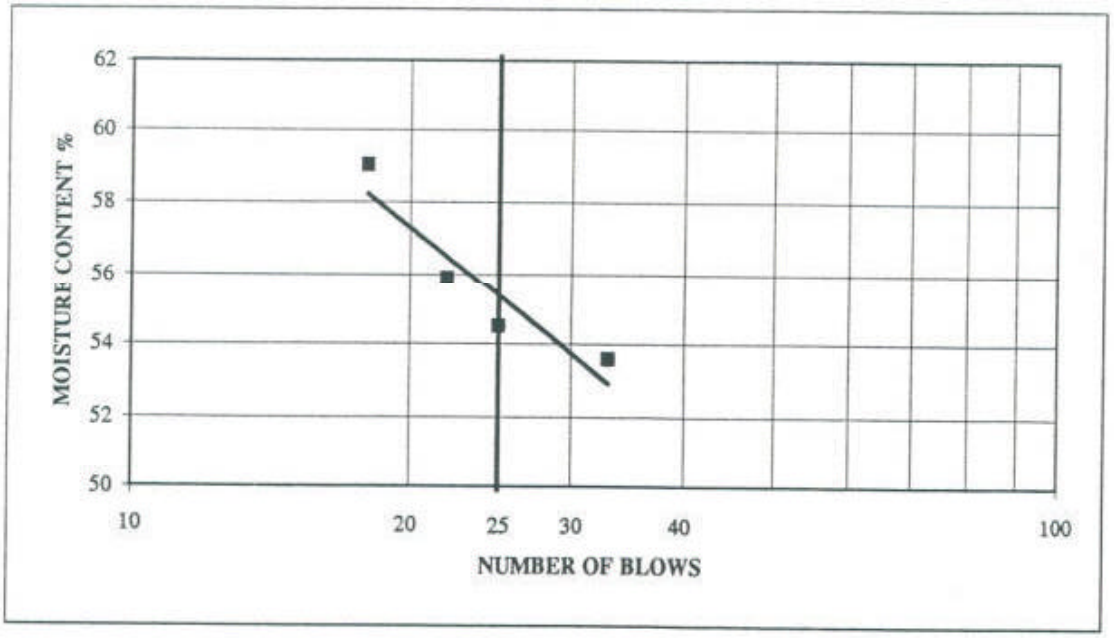
SAMPLE PREPARATION
Wet or Dry: Dry Minus #40 Sieve: Yes

PLASTIC LIMIT DETERMINATION

					NATURAL MOISTURE
Weight of Wet Soil & Tare (gm)	(W1)	27.59	29.75	26.59	279.01
Weight of Dry Soil & Tare (gm)	(W2)	23.73	25.38	22.97	210.02
Weight of Tare (gm)	(W3)	11.41	11.44	11.48	52.07
Weight of Water (gm)	(W4=W1-W2)	3.86	4.37	3.62	68.99
Weight of Dry Soil (gm)	(W5=W2-W3)	12.32	13.94	11.49	157.95
Water Content %	(W4/W5)*100	31.33	31.35	31.51	43.68

LIQUID LIMIT DETERMINATION

Number of Blows		33	25	22	18	NOTE:
Weight of Wet Soil & Tare (gm)	(W6)	16.48	13.95	13.01	16.44	
Weight of Dry Soil & Tare (gm)	(W7)	12.22	10.54	9.88	12.84	
Weight of Tare (gm)	(W8)	4.27	4.28	4.28	6.74	
Weight of Water (gm)	(W9=W6-W7)	4.26	3.41	3.13	3.60	
Weight of Dry Soil (gm)	(W10=W7-W8)	7.95	6.26	5.60	6.10	
Water Content %	(W9/W10)*100	53.58	54.47	55.89	59.02	



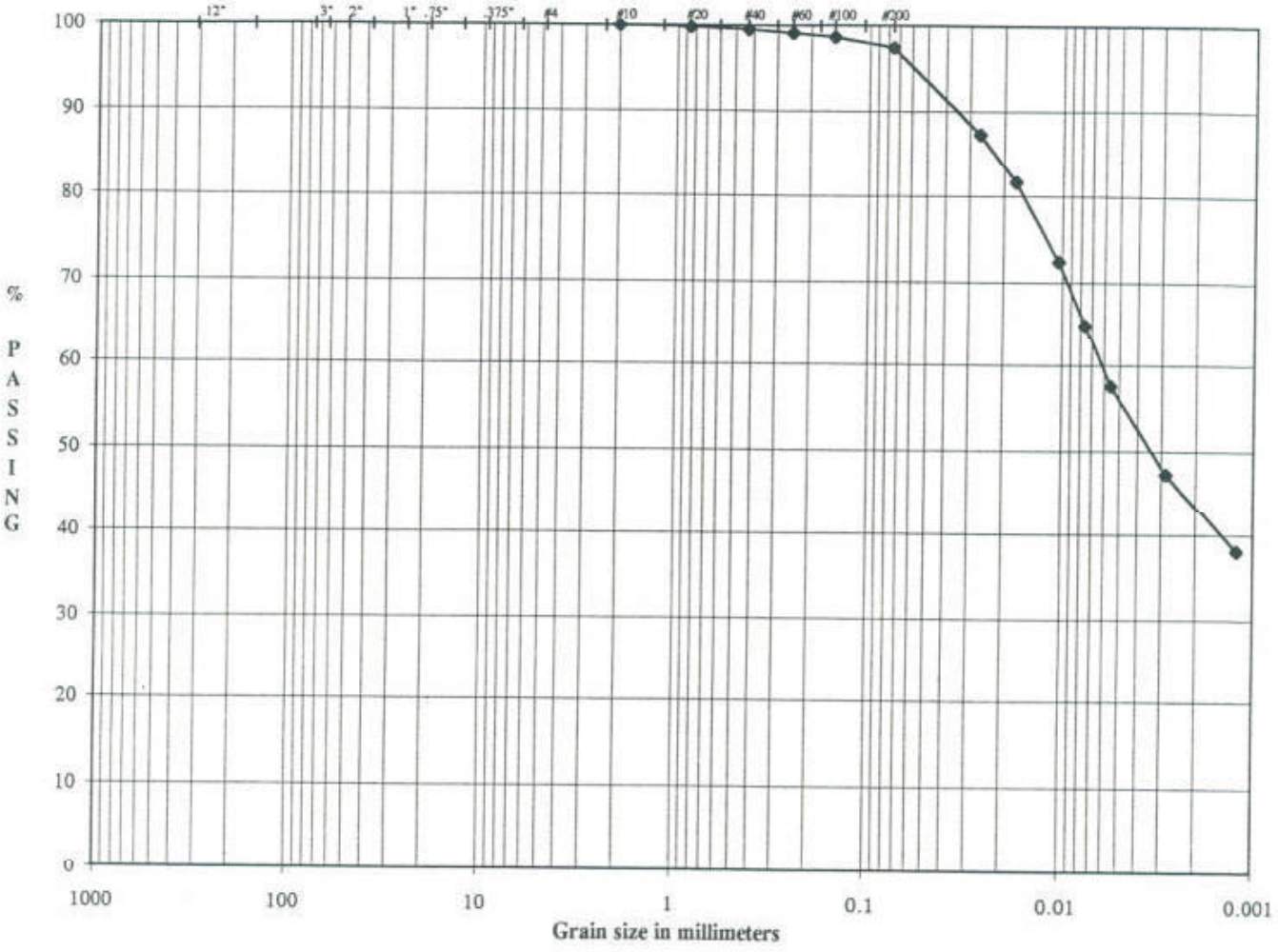
LIQUID LIMIT (WI)	55.35	55
PLASTIC LIMIT (Wp)	31.4	31
PLASTICITY INDEX (Ip)		24
LIQUIDITY INDEX (I)		0.51
MOISTURE CONTENT		43.68

DESCRIPTION: Yellowish and Reddish Brown, CLAYEY SILT, trace medium to fine sand.

USCS: MH

TECH: JDR/GM
DATE: 6/8/98
CHECK:
REVIEW:

PARTICLE SIZE DISTRIBUTION ASTM D 421 AND D 422
US STANDARD SIEVE OPENING SIZES



Boulders	Cobbles	Coarse	Fine	Cor	Med	Fine	SILT OR CLAY
		Gravel		SAND			FINES

SAMPLE ID	OWR - 4D
SAMPLE TYPE	UD
SAMPLE DEPTH	60.0 - 62.0'

LL	55
PL	31
PI	24

DESCRIPTION	Yellowish and Reddish Brown, CLAYEY SILT, trace medium to fine sand.
USCS	MH

SOLUTIA / RFI-CS / AL
983-3223

TECH	JDR
DATE	6/8/98
CHECK	
REVIEW	

ASTM GRAIN SIZE ANALYSIS
ASTM C117, C136, D421, D422, D1140 and D2217

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR - 4D
PROJECT NO.	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	60.0 - 62.0'

AS RECEIVED WATER CONTENT

Tare No.		-
Wt. Wet Soil & Tare (gm)	(W1)	279.01
Wt. Dry Soil & Tare (gm)	(W2)	210.02
Weight of Tare (gm)	(W3)	52.07
Weight of Water (gm)	(W4 = W1-W2)	68.99
Weight of Dry Soil (gm)	(W5 = W2-W3)	157.95
Moisture Content (%)	(W4/W5)*100	43.68

Hygroscopic Moisture For Sieve Sample

Wet Soil & Tare (gm)	55.66
Dry Soil & Tare (gm)	53.75
Tare Weight (gm)	3.23
Moisture Content (%)	3.78

Total Weight of Sample Used For Sieve Analysis Corrected For Hygroscopic Moisture

Weight + Tare, Before Separating On The #4 Sieve (gm)	760.67	
Tare Weight (gm)	237.32	
Total Weight (gm)	504.28	(W6)

Plus #4 Material Sieve

TARE WEIGHT: 0.00

	(Wt+Tare)	(((Wt-Tare)/W6)*100)	%PASSING		
12.0"				12.0"	cobbles
3.0"				3.0"	coarse gravel
2.5"				2.5"	coarse gravel
2.0"				2.0"	coarse gravel
1.5"				1.5"	coarse gravel
1.0"				1.0"	coarse gravel
0.75"				0.75"	fine gravel
0.50"				0.50"	fine gravel
0.375"				0.375"	fine gravel
#4	0.00	0.0	100.0	#4	coarse sand

HYDROMETER ANALYSIS

Specific Gravity	(assumed)	
Specific Gravity	(tested)	2.789
Amount Dispersing Agent (ml)		125.00
Type Dispersion Device		Mechanical
Length of Dispersion Period		1 Minute

Weight of Sample Used For Hydrometer Test

Weight of Sample Wet or Dry (gm)	54.78
Calculated Dry Wt. used in test (gm)	52.78
Hydrometer Bulb Number	624378
% Pass #4 Sieve For Whole Sample	100.00

TARE WEIGHT: 203.14

HYDROMETER BACKSIEVE (Percent Passing #10 - #200 Sieves)

	(Wt+Tare)	Cumul Wt. Retained	% PASSING		
#10	203.14	0.00	100.0	#10	medium sand
#20	203.26	0.12	99.8	#20	medium sand
#40	203.41	0.27	99.5	#40	fine sand
#60	203.62	0.48	99.1	#60	fine sand
#100	203.85	0.71	98.7	#100	fine sand
#200	204.52	1.38	97.4	#200	fines

HYDROMETER CALCULATIONS

DATE	TIME	ET	READING	TEMP	TEMP.COR.	HYD.COR.	READING	EFFECTIVE	
6/8/98	8:25	(min)	R	T	K	Cc	C	LENGTH	A
6/8/98	8:27	2.00	52.5	22.00	0.013	5.50	47.00	8.6	0.98
6/8/98	8:30	5.00	49.5	22.00	0.013	5.50	44.00	9.1	0.98
6/8/98	8:40	15.00	44.5	22.00	0.013	5.50	39.00	9.9	0.98
6/8/98	8:55	30.00	40.5	22.00	0.013	5.50	35.00	10.6	0.98
6/8/98	9:25	60.00	36.5	22.00	0.013	5.50	31.00	11.2	0.98
6/8/98	12:35	250.00	31.0	22.00	0.013	5.50	25.50	12.2	0.98
6/9/98	8:25	1440.00	26.0	22.00	0.013	5.50	20.50	13.0	0.98

GRAIN SIZE PERCENTAGES

Particle Diameter	% PASSING		
0.0265	87.3	% COBBLES	0.00
0.0173	81.7	% COARSE GRAVEL	0.00
0.0104	72.4	% FINE GRAVEL	0.00
0.0076	65.0	% COARSE SAND	0.51
0.0055	57.6	% MEDIUM SAND	2.10
0.0028	47.3	% FINE SAND	97.39
0.0012	38.1	% FINES	100.00
		% TOTAL SAMPLE	100.00

Description: Yellowish and Reddish Brown, CLAYEY SILT, trace medium to fine sand.

USCS: MH

55	LL
31	PL
24	PI

TECH	JDR
DATE	6/8/98
CHECK	
REVIEW	

UNIT WEIGHT DETERMINATION
ASTM D 2937

PROJECT NAME	SOLUTIA / RFI-CS / AL	**SAMPLE ID**	OWR - 4D
PROJECT NUMBER	983-3223	**SAMPLE TYPE**	UD
		SAMPLE DEPTH	60.0-62.0'

WEIGHT OF SOIL (g)	582.05
LENGTH OF SAMPLE (in)	3.080
DIAMETER OF SAMPLE (in)	2.876
AREA OF SAMPLE (in^2)	6.50
VOLUME OF SAMPLE (in^3)	20.01
VOLUME OF SAMPLE (cm^3)	327.90

WET UNIT WEIGHT (pcf)	110.8

WEIGHT WET SOIL & TARE (g)	279.01
WEIGHT DRY SOIL & TARE (g)	210.02
WEIGHT OF WATER (g)	68.99
WEIGHT OF TARE (g)	52.07
WEIGHT OF DRY SOIL (g)	157.95
WATER CONTENT (%)	43.68

DRY UNIT WEIGHT (pcf)	77.1

SPECIFIC GRAVITY	2.789
VOLUME OF SOLIDS (cm^3)	145.25
VOLUME OF VOIDS (cm^3)	182.65
POROSITY (%)	56

TECH	GM
DATE	6/10/98
CHECK	
REVIEW	

FLOW PUMP #2

FLEXIBLE WALL PERMEABILITY
ASTM D 5084
METHOD D, CONSTANT RATE OF FLOW

PROJECT TITLE	SOLUTIA / RFI-CS / AL		
PROJECT NUMBER	983-3223		
SAMPLEID	OWR - 4D	-	60.0-62.0
SAMPLETYPE	UD		

BOARD #	1
CELL #	1
Flow Pump Speed	8
Technician	PWM

COMMENTS

Sample Data, Initial			
Height, inches	3.080	B-Value, f	1.00
Diameter, inches	2.876	Cell Pres.	112.0
Area, cm²	41.91	Bot. Pres.	70.0
Volume, cm³	327.88	Top Pres.	70.0
Mass, g	582.05	Tot. B.P.	70.0
Moisture Content, %	43.68	Head, max.	96.37
Dry Density, pcf	77.10	Head, min.	96.37
Spec. Gravity	2.789	Max. Grad.	12.43
Volume Solids, cm³	145.25	Min. Grad.	12.43
Volume Voids, cm³	182.63		
Void Ratio	126		
Saturation, %	969%		

Sample Data, Final	
Height, inches	3.053
Diameter, inches	2.859
Area, cm²	41.42
Volume, cm³	321.18
Mass, g	578.88
Moisture Content, %	43.37
Dry Density, pcf	78.44
Volume Solids, cm³	144.77
Volume Voids, cm³	176.41
Void Ratio	1.22
Saturation, %	99.3%

WATER CONTENTS		Trimmings Initial	Sample Final
Wt Soil & Tare, i	g	279.01	629.94
Wt Soil & Tare, f	g	210.02	454.88
Wt Tare	g	52.07	51.28
Wt Moisture Lost	g	68.99	175.06
Wt Dry Soil	g	157.95	403.60
Water Content	%	43.68%	43.37%

DESCRIPTION

Yellowish and Reddish Brown, CLAYEY SILT, trace medium to fine sand.

Flow Pump Rate: 1.40E-04 cm³/sec

USCS: MH

TIMEFUNCTIONS, SECONDS								cP					
DATE	DAY	HOUR	MIN	TEMP (°C)	dt (min)	dt,acc (min)	dt (sec)	dt,acc (sec)	Reading (psi)	Head (cm)	Gradient	Permeability (cm/sec)	
6/8/98	35954	14	25	21.4	0	0	0	0	1.37	96.37	12.43	2.6E-07	
6/8/98	35954	14	30	21.4	5	5	300	300	1.37	96.37	12.43	2.6E-07	
6/8/98	35954	14	35	21.4	5	10	300	600	1.37	96.37	12.43	2.6E-07	
6/8/98	35954	14	40	21.4	5	15	300	900	1.37	96.37	12.43	2.6E-07	*
6/8/98	35954	14	45	21.4	5	20	300	1200	1.37	96.37	12.43	2.6E-07	*
6/8/98	35954	14	50	21.4	5	25	300	1500	1.37	96.37	12.43	2.6E-07	*
6/8/98	35954	14	55	21.4	5	30	300	1800	1.37	96.37	12.43	2.6E-07	*

*TRANSCRIBED FROM ORIGINAL DATA SHEETS

PERMEABILITY REPORTED AS ** 2.6E-07 cm/sec **

DATE 6/8/98
CHECK
REVIEW

ATTERBERG LIMITS
ASTM D-4318

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR-4D -
PROJECT NUMBER	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	80.0 - 82.0'

SAMPLE PREPARATION
Wet or Dry: Dry Minus #40 Sieve: Yes

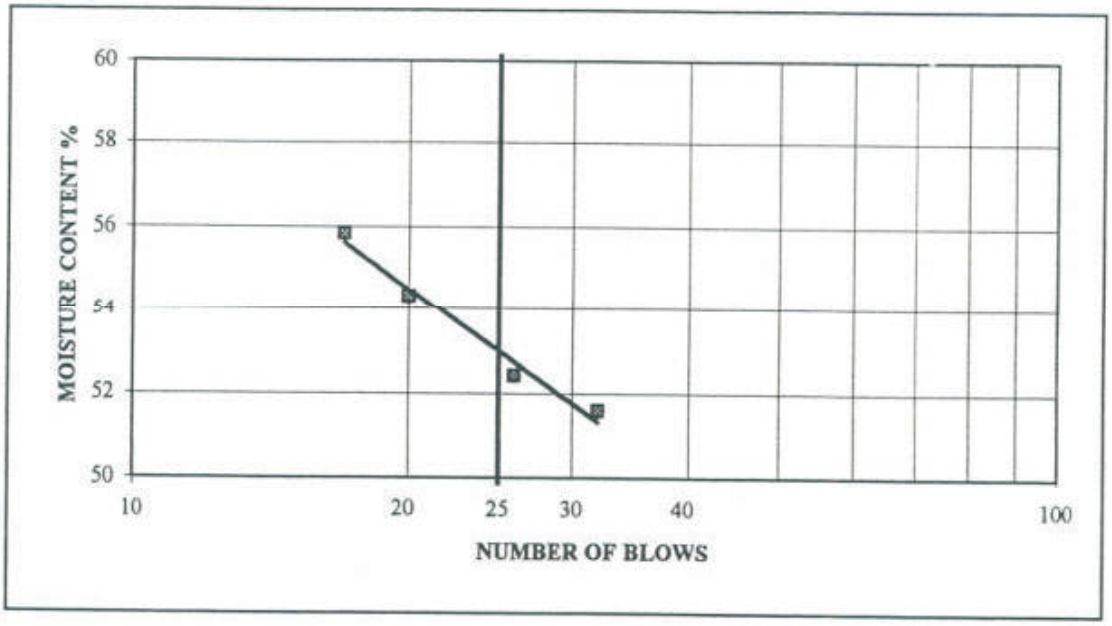
PLASTIC LIMIT DETERMINATION

					NATURAL MOISTURE
Weight of Wet Soil & Tare (gm)	(W1)	23.14	22.50	22.36	602.75
Weight of Dry Soil & Tare (gm)	(W2)	21.12	20.61	20.41	423.77
Weight of Tare (gm)	(W3)	11.40	11.39	10.82	0.00
Weight of Water (gm)	(W4=W1-W2)	2.02	1.89	1.95	178.98
Weight of Dry Soil (gm)	(W5=W2-W3)	9.72	9.22	9.59	423.77
Water Content %	(W4/W5)*100	20.78	20.50	20.33	42.24

LIQUID LIMIT DETERMINATION

Number of Blows		32	26	20	17
Weight of Wet Soil & Tare (gm)	(W6)	16.23	16.02	16.51	15.75
Weight of Dry Soil & Tare (gm)	(W7)	12.98	12.00	12.20	11.64
Weight of Tare (gm)	(W8)	6.68	4.33	4.27	4.28
Weight of Water (gm)	(W9=W6-W7)	3.25	4.02	4.31	4.11
Weight of Dry Soil (gm)	(W10=W7-W8)	6.30	7.67	7.93	7.36
Water Content %	(W9/W10)*100	51.59	52.41	54.35	55.84

NOTE:



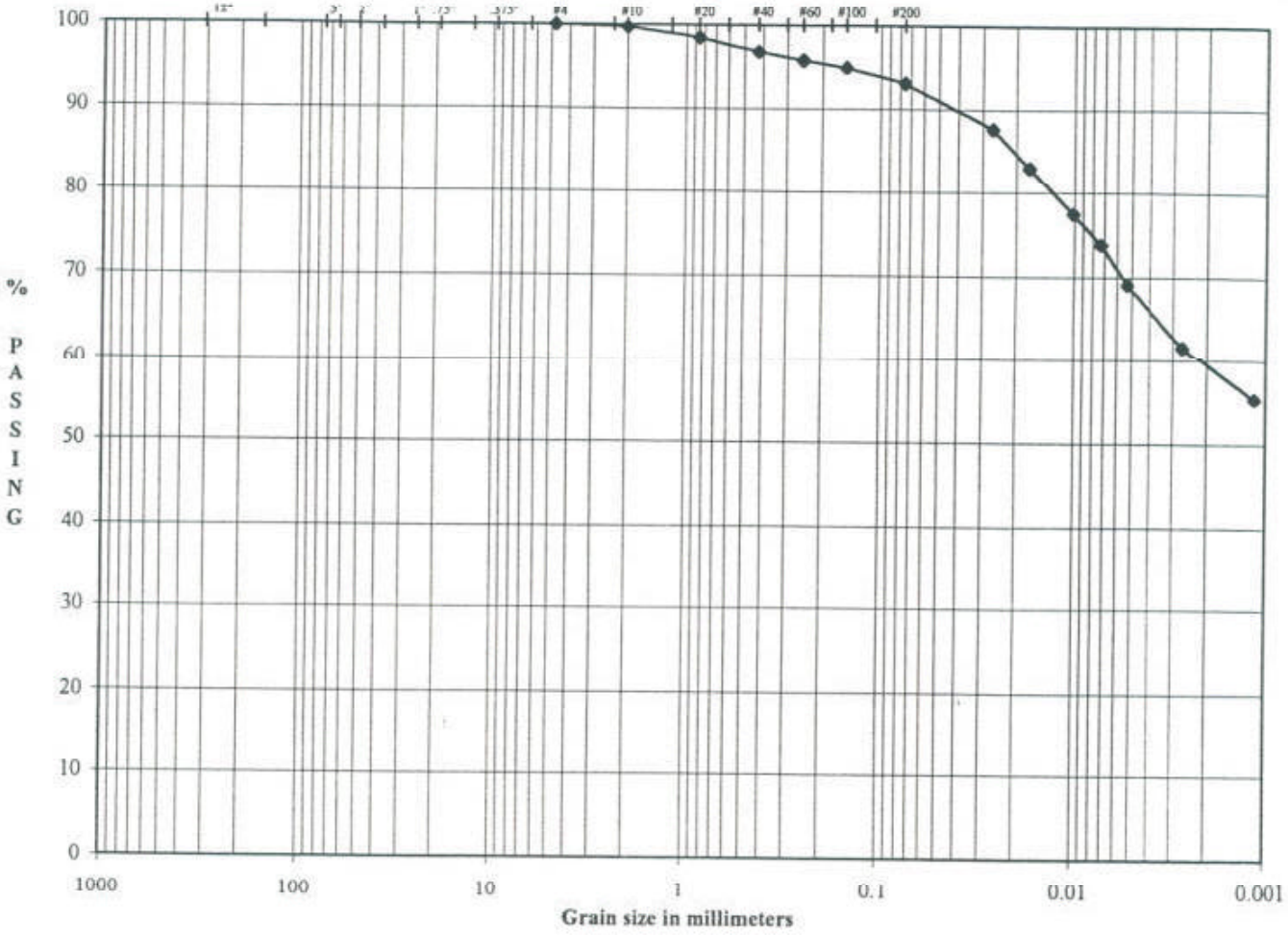
LIQUID LIMIT (WI)	53.00	53
PLASTIC LIMIT (Wp)	20.54	21
PLASTICITY INDEX (Ip)		32
LIQUIDITY INDEX (I)		0.68
MOISTURE CONTENT		42.24

DESCRIPTION: Reddish Brown, SILTY CLAY, little medium to fine sand.

USCS: CH

TECH	SW/GM
DATE	6/8/98
CHECK	
REVIEW	

PARTICLE SIZE DISTRIBUTION ASTM D 421 AND D 422
US STANDARD SIEVE OPENING SIZES



Boulders	Cobbles	Coarse	Fine	Cor	Med	Fine	SILT OR CLAY
		Gravel		SAND			FINES

SAMPLE ID	OWR - 4D
SAMPLE TYPE	UD
SAMPLE DEPTH	80.0 - 82.0'

LL	53
PL	21
PI	32

DESCRIPTION	Reddish Brown, SILTY CLAY, little medium to fine sand.
USCS	CH

SOLUTIA / RFI-CS / AL
983-3223

TECH	JDR
DATE	6/4/98
CHECK	
REVIEW	

ASTM GRAIN SIZE ANALYSIS
ASTM C117, C136, D421, D422, D1140 and D2217

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR - 4D
PROJECT NO.	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	80.0 - 82.0'

AS RECEIVED WATER CONTENT

Tare No.		-
Wt. Wet Soil & Tare (gm)	(W1)	602.75
Wt. Dry Soil & Tare (gm)	(W2)	423.77
Weight of Tare (gm)	(W3)	0.00
Weight of Water (gm)	(W4=W1-W2)	178.98
Weight of Dry Soil (gm)	(W5=W2-W3)	423.77
Moisture Content (%)	(W4/W5)*100	42.24

Hygroscopic Moisture For Sieve Sample

Wet Soil & Tare (gm)	53.22
Dry Soil & Tare (gm)	51.74
Tare Weight (gm)	3.19
Moisture Content (%)	3.05

Total Weight of Sample Used For Sieve Analysis Corrected For Hygroscopic Moisture

Weight + Tare, Before Separating On The #4 Sieve (gm)	720.52	
Tare Weight (gm)	236.21	
Total Weight (gm)	469.98	(W6)

Plus #4 Material Sieve

TARE WEIGHT: 0.00

	(Wt+Tare)	(((Wt-Tare)/W6)*100)	%PASSING		
12.0"				12.0"	cobbles
3.0"				3.0"	coarse gravel
2.5"				2.5"	coarse gravel
2.0"				2.0"	coarse gravel
1.5"				1.5"	coarse gravel
1.0"				1.0"	coarse gravel
0.75"				0.75"	fine gravel
0.50"				0.50"	fine gravel
0.375"				0.375"	fine gravel
#4	0.00	0.0	100.0	#4	coarse sand

HYDROMETER ANALYSIS

Specific Gravity	(assumed)	
Specific Gravity	(tested)	2.789
Amount Dispersing Agent (ml)		125.00
Type Dispersion Device		Mechanical
Length of Dispersion Period		1 Minute

Weight of Sample Used For Hydrometer Test

Weight of Sample Wet or Dry (gm)	54.75
Calculated Dry Wt. used in test (gm)	53.13
Hydrometer Bulb Number	624378
% Pass #4 Sieve For Whole Sample	100.00

TARE WEIGHT: 203.14

HYDROMETER BACKSIEVE (Percent Passing #10 - #200 Sieves)

	(Wt+Tare)	Cumul Wt. Retained	% PASSING		
#10	203.29	0.15	99.7	#10	medium sand
#20	203.96	0.82	98.5	#20	medium sand
#40	204.85	1.71	96.8	#40	fine sand
#60	205.39	2.25	95.8	#60	fine sand
#100	205.81	2.67	95.0	#100	fine sand
#200	206.79	3.65	93.1	#200	fines

HYDROMETER CALCULATIONS

DATE	TIME	ET (min)	READING R	TEMP T	TEMP.COR. K	HYD.COR. Cc	READING C	EFFECTIVE LENGTH	A
6/8/98	8:21								
6/8/98	8:23	2.00	53.0	22.00	0.013	5.50	47.50	8.6	0.98
6/8/98	8:26	5.00	50.5	22.00	0.013	5.50	45.00	8.9	0.98
6/8/98	8:36	15.00	47.5	22.00	0.013	5.50	42.00	9.4	0.98
6/8/98	8:51	30.00	45.5	22.00	0.013	5.50	40.00	9.7	0.98
6/8/98	9:21	60.00	43.0	22.00	0.013	5.50	37.50	10.2	0.98
6/8/98	12:31	250.00	39.0	22.00	0.013	5.50	33.50	10.9	0.98
6/9/98	8:21	1440.00	35.5	22.00	0.013	5.50	30.00	11.4	0.98

GRAIN SIZE PERCENTAGES

Particle Diameter	% PASSING		
0.0265	87.6	% COBBLES	0.00
0.0171	83.0	% COARSE GRAVEL	0.00
0.0101	77.5	% FINE GRAVEL	0.00
0.0073	73.8	% COARSE SAND	0.28
0.0053	69.2	% MEDIUM SAND	2.94
0.0027	61.8	% FINE SAND	3.65
0.0011	55.3	% FINES	93.13
		% TOTAL SAMPLE	100.00

Description: Reddish Brown, SILTY CLAY, little medium to fine sand.

USCS: CH

53	LL
21	PL
32	PI

TECH	JDR
DATE	6/4/98
CHECK	
REVIEW	

UNIT WEIGHT DETERMINATION
ASTM D 2937

PROJECT NAME	SOLUTIA / RFI-CS / AL	**SAMPLE ID**	OWR - 4D
PROJECT NUMBER	983-3223	**SAMPLE TYPE**	UD
		SAMPLE DEPTH	80.0-82.0'

WEIGHT OF SOIL (g)	602.75
LENGTH OF SAMPLE (in)	3.140
DIAMETER OF SAMPLE (in)	2.886
AREA OF SAMPLE (in^2)	6.54
VOLUME OF SAMPLE (in^3)	20.54
VOLUME OF SAMPLE (cm^3)	336.59

WET UNIT WEIGHT (pcf)	111.8

WEIGHT WET SOIL & TARE (g)	602.75
WEIGHT DRY SOIL & TARE (g)	423.77
WEIGHT OF WATER (g)	178.98
WEIGHT OF TARE (g)	0.00
WEIGHT OF DRY SOIL (g)	423.77
WATER CONTENT (%)	42.24

DRY UNIT WEIGHT (pcf)	78.6

SPECIFIC GRAVITY	2.789
VOLUME OF SOLIDS (cm^3)	151.94
VOLUME OF VOIDS (cm^3)	184.65
POROSITY (%)	55

TECH	GM
DATE	6/10/98
CHECK	
REVIEW	

FLOW PUMP #1

FLEXIELE WALL PERMEABILITY
ASTM D 5084
METHOD B, CONSTANT RATE OF FLOW

PROJECT TITLE	SOLUTIA / RFI-CS / AL		
PROJECT NUMBER	983-3223		
SAMPLE ID	OWR - 4D	-	80.0-82.0'
SAMPLE TYPE	UD		

BOARD #	10
CELL #	10
Flow Pump Speed	10
Technician	PWM

COMMENTS

Sample Data, Initial			
Height, inches	3.140	B-Value, f	100
Diameter, inches	2.886	Cell Pres.	116.0
Area, cm²	42.20	Bot. Pres.	60.0
Volume, cm³	336.60	Top Pres.	60.0
Mass, g	602.75	Tot. B.P.	60.0
Moisture Content, %	42.24	Head, max.	157.56
Dry Density, pcf	78.56	Head, min.	157.56
Spec. Gravity	2.789	Max. Grad.	20.11
Volume Solids, cm³	151.94	Min. Grad.	20.11
Volume Voids, cm³	184.66		
Void Ratio	1.22		
Saturation, %	96.9%		

Sample Data, Final	
Height, inches	3.084
Diameter, inches	2.839
Area, cm²	40.84
Volume, cm³	319.92
Mass, g	589.25
Moisture Content, %	39.05
Dry Density, pcf	82.66
Volume Solids, cm³	151.94
Volume Voids, cm³	167.97
Void Ratio	1.11
Saturation, %	98.5%

WATER CONTENTS		Trimmings Initial	Sample Final
Wt Soil & Tare, i	g	602.75	640.81
Wt Soil & Tare, f	g	423.77	475.33
Wt Tare	g	8.00	51.56
Wt Moisture Lost	g	178.98	165.48
Wt Dry Soil	g	423.77	423.77
Water Content	%	42.24%	39.05%

Flow Pump Rate: 3.00E-05 cm³/sec

USCS: CH

DESCRIPTION: Reddish Brown, SILTY CLAY, little medium to fine sand.

TIME FUNCTIONS, SECONDS								dP				
DATE	DAY	HOUR	MIN	TEMP (°C)	dt (min)	dt,acc (min)	dt (sec)	dt,acc (sec)	Reading (psi)	Head (cm)	Gradient	Permeability (cm/sec)
6/8/98	35954	10	0	21.3	0	0	0	0	2.24	157.56	20.11	3.6E-08
6/8/98	35954	10	5	21.3	5	5	300	300	2.24	157.56	20.11	3.6E-08
6/8/98	35954	10	10	21.3	5	10	300	600	2.24	157.56	20.11	3.6E-08
6/8/98	35954	10	15	21.3	5	15	300	900	2.24	157.56	20.11	3.6E-08
6/8/98	35954	10	20	21.3	5	20	300	1200	2.24	157.56	20.11	3.6E-08 *
6/8/98	35954	10	25	21.3	5	25	300	1500	2.24	157.56	20.11	3.6E-08 *
6/8/98	35954	10	30	21.3	5	30	300	1800	2.24	157.56	20.11	3.6E-08 *

*TRANSCRIBED FROM ORIGINAL DATA SHEETS

PERMEABILITY REPORTED AS ** 3.6E-08 cm/sec **

DATE 6/8/98
CHECK
REVIEW

ATTERBERG LIMITS
ASTM D-4318

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR-5D -
PROJECT NUMBER	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	20.0 - 22.0'

SAMPLE PREPARATION

Wet or Dry: Dry

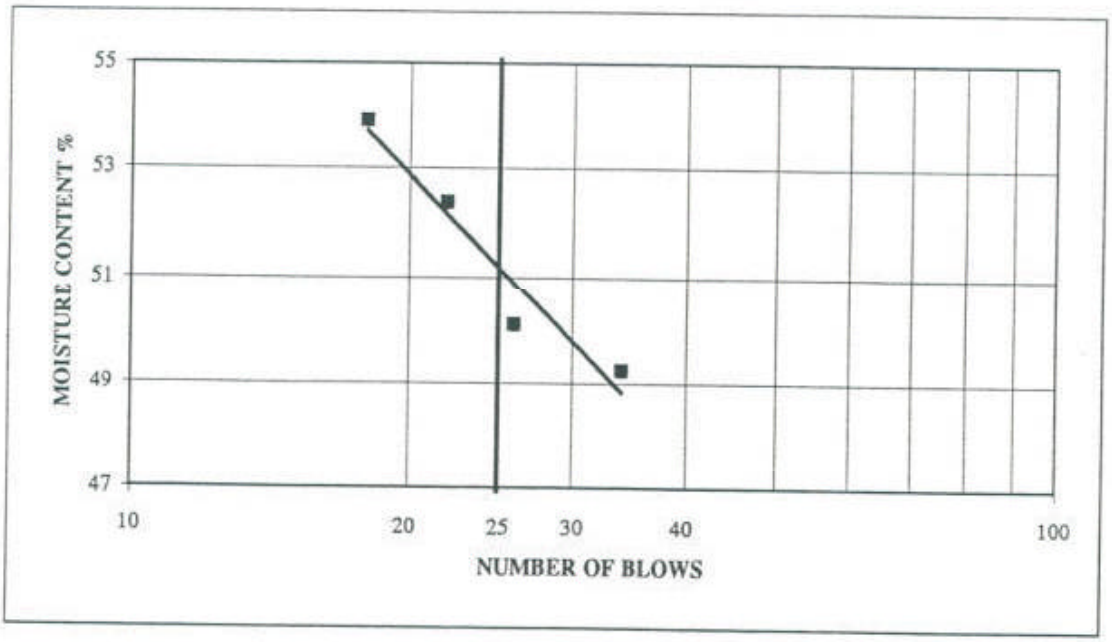
Minus #40 Sieve: Yes

PLASTIC LIMIT DETERMINATION

					NATURAL MOISTURE
Weight of Wet Soil & Tare (gm)	(W1)	25.77	25.13	23.07	614.30
Weight of Dry Soil & Tare (gm)	(W2)	22.25	21.77	20.17	534.30
Weight of Tare (gm)	(W3)	11.49	11.40	11.24	233.80
Weight of Water (gm)	(W4=W1-W2)	3.52	3.36	2.90	80.00
Weight of Dry Soil (gm)	(W5=W2-W3)	10.76	10.37	8.93	300.50
Water Content %	(W4/W5)*100	32.71	32.40	32.47	26.62

LIQUID LIMIT DETERMINATION

Number of Blows		34	26	22	18	NOTE:
Weight of Wet Soil & Tare (gm)	(W6)	26.76	26.98	24.86	25.60	
Weight of Dry Soil & Tare (gm)	(W7)	20.12	20.22	18.59	18.99	
Weight of Tare (gm)	(W8)	6.63	6.72	6.62	6.72	
Weight of Water (gm)	(W9=W6-W7)	6.64	6.76	6.27	6.61	
Weight of Dry Soil (gm)	(W10=W7-W8)	13.49	13.50	11.97	12.27	
Water Content %	(W9/W10)*100	49.22	50.07	52.38	53.87	



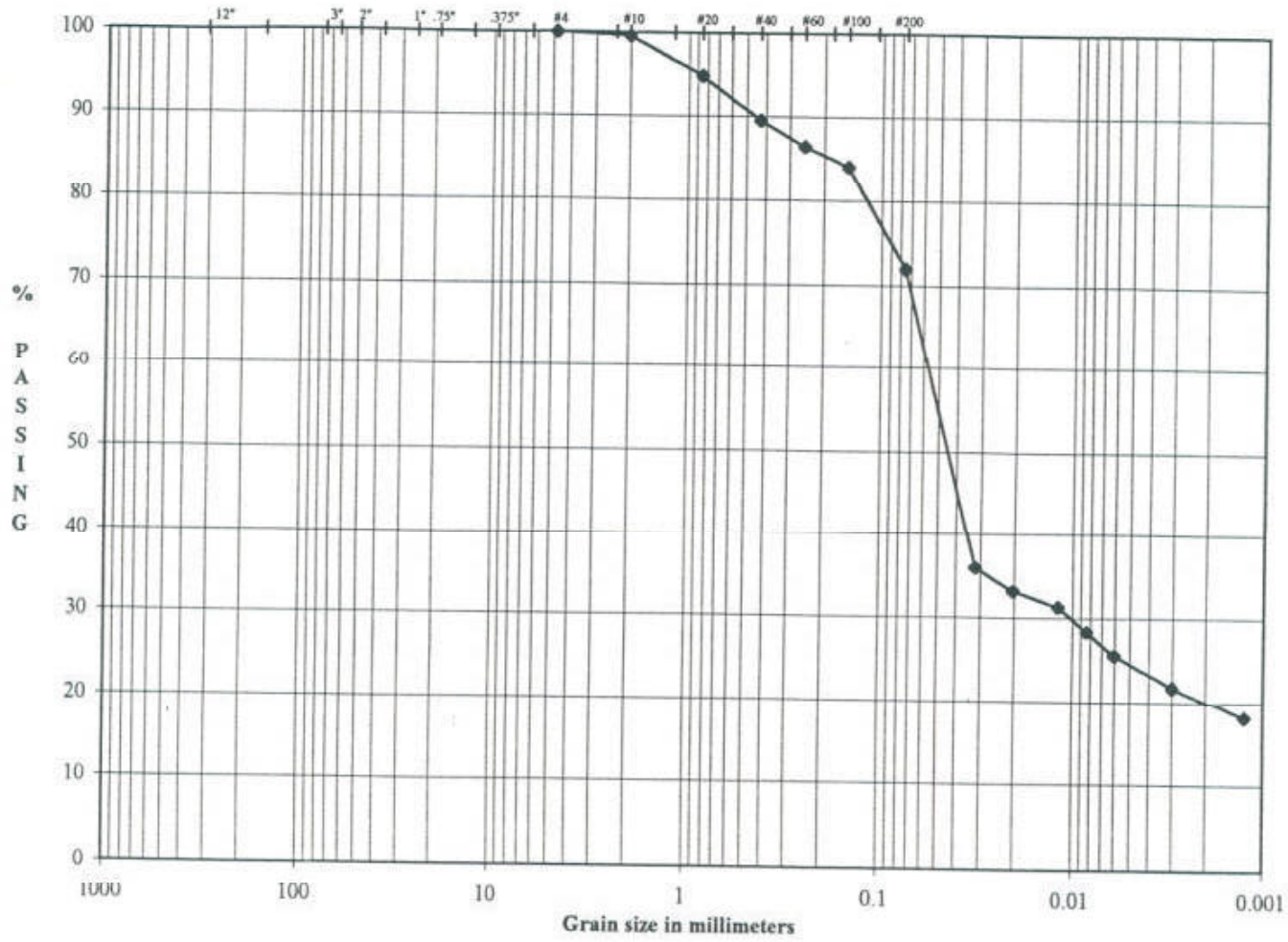
LIQUID LIMIT (WI)	51.18	51
PLASTIC LIMIT (Wp)	32.53	33
PLASTICITY INDEX (Ip)		18
LIQUIDITY INDEX (I)		-0.33
MOISTURE CONTENT		26.62

DESCRIPTION: Dark Reddish Clay, CLAYEY SILT, some medium to fine sand.

USCS: MH

TECH: JDR
DATE: 6/9/98
CHECK:
REVIEW:

PARTICLE SIZE DISTRIBUTION ASTM D 421 AND D 422
US STANDARD SIEVE OPENING SIZES



Boulders	Cobbles	Coarse Gravel	Fine Gravel	Cor SAND	Med SAND	Fine SAND	SILT OR CLAY FINES

SAMPLE ID	OWR - 5D
SAMPLE TYPE	UD
SAMPLE DEPTH	20.0 - 22.0'

LL	51
PL	33
PI	18

DESCRIPTION	Dark Reddish Clay, CLAYEY SILT, some medium to fine sand.
USCS	MH

SOLUTIA / RFI-CS / AL
983-3223

TECH	JDR
DATE	6/8/98
CHECK	
REVIEW	

ASTM GRAIN SIZE ANALYSIS
ASTM C117, C136, D421, D422, D1140 and D2217

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR - 5D
PROJECT NO.	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	20.0 - 22.0'

AS RECEIVED WATER CONTENT

Tare No.		-
Wt. Wet Soil & Tare (gm)	(W1)	614.30
Wt. Dry Soil & Tare (gm)	(W2)	534.30
Weight of Tare (gm)	(W3)	233.80
Weight of Water (gm)	(W4=W1-W2)	80.00
Weight of Dry Soil (gm)	(W5=W2-W3)	300.50
Moisture Content (%)	(W4/W5)*100	26.62

Hygroscopic Moisture For Sieve Sample

Wet Soil & Tare (gm)	206.59
Dry Soil & Tare (gm)	200.53
Tare Weight (gm)	52.28
Moisture Content (%)	4.09

Total Weight of Sample Used For Sieve Analysis Corrected For Hygroscopic Moisture

Weight + Tare, Before Separating On The #4 Sieve (gm)	929.21	
Tare Weight (gm)	236.07	
Total Weight (gm)	665.92	(W6)

Plus #4 Material Sieve

TARE WEIGHT: 0.00

	(Wt+Tare)	(((Wt-Tare)/W6)*100)	%PASSING		
12.0"				12.0"	cobbles
3.0"				3.0"	coarse gravel
2.5"				2.5"	coarse gravel
2.0"				2.0"	coarse gravel
1.5"				1.5"	coarse gravel
1.0"				1.0"	coarse gravel
0.75"				0.75"	fine gravel
0.50"				0.50"	fine gravel
0.375"				0.375"	fine gravel
#4	0.00	0.0	100.0	#4	coarse sand

HYDROMETER ANALYSIS

Specific Gravity	(assumed)	
Specific Gravity	(tested)	2.886
Amount Dispersing Agent (ml)		125.00
Type Dispersion Device		Mechanical
Length of Dispersion Period		1 Minute

Weight of Sample Used For Hydrometer Test

Weight of Sample Wet or Dry (gm)	52.80
Calculated Dry Wt. used in test (gm)	50.73
Hydrometer Bulb Number	624378
% Pass #4 Sieve For Whole Sample	100.00

TARE WEIGHT: 203.14

HYDROMETER BACKSIEVE (Percent Passing #10 - #200 Sieves)

	(Wt+Tare)	Cumul Wt. Retained	% PASSING		
#10	203.35	0.21	99.6	#10	medium sand
#20	205.74	2.60	94.9	#20	medium sand
#40	208.44	5.30	89.6	#40	fine sand
#60	210.01	6.87	86.5	#60	fine sand
#100	211.22	8.08	84.1	#100	fine sand
#200	217.37	14.23	71.9	#200	fines

HYDROMETER CALCULATIONS

DATE	TIME	ET (min)	READING R	TEMP T	TEMP.COR. K	HYD.COR. Cc	READING C	EFFECTIVE LENGTH	A
6/9/98	8:25								
6/9/98	8:27	2.00	24.5	22.50	0.012	5.50	19.00	13.2	0.96
6/9/98	8:30	5.00	23.0	22.50	0.012	5.50	17.50	13.5	0.96
6/9/98	8:40	15.00	22.0	22.50	0.012	5.50	16.50	13.7	0.96
6/9/98	8:55	30.00	20.5	22.50	0.012	5.50	15.00	13.8	0.96
6/9/98	9:25	60.00	19.0	22.50	0.012	5.50	13.50	14.2	0.96
6/9/98	12:35	250.00	17.0	22.50	0.012	5.50	11.50	14.5	0.96
6/10/98	8:25	1440.00	15.0	22.50	0.012	5.50	9.50	14.8	0.96

GRAIN SIZE PERCENTAGES

Particle Diameter	% PASSING		
0.0319	36.0	% COBBLES	0.00
0.0204	33.1	% COARSE GRAVEL	0.00
0.0119	31.2	% FINE GRAVEL	0.00
0.0084	28.4	% COARSE SAND	0.41
0.0060	25.5	% MEDIUM SAND	10.03
0.0030	21.8	% FINE SAND	17.60
0.0013	18.0	% FINES	71.95
		% TOTAL SAMPLE	100.00

Description: Dark Reddish Clay, CLAYEY SILT, some medium to fine sand.

USCS: MH

51	LL
33	PL
18	PI

TECH	JDR
DATE	6/8/98
CHECK	
REVIEW	

ATTERBERG LIMITS
ASTM D-4318

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR-5D -
PROJECT NUMBER	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	38.0 - 40.0'

SAMPLE PREPARATION
Wet or Dry: Dry Minus #40 Sieve: Yes

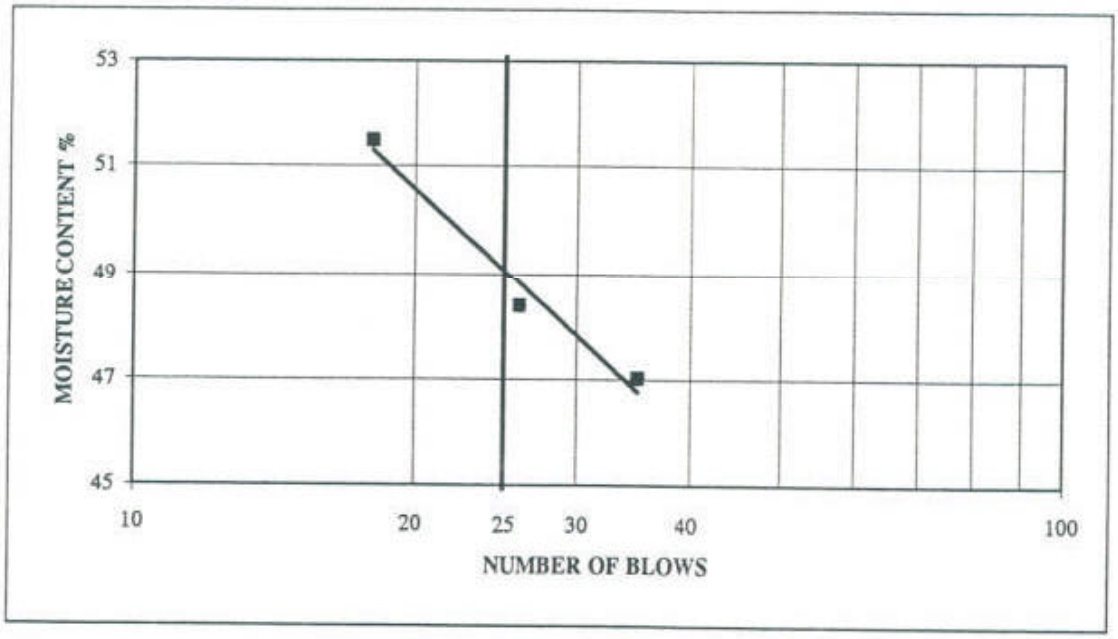
PLASTIC LIMIT DETERMINATION

					NATURAL MOISTURE
Weight of Wet Soil & Tare (gm)	(W1)	20.42	23.73	23.13	644.47
Weight of Dry Soil & Tare (gm)	(W2)	18.02	20.46	20.10	483.54
Weight of Tare (gm)	(W3)	11.39	11.48	11.71	0.00
Weight of Water (gm)	(W4=W1-W2)	2.40	3.27	3.03	160.93
Weight of Dry Soil (gm)	(W5=W2-W3)	6.63	8.98	8.39	483.54
Water Content %	(W4/W5)*100	36.20	36.41	36.11	33.28

LIQUID LIMIT DETERMINATION

Number of Blows		35	26	18
Weight of Wet Soil & Tare (gm)	(W6)	16.12	16.92	17.53
Weight of Dry Soil & Tare (gm)	(W7)	12.34	12.79	12.99
Weight of Tare (gm)	(W8)	4.30	4.25	4.17
Weight of Water (gm)	(W9=W6-W7)	3.78	4.13	4.54
Weight of Dry Soil (gm)	(W10=W7-W8)	8.04	8.54	8.82
Water Content %	(W9/W10)*100	47.01	48.36	51.47

NOTE:



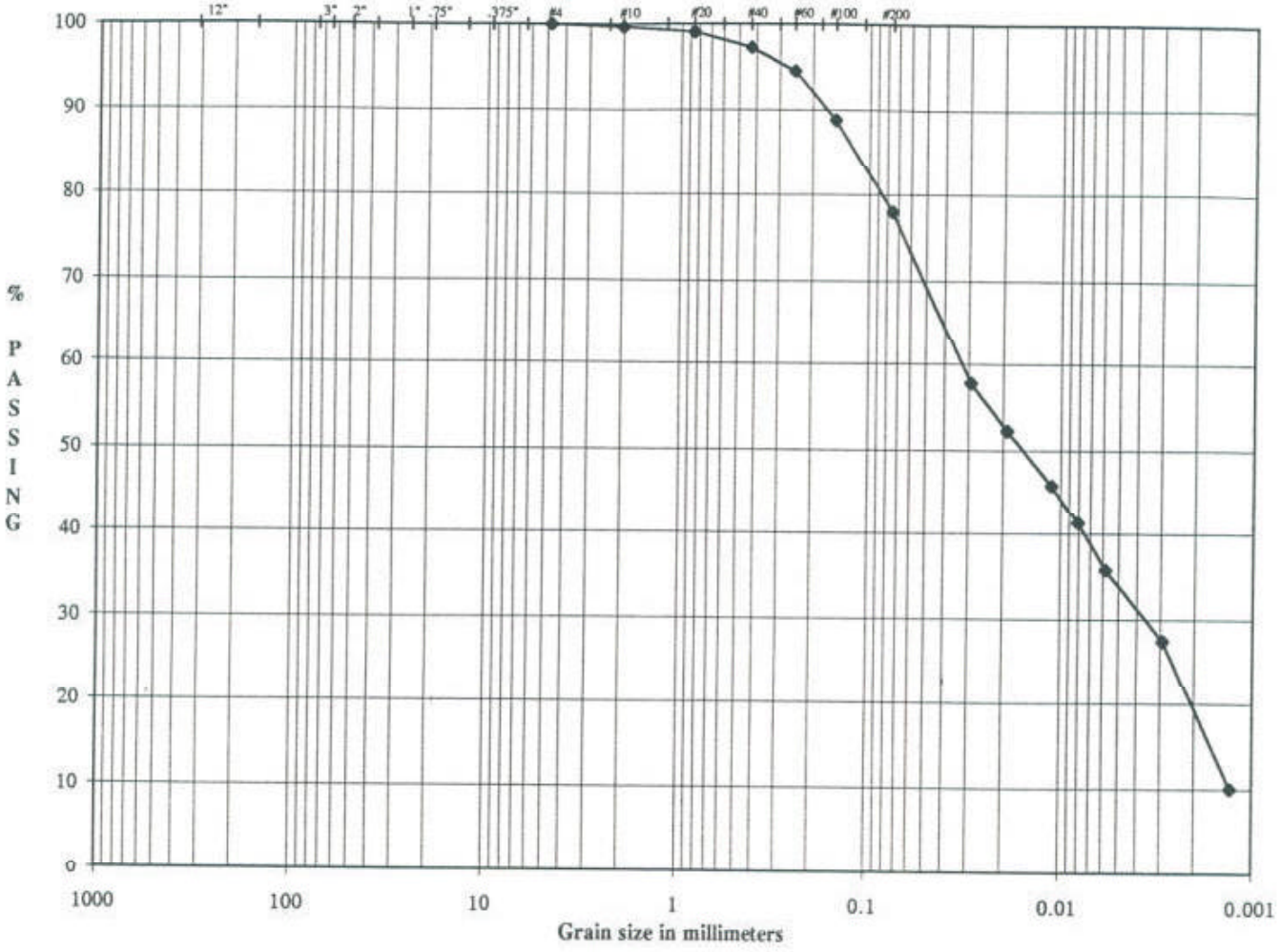
LIQUID LIMIT (WI)	49.06	49
PLASTIC LIMIT (Wp)	36.24	36
PLASTICITY INDEX (Ip)		13
LIQUIDITY INDEX (I)		-0.23
MOISTURE CONTENT		33.28

DESCRIPTION: Dark Red, CLAYEY SILT, some medium to fine sand.

USCS: ML

TECH	TF/SW
DATE	6/25/98
CHECK	
REVIEW	

PARTICLE SIZE DISTRIBUTION ASTM D 421 AND D 422
US STANDARD SIEVE OPENING SIZES



Boulders	Cobbles	Coarse	Fine	Cor	Med	Fine	SILT OR CLAY
		Gravel		SAND			FINES

SAMPLE ID	OWR - 5D
SAMPLE TYPE	UD
SAMPLE DEPTH	38.0 - 40.0'

LL	49
PL	36
PI	13

DESCRIPTION	Dark Red, CLAYEY SILT, some medium to fine sand.
USCS	ML

SOLUTIA / RFI-CS / AL
983-3223

TECH	JDR
DATE	6/24/98
CHECK	
REVIEW	

ASTM GRAIN SIZE ANALYSIS
ASTM C117, C136, D421, D422, D1140 and D2217

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR - 5D
PROJECT NO.	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	38.0 - 40.0'

AS RECEIVED WATER CONTENT

Tare No.		-
Wt. Wet Soil & Tare (gm)	(W1)	644.47
Wt. Dry Soil & Tare (gm)	(W2)	483.54
Weight of Tare (gm)	(W3)	0.00
Weight of Water (gm)	(W4 = W1-W2)	160.93
Weight of Dry Soil (gm)	(W5 = W2-W3)	483.54
Moisture Content (%)	(W4/W5)*100	33.28

Hygroscopic Moisture For Sieve Sample

Wet Soil & Tare (gm)	40.53
Dry Soil & Tare (gm)	38.66
Tare Weight (gm)	3.15
Moisture Content (%)	5.27

Total Weight of Sample Used For Sieve Analysis Corrected For Hygroscopic Moisture

Weight + Tare, Before Separating On The #4 Sieve (gm)	658.21	
Tare Weight (gm)	234.18	
Total Weight (gm)	402.82	(W6)

Plus #4 Material Sieve

TARE WEIGHT: 0.00

	(Wt+Tare)	(((Wt-Tare)/W6)*100)	%PASSING		
12.0"				12.0"	cobbles
3.0"				3.0"	coarse gravel
2.5"				2.5"	coarse gravel
2.0"				2.0"	coarse gravel
1.5"				1.5"	coarse gravel
1.0"				1.0"	coarse gravel
0.75"				0.75"	fine gravel
0.50"				0.50"	fine gravel
0.375"				0.375"	fine gravel
#4	0.00	0.0	100.0	#4	coarse sand

HYDROMETER ANALYSIS

Specific Gravity	(assumed)	
Specific Gravity	(tested)	2.838
Amount Dispersing Agent (ml)		125.00
Type Dispersion Device		Mechanical
Length of Dispersion Period		1 Minute

Weight of Sample Used For Hydrometer Test

Weight of Sample Wet or Dry (gm)	55.03
Calculated Dry Wt. used in test (gm)	52.87
Hydrometer Bulb Number	624378
% Pass #4 Sieve For Whole Sample	100.00

TARE WEIGHT: 203.14

HYDROMETER BACKSIEVE (Percent Passing #10 - #200 Sieves)

	(Wt+Tare)	Cumul Wt. Retained	% PASSING		
#10	203.32	0.18	99.7	#10	medium sand
#20	203.64	0.50	99.1	#20	medium sand
#40	204.58	1.44	97.3	#40	fine sand
#60	206.06	2.92	94.5	#60	fine sand
#100	209.06	5.92	88.8	#100	fine sand
#200	214.80	11.66	77.9	#200	fines

HYDROMETER CALCULATIONS

DATE	TIME	ET (min)	READING R	TEMP T	TEMP.COR. K	HYD.COR. Cc	READING C	EFFECTIVE LENGTH	A
6/25/98	9:51								
6/25/98	9:53	2.00	37.0	23.00	0.012	5.50	31.50	11.2	0.97
6/25/98	9:56	5.00	34.0	23.00	0.012	5.50	28.50	11.7	0.97
6/25/98	10:06	15.00	30.5	23.00	0.012	5.50	25.00	12.2	0.97
6/25/98	10:21	30.00	28.0	23.00	0.012	5.50	22.50	12.7	0.97
6/25/98	10:51	60.00	25.0	23.00	0.012	5.50	19.50	13.2	0.97
6/25/98	14:01	250.00	20.5	23.00	0.012	5.50	15.00	13.8	0.97
6/26/98	9:51	1440.00	11.0	23.00	0.012	5.50	5.50	15.5	0.97

Particle Diameter	% PASSING
0.0293	37.8
0.0190	52.3
0.0112	45.9
0.0081	41.3
0.0058	35.8
0.0029	27.5
0.0013	10.1

GRAIN SIZE PERCENTAGES

% COBBLES	0.00
% COARSE GRAVEL	0.00
% FINE GRAVEL	0.00
% COARSE SAND	0.34
% MEDIUM SAND	2.38
% FINE SAND	19.33
% FINES	77.94
% TOTAL SAMPLE	100.00

Description: Dark Red, CLAYEY SILT, some medium to fine sand.

USCS: ML

49	LL
36	PL
13	PI

TECH	JDR
DATE	6/24/98
CHECK	
REVIEW	

UNIT WEIGHT DETERMINATION
ASTM D 2937

PROJECT NAME	SOLUTIA / RFI-CS / AL	**SAMPLE ID**	OWR - 5D
PROJECT NUMBER	983-3223	**SAMPLE TYPE**	UD
		SAMPLE DEPTH	38.0 - 40.0'

WEIGHT OF SOIL (g)	644.47
LENGTH OF SAMPLE (in)	3.196
DIAMETER OF SAMPLE (in)	2.851
AREA OF SAMPLE (in^2)	6.38
VOLUME OF SAMPLE (in^3)	20.40
VOLUME OF SAMPLE (cm^3)	334.29

WET UNIT WEIGHT (pcf)	120.3

WEIGHT WET SOIL & TARE (g)	644.47
WEIGHT DRY SOIL & TARE (g)	483.54
WEIGHT OF WATER (g)	160.93
WEIGHT OF TARE (g)	0.00
WEIGHT OF DRY SOIL (g)	483.54
WATER CONTENT (%)	33.28

DRY UNIT WEIGHT (pcf)	90.3

SPECIFIC GRAVITY	2.838
VOLUME OF SOLIDS (cm^3)	170.38
VOLUME OF VOIDS (cm^3)	163.91
POROSITY (%)	49

TECH	GM
DATE	6/29/98
CHECK	
REVIEW	

FLOW PUMP #1

FLEXIBLE WALL PERMEABILITY
ASTM D 5084
METHOD D, CONSTANT RATE OF FLOW

PROJECT TITLE	SOLUTIA / RFI-CS / AL		
PROJECT NUMBER	983-3223		
SAMPLE ID	OWR - 5D	-	38.0-40.0'
SAMPLE TYPE	UD		

BOARD #	4
CELL #	4
Flow Pump Speed	5
Technician	PWM

COMMENTS

Sample Data, Initial			
Height, inches	3.196	B-Value, f	1.00
Diameter, inches	2.851	Cell Pres.	107.0
Area, cm²	41.19	Bot. Pres.	80.0
Volume, cm³	334.34	Top Pres.	80.0
Mass, g	644.47	Tot. B.P.	80.0
Moisture Content, %	33.28	Head, max.	160.38
Dry Density, pcf	90.25	Head, min.	160.38
Spec. Gravity	2.838	Max. Grad.	19.66
Volume Solids, cm³	170.38	Min. Grad.	19.66
Volume Voids, cm³	163.96		
Void Ratio	0.96		
Saturation, %	98.2%		

Sample Data, Final	
Height, inches	3.212
Diameter, inches	2.872
Area, cm²	41.80
Volume, cm³	340.99
Mass, g	651.62
Moisture Content, %	34.76
Dry Density, pcf	88.49
Volume Solids, cm³	170.38
Volume Voids, cm³	170.60
Void Ratio	1.00
Saturation, %	98.5%

WATER CONTENTS		Trimmings Initial	Sample Final
Wt Soil & Tare, i	g	644.47	703.24
Wt Soil & Tare, f	g	483.54	535.21
Wt Tare	g	0.00	51.79
Wt Moisture Lost	g	160.93	168.03
Wt Dry Soil	g	483.54	483.42
Water Content	%	33.28%	34.76%

DESCRIPTION

Dark Red, CLAYEY SILT, some medium to fine sand.

Flow Pump Rate 1.40E-03 cm³/sec

USCS ML

TIME FUNCTIONS, SECONDS								dP				
DATE	DAY	HOUR	MIN	TEMP (°C)	dt (min)	dt,acc (min)	dt (sec)	dt,acc (sec)	Reading (psi)	Head (cm)	Gradient	Permeability (cm/sec)
6/26/98	35972	10	0	20.9	0	0	0	0	2.28	160.38	19.66	1.7E-06
6/26/98	35972	10	5	20.9	5	5	300	300	2.28	160.38	19.66	1.7E-06
6/26/98	35972	10	10	20.9	5	10	300	600	2.28	160.38	19.66	1.7E-06
6/26/98	35972	10	15	20.9	5	15	300	900	2.28	160.38	19.66	1.7E-06 *
6/26/98	35972	10	20	20.9	5	20	300	1200	2.28	160.38	19.66	1.7E-06 *
6/26/98	35972	10	25	20.9	5	25	300	1500	2.28	160.38	19.66	1.7E-06 *
6/26/98	35972	10	30	20.9	5	30	300	1800	2.28	160.38	19.66	1.7E-06 *

*TRANSCRIBED FROM ORIGINAL DATA SHEETS

PERMEABILITY REPORTED AS ** 1.7E-06 cm/sec **

DATE 6/26/98
CHECK
REVIEW

ATTERBERG LIMITS
ASTM D-4318

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR - 5D -
PROJECT NUMBER	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	60.0 - 65.0'

SAMPLE PREPARATION

Wet or Dry: Dry

Minus #40 Sieve: Yes

PLASTIC LIMIT DETERMINATION

					NATURAL MOISTURE
Weight of Wet Soil & Tare	(W1)	27.49	23.20	23.26	256.19
Weight of Dry Soil & Tare	(W2)	23.64	20.46	20.29	191.82
Weight of Tare	(W3)	11.40	11.72	10.83	42.34
Weight of Water	(W4=W1-W2)	3.85	2.74	2.97	64.37
Weight of Dry Soil	(W5=W2-W3)	12.24	8.74	9.46	149.48
Water Content	(W4/W5)*100	31.45%	31.35%	31.40%	43.06%

LIQUID LIMIT DETERMINATION

Number of Blows		23	23
Weight of Wet Soil & Tare	(W6)	16.89	19.43
Weight of Dry Soil & Tare	(W7)	12.34	13.95
Weight of Tare	(W8)	4.29	4.24
Weight of Water	(W9=W6-W7)	4.55	5.48
Weight of Dry Soil	W10=W7-W8)	8.05	9.71
Water Content	(W9/W10)*100	56.52%	56.44%

TEST RESULTS

	TRAIL 1	TRIAL 2
BLOWS:	23	23
K VALUE:	0.99	0.99

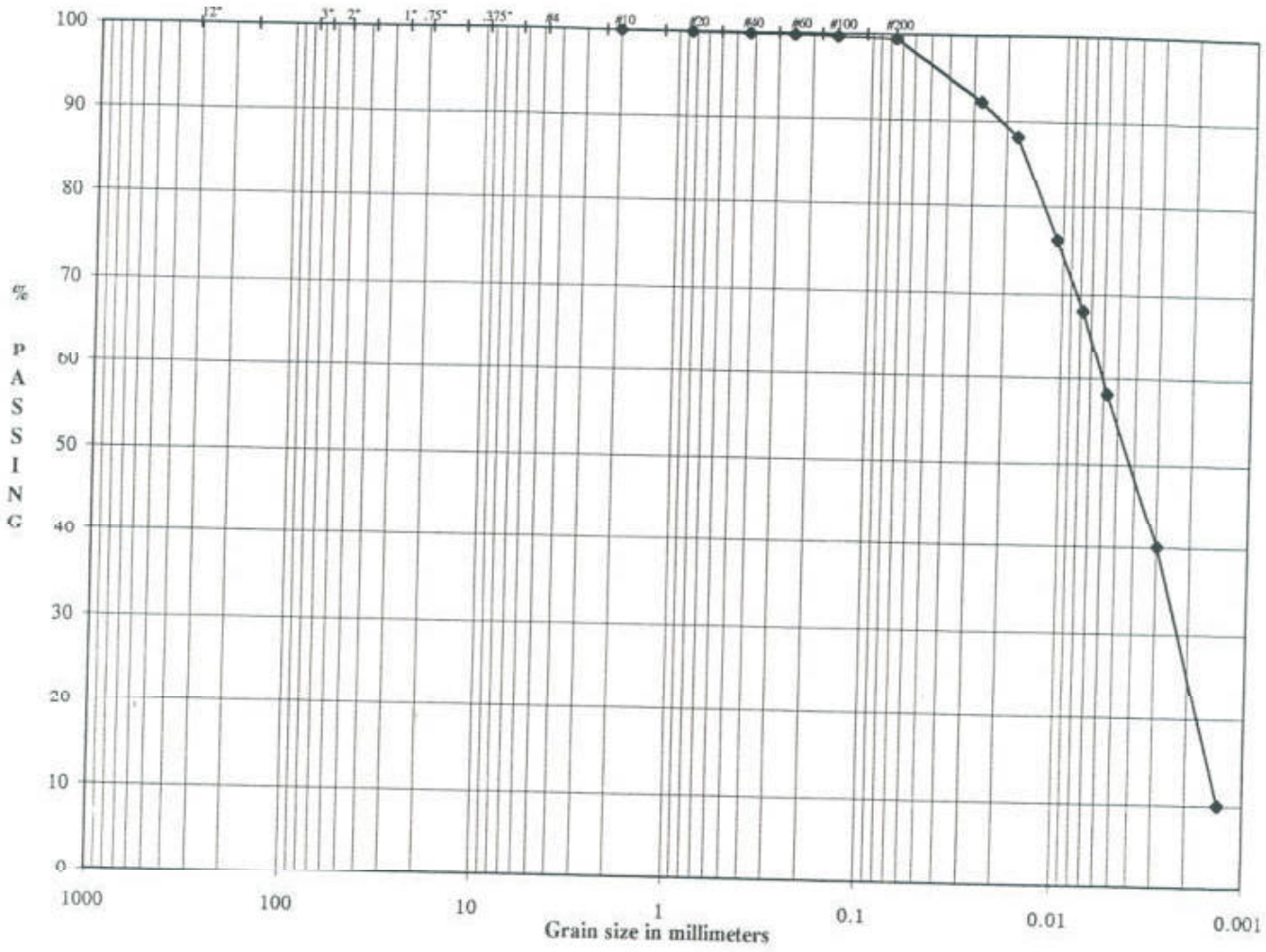
LIQUID LIMIT (WI)	55.91	56
PLASTIC LIMIT (Wp)	31.40	31
PLASTICITY INDEX (Ip)		25
LIQUIDITY INDEX (I)		0.47
MOISTURE CONTENT		43.06%

DESCRIPTION: White, Yellow, and Reddish Gray, CLAYEY SILT, trace medium to fine sand.

USCS: MH

TECH	TF
DATE	6/30/98
CHECK	
REVIEW	

PARTICLE SIZE DISTRIBUTION ASTM D 421 AND D 422
US STANDARD SIEVE OPENING SIZES



Boulders	Cobbles	Coarse Gravel	Fine Gravel	Cor SAND	Med SAND	Fine SAND	SILT OR CLAY FINES

SAMPLE ID	OWR - 5D
SAMPLE TYPE	UD
SAMPLE DEPTH	60.0 - 65.0'

LL	56
PL	31
PI	25

DESCRIPTION	White, Yellow, and Reddish Gray, CLAYEY SILT, trace medium to fine sand.
USCS	MH

SOLUTIA / RFI-CS / AL
983-3223

TECH	TF
DATE	6/29/98
CHECK	
REVIEW	

Golder Construction Services, Inc.

ASTM GRAIN SIZE ANALYSIS
ASTM C117, C136, D421, D422, D1140 and D2217

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR - 5D -
PROJECT NO.	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	60.0 - 65.0'

AS RECEIVED WATER CONTENT

Tare No.		-
Wt. Wet Soil & Tare (gm)	(W1)	256.19
Wt. Dry Soil & Tare (gm)	(W2)	191.82
Weight of Tare (gm)	(W3)	42.34
Weight of Water (gm)	(W4 = W1-W2)	64.37
Weight of Dry Soil (gm)	(W5 = W2-W3)	149.48
Moisture Content (%)	(W4/W5)*100	43.06

Hygroscopic Moisture For Sieve Sample

Wet Soil & Tare (gm)	74.14
Dry Soil & Tare (gm)	68.45
Tare Weight (gm)	3.24
Moisture Content (%)	8.73

Total Weight of Sample Used For Sieve Analysis Corrected For Hygroscopic Moisture

Weight + Tare, Before Separating On The #4 Sieve (gm)	813.14	
Tare Weight (gm)	232.90	
Total Weight (gm)	533.67	(W6)

Plus #4 Material Sieve

TARE WEIGHT: 0.00

	(Wt+Tare)	(((Wt-Tare)/W6)*100)	%PASSING		
12.0"				12.0"	cobbles
3.0"				3.0"	coarse gravel
2.5"				2.5"	coarse gravel
2.0"				2.0"	coarse gravel
1.5"				1.5"	coarse gravel
1.0"				1.0"	coarse gravel
0.75"				0.75"	fine gravel
0.50"				0.50"	fine gravel
0.375"				0.375"	fine gravel
#4	0.00	0.0	100.0	#4	coarse sand

HYDROMETER ANALYSIS

Specific Gravity	(assumed)	
Specific Gravity	(tested)	2.677
Amount Dispersing Agent (ml)		125.00
Type Dispersion Device		Mechanical
Length of Dispersion Period		1 Minute

Weight of Sample Used For Hydrometer Test

Weight of Sample Wet or Dry (gm)	54.29
Calculated Dry Wt. used in test (gm)	49.93
Hydrometer Bulb Number	624378
% Pass #4 Sieve For Whole Sample	100.00

TARE WEIGHT: 203.15

HYDROMETER BACKSIEVE (Percent Passing #10 - #200 Sieves)

	(Wt + Tare)	Cumul Wt. Retained	% PASSING		
#10	203.15	0.00	100.0	#10	medium sand
#20	203.20	0.05	99.9	#20	medium sand
#40	203.23	0.08	99.8	#40	fine sand
#60	203.26	0.11	99.8	#60	fine sand
#100	203.31	0.16	99.7	#100	fine sand
#200	203.42	0.27	99.5	#200	fines

HYDROMETER CALCULATIONS

DATE	TIME	ET (min)	READING R	TEMP T	TEMP.COR. K	HYD.COR. Cc	READING C	EFFECTIVE LENGTH	A
6/30/98	9:55								
6/30/98	9:57	2.00	51.0	23.00	0.013	5.00	46.00	8.8	1.00
6/30/98	10:00	5.00	49.0	23.00	0.013	5.00	44.00	9.1	1.00
6/30/98	10:10	15.00	43.0	23.00	0.013	5.00	38.00	10.1	1.00
6/30/98	10:25	30.00	39.0	23.00	0.013	5.00	34.00	10.7	1.00
6/30/98	10:55	60.00	34.0	23.00	0.013	5.00	29.00	11.5	1.00
6/30/98	14:05	250.00	25.0	23.00	0.013	5.00	20.00	13.0	1.00
7/1/98	9:55	1440.00	10.0	23.00	0.013	5.00	5.00	15.5	1.00

GRAIN SIZE PERCENTAGES

Particle Diameter	% PASSING
0.0273	92.1
0.0175	88.1
0.0107	76.1
0.0078	68.1
0.0057	58.1
0.0030	40.1
0.0013	10.0

% COBBLES	0.00
% COARSE GRAVEL	0.00
% FINE GRAVEL	0.00
% COARSE SAND	0.00
% MEDIUM SAND	0.16
% FINE SAND	0.38
% FINES	99.46
% TOTAL SAMPLE	100.00

Description: White, Yellow, and Reddish Gray, CLAYEY SILT, trace medium to fine sand.

USCS: MH

56	LL
31	PL
25	PI

TECH	TF
DATE	6/29/98
CHECK	
REVIEW	

UNIT WEIGHT DETERMINATION
ASTM D 2937

PROJECT NAME	SOLUTIA / RFI-CS / AL	**SAMPLE ID**	OWR - 5D
PROJECT NUMBER	983-3223	**SAMPLE DEPTH**	60.0-65.0'
		SAMPLE TYPE	UD

WEIGHT OF SOIL (g)	512.75
LENGTH OF SAMPLE (in)	2.725
DIAMETER OF SAMPLE (in)	2.872
AREA OF SAMPLE (in^2)	6.48
VOLUME OF SAMPLE (in^3)	17.65
VOLUME OF SAMPLE (cm^3)	289.23

WET UNIT WEIGHT (pcf)	110.65

WEIGHT WET SOIL & TARE (g)	256.19
WEIGHT DRY SOIL & TARE (g)	191.82
WEIGHT OF WATER (g)	64.37
WEIGHT OF TARE (g)	42.34
WEIGHT OF DRY SOIL (g)	149.48
WATER CONTENT (%)	43.06

DRY UNIT WEIGHT (pcf)	77.35

SPECIFIC GRAVITY	2.677
VOLUME OF SOLIDS (cm^3)	133.89
VOLUME OF VOIDS (cm^3)	155.34
POROSITY (%)	54

TECH	LB
DATE	7/10/98
CHECK	LD
REVIEW	PWM

FLOW PUMP #2

FLEXIBLE WALL PERMEABILITY
ASTM D 5084
METHOD D, CONSTANT RATE OF FLOW

PROJECT TITLE	SOLUTIA / RFI-CS / AL		
PROJECT NUMBER	983-3213		
SAMPLE ID	OWR - 5D	-	60.0-65.0'
SAMPLE TYPE	UD		

BOARD #	3
CELL #	3
Flow Pump Speed	7
Technician	LB

COMMENTS

Sample Data, Initial			
Height, inches	2.725	B-Value, f	1.00
Diameter, inches	2.873	Cell Pres.	100.0
Area, cm²	41.80	Bot. Pres.	80.0
Volume, cm³	289.29	Top Pres.	80.0
Mass, g	512.75	Tot. B.P.	80.0
Moisture Content, %	43.04	Head, max.	36.58
Dry Density, pcf	77.31	Head, min.	36.58
Spec. Gravity	2.677	Max. Grad.	5.27
Volume Solids, cm³	133.88	Min. Grad.	5.27
Volume Voids, cm³	155.40		
Void Ratio	1.16		
Saturation, %	99.3%		

Sample Data, Final	
Height, inches	2.732
Diameter, inches	2.873
Area, cm²	41.82
Volume, cm³	290.23
Mass, g	515.43
Moisture Content, %	44.05
Dry Density, pcf	76.93
Volume Solids, cm³	133.66
Volume Voids, cm³	156.57
Void Ratio	1.17
Saturation, %	100.7%

WATER CONTENTS		Timmings Initial	Sample Final
Wt Soil & Tare, i	g	256.19	566.66
Wt Soil & Tare, f	g	191.82	409.06
Wt Tare	g	42.34	51.28
Wt Moisture Lost	g	64.37	157.60
Wt Dry Soil	g	149.48	357.78
Water Content	%	43.06%	44.05%

DESCRIPTION

White, Yellow, and Reddish Gray, CLAYEY SILT, trace medium to fine sand.

Flow Pump Rate: 2.70E-04 cm³/sec

USCS: MH

TIME FUNCTIONS, SECONDS								dP				
DATE	DAY	HOUR	MIN	TEMP (°C)	dt (min)	dt,acc (min)	dt (sec)	dt,acc (sec)	Reading (psi)	Head (cm)	Gradient	Permeability (cm/sec)
7/8/98	35984	14	20	21.5	0	0	0	0	0.52	36.58	5.27	1.2E-06
7/8/98	35984	14	25	21.5	5	5	300	300	0.52	36.58	5.27	1.2E-06
7/8/98	35984	14	30	21.5	5	10	300	600	0.52	36.58	5.27	1.2E-06
7/8/98	35984	14	35	21.5	5	15	300	900	0.52	36.58	5.27	1.2E-06 *
7/8/98	35984	14	40	21.5	5	20	300	1200	0.52	36.58	5.27	1.2E-06 *
7/8/98	35984	14	45	21.5	5	25	300	1500	0.52	36.58	5.27	1.2E-06 *
7/8/98	35984	14	50	21.5	5	30	300	1800	0.52	36.58	5.27	1.2E-06 *

*TRANSCRIBED FROM ORIGINAL DATA SHEETS

PERMEABILITY REPORTED AS ** 1.2E-06 cm/sec **

DATE 7/8/98
CHECK
REVIEW

ATTERBERG LIMITS
ASTM D-4318

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR-6D -
PROJECT NUMBER	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	20.0 - 22.0'

SAMPLE PREPARATION

Wet or Dry: Dry

Minus #40 Sieve: Yes

PLASTIC LIMIT DETERMINATION

Weight of Wet Soil & Tare (gm)	(W1)	21.20	21.23	20.99
Weight of Dry Soil & Tare (gm)	(W2)	18.82	18.80	18.70
Weight of Tare (gm)	(W3)	11.31	11.07	11.42
Weight of Water (gm)	(W4=W1-W2)	2.38	2.43	2.29
Weight of Dry Soil (gm)	(W5=W2-W3)	7.51	7.73	7.28
Water Content %	(W4/W5)*100	31.69	31.44	31.46

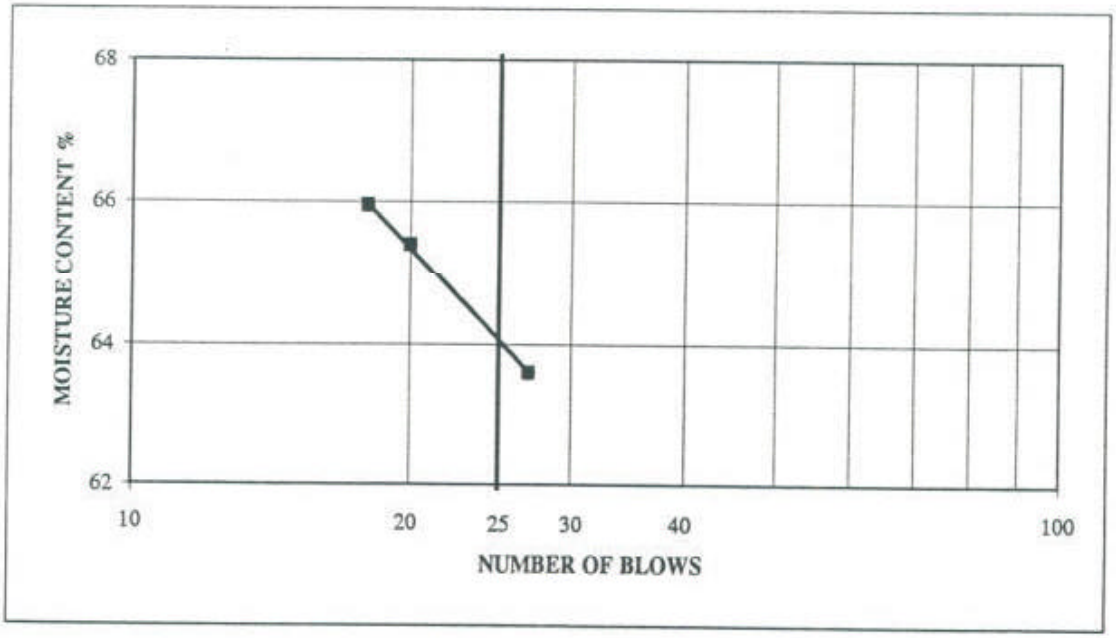
NATURAL MOISTURE

228.06
190.00
51.00
38.06
139.00
27.38

LIQUID LIMIT DETERMINATION

Number of Blows		27	20	18
Weight of Wet Soil & Tare (gm)	(W6)	17.34	18.97	17.28
Weight of Dry Soil & Tare (gm)	(W7)	13.18	14.13	12.07
Weight of Tare (gm)	(W8)	6.64	6.73	4.17
Weight of Water (gm)	(W9=W6-W7)	4.16	4.84	5.21
Weight of Dry Soil (gm)	(W10=W7-W8)	6.54	7.40	7.90
Water Content %	(W9/W10)*100	63.61	65.41	65.95

NOTE:



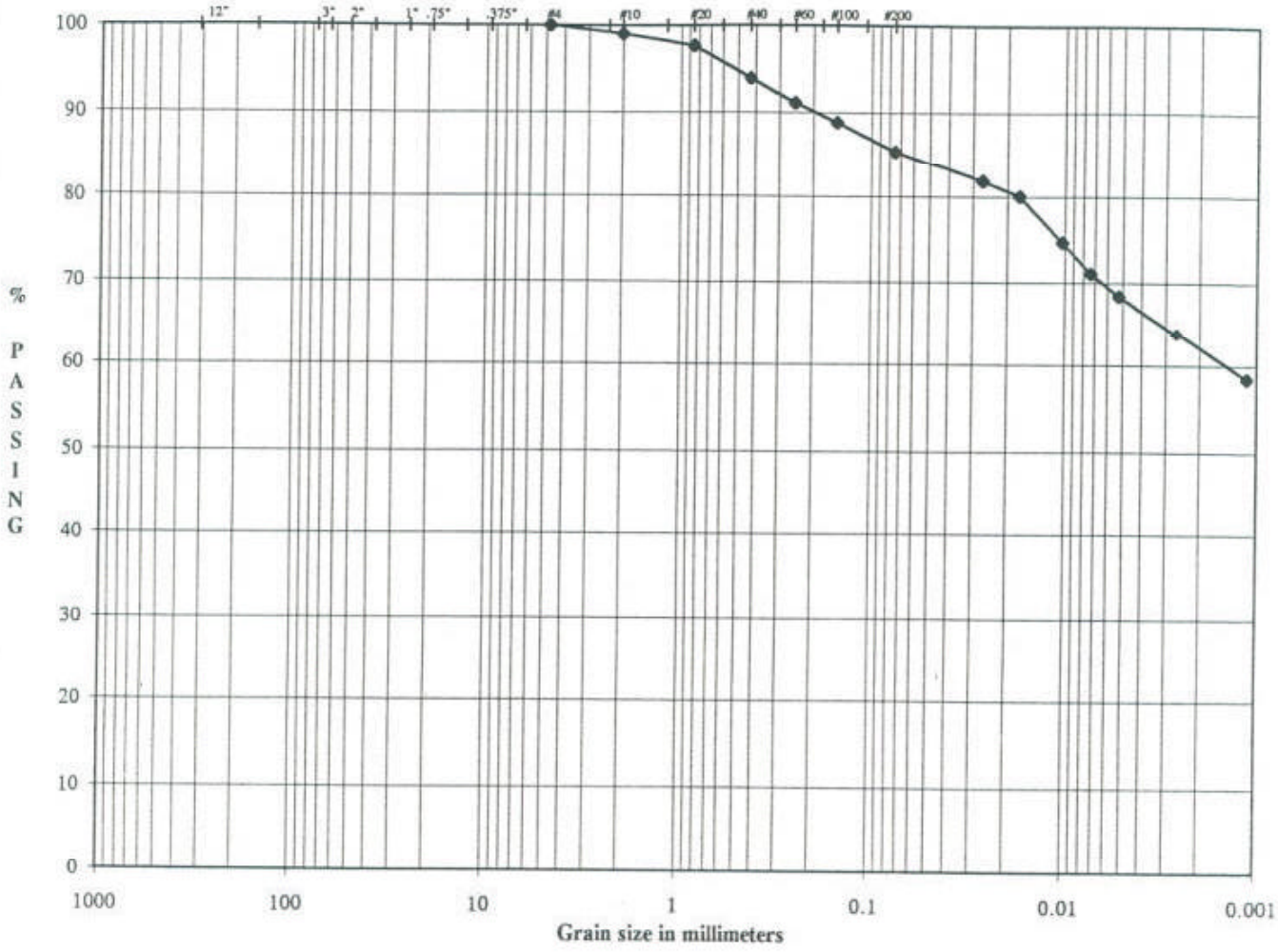
LIQUID LIMIT (WI)	64.07	64
PLASTIC LIMIT (Wp)	31.53	32
PLASTICITY INDEX (Ip)		32
LIQUIDITY INDEX (I)		-0.13
MOISTURE CONTENT		27.38

DESCRIPTION: Reddish Yellow, SILTY CLAY, some medium to fine sand.

USCS: CH

TECH	GM
DATE	6/8/98
CHECK	
REVIEW	

PARTICLE SIZE DISTRIBUTION ASTM D 421 AND D 422
US STANDARD SIEVE OPENING SIZES



Boulders	Cobbles	Gravel: Coarse	Gravel: Fine	SAND: Cor	SAND: Med	SAND: Fine	SILT OR CLAY
		Gravel		SAND			FINES

SAMPLE ID	OWR - 6D
SAMPLE TYPE	UD
SAMPLE DEPTH	20.0 - 22.0'

LL	64
PL	32
PI	32

DESCRIPTION	Reddish Yellow, SILTY CLAY, some medium to fine sand.
USCS	CH

SOLUTIA / RFI-CS / AL
983-3223

TECH	JDR
DATE	6/8/98
CHECK	
REVIEW	

ASTM GRAIN SIZE ANALYSIS
ASTM C117, C136, D421, D422, D1140 and D2217

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR - 6D
PROJECT NO.	983 3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	20.0 - 22.0'

AS RECEIVED WATER CONTENT

Tare No.		-
Wt. Wet Soil & Tare (gm)	(W1)	228.06
Wt. Dry Soil & Tare (gm)	(W2)	190.00
Weight of Tare (gm)	(W3)	51.00
Weight of Water (gm)	(W4=W1-W2)	38.06
Weight of Dry Soil (gm)	(W5=W2-W3)	139.00
Moisture Content (%)	(W4/W5)*100	27.38

Hygroscopic Moisture For Sieve Sample

Wet Soil & Tare (gm)	66.94
Dry Soil & Tare (gm)	65.79
Tare Weight (gm)	3.21
Moisture Content (%)	1.84

Total Weight of Sample Used For Sieve Analysis Corrected For Hygroscopic Moisture

Weight + Tare, Before Separating On The #4 Sieve (gm)	851.24	
Tare Weight (gm)	236.01	
Total Weight (gm)	604.13	(W6)

Plus #4 Material Sieve

TARE WEIGHT: 0.00

	(Wt+Tare)	(((Wt-Tare)/W6)*100)	%PASSING		
12.0"				12.0"	cobbles
3.0"				3.0"	coarse gravel
2.5"				2.5"	coarse gravel
2.0"				2.0"	coarse gravel
1.5"				1.5"	coarse gravel
1.0"				1.0"	coarse gravel
0.75"				0.75"	fine gravel
0.50"				0.50"	fine gravel
0.375"				0.375"	fine gravel
#4	0.00	0.0	100.0	#4	coarse sand

HYDROMETER ANALYSIS

Specific Gravity	(assumed)	
Specific Gravity	(tested)	2.817
Amount Dispersing Agent (ml)		125.00
Type Dispersion Device		Mechanical
Length of Dispersion Period		1 Minute

Weight of Sample Used For Hydrometer Test

Weight of Sample Wet or Dry (gm)	54.88
Calculated Dry Wt. used in test (gm)	53.89
Hydrometer Bulb Number	624378
% Pass #4 Sieve For Whole Sample	100.00

TARE WEIGHT: 203.14

HYDROMETER BACKSIEVE (Percent Passing #10 - #200 Sieves)

	(Wt+Tare)	Cumul Wt. Retained	% PASSING		
#10	203.66	0.52	99.0	#10	medium sand
#20	204.41	1.27	97.6	#20	medium sand
#40	206.43	3.29	93.9	#40	fine sand
#60	207.94	4.80	91.1	#60	fine sand
#100	209.16	6.02	88.8	#100	fine sand
#200	211.01	7.87	85.4	#200	fines

HYDROMETER CALCULATIONS

DATE	TIME	ET	READING	TEMP	TEMP.COR.	HYD.COR.	READING	EFFECTIVE	
6/8/98	8:33	(min)	R	T	K	Cc	C	LENGTH	A
6/8/98	8:35	2.00	51.0	22.00	0.013	5.50	45.50	8.9	0.97
6/8/98	8:38	5.00	50.0	22.00	0.013	5.50	44.50	9.1	0.97
6/8/98	8:48	15.00	47.0	22.00	0.013	5.50	41.50	9.6	0.97
6/8/98	9:03	30.00	45.0	22.00	0.013	5.50	39.50	9.9	0.97
6/8/98	9:33	60.00	43.5	22.00	0.013	5.50	38.00	10.1	0.97
6/8/98	12:43	250.00	41.0	22.00	0.013	5.50	35.50	10.6	0.97
6/9/98	8:33	1440.00	38.0	22.00	0.013	5.50	32.50	11.1	0.97

Particle Diameter	% PASSING
0.0270	81.9
0.0173	80.1
0.0102	74.7
0.0074	71.1
0.0053	68.4
0.0026	63.9
0.0011	58.5

GRAIN SIZE PERCENTAGES

% COBBLES	0.00
% COARSE GRAVEL	0.00
% FINE GRAVEL	0.00
% COARSE SAND	0.96
% MEDIUM SAND	5.14
% FINE SAND	8.50
% FINES	85.40
% TOTAL SAMPLE	100.00

Description: Reddish Yellow, SILTY CLAY, some medium to fine sand.

USCS: CH

64	LL
32	PL
32	PI

TECH	JDR
DATE	6/8/98
CHECK	
REVIEW	

UNIT WEIGHT DETERMINATION
ASTM D 2937

PROJECT NAME	SOLUTIA / RFI-CS / AL	**SAMPLE ID**	OWR - 6D
PROJECT NUMBER	983-3223	**SAMPLE TYPE**	UD
		SAMPLE DEPTH	20.0-22.0'

WEIGHT OF SOIL (g)	667.85
LENGTH OF SAMPLE (in)	3.166
DIAMETER OF SAMPLE (in)	2.870
AREA OF SAMPLE (in^2)	6.47
VOLUME OF SAMPLE (in^3)	20.48
VOLUME OF SAMPLE (cm^3)	335.61

WET UNIT WEIGHT (pcf)	124.2

WEIGHT WET SOIL & TARE (g)	228.06
WEIGHT DRY SOIL & TARE (g)	190.00
WEIGHT OF WATER (g)	38.06
WEIGHT OF TARE (g)	51.00
WEIGHT OF DRY SOIL (g)	139.00
WATER CONTENT (%)	27.38

DRY UNIT WEIGHT (pcf)	97.5

SPECIFIC GRAVITY	2.817
VOLUME OF SOLIDS (cm^3)	186.12
VOLUME OF VOIDS (cm^3)	149.49
POROSITY (%)	45

TECH	GM
DATE	6/10/98
CHECK	GM
REVIEW	PLM

FLOW PUMP #2

FLEXIBLE WALL PERMEABILITY
ASTM D 5084
METHOD D, CONSTANT RATE OF FLOW

PROJECT TITLE	SOLUTIA / RFI-CS / AL		
PROJECT NUMBER	983-3223		
SAMPLE ID	OWR - 6D	-	20.0-22.0'
SAMPLE TYPE	UD		

BOARD #	8
CELL #	8
Flow Pump Speed	9
Technician	PWM

COMMENTS

Sample Data, Initial			
Height, inches	3.166	B-Value, f	1.00
Diameter, inches	2.870	Cell Pres.	94.0
Area, cm²	41.74	Bot. Pres.	80.0
Volume, cm³	335.63	Top Pres.	80.0
Mass, g	667.85	Tot. B.P.	80.0
Moisture Content, %	27.38	Head, max.	92.85
Dry Density, pcf	97.47	Head, min.	92.85
Spec. Gravity	2.811	Max. Grad.	11.55
Volume Solids, cm³	186.18	Min. Grad.	11.55
Volume Voids, cm³	149.51		
Void Ratio	0.80		
Saturation, %	96.0%		

Sample Data, Final	
Height, inches	3.165
Diameter, inches	2.873
Area, cm²	41.82
Volume, cm³	336.23
Mass, g	670.51
Moisture Content, %	28.07
Dry Density, pcf	97.17
Volume Solids, cm³	185.86
Volume Voids, cm³	150.37
Void Ratio	0.81
Saturation, %	97.7%

WATER CONTENTS		Trimmings Initial	Sample Final
Wt Soil & Tare, i	g	228.06	721.93
Wt Soil & Tare, f	g	190.00	575.05
Wt Tare	g	51.00	51.70
Wt Moisture Lost	g	38.06	146.88
Wt Dry Soil	g	139.00	523.35
Water Content	%	27.38%	28.07%

DESCRIPTION

Reddish Yellow, SILTY CLAY, some medium to fine sand.

Flow Pump Rate 5.70E-05 cm³/sec

USCS CH

TIME FUNCTIONS, SECONDS								dP				
DATE	DAY	HOUR	MIN	TEMP (°C)	dt (min)	dt,acc (min)	dt (sec)	dt,acc (sec)	Reading (psi)	Head (cm)	Gradient	Permeability (cm/sec)
6/8/98	35954	9	30	21.3	0	0	0	0	1.32	92.85	11.55	1.1E-07
6/8/98	35954	9	35	21.3	5	5	300	300	1.32	92.85	11.55	1.1E-07
6/8/98	35954	9	40	21.3	5	10	300	600	1.32	92.85	11.55	1.1E-07
6/8/98	35954	9	45	21.3	5	15	300	900	1.32	92.85	11.55	1.1E-07 *
6/8/98	35954	9	50	21.3	5	20	300	1200	1.32	92.85	11.55	1.1E-07 *
6/8/98	35954	9	55	21.3	5	25	300	1500	1.32	92.85	11.55	1.1E-07 *
6/8/98	35954	10	0	21.3	5	30	300	1800	1.32	92.85	11.55	1.1E-07 *

*TRANSCRIBED FROM ORIGINAL DATA SHEETS

PERMEABILITY REPORTED AS ** 1.1E-07 cm/sec **

DATE 6/8/98
CHECK
REVIEW

ATTERBERG LIMITS
ASTM D-4318

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR-6D -
PROJECT NUMBER	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	23.0 - 25.0'

SAMPLE PREPARATION

Wet or Dry: Dry

Minus #40 Sieve: Yes

PLASTIC LIMIT DETERMINATION

Weight of Wet Soil & Tare (gm)	(W1)	22.56	24.06	20.57
Weight of Dry Soil & Tare (gm)	(W2)	20.13	21.20	18.50
Weight of Tare (gm)	(W3)	11.75	11.34	11.42
Weight of Water (gm)	(W4=W1-W2)	2.43	2.86	2.07
Weight of Dry Soil (gm)	(W5=W2-W3)	8.38	9.86	7.08
Water Content %	(W4/W5)*100	29.00	29.01	29.24

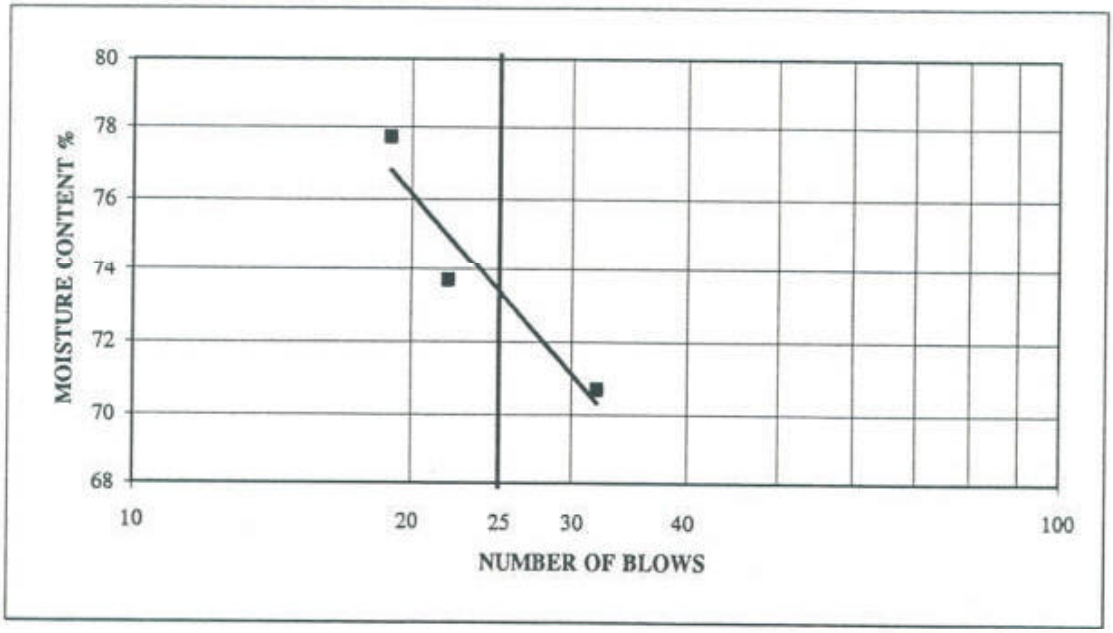
NATURAL MOISTURE

265.73
213.27
51.76
52.46
161.51
32.48

LIQUID LIMIT DETERMINATION

Number of Blows		32	22	19
Weight of Wet Soil & Tare (gm)	(W6)	15.81	19.38	17.45
Weight of Dry Soil & Tare (gm)	(W7)	11.06	12.97	11.69
Weight of Tare (gm)	(W8)	4.34	4.27	4.28
Weight of Water (gm)	(W9=W6-W7)	4.75	6.41	5.76
Weight of Dry Soil (gm)	(W10=W7-W8)	6.72	8.70	7.41
Water Content %	(W9/W10)*100	70.68	73.68	77.73

NOTE:



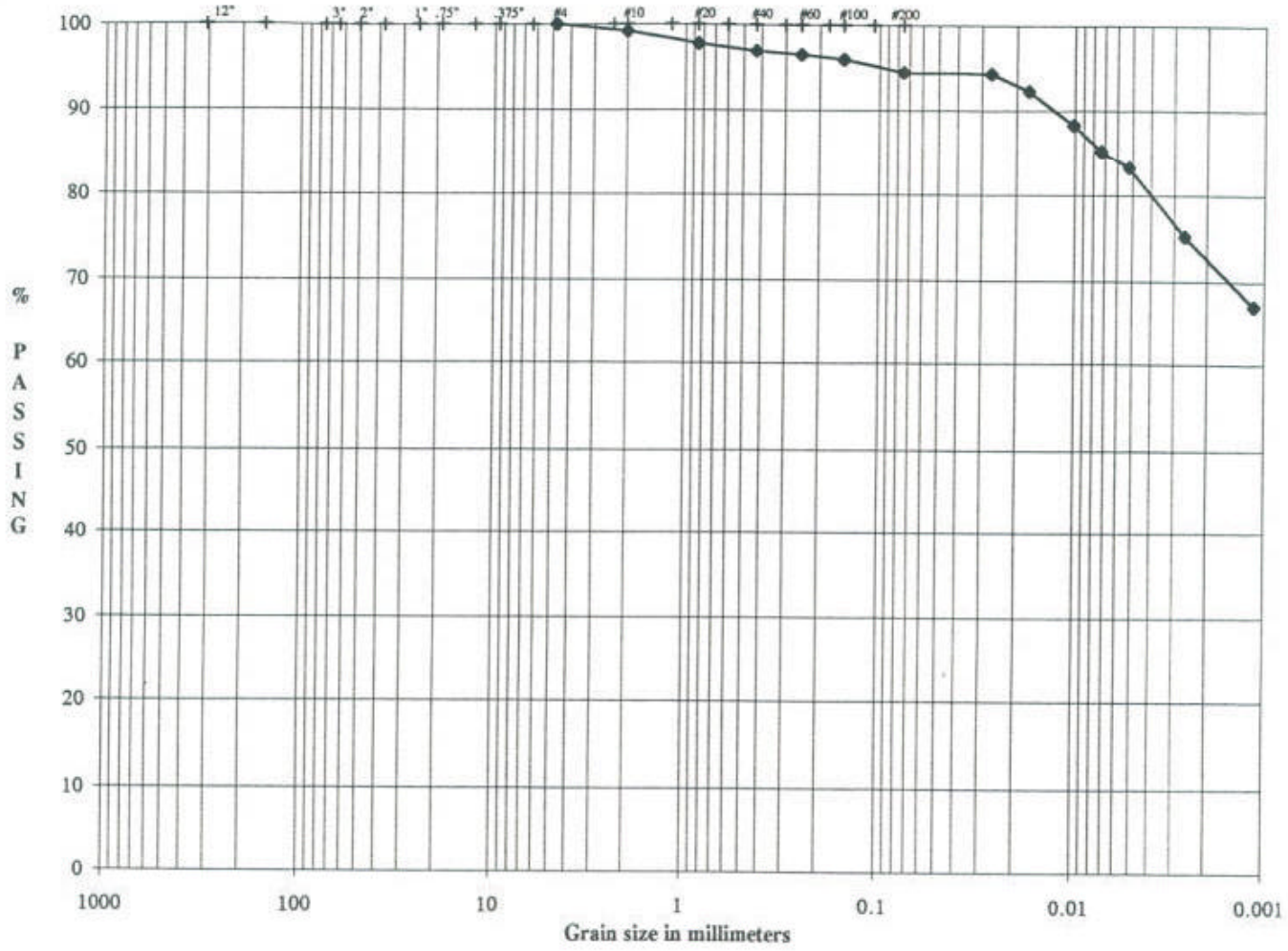
LIQUID LIMIT (WI)	73.39	73
PLASTIC LIMIT (Wp)	29.08	29
PLASTICITY INDEX (Ip)		44
LIQUIDITY INDEX (I)		0.08
MOISTURE CONTENT		32.48

DESCRIPTION: Brownish Yellow, SILTY CLAY, little coarse to fine sand.

USCS: CH

TECH	TF
DATE	6/25/98
CHECK	
REVIEW	

PARTICLE SIZE DISTRIBUTION ASTM D 421 AND D 422
US STANDARD SIEVE OPENING SIZES



Boulders	Cobbles	Coarse	Fine	Cor	Med	Fine	SILT OR CLAY
		Gravel		SAND			FINES

SAMPLE ID	OWR - 6D
SAMPLE TYPE	UD
SAMPLE DEPTH	23.0 - 25.0'

LL	73
PL	29
PI	44

DESCRIPTION	Brownish Yellow, SILTY CLAY, little coarse to fine sand.
USCS	CH

SOLUTIA / RFI-CS / AL
983-3223

TECH	JDR
DATE	6/24/98
CHECK	
REVIEW	

ASTM GRAIN SIZE ANALYSIS
ASTM C117, C136, D421, D422, D1140 and D2217

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR - 6D
PROJECT NO.	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	23.0 - 25.0'

AS RECEIVED WATER CONTENT

Tare No.		-
Wt. Wet Soil & Tare (gm)	(W1)	265.73
Wt. Dry Soil & Tare (gm)	(W2)	213.27
Weight of Tare (gm)	(W3)	51.76
Weight of Water (gm)	(W4=W1-W2)	52.46
Weight of Dry Soil (gm)	(W5=W2-W3)	161.51
Moisture Content (%)	(W4/W5)*100	32.48

Hygroscopic Moisture For Sieve Sample

Wet Soil & Tare (gm)	46.07
Dry Soil & Tare (gm)	42.83
Tare Weight (gm)	3.25
Moisture Content (%)	8.19

Total Weight of Sample Used For Sieve Analysis Corrected For Hygroscopic Moisture

Weight + Tare, Before Separating On The #4 Sieve (gm)	715.22	
Tare Weight (gm)	218.45	
Total Weight (gm)	459.18	(W6)

Plus #4 Material Sieve

TARE WEIGHT: 0.00

	(Wt+Tare)	(((Wt-Tare)/W6)*100)	%PASSING		
12.0"				12.0"	cobbles
3.0"				3.0"	coarse gravel
2.5"				2.5"	coarse gravel
2.0"				2.0"	coarse gravel
1.5"				1.5"	coarse gravel
1.0"				1.0"	coarse gravel
0.75"				0.75"	fine gravel
0.50"				0.50"	fine gravel
0.375"				0.375"	fine gravel
#4	0.00	0.0	100.0	#4	coarse sand

HYDROMETER ANALYSIS

Specific Gravity	(assumed)	
Specific Gravity	(tested)	2.698
Amount Dispersing Agent (ml)		125.00
Type Dispersion Device		Mechanical
Length of Dispersion Period		1 Minute

Weight of Sample Used For Hydrometer Test

Weight of Sample Wet or Dry (gm)	53.94
Calculated Dry Wt. used in test (gm)	49.86
Hydrometer Bulb Number	624378
% Pass #4 Sieve For Whole Sample	100.00

TARE WEIGHT: 203.14

HYDROMETER BACKSIEVE (Percent Passing #10 - #200 Sieves)

	(Wt+Tare)	Cumul Wt. Retained	% PASSING		
#10	203.56	0.42	99.2	#10	medium sand
#20	204.26	1.12	97.8	#20	medium sand
#40	204.69	1.55	96.9	#40	fine sand
#60	204.88	1.74	96.5	#60	fine sand
#100	205.17	2.03	95.9	#100	fine sand
#200	205.93	2.79	94.4	#200	fine

HYDROMETER CALCULATIONS

DATE	TIME	ET (min)	READING R	TEMP T	TEMP.COR. K	HYD.COR. Cc	READING C	EFFECTIVE LENGTH	A
6/25/98	9:58								
6/25/98	10:00	2.00	52.5	23.00	0.013	5.50	47.00	8.6	1.00
6/25/98	10:03	5.00	51.5	23.00	0.013	5.50	46.00	8.8	1.00
6/25/98	10:13	15.00	49.5	23.00	0.013	5.50	44.00	9.1	1.00
6/25/98	10:28	30.00	48.0	23.00	0.013	5.50	42.50	9.4	1.00
6/25/98	10:58	60.00	47.0	23.00	0.013	5.50	41.50	9.6	1.00
6/25/98	14:08	250.00	43.0	23.00	0.013	5.50	37.50	10.2	1.00
6/26/98	9:58	1440.00	39.0	23.00	0.013	5.50	33.50	10.9	1.00

Particle Diameter	% PASSING
0.0270	94.3
0.0172	92.3
0.0101	88.2
0.0073	85.2
0.0052	83.2
0.0026	75.2
0.0011	67.2

GRAIN SIZE PERCENTAGES

% COBBLES	0.00
% COARSE GRAVEL	0.00
% FINE GRAVEL	0.00
% COARSE SAND	0.84
% MEDIUM SAND	2.27
% FINE SAND	2.49
% FINES	94.40
% TOTAL SAMPLE	100.00

Description: Brownish Yellow, SILTY CLAY, little coarse to fine sand.

USCS: CH

73	LL
29	PL
44	PI

TECH	JDR
DATE	6/24/98
CHECK	
REVIEW	

UNIT WEIGHT DETERMINATION
ASTM D 2937

PROJECT NAME	SOLUTIA / RFI-CS / AL	**SAMPLE ID**	OWR - 6D
PROJECT NUMBER	983-3223	**SAMPLE TYPE**	UD
		SAMPLE DEPTH	23.0 - 25.0'

WEIGHT OF SOIL (g)	665.77
LENGTH OF SAMPLE (in)	3.348
DIAMETER OF SAMPLE (in)	2.851
AREA OF SAMPLE (in^2)	6.38
VOLUME OF SAMPLE (in^3)	21.37
VOLUME OF SAMPLE (cm^3)	350.19

WET UNIT WEIGHT (pcf)	118.7

WEIGHT WET SOIL & TARE (g)	265.73
WEIGHT DRY SOIL & TARE (g)	213.27
WEIGHT OF WATER (g)	52.46
WEIGHT OF TARE (g)	51.76
WEIGHT OF DRY SOIL (g)	161.51
WATER CONTENT (%)	32.48

DRY UNIT WEIGHT (pcf)	89.6

SPECIFIC GRAVITY	2.698
VOLUME OF SOLIDS (cm^3)	186.27
VOLUME OF VOIDS (cm^3)	163.92
POROSITY (%)	47

TECH	GM
DATE	6/29/98
CHECK	
REVIEW	

FLOW PUMP #1

FLEXIBLE WALL PERMEABILITY
ASTM D 5084
METHOD D, CONSTANT RATE OF FLOW

PROJECT TITLE	SOLUTIA / RFI-CS / AL		
PROJECT NUMBER	983-3223		
SAMPLE ID	OWR - 6D	-	23.0-25.0'
SAMPLE TYPE	UD		

BOARD #	1
CELL #	1
Flow Pump Speed	11
Technician	PWM

COMMENTS

Sample Data, Initial			
Height, inches	3.348	B-Value, f	0.99
Diameter, inches	2.851	Cell Pres.	97.0
Area, cm²	41.19	Bot. Pres.	80.0
Volume, cm³	350.24	Top Pres.	80.0
Mass, g	665.77	Tot. B.P.	80.0
Moisture Content, %	32.48	Head, max.	172.33
Dry Density, pcf	89.52	Head, min.	172.33
Spec. Gravity	2.698	Max. Grad.	20.00
Volume Solids, cm³	186.25	Min. Grad.	20.00
Volume Voids, cm³	163.98		
Void Ratio	0.88		
Saturation, %	99.5%		

Sample Data, Final	
Height, inches	3.392
Diameter, inches	2.872
Area, cm²	41.80
Volume, cm³	360.09
Mass, g	678.60
Moisture Content, %	36.17
Dry Density, pcf	86.36
Volume Solids, cm³	184.71
Volume Voids, cm³	175.38
Void Ratio	0.95
Saturation, %	102.8%

WATER CONTENTS		Trimmings Initial	Sample Final
Wt Soil & Tare, i	g	165.73	730.60
Wt Soil & Tare, f	g	113.27	550.38
Wt Tare	g	51.76	52.08
Wt Moisture Lost	g	52.46	180.22
Wt Dry Soil	g	161.51	498.30
Water Content	%	32.48%	36.17%

DESCRIPTION

Brownish Yellow, SILTY CLAY, little coarse to fine sand.

Flow Pump Rate: 1.50E-05 cm³/sec

USCS: CH

TIME FUNCTIONS, SECONDS								dP				
DATE	DAY	HOUR	MIN	TEMP (°C)	dt (min)	dt,acc (min)	dt (sec)	dt,acc (sec)	Reading (psi)	Head (cm)	Gradient	Permeability (cm/sec)
6/25/98	35971	12	30	20.4	0	0	0	0	2.45	172.33	20.00	1.8E-08
6/25/98	35971	12	35	20.4	5	5	300	300	2.45	172.33	20.00	1.8E-08
6/25/98	35971	12	40	20.4	5	10	300	600	2.45	172.33	20.00	1.8E-08
6/25/98	35971	12	45	20.4	5	15	300	900	2.45	172.33	20.00	1.8E-08 *
6/25/98	35971	12	50	20.4	5	20	300	1200	2.45	172.33	20.00	1.8E-08 *
6/25/98	35971	12	55	20.4	5	25	300	1500	2.45	172.33	20.00	1.8E-08 *
6/25/98	35971	13	0	20.4	5	30	300	1800	2.45	172.33	20.00	1.8E-08 *

*TRANSCRIBED FROM ORIGINAL DATA SHEETS

PERMEABILITY REPORTED AS ** 1.8E-08 cm/sec **

DATE 6/25/98
CHECK
REVIEW

ATTERBERG LIMITS
ASTM D-4318

PROJECT TITLE	SOLUTIA / RFI-CS / AL	**SAMPLE ID**	OWR-6D -
PROJECT NUMBER	983-3223	**SAMPLE TYPE**	UD
		SAMPLE DEPTH	60.0 - 62.0'

SAMPLE PREPARATION

Wet or Dry: Dry

Minus #40 Sieve: Yes

PLASTIC LIMIT DETERMINATION

				NATURAL MOISTURE
Weight of Wet Soil & Tare	(W1)	23.51	23.14	602.85
Weight of Dry Soil & Tare	(W2)	20.54	20.36	412.62
Weight of Tare	(W3)	11.33	11.76	0.00
Weight of Water	(W4=W1-W2)	2.97	2.78	190.23
Weight of Dry Soil	(W5=W2-W3)	9.21	8.60	412.62
Water Content	(W4/W5)*100	32.25%	32.33%	46.10%

LIQUID LIMIT DETERMINATION

Number of Blows		24	24
Weight of Wet Soil & Tare	(W6)	19.11	14.25
Weight of Dry Soil & Tare	(W7)	14.32	11.38
Weight of Tare	(W8)	6.58	6.72
Weight of Water	(W9=W6-W7)	4.79	2.87
Weight of Dry Soil	W10=W7-W8)	7.74	4.66
Water Content	(W9/W10)*100	61.89%	61.59%

TEST RESULTS

	TRAIL 1	TRIAL 2
BLOWS:	24	24
K VALUE:	0.995	0.995

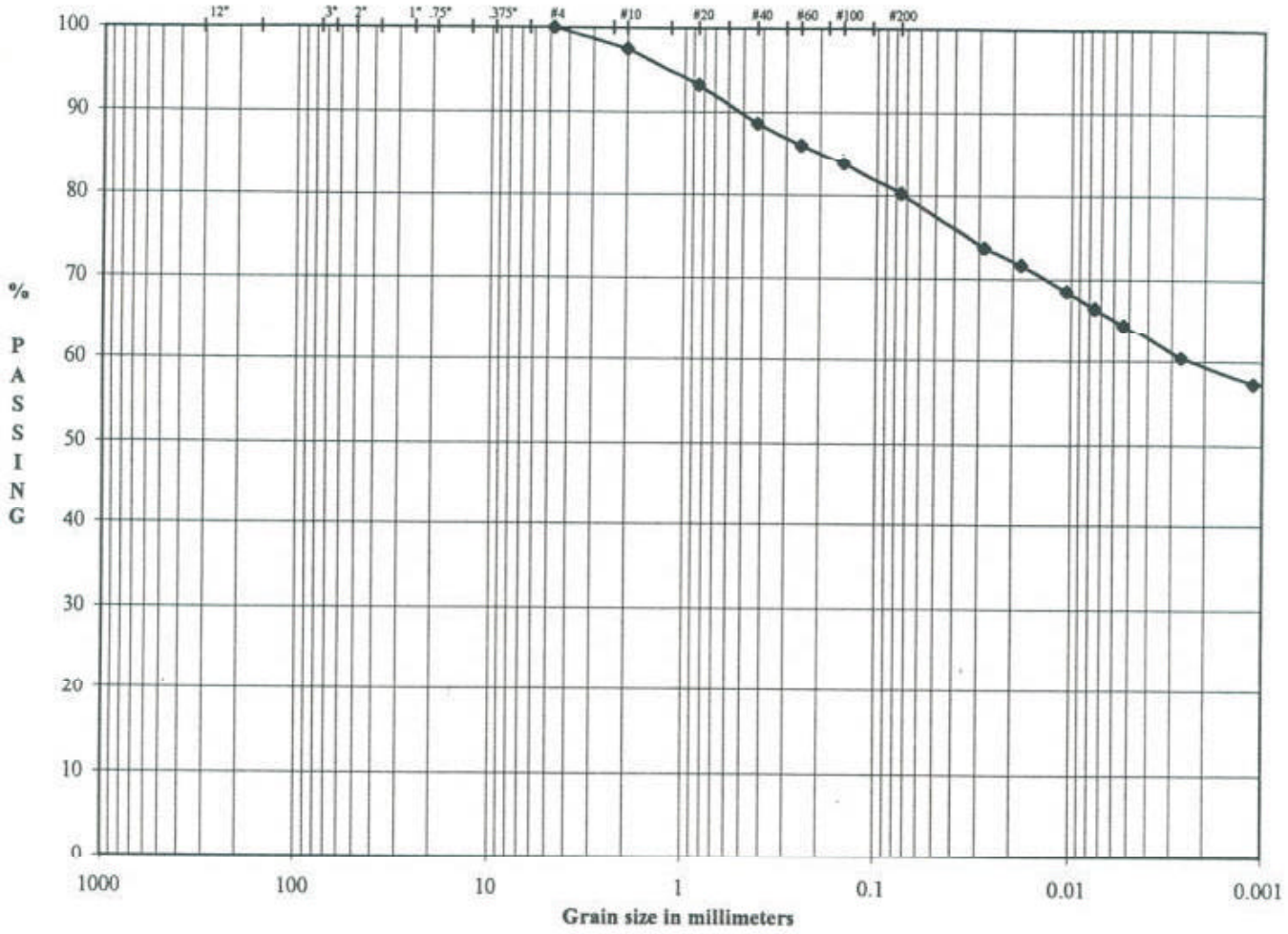
LIQUID LIMIT (Wl)	61.43	61
PLASTIC LIMIT (Wp)	32.29	32
PLASTICITY INDEX (Ip)		29
LIQUIDITY INDEX (I)		0.48
MOISTURE CONTENT		46.10%

DESCRIPTION: Yellowish Brown, CLAYEY SILT, some coarse to fine sand.

USCS: MH

TECH	TF/SW
DATE	6/26/98
CHECK	
REVIEW	

PARTICLE SIZE DISTRIBUTION ASTM D 421 AND D 422
US STANDARD SIEVE OPENING SIZES



Boulders	Cobbles	Coarse	Fine	Cor	Med	Fine	SILT OR CLAY
		Gravel		SAND			FINES

SAMPLE ID	OWR - 6D
SAMPLE TYPE	UD
SAMPLE DEPTH	60.0 - 62.0

LL	61
PL	32
PI	29

DESCRIPTION	Yellowish Brown, CLAYEY SILT, some coarse to fine sand.
USCS	MH

SOLUTIA / RFI-CS / AL
983-3223

TECH	JDR
DATE	6/25/98
CHECK	
REVIEW	

ASTM GRAIN SIZE ANALYSIS
ASTM C117, C136, D421, D422, D1140 and D2217

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR - 6D
PROJECT NO.	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	60.0 - 62.0'

AS RECEIVED WATER CONTENT

Tare No.		-
Wt. Wet Soil & Tare (gm)	(W1)	602.85
Wt. Dry Soil & Tare (gm)	(W2)	412.62
Weight of Tare (gm)	(W3)	0.00
Weight of Water (gm)	(W4=W1-W2)	190.23
Weight of Dry Soil (gm)	(W5=W2-W3)	412.62
Moisture Content (%)	(W4/W5)*100	46.10

Hygroscopic Moisture For Sieve Sample

Wet Soil & Tare (gm)	31.48
Dry Soil & Tare (gm)	27.31
Tare Weight (gm)	3.22
Moisture Content (%)	17.31

Total Weight of Sample Used For Sieve Analysis Corrected For Hygroscopic Moisture

Weight + Tare, Before Separating On The #4 Sieve (gm)	580.78	
Tare Weight (gm)	234.51	
Total Weight (gm)	295.17	(W6)

Plus #4 Material Sieve

TARE WEIGHT: 0.00

	(Wt+Tare)	(((Wt-Tare)/W6)*100)	%PASSING		
12.0"				12.0"	cobbles
3.0"				3.0"	coarse gravel
2.5"				2.5"	coarse gravel
2.0"				2.0"	coarse gravel
1.5"				1.5"	coarse gravel
1.0"				1.0"	coarse gravel
0.75"				0.75"	fine gravel
0.50"				0.50"	fine gravel
0.375"				0.375"	fine gravel
#4	0.00	0.0	100.0	#4	coarse sand

HYDROMETER ANALYSIS

Specific Gravity	(assumed)	
Specific Gravity	(tested)	2.825
Amount Dispersing Agent (ml)		125.00
Type Dispersion Device		Mechanical
Length of Dispersion Period		1 Minute

Weight of Sample Used For Hydrometer Test

Weight of Sample Wet or Dry (gm)	55.57
Calculated Dry Wt. used in test (gm)	47.37
Hydrometer Bulb Number	624378
% Pass #4 Sieve For Whole Sample	100.00

TARE WEIGHT: 203.14

HYDROMETER BACKSIEVE (Percent Passing #10 - #200 Sieves)

	(Wt+Tare)	Cumul Wt. Retained	% PASSING		
#10	204.30	1.16	97.6	#10	medium sand
#20	206.34	3.20	93.2	#20	medium sand
#40	208.53	5.39	88.6	#40	fine sand
#60	209.75	6.61	86.0	#60	fine sand
#100	210.84	7.70	83.7	#100	fine sand
#200	212.53	9.39	80.2	#200	fines

HYDROMETER CALCULATIONS

DATE	TIME	ET (min)	READING R	TEMP T	TEMP.COR. K	HYD.COR. Cc	READING C	EFFECTIVE LENGTH	A
6/26/98	9:14								
6/26/98	9:16	2.00	41.5	23.00	0.012	5.50	36.00	10.4	0.97
6/26/98	9:19	5.00	40.5	23.00	0.012	5.50	35.00	10.6	0.97
6/26/98	9:29	15.00	39.0	23.00	0.012	5.50	33.50	10.9	0.97
6/26/98	9:44	30.00	38.0	23.00	0.012	5.50	32.50	11.1	0.97
6/26/98	10:14	60.00	37.0	23.00	0.012	5.50	31.50	11.2	0.97
6/26/98	13:24	250.00	35.0	23.00	0.012	5.50	29.50	11.5	0.97
6/27/98	9:14	1440.00	33.5	23.00	0.012	5.50	28.00	11.7	0.97

GRAIN SIZE PERCENTAGES

Particle Diameter	% PASSING		
0.0283	73.7	% COBBLES	0.00
0.0181	71.7	% COARSE GRAVEL	0.00
0.0106	68.6	% FINE GRAVEL	0.00
0.0075	66.6	% COARSE SAND	2.45
0.0054	64.5	% MEDIUM SAND	8.93
0.0027	60.4	% FINE SAND	8.44
0.0011	57.3	% FINES	80.18
		% TOTAL SAMPLE	100.00

Description: Yellowish Brown, CLAYEY SILT, some coarse to fine sand.

USCS: MH

61	LL
32	PL
29	PI

TECH	JDR
DATE	6/25/98
CHECK	
REVIEW	

UNIT WEIGHT DETERMINATION
ASTM D 2937

PROJECT NAME	SOLUTIA / RFI-CS / AL	**SAMPLE ID**	OWR - 6D
PROJECT NUMBER	983-3223	**SAMPLE TYPE**	UD
		SAMPLE DEPTH	60.0 - 62.0'

WEIGHT OF SOIL (g)	602.85
LENGTH OF SAMPLE (in)	3.265
DIAMETER OF SAMPLE (in)	2.810
AREA OF SAMPLE (in^2)	6.20
VOLUME OF SAMPLE (in^3)	20.25
VOLUME OF SAMPLE (cm^3)	331.84

WET UNIT WEIGHT (pcf)	113.4

WEIGHT WET SOIL & TARE (g)	602.85
WEIGHT DRY SOIL & TARE (g)	412.62
WEIGHT OF WATER (g)	190.23
WEIGHT OF TARE (g)	0.00
WEIGHT OF DRY SOIL (g)	412.62
WATER CONTENT (%)	46.10

DRY UNIT WEIGHT (pcf)	77.6

SPECIFIC GRAVITY	2.825
VOLUME OF SOLIDS (cm^3)	146.06
VOLUME OF VOIDS (cm^3)	185.78
POROSITY (%)	56

TECH	GM
DATE	6/29/98
CHECK	
REVIEW	

FLOW PUMP #1

FLEXIBLE WALL PERMEABILITY
ASTM D 5084
METHOD E, CONSTANT RATE OF FLOW

PROJECT TITLE	SOLUTIA / RFI-CS / AL		
PROJECT NUMBER	983-3223		
SAMPLE ID	OWR - 6D	-	60.0-62.0'
SAMPLE TYPE	UD		

BOARD #	1
CELL #	1
Flow Pump Speed	10
Technician	PWM

COMMENTS

Sample Data, Initial			
Height, inches	3.265	B-Value, f	100.00
Diameter, inches	2.810	Cell Pres.	100.5
Area, cm²	40.01	Bot. Pres.	80.0
Volume, cm³	331.81	Top Pres.	80.0
Mass, g	602.85	Tot. B.P.	80.0
Moisture Content, %	46.10	Head, max.	137.87
Dry Density, pcf	77.60	Head, min.	137.87
Spec. Gravity	2.825	Max. Grad.	16.95
Volume Solids, cm³	146.06	Min. Grad.	16.95
Volume Voids, cm³	185.75		
Void Ratio	1.27		
Saturation, %	102.4%		

Sample Data, Final	
Height, inches	3.202
Diameter, inches	2.784
Area, cm²	39.27
Volume, cm³	319.41
Mass, g	584.80
Moisture Content, %	41.73
Dry Density, pcf	80.61
Volume Solids, cm³	146.06
Volume Voids, cm³	173.35
Void Ratio	1.19
Saturation, %	99.3%

WATER CONTENTS		Trimmings Initial	Sample Final
Wt Soil & Tare, i	g	642.85	636.22
Wt Soil & Tare, f	g	472.62	464.06
Wt Tare	g	60.00	51.52
Wt Moisture Lost	g	190.23	172.16
Wt Dry Soil	g	412.62	412.54
Water Content	%	46.10%	41.73%

Flow Pump Rate: 3.00E-05 cm³/sec

USCS: MH

DESCRIPTION: Yellowish Brown, CLAYEY SILT, some coarse to fine sand.

TIME FUNCTIONS, SECONDS								dP				
DATE	DAY	HOUR	MIN	TEMP (°C)	dt (min)	dt,acc (min)	dt (sec)	dt,acc (sec)	Reading (psi)	Head (cm)	Gradient	Permeability (cm/sec)
6/26/98	35972	14	15	20.9	0	0	0	0	1.96	137.87	16.95	4.4E-08
6/26/98	35972	14	20	20.9	5	5	300	300	1.96	137.87	16.95	4.4E-08
6/26/98	35972	14	25	20.9	5	10	300	600	1.96	137.87	16.95	4.4E-08
6/26/98	35972	14	30	20.9	5	15	300	900	1.96	137.87	16.95	4.4E-08
6/26/98	35972	14	35	20.9	5	20	300	1200	1.96	137.87	16.95	4.4E-08 *
6/26/98	35972	14	40	20.9	5	25	300	1500	1.96	137.87	16.95	4.4E-08 *
6/26/98	35972	14	45	20.9	5	30	300	1800	1.96	137.87	16.95	4.4E-08 *

*TRANSCRIBED FROM ORIGINAL DATA SHEETS

PERMEABILITY REPORTED AS ** 4.4E-08 cm/sec **

DATE 6/26/98
CHECK
REVIEW

SOLUTIA / RFI-CS / AL
SUMMARY OF SOIL DATA

Sample Identificaton	Sample Type	Sample Depth	Soil Classi-fication	Natural Moisture %	Atterberg Limits				Grain Size Distribution			Compaction		Gs	Unit Weight		Permeability (cm/sec)	Additional Tests Conducted (See Notes)
					L.L.	P.L.	P.I.	L.I	% Finer No. 4 Sieve	% Finer No. 200 Sieve	% Finer .005 mm	Maximum Dry Density (lb/cuft)	Optimum Moisture %		Moisture %	Dry (lb/cuft)		
OWR - 7D	UD	28.0-29.5'	CH	28.0	51	27	24	0.06	98.6	72.4	54.5	-	-	2.85	28.0	96.8	3.9E-08	PO
OWR - 7D	UD	40.0-42.0'	CH	30.0	67	30	37	0.01	100.0	96.7	71.8	-	-	2.87	30.0	93.1	4.0E-08	PO
OWR - 7D	UD	60.0-62.0'	CH	30.9	53	29	24	0.09	100.0	88.9	61.0	-	-	2.79	30.9	85.6	1.1E-06	PO

ABBREVIATIONS: LIQUID LIMIT (LL)
PLASTIC LIMIT (PL)
PLASTICITY INDEX (PI)
LIQUIDITY INDEX (LI)
SPECIFIC GRAVITY (Gs)
MOISTURE (Mc)

NOTES: T = TRIAXIAL TEST
U = UNCONFINED COMPRESSION TEST
C = CONSOLIDATION TEST
DS = DIRECT SHEAR TEST
O = ORGANIC CONTENT
P = pH
PO = POROSITY
W_T = WATER TABLE GIVEN 6-25-98

ATTERBERG LIMITS
ASTM D-4318

PROJECT TITLE	SOLUTIA / RFI-CS / AL	**SAMPLE ID**	OWR - 7D / -
PROJECT NUMBER	983-3223	**SAMPLE TYPE**	UD
		SAMPLE DEPTH	28.0 - 29.5'

SAMPLE PREPARATION

Wet or Dry: Dry

Minus #40 Sieve: Yes

PLASTIC LIMIT DETERMINATION

Weight of Wet Soil & Tare (gm)	(W1)	23.17	23.29	23.78
Weight of Dry Soil & Tare (gm)	(W2)	20.78	20.80	21.26
Weight of Tare (gm)	(W3)	11.79	11.49	11.83
Weight of Water (gm)	(W4=W1-W2)	2.39	2.49	2.52
Weight of Dry Soil (gm)	(W5=W2-W3)	8.99	9.31	9.43
Water Content %	(W4/W5)*100	26.59	26.75	26.72

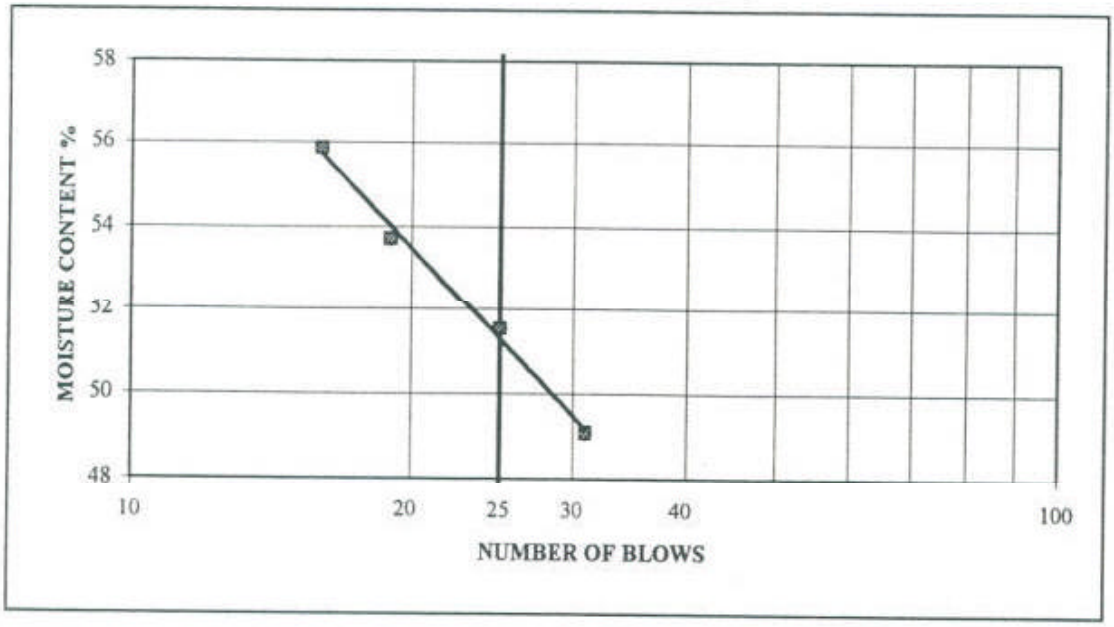
NATURAL MOISTURE

678.65
530.04
0.00
148.61
530.04
28.04

LIQUID LIMIT DETERMINATION

Number of Blows		31	25	19	16
Weight of Wet Soil & Tare (gm)	(W6)	15.64	17.62	20.07	18.13
Weight of Dry Soil & Tare (gm)	(W7)	11.89	13.07	15.38	13.17
Weight of Tare (gm)	(W8)	4.25	4.24	6.65	4.29
Weight of Water (gm)	(W9=W6-W7)	3.75	4.55	4.69	4.96
Weight of Dry Soil (gm)	(W10=W7-W8)	7.64	8.83	8.73	8.88
Water Content %	(W9/W10)*100	49.08	51.53	53.72	55.86

NOTE:



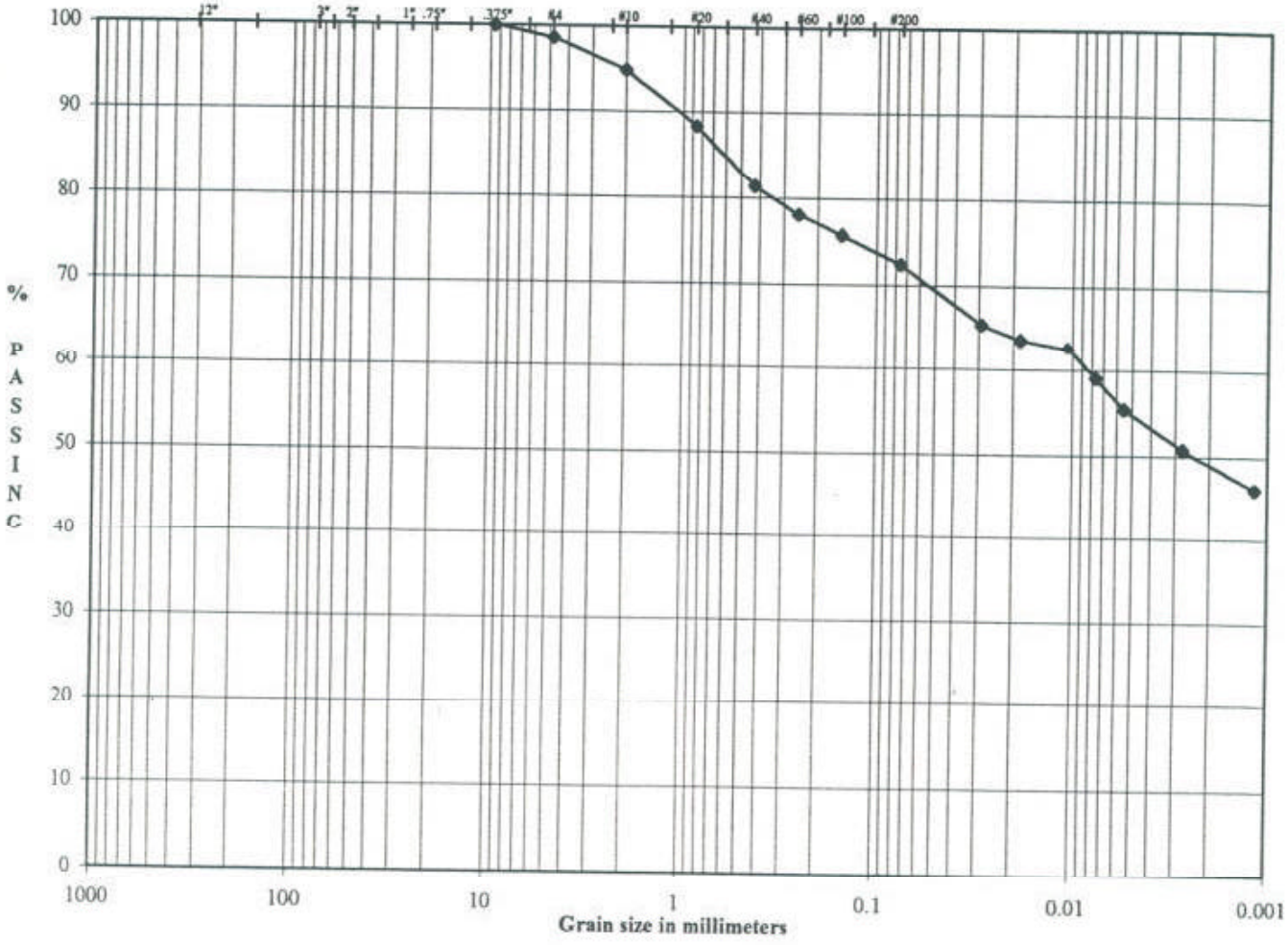
LIQUID LIMIT (WI)	51.30	51
PLASTIC LIMIT (Wp)	26.68	27
PLASTICITY INDEX (Ip)		24
LIQUIDITY INDEX (I)		0.06
MOISTURE CONTENT		28.04

DESCRIPTION: Reddish Brown and White, SILTY CLAY, some coarse to fine sand, trace fine gravel.

USCS: CH

TECH	SW/GM
DATE	6/8/98
CHECK	
REVIEW	

PARTICLE SIZE DISTRIBUTION ASTM D 421 AND D 422
US STANDARD SIEVE OPENING SIZES



Boulders	Cobbles	Coarse Gravel	Fine Gravel	Cor SAND	Med SAND	Fine SAND	SILT OR CLAY FINES

SAMPLE ID	OWR - 7D
SAMPLE TYPE	UD
SAMPLE DEPTH	28.0 - 29.5'

LL	51
PL	27
PI	24

DESCRIPTION	Reddish Brown and White, SILTY CLAY, some coarse to fine sand, trace fine gravel.
USCS	CH

SOLUTIA / RFI-CS / AL
983-3223

TECH	JDR
DATE	6/4/98
CHECK	
REVIEW	

ASTM GRAIN SIZE ANALYSIS
ASTM C117, C136, D421, D422, D1140 and D2217

PROJECT TITLE	SOLUTIA / RFI-CS / AL
PROJECT NO.	983-3223
SAMPLE ID	OWR - 7D
SAMPLE TYPE	UD
SAMPLE DEPTH	28.0 - 29.5'

AS RECEIVED WATER CONTENT

Tare No.		-
Wt. Wet Soil & Tare (gm)	(W1)	678.65
Wt. Dry Soil & Tare (gm)	(W2)	530.04
Weight of Tare (gm)	(W3)	0.00
Weight of Water (gm)	(W4=W1-W2)	148.61
Weight of Dry Soil (gm)	(W5=W2-W3)	530.04
Moisture Content (%)	(W4/W5)*100	28.04

Hygroscopic Moisture For Sieve Sample

Wet Soil & Tare (gm)	71.00
Dry Soil & Tare (gm)	67.44
Tare Weight (gm)	3.24
Moisture Content (%)	5.55

Total Weight of Sample Used For Sieve Analysis Corrected For Hygroscopic Moisture

Weight + Tare, Before Separating On The #4 Sieve (gm)	751.94	
Tare Weight (gm)	113.14	
Total Weight (gm)	605.24	(W6)

Plus #4 Material Sieve

TARE WEIGHT: 0.00

	(Wt+Tare)	(((Wt-Tare)/W6)*100)	%PASSING		
12.0"				12.0"	cobbles
3.0"				3.0"	coarse gravel
2.5"				2.5"	coarse gravel
2.0"				2.0"	coarse gravel
1.5"				1.5"	coarse gravel
1.0"				1.0"	coarse gravel
0.75"				0.75"	fine gravel
0.50"				0.50"	fine gravel
0.375"	0.00	0.0	100.0	0.375"	fine gravel
#4	8.41	1.4	98.6	#4	coarse sand

HYDROMETER ANALYSIS

Specific Gravity	(assumed)	
Specific Gravity	(tested)	2.852
Amount Dispersing Agent (ml)		125.00
Type Dispersion Device		Mechanical
Length of Dispersion Period		1 Minute

Weight of Sample Used For Hydrometer Test

Weight of Sample Wet or Dry (gm)	54.19
Calculated Dry Wt. used in test (gm)	51.34
Hydrometer Bulb Number	624378
% Pass #4 Sieve For Whole Sample	98.61

TARE WEIGHT: 203.14

HYDROMETER BACKSIEVE (Percent Passing #10 - #200 Sieves)

	(Wt+Tare)	Cumul Wt. Retained	% PASSING		
#10	205.10	1.96	94.8	#10	medium sand
#20	208.49	5.35	88.3	#20	medium sand
#40	212.12	8.98	81.4	#40	fine sand
#60	213.86	10.72	78.0	#60	fine sand
#100	215.06	11.92	75.7	#100	fine sand
#200	216.80	13.66	72.4	#200	fines

HYDROMETER CALCULATIONS

DATE	TIME	ET (min)	READING R	TEMP T	TEMP.COR. K	HYD.COR. Cc	READING C	EFFECTIVE LENGTH	A
6/8/98	8:17								
6/8/98	8:19	2.00	41.0	22.00	0.013	5.50	35.50	10.6	0.96
6/8/98	8:22	5.00	40.0	22.00	0.013	5.50	34.50	10.7	0.96
6/8/98	8:32	15.00	39.5	22.00	0.013	5.50	34.00	10.7	0.96
6/8/98	8:47	30.00	37.5	22.00	0.013	5.50	32.00	11.1	0.96
6/8/98	9:17	60.00	35.5	22.00	0.013	5.50	30.00	11.4	0.96
6/8/98	12:27	250.00	33.0	22.00	0.013	5.50	27.50	11.9	0.96
6/9/98	8:17	1440.00	30.5	22.00	0.013	5.50	25.00	12.2	0.96

Particle Diameter	% PASSING
0.0290	65.5
0.0184	63.6
0.0106	62.7
0.0077	59.0
0.0055	55.3
0.0027	50.7
0.0012	46.1

GRAIN SIZE PERCENTAGES

% COBBLES	0.00
% COARSE GRAVEL	0.00
% FINE GRAVEL	1.39
% COARSE SAND	3.76
% MEDIUM SAND	13.48
% FINE SAND	8.99
% FINES	72.37
% TOTAL SAMPLE	100.00

Description: Reddish Brown and White, SILTY CLAY, some coarse to fine sand, trace fine gravel.

USCS: CH

51	LL
27	PL
24	PI

TECH	JDR
DATE	6/4/98
CHECK	
REVIEW	

UNIT WEIGHT DETERMINATION
ASTM D 2937

PROJECT NAME	SOLUTIA / RFI-CS / AL	**SAMPLE ID**	OWR - 7D
PROJECT NUMBER	983-3223	**SAMPLE TYPE**	UD
		SAMPLE DEPTH	28.0-29.5'

WEIGHT OF SOIL (g)	678.65
LENGTH OF SAMPLE (in)	3.221
DIAMETER OF SAMPLE (in)	2.871
AREA OF SAMPLE (in^2)	6.47
VOLUME OF SAMPLE (in^3)	20.85
VOLUME OF SAMPLE (cm^3)	341.67

WET UNIT WEIGHT (pcf)	124.0

WEIGHT WET SOIL & TARE (g)	678.65
WEIGHT DRY SOIL & TARE (g)	530.04
WEIGHT OF WATER (g)	148.61
WEIGHT OF TARE (g)	0.00
WEIGHT OF DRY SOIL (g)	530.04
WATER CONTENT (%)	28.04

DRY UNIT WEIGHT (pcf)	96.8

SPECIFIC GRAVITY	2.852
VOLUME OF SOLIDS (cm^3)	185.84
VOLUME OF VOIDS (cm^3)	155.83
POROSITY (%)	46

TECH	GM
DATE	6/10/98
CHECK	
REVIEW	

FLOW PUMP #1

FLEXIBLE WALL PERMEABILITY
ASTM D 5084
METHOD D, CONSTANT RATE OF FLOW

PROJECT TITLE	SOLUTIA / RFI-CS / AL		
PROJECT NUMBER	983-3223		
SAMPLE ID	OWE - 7D	-	28.0-29.5'
SAMPLE TYPE	UD		

BOARD #	4
CELL #	4
Flow Pump Speed	10
Technidan	PWM

COMMENTS

Sample Data, Initial			
Height, inches	3.221	B-Value, f	1.00
Diameter, inches	2.871	Cell Pres.	100.0
Area, cm²	41.77	Bot. Pres.	80.0
Volume, cm³	341.70	Top Pres.	80.0
Mass, g	678.65	Tot. B.P.	80.0
Moisture Content, %	28.04	Head, max.	147.71
Dry Density, pcf	96.79	Head, min.	147.71
Spec. Gravity	2.852	Max. Grad.	18.05
Volume Solids, cm³	185.85	Min. Grad.	18.05
Volume Voids, cm³	155.85		
Void Ratio	0.84		
Saturation, %	95.4%		

Sample Data, Final	
Height, inches	3.221
Diameter, inches	2.865
Area, cm²	41.59
Volume, cm³	340.28
Mass, g	679.83
Moisture Content, %	28.26
Dry Density, pcf	97.20
Volume Solids, cm³	185.84
Volume Voids, cm³	154.43
Void Ratio	0.83
Saturation, %	97.0%

WATER CONTENTS		Trimmings Initial	Sample Final
Wt Soil & Tare, i	g	678.65	730.45
Wt Soil & Tare, f	g	530.04	581.68
Wt Tare	g	0.00	51.20
Wt Moisture Lost	g	148.61	149.77
Wt Dry Soil	g	530.04	529.88
Water Content	%	28.04%	28.26%

Flow Pump Rate 3.00E-05 cm³/sec

USCS CH

DESCRIPTION

Reddish Brown and White, SILTY CLAY, some coarse to fine sand, trace fine gravel.

TIME FUNCTIONS, SECONDS								d²				
DATE	DAY	HOUR	MIN	TEMP (°C)	dt (min)	dt,acc (min)	dt (sec)	dt,acc (sec)	Reading (psi)	Head (cm)	Gradient	Permeability (cm/sec)
6/8/98	35954	10	0	21.3	0	0	0	0	2.1	147.71	18.05	3.9E-08
6/8/98	35954	10	5	21.3	5	5	300	300	2.1	147.71	18.05	3.9E-08
6/8/98	35954	10	10	21.3	5	10	300	600	2.1	147.71	18.05	3.9E-08
6/8/98	35954	10	15	21.3	5	15	300	900	2.1	147.71	18.05	3.9E-08 *
6/8/98	35954	10	20	21.3	5	20	300	1200	2.1	147.71	18.05	3.9E-08 *
6/8/98	35954	10	25	21.3	5	25	300	1500	2.1	147.71	18.05	3.9E-08 *
6/8/98	35954	10	30	21.3	5	30	300	1800	2.1	147.71	18.05	3.9E-08 *

*TRANSCRIBEDFROM ORIGINAL DATA SHEETS

PERMEABILITY REPORTED AS ** 3.9E-08 cm/sec **

DATE 6/8/98

CHECK

REVIEW

ATTERBERG LIMITS
ASTM D-4318

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR-7D -
PROJECT NUMBER	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	40.0 - 42.0'

SAMPLE PREPARATION
Wet or Dry: Dry Minus #40 Sieve: Yes

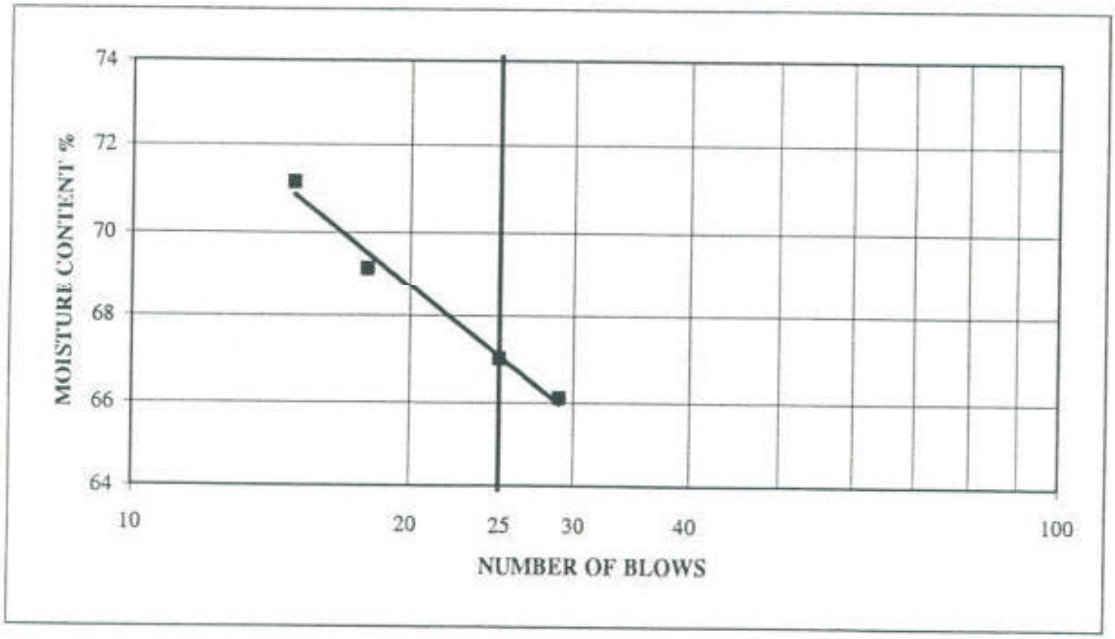
PLASTIC LIMIT DETERMINATION

					NATURAL MOISTURE
Weight of Wet Soil & Tare (gm)	(W1)	22.52	21.32	22.17	607.31
Weight of Dry Soil & Tare (gm)	(W2)	19.99	19.14	19.67	467.06
Weight of Tare (gm)	(W3)	11.43	11.84	11.21	0.00
Weight of Water (gm)	(W4=W1-W2)	2.53	2.18	2.50	140.25
Weight of Dry Soil (gm)	(W5=W2-W3)	8.56	7.30	8.46	467.06
Water Content %	(W4/W5)*100	29.56	29.86	29.55	30.03

LIQUID LIMIT DETERMINATION

Number of Blows		29	25	18	15
Weight of Wet Soil & Tare (gm)	(W6)	24.60	22.58	24.34	24.69
Weight of Dry Soil & Tare (gm)	(W7)	16.51	15.23	16.13	16.21
Weight of Tare (gm)	(W8)	4.27	4.26	4.26	4.29
Weight of Water (gm)	(W9=W6-W7)	8.09	7.35	8.21	8.48
Weight of Dry Soil (gm)	(W10=W7-W8)	12.24	10.97	11.87	11.92
Water Content %	(W9/W10)*100	66.09	67.00	69.17	71.14

NOTE:



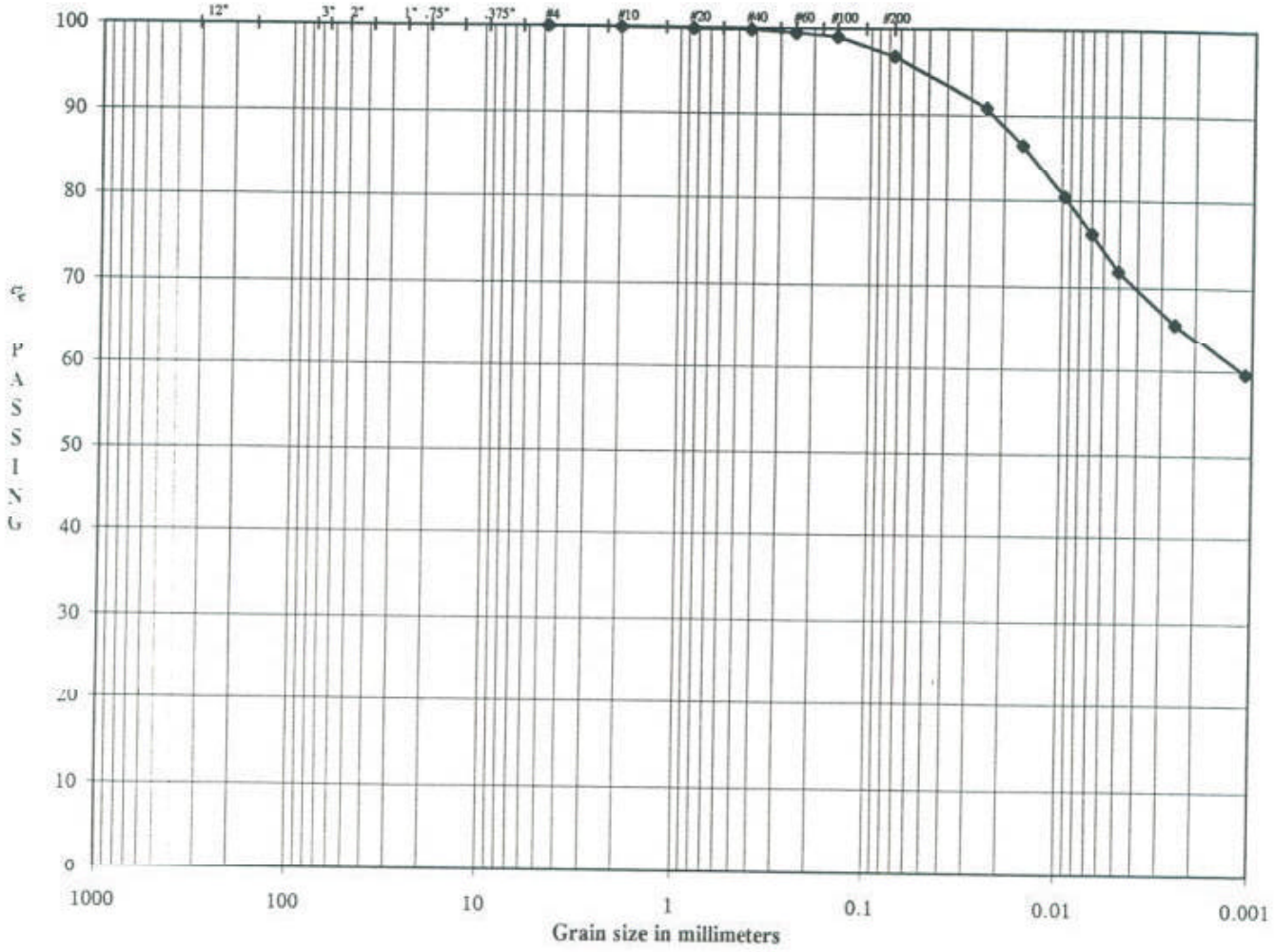
LIQUID LIMIT (WI)	67.06	67
PLASTIC LIMIT (Wp)	29.66	30
PLASTICITY INDEX (Ip)		37
LIQUIDITY INDEX (I)		0.01
MOISTURE CONTENT		30.03

DESCRIPTION: Reddish Brown, SILTY CLAY, trace fine sand.

USCS: CH

TECH: JDR
DATE: 6/8/98
CHECK:
REVIEW: PWM

PARTICLE SIZE DISTRIBUTION ASTM D 421 AND D 422
US STANDARD SIEVE OPENING SIZES



Boulders	Cobbles	Gravel: Coarse	Gravel: Fine	SAND: Cor	SAND: Med	SAND: Fine	SILT OR CLAY
		Gravel		SAND			FINES

SAMPLE ID	OWR - 7D
SAMPLE TYPE	UD
SAMPLE DEPTH	40.0 - 42.0'

LL	67
PL	30
PI	37

DESCRIPTION	Reddish Brown, SILTY CLAY, trace fine sand.
USCS	CH

SOLUTIA / RFI-CS / AL
983-3223

TECH	TF
DATE	6/1/98
CHECK	
REVIEW	

ASTM GRAIN SIZE ANALYSIS
ASTM C117, C136, D421, D422, D1140 and D2217

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR - 7D
PROJECT NO.	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	40.0 - 42.0'

AS RECEIVED WATER CONTENT

Tare No.		-
Wt. Wet Soil & Tare (gm)	(W1)	607.31
Wt. Dry Soil & Tare (gm)	(W2)	467.06
Weight of Tare (gm)	(W3)	0.00
Weight of Water (gm)	(W4=W1-W2)	140.25
Weight of Dry Soil (gm)	(W5=W2-W3)	467.06
Moisture Content (%)	(W4/W5)*100	30.03

Hygroscopic Moisture For Sieve Sample

Wet Soil & Tare (gm)	55.35
Dry Soil & Tare (gm)	54.44
Tare Weight (gm)	3.15
Moisture Content (%)	1.77

Total Weight of Sample Used For Sieve Analysis Corrected For Hygroscopic Moisture

Weight + Tare, Before Separating On The #4 Sieve (gm)	761.78	
Tare Weight (gm)	234.27	
Total Weight (gm)	518.31	(W6)

Plus #4 Material Sieve

TARE WEIGHT: 0.00

	(Wt+Tare)	(((Wt-Tare)/W6)*100)	%PASSING		
12.0"				12.0"	cobbles
3.0"				3.0"	coarse gravel
2.5"				2.5"	coarse gravel
2.0"				2.0"	coarse gravel
1.5"				1.5"	coarse gravel
1.0"				1.0"	coarse gravel
0.75"				0.75"	fine gravel
0.50"				0.50"	fine gravel
0.375"				0.375"	fine gravel
#4	0.00	0.0	100.0	#4	coarse sand

HYDROMETER ANALYSIS

Specific Gravity	(assumed)	
Specific Gravity	(tested)	2.865
Amount Dispersing Agent (ml)		125.00
Type Dispersion Device		Mechanical
Length of Dispersion Period		1 Minute

Weight of Sample Used For Hydrometer Test

Weight of Sample Wet or Dry (gm)	56.51
Calculated Dry Wt. used in test (gm)	55.52
Hydrometer Bulb Number	624378
% Pass #4 Sieve For Whole Sample	100.00

TARE WEIGHT: 203.14

HYDROMETER BACKSIEVE (Percent Passing #10 - #200 Sieves)

	(Wt+Tare)	Cumul Wt. Retained	% PASSING		
#10	203.18	0.04	99.9	#10	medium sand
#20	203.20	0.06	99.9	#20	medium sand
#40	203.27	0.13	99.8	#40	fine sand
#60	203.44	0.30	99.5	#60	fine sand
#100	203.67	0.53	99.0	#100	fine sand
#200	204.95	1.81	96.7	#200	fines

HYDROMETER CALCULATIONS

DATE	TIME	ET (min)	READING R	TEMP T	TEMP.COR. K	HYD.COR. Cc	READING C	EFFECTIVE LENGTH	A
6/8/98	8:27								
6/8/98	8:29	2.00	58.0	22.00	0.013	5.50	52.50	7.8	0.96
6/8/98	8:32	5.00	55.5	22.00	0.013	5.50	50.00	8.1	0.96
6/8/98	8:42	15.00	52.0	22.00	0.013	5.50	46.50	8.8	0.96
6/8/98	8:57	30.00	49.5	22.00	0.013	5.50	44.00	9.1	0.96
6/8/98	9:27	60.00	47.0	22.00	0.013	5.50	41.50	9.6	0.96
6/8/98	12:37	250.00	43.5	22.00	0.013	5.50	38.00	10.1	0.96
6/9/98	8:27	1440.00	40.0	22.00	0.013	5.50	34.50	10.7	0.96

GRAIN SIZE PERCENTAGES

Particle Diameter	% PASSING		
0.0249	90.8	% COBBLES	0.00
0.0160	86.4	% COARSE GRAVEL	0.00
0.0097	80.4	% FINE GRAVEL	0.00
0.0069	76.1	% COARSE SAND	0.07
0.0050	71.8	% MEDIUM SAND	0.16
0.0025	65.7	% FINE SAND	3.03
0.0011	59.6	% FINES	96.74
		% TOTAL SAMPLE	100.00

Description: Reddish Brown, SILTY CLAY, trace fine sand.

USCS: CH

67	LL
30	PL
37	PI

TECH	TF
DATE	6/7/98
CHECK	
REVIEW	

UNIT WEIGHT DETERMINATION
ASTM D 2937

PROJECT NAME	SOLUTIA / RFI-CS / AL	**SAMPLE ID**	OWR - 7D
PROJECT NUMBER	983-3223	**SAMPLE TYPE**	UD
		SAMPLE DEPTH	40.0-42.0'

WEIGHT OF SOIL (g)	607.31
LENGTH OF SAMPLE (in)	3.057
DIAMETER OF SAMPLE (in)	2.822
AREA OF SAMPLE (in^2)	6.25
VOLUME OF SAMPLE (in^3)	19.12
VOLUME OF SAMPLE (cm^3)	313.32

WET UNIT WEIGHT (pcf)	121.0

WEIGHT WET SOIL & TARE (g)	607.31
WEIGHT DRY SOIL & TARE (g)	467.06
WEIGHT OF WATER (g)	140.25
WEIGHT OF TARE (g)	0.00
WEIGHT OF DRY SOIL (g)	467.06
WATER CONTENT (%)	30.03

DRY UNIT WEIGHT (pcf)	93.1

SPECIFIC GRAVITY	2.865
VOLUME OF SOLIDS (cm^3)	163.02
VOLUME OF VOIDS (cm^3)	150.30
POROSITY (%)	48

TECH	GM
DATE	6/10/98
CHECK	
REVIEW	

FLOW PUMP #2

FLEXIBLE WALL PERMEABILITY
ASTM D 5084
METHOD D, CONSTANT RATE OF FLOW

PROJECT TITLE	SOLUTIA / RFI-CS / AL		
PROJECT NUMBER	983-3223		
SAMPLE ID	OWR -7D	-	40.0-42.0'
SAMPLE TYPE	UD		

BOARD #	6
CELL #	6
Flow Pump Speed	10
Technician	PWM

COMMENTS

Sample Data, Initial			
Height, inches	3.057	B-Value, f	1.00
Diameter, inches	2.822	Cell Pres.	108.0
Area, cm²	40.35	Bot. Pres.	80.0
Volume, cm³	313.31	Top Pres.	80.0
Mass, g	607.31	Tot. B.P.	80.0
Moisture Content, %	30.03	Head, max.	132.24
Dry Density, pcf	93.02	Head, min.	132.24
Spec. Gravity	2.865	Max. Grad.	16.90
Volume Solids, cm³	163.02	Min. Grad.	16.90
Volume Voids, cm³	150.31		
Void Ratio	0.92		
Saturation, %	93.3%		

Sample Data, Final	
Height, inches	3.081
Diameter, inches	2.828
Area, cm²	40.52
Volume, cm³	317.13
Mass, g	616.84
Moisture Content, %	32.07
Dry Density, pcf	91.90
Volume Solids, cm³	163.02
Volume Voids, cm³	154.11
Void Ratio	0.95
Saturation, %	97.2%

WATER CONTENTS		Trimmings Initial	Sample Final
Wt Soil & Tare, i	g	607.31	659.88
Wt Soil & Tare, f	g	467.06	510.15
Wt Tare	g	0.00	43.26
Wt Moisture Lost	g	140.25	149.73
Wt Dry Soil	g	467.06	466.89
Water Content	%	30.03%	32.07%

DESCRIPTION: Reddish Brown, SILTY CLAY, trace fine sand.

Flow Pump Rate: 2.8E-05 cm³/sec

USCS: CH

TIME FUNCTIONS, SECONDS								dP				
DATE	DAY	HOUR	MIN	TEMP (°C)	dt (min)	dt,acc (min)	dt (sec)	dt,acc (sec)	Reading (psi)	Head (cm)	Gradient	Permeability (cm/sec)
6/8/98	35954	16	0	21.4	0	0	0	0	1.88	132.24	16.90	4.0E-08
6/8/98	35954	16	5	21.4	5	5	300	300	1.88	132.24	16.90	4.0E-08
6/8/98	35954	16	10	21.4	5	10	300	600	1.88	132.24	16.90	4.0E-08
6/8/98	35954	16	15	21.4	5	15	300	900	1.88	132.24	16.90	4.0E-08
6/8/98	35954	16	20	21.4	5	20	300	1200	1.88	132.24	16.90	4.0E-08 *
6/8/98	35954	16	25	21.4	5	25	300	1500	1.88	132.24	16.90	4.0E-08 *
6/8/98	35954	16	30	21.4	5	30	300	1800	1.88	132.24	16.90	4.0E-08 *

*TRANSCRIBED FROM ORIGINAL DATA SHEETS

PERMEABILITY REPORTED AS ** 4.0E-08 cm/sec **

DATE 6/8/98
CHECK
REVIEW

ATTERBERG LIMITS
ASTM D-4318

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR-7D -
PROJECT NUMBER	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	60.0 - 62.0'

SAMPLE PREPARATION
Wet or Dry: Dry

Minus #40 Sieve: Yes

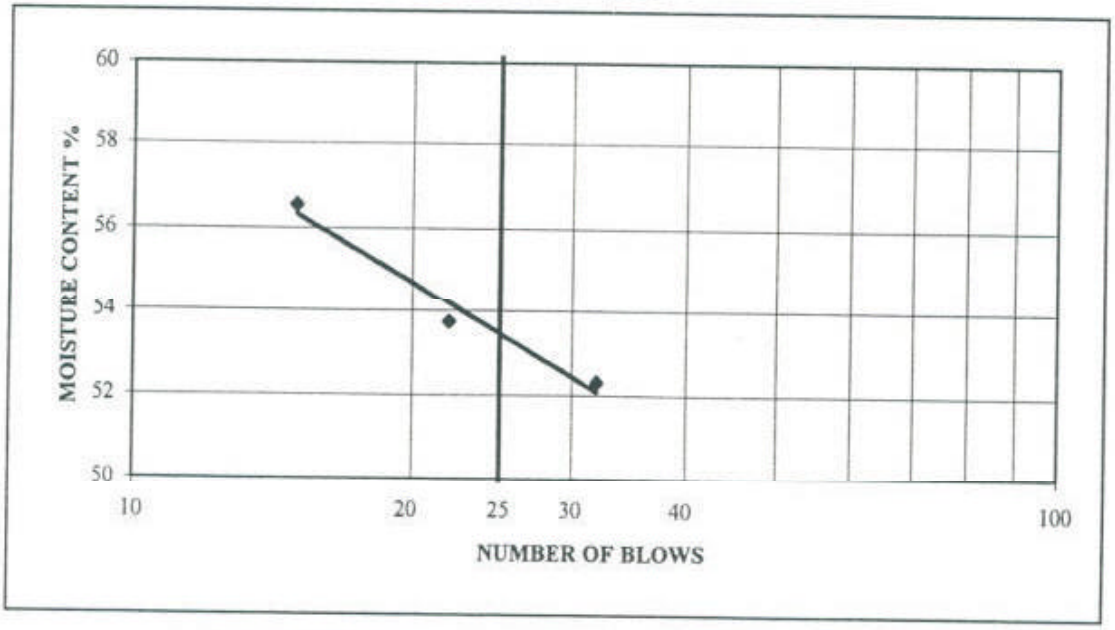
PLASTIC LIMIT DETERMINATION

					NATURAL MOISTURE
Weight of Wet Soil & Tare (gm)	(W1)	24.40	23.64	22.18	574.17
Weight of Dry Soil & Tare (gm)	(W2)	21.48	20.98	19.79	438.72
Weight of Tare (gm)	(W3)	11.40	11.77	11.39	0.00
Weight of Water (gm)	(W4=W1-W2)	2.92	2.66	2.39	135.45
Weight of Dry Soil (gm)	(W5=W2-W3)	10.08	9.21	8.40	438.72
Water Content %	(W4/W5)*100	28.97	28.88	28.45	30.87

LIQUID LIMIT DETERMINATION

Number of Blows		32	22	15
Weight of Wet Soil & Tare (gm)	(W6)	16.17	18.84	17.57
Weight of Dry Soil & Tare (gm)	(W7)	12.08	13.74	12.77
Weight of Tare (gm)	(W8)	4.26	4.25	4.28
Weight of Water (gm)	(W9=W6-W7)	4.09	5.10	4.80
Weight of Dry Soil (gm)	(W10=W7-W8)	7.82	9.49	8.49
Water Content %	(W9/W10)*100	52.30	53.74	56.54

NOTE:



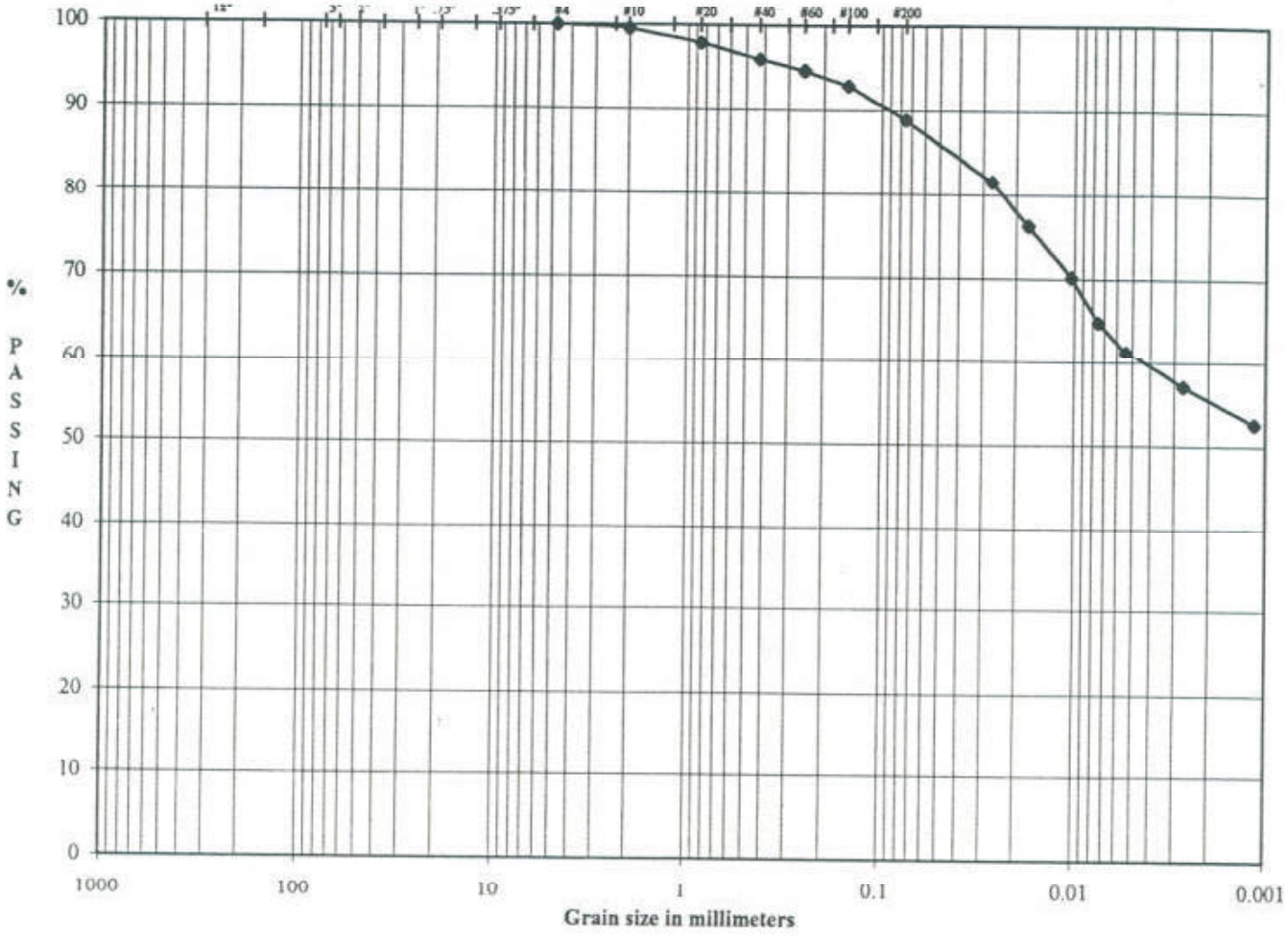
LIQUID LIMIT (WI)	53.46	53
PLASTIC LIMIT (Wp)	28.77	29
PLASTICITY INDEX (Ip)		24
LIQUIDITY INDEX (I)		0.09
MOISTURE CONTENT		30.87

DESCRIPTION: Reddish Brown and White, SILTY CLAY, little medium to fine sand.

USCS: CH

TECH	GM
DATE	6/8/98
CHECK	
REVIEW	

PARTICLE SIZE DISTRIBUTION ASTM D 421 AND D 422
US STANDARD SIEVE OPENING SIZES



Boulders	Cobbles	Coarse	Fine	Cor	Med	Fine	SILT OR CLAY
		Gravel		SAND			FINES

SAMPLE ID	OWR - 7D
SAMPLE TYPE	UD
SAMPLE DEPTH	60.0 - 62.0'

LL	53
PL	29
PI	24

DESCRIPTION	Reddish Brown and White, SILTY CLAY, little medium to fine sand.
USCS	CH

SOLUTIA / RFI-CS / AL
983-3223

TECH	JDR
DATE	6/7/98
CHECK	
REVIEW	

ASTM GRAIN SIZE ANALYSIS
ASTM C117, C136, D421, D422, D1140 and D2217

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR - 7D
PROJECT NO.	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	60.0 - 62.0'

AS RECEIVED WATER CONTENT

Tare No.		-
Wt. Wet Soil & Tare (gm)	(W1)	574.17
Wt. Dry Soil & Tare (gm)	(W2)	438.72
Weight of Tare (gm)	(W3)	0.00
Weight of Water (gm)	(W4=W1-W2)	135.45
Weight of Dry Soil (gm)	(W5=W2-W3)	438.72
Moisture Content (%)	(W4/W5)*100	30.87

Hygroscopic Moisture For Sieve Sample

Wet Soil & Tare (gm)	68.00
Dry Soil & Tare (gm)	66.46
Tare Weight (gm)	3.23
Moisture Content (%)	2.44

Total Weight of Sample Used For Sieve Analysis Corrected For Hygroscopic Moisture

Weight + Tare, Before Separating On The #4 Sieve (gm)	694.98	
Tare Weight (gm)	218.76	
Total Weight (gm)	464.90	(W6)

Plus #4 Material Sieve

TARE WEIGHT: 0.00

	(Wt+Tare)	(((Wt-Tare)/W6)*100)	%PASSING		
12.0"				12.0"	cobbles
3.0"				3.0"	coarse gravel
2.5"				2.5"	coarse gravel
2.0"				2.0"	coarse gravel
1.5"				1.5"	coarse gravel
1.0"				1.0"	coarse gravel
0.75"				0.75"	fine gravel
0.50"				0.50"	fine gravel
0.375"				0.375"	fine gravel
#4	0.00	0.0	100.0	#4	coarse sand

HYDROMETER ANALYSIS

Specific Gravity	(assumed)	
Specific Gravity	(tested)	2.791
Amount Dispersing Agent (ml)		125.00
Type Dispersion Device		Mechanical
Length of Dispersion Period		1 Minute

Weight of Sample Used For Hydrometer Test

Weight of Sample Wet or Dry (gm)	57.25
Calculated Dry Wt. used in test (gm)	55.89
Hydrometer Bulb Number	624378
% Pass #4 Sieve For Whole Sample	100.00

TARE WEIGHT: 203.14

HYDROMETER BACKSIEVE (Percent Passing #10 - #200 Sieves)

	(Wt+Tare)	Cumul Wt. Retained	% PASSING		
#10	203.38	0.24	99.6	#10	medium sand
#20	204.33	1.19	97.9	#20	medium sand
#40	205.39	2.25	96.0	#40	fine sand
#60	206.12	2.98	94.7	#60	fine sand
#100	207.15	4.01	92.8	#100	fine sand
#200	209.33	6.19	88.9	#200	fines

HYDROMETER CALCULATIONS

209.33

DATE	TIME	ET (min)	READING R	TEMP T	TEMP.COR. K	HYD.COR. Cc	READING C	EFFECTIVE LENGTH	A
6/8/98	8:23								
6/8/98	8:25	2.00	52.0	22.00	0.013	5.50	46.50	8.8	0.98
6/8/98	8:28	5.00	49.0	22.00	0.013	5.50	43.50	9.2	0.98
6/8/98	8:38	15.00	45.5	22.00	0.013	5.50	40.00	9.7	0.98
6/8/98	8:53	30.00	42.5	22.00	0.013	5.50	37.00	10.2	0.98
6/8/98	9:23	60.00	40.5	22.00	0.013	5.50	35.00	10.6	0.98
6/8/98	12:33	250.00	38.0	22.00	0.013	5.50	32.50	11.1	0.98
6/9/98	8:23	1440.00	35.5	22.00	0.013	5.50	30.00	11.4	0.98

GRAIN SIZE PERCENTAGES

Particle Diameter	% PASSING		
0.0268	81.5	% COBBLES	0.00
0.0174	76.3	% COARSE GRAVEL	0.00
0.0103	70.1	% FINE GRAVEL	0.00
0.0075	64.9	% COARSE SAND	0.43
0.0054	61.4	% MEDIUM SAND	3.60
0.0027	57.0	% FINE SAND	7.05
0.0011	52.6	% FINES	88.92
		% TOTAL SAMPLE	100.00

Description: Reddish Brown and White, SILTY CLAY, little medium to fine sand.

USCS: CH

53	LL
29	PL
24	PI

TECH	JDR
DATE	6/7/98
CHECK	
REVIEW	

UNIT WEIGHT DETERMINATION
ASTM D 2937

PROJECT NAME	SOLUTIA / RFI-CS / AL	**SAMPLE ID**	OWR - 7D
PROJECT NUMBER	983-3223	**SAMPLE TYPE**	UD
		SAMPLE DEPTH	60.0-62.0'

WEIGHT OF SOIL (g)	574.17
LENGTH OF SAMPLE (in)	3.018
DIAMETER OF SAMPLE (in)	2.870
AREA OF SAMPLE (in^2)	6.47
VOLUME OF SAMPLE (in^3)	19.52
VOLUME OF SAMPLE (cm^3)	319.87

WET UNIT WEIGHT (pcf)	112.0

WEIGHT WET SOIL & TARE (g)	574.17
WEIGHT DRY SOIL & TARE (g)	438.72
WEIGHT OF WATER (g)	135.45
WEIGHT OF TARE (g)	0.00
WEIGHT OF DRY SOIL (g)	438.72
WATER CONTENT (%)	30.87

DRY UNIT WEIGHT (pcf)	85.6

SPECIFIC GRAVITY	2.791
VOLUME OF SOLIDS (cm^3)	157.20
VOLUME OF VOIDS (cm^3)	162.67
POROSITY (%)	51

TECH	GM
DATE	6/10/98
CHECK	
REVIEW	

FLOW PUMP #2

FLEXIBLE WALL PERMEABILITY
ASTM D 5084
METHOD D, CONSTANT RATE OF FLOW

PROJECT TITLE	SOLUTIA / RFI-CS / AL		
PROJECT NUMBER	983-3223		
SAMPLE ID	OWR - 7D	-	60.0-62.0'
SAMPLE TYPE	UD		

BOARD#	3
CELL#	3
Flow Pump Speed	6
Technician	JDR

COMMENTS

Sample Data, Initial			
Height, inches	3.052	B-Value, f	0.95
Diameter, inches	2.873	Cell Pres.	102.0
Area, cm²	41.82	Bot. Pres.	60.0
Volume, cm³	324.23	Top Pres.	60.0
Mass, g	628.48	Tot. B.P.	60.0
Moisture Content, %	21.63	Head, max.	83.00
Dry Density, pcf	99.45	Head, min.	83.00
Spec. Gravity	2.791	Max. Grad.	10.75
Volume Solids, cm³	185.13	Min. Grad.	10.75
Volume Voids, cm³	139.09		
Void Ratio	0.75		
Saturation, %	80.4%		

Sample Data, Final	
Height, inches	3.040
Diameter, inches	2.868
Area, cm²	41.68
Volume, cm³	321.83
Mass, g	639.12
Moisture Content, %	23.69
Dry Density, pcf	100.19
Volume Solids, cm³	185.14
Volume Voids, cm³	136.69
Void Ratio	0.74
Saturation, %	89.5%

WATER CONTENTS		Trimmings Initial	Sample Final
Wt Soil & Tare,i	g	628.48	681.35
Wt Soil & Tare,f	g	516.71	559.04
Wt Tare	g	0.00	42.69
Wt Moisture Lost	g	111.77	122.31
Wt Dry Soil	g	516.71	516.35
Water Content	%	21.63%	23.69%

Flow Pump Rate: 5.30E-04 cm³/sec

USCS: CH

DESCRIPTION: Reddish Brown and White, SILTY CLAY, little medium to fine sand.

TIME FUNCTIONS, SECONDS								dP				
DATE	DAY	HOUR	MIN	TEMP (°C)	dt (min)	dt,acc (min)	dt (sec)	dt,acc (sec)	Reading (psi)	Head (cm)	Gradient	Permeability (cm/sec)
6/12/98	35958	8	40	21.9	0	0	0	0	1.18	83.00	10.75	1.1E-06
6/12/98	35958	8	45	21.9	5	5	300	300	1.18	83.00	10.75	1.1E-06
6/12/98	35958	8	50	21.9	5	10	300	600	1.18	83.00	10.75	1.1E-06
6/12/98	35958	8	55	21.9	5	15	300	900	1.18	83.00	10.75	1.1E-06 *
6/12/98	35958	9	0	21.9	5	20	300	1200	1.18	83.00	10.75	1.1E-06 *
6/12/98	35958	9	5	21.9	5	25	300	1500	1.18	83.00	10.75	1.1E-06 *
6/12/98	35958	9	10	21.9	5	30	300	1800	1.18	83.00	10.75	1.1E-06 *

*TRANSCRIBED FROM ORIGINAL DATA SHEETS

PERMEABILITY REPORTED AS ** 1.1E-06 cm/sec **

DATE 6/12/98
CHECK
REVIEW

JUNE 1998

983-3223

SOLUTIA / RFI-CS / AL
SUMMARY OF SOIL DATA

Sample Identification	Sample Type	Sample Depth	Soil Classification	Natural Moisture %	Atterberg Limits				Grain Size Distribution			Compaction		Gs	Unit Weight		Permeability (cm/sec)	Additional Tests Conducted (See Notes)
					L.L.	P.L.	P.I.	L.I.	% Finer No. 4 Sieve	% Finer No. 200 Sieve	% Finer .005 mm	Maximum Dry Density (lb/cuft)	Optimum Moisture %		Moisture %	Dry (lb/cuft)		
OWR - 1S	UD	30.0-32.0'	CH	29.5	52	26	26	0.01	100.0	83.1	62.0	-	-	2.78	29.5	95.3	3.8E-08	PO, W_T
OWR - 2S	UD	30.0-32.0'	SM	17.9	35	25	10	-0.67	99.7	41.3	29.5	-	-	2.71	17.9	108.7	3.2E-07	PO, W_T
OWR - 3S	UD	30.0-32.0'	CH	39.1	77	32	45	0.15	100.0	92.0	79.3	-	-	2.84	39.1	84.4	4.9E-08	PO, W_T
OWR - 8S	UD	20.0-22.0'	ML	22.4	48	28	20	-0.28	98.8	63.1	44.5	-	-	2.76	22.4	102.8	1.0E-07	PO, W_T
OWR - 8S	UD	30.0-32.0'	MH	31.8	54	31	23	0.06	93.7	64.6	48.5	-	-	2.80	31.8	93.6	3.8E-08	PO, W_T
OWR - 9S	UD	20.0-22.0'	MH	28.0	66	35	31	-0.22	86.8	61.2	53.0	-	-	2.83	28.0	97.0	1.3E-07	PO, W_T
OWR - 9S	UD	40.0-42.0'	ML	21.3	35	27	8	-0.71	81.1	53.7	30.5	-	-	2.82	21.3	100.2	9.5E-07	PO, W_T

ABBREVIATIONS: LIQUID LIMIT (LL)
PLASTIC LIMIT (PL)
PLASTICITY INDEX (PI)
LIQUIDITY INDEX (LI)
SPECIFIC GRAVITY (Gs)
MOISTURE (Mc)

NOTES: T = TRIAXIAL TEST
U = UNCONFINED COMPRESSION TEST
C = CONSOLIDATION TEST
DS = DIRECT SHEAR TEST
O = ORGANIC CONTENT
P = pH
PO = POROSITY
W_T = WATER TABLE GIVEN 6-25-98

ATTERBERG LIMITS
ASTM D-4318

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR - 1S -
PROJECT NUMBER	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	30.0 - 32.0'

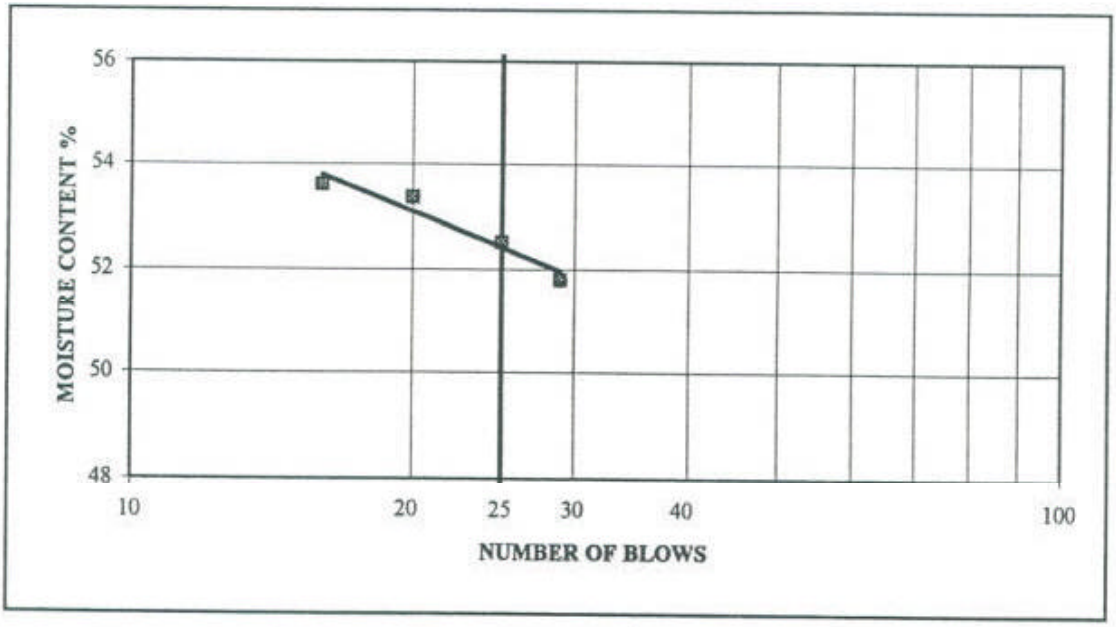
SAMPLE PREPARATION
Wet or Dry: Dry Minus #40 Sieve: Yes

PLASTIC LIMIT DETERMINATION

					NATURAL MOISTURE
Weight of Wet Soil & Tare (gm)	(W1)	21.04	21.37	21.15	616.43
Weight of Dry Soil & Tare (gm)	(W2)	19.05	19.33	19.17	476.14
Weight of Tare (gm)	(W3)	11.48	11.41	11.40	0.00
Weight of Water (gm)	(W4=W1-W2)	1.99	2.04	1.98	140.29
Weight of Dry Soil (gm)	(W5=W2-W3)	7.57	7.92	7.77	476.14
Water Content %	(W4/W5)*100	26.29	25.76	25.48	29.46

LIQUID LIMIT DETERMINATION

Number of Blows		29	25	20	16	NOTE:
Weight of Wet Soil & Tare (gm)	(W6)	22.05	24.33	23.98	27.52	
Weight of Dry Soil & Tare (gm)	(W7)	15.99	17.42	17.15	19.41	
Weight of Tare (gm)	(W8)	4.29	4.26	4.35	4.28	
Weight of Water (gm)	(W9=W6-W7)	6.06	6.91	6.83	8.11	
Weight of Dry Soil (gm)	(W10=W7-W8)	11.70	13.16	12.80	15.13	
Water Content %	(W9/W10)*100	51.79	52.51	53.36	53.60	



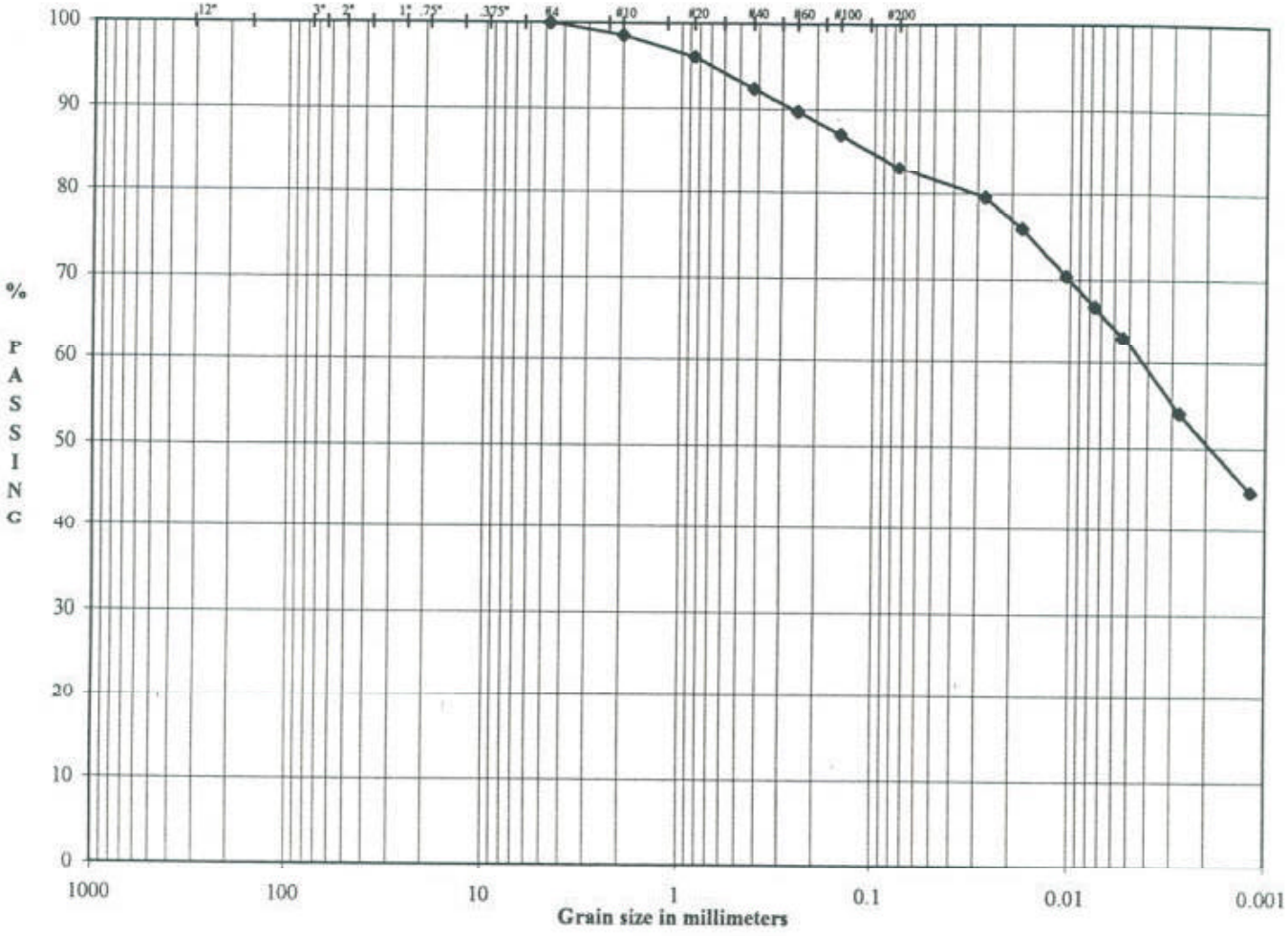
LIQUID LIMIT (Wl)	52.42	52
PLASTIC LIMIT (Wp)	25.84	26
PLASTICITY INDEX (Ip)		26
LIQUIDITY INDEX (I)		0.14
MOISTURE CONTENT		29.46

DESCRIPTION: Brownish Yellow, SILTY CLAY, some medium to fine sand.

USCS: CH

TECH: JDR
DATE: 6/8/98
CHECK:
REVIEW:

PARTICLE SIZE DISTRIBUTION ASTM D 421 AND D 422
US STANDARD SIEVE OPENING SIZES



Boulders	Cobbles	Coarse Gravel	Fine Gravel	Cor SAND	Med SAND	Fine SAND	SILT OR CLAY FINES

SAMPLE ID	OWR - 1S
SAMPLE TYPE	UD
SAMPLE DEPTH	30.0 - 32.0'

LL	52
PL	26
PI	26

DESCRIPTION	Brownish Yellow, SILTY CLAY, some medium to fine sand.
USCS	CH

SOLUTIA / RFI-CS / AL
983-3223

TECH	JDR
DATE	6/4/98
CHECK	
REVIEW	

ASTM GRAIN SIZE ANALYSIS
ASTM C117, C136, D421, D422, D1140 and D2217

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR - 1S -
PROJECT NO.	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	30.0 - 32.0'

AS RECEIVED WATER CONTENT

Tare No.		-
Wt. Wet Soil & Tare (gm)	(W1)	616.43
Wt. Dry Soil & Tare (gm)	(W2)	476.14
Weight of Tare (gm)	(W3)	0.00
Weight of Water (gm)	(W4=W1-W2)	140.29
Weight of Dry Soil (gm)	(W5=W2-W3)	476.14
Moisture Content (%)	(W4/W5)*100	29.46

Hygroscopic Moisture For Sieve Sample

Wet Soil & Tare (gm)	66.48
Dry Soil & Tare (gm)	66.11
Tare Weight (gm)	3.16
Moisture Content (%)	0.59

Total Weight of Sample Used For Sieve Analysis Corrected For Hygroscopic Moisture

Weight + Tare, Before Separating On The #4 Sieve (gm)	957.36	
Tare Weight (gm)	235.49	
Total Weight (gm)	717.65	(W6)

Plus #4 Material Sieve

TARE WEIGHT: 0.00

	(Wt+Tare)	(((Wt-Tare)/W6)*100)	%PASSING		
12.0"				12.0"	cobbles
3.0"				3.0"	coarse gravel
2.5"				2.5"	coarse gravel
2.0"				2.0"	coarse gravel
1.5"				1.5"	coarse gravel
1.0"				1.0"	coarse gravel
0.75"				0.75"	fine gravel
0.50"				0.50"	fine gravel
0.375"				0.375"	fine gravel
#4	0.00	0.0	100.0	#4	coarse sand

HYDROMETER ANALYSIS

Specific Gravity	(assumed)	
Specific Gravity	(tested)	2.784
Amount Dispersing Agent (ml)		125.00
Type Dispersion Device		Mechanical
Length of Dispersion Period		1 Minute

Weight of Sample Used For Hydrometer Test

Weight of Sample Wet or Dry (gm)	53.90
Calculated Dry Wt. used in test (gm)	53.59
Hydrometer Bulb Number	624378
% Pass #4 Sieve For Whole Sample	100.00

TARE WEIGHT: 203.14

HYDROMETER BACKSIEVE (Percent Passing #10 - #200 Sieves)

	(Wt+Tare)	Cumul Wt. Retained	% PASSING		
#10	203.89	0.75	98.6	#10	medium sand
#20	205.26	2.12	96.0	#20	medium sand
#40	207.26	4.12	92.3	#40	fine sand
#60	208.66	5.52	89.7	#60	fine sand
#100	210.12	6.98	87.0	#100	fine sand
#200	212.21	9.07	83.1	#200	fines

HYDROMETER CALCULATIONS

DATE	TIME	ET (min)	READING R	TEMP T	TEMP.COR. K	HYD.COR. Cc	READING C	EFFECTIVE LENGTH	A
6/5/98	8:19								
6/5/98	8:21	2.00	49.0	22.50	0.013	5.50	43.50	9.2	0.98
6/5/98	8:24	5.00	47.0	22.50	0.013	5.50	41.50	9.6	0.98
6/5/98	8:34	15.00	44.0	22.50	0.013	5.50	38.50	10.1	0.98
6/5/98	8:49	30.00	42.0	22.50	0.013	5.50	36.50	10.4	0.98
6/5/98	9:19	60.00	40.0	22.50	0.013	5.50	34.50	10.7	0.98
6/5/98	12:29	250.00	35.0	22.50	0.013	5.50	29.50	11.5	0.98
6/6/98	8:19	1440.00	30.0	22.50	0.013	5.50	24.50	12.4	0.98

GRAIN SIZE PERCENTAGES

Particle Diameter	% PASSING		
0.0275	79.6	% COBBLES	0.00
0.0177	75.9	% COARSE GRAVEL	0.00
0.0105	70.4	% FINE GRAVEL	0.00
0.0075	66.8	% COARSE SAND	1.40
0.0054	63.1	% MEDIUM SAND	6.29
0.0027	54.0	% FINE SAND	9.24
0.0012	44.8	% FINES	83.07
		% TOTAL SAMPLE	100.00

Description: Brownish Yellow, SILTY CLAY, some medium to fine sand.

USCS: CH

52	LL
26	PL
26	PI

TECH	JDR
DATE	6/4/98
CHECK	
REVIEW	

UNIT WEIGHT DETERMINATION
ASTM D 2937

PROJECT NAME	SOLUTIA / RFI-CS / AL	**SAMPLE ID**	OWR - 1S
PROJECT NUMBER	983-3223	**SAMPLE TYPE**	UD
		SAMPLE DEPTH	30.0-32.0'

WEIGHT OF SOIL (g)	616.43
LENGTH OF SAMPLE (in)	2.971
DIAMETER OF SAMPLE (in)	2.855
AREA OF SAMPLE (in^2)	6.40
VOLUME OF SAMPLE (in^3)	19.02
VOLUME OF SAMPLE (cm^3)	311.68

WET UNIT WEIGHT (pcf)	123.5

WEIGHT WET SOIL & TARE (g)	616.43
WEIGHT DRY SOIL & TARE (g)	476.14
WEIGHT OF WATER (g)	140.29
WEIGHT OF TARE (g)	0.00
WEIGHT OF DRY SOIL (g)	476.14
WATER CONTENT (%)	29.46

DRY UNIT WEIGHT (pcf)	95.4

SPECIFIC GRAVITY	2.784
VOLUME OF SOLIDS (cm^3)	171.03
VOLUME OF VOIDS (cm^3)	140.65
POROSITY (%)	45

TECH	GM
DATE	6/10/98
CHECK	
REVIEW	

FLOW PUMP #1

FLEXIBLE WALL PERMEABILITY
ASTM D 5084
METHOD D, CONSTANT RATE OF FLOW

PROJECT TITLE	SOLUTIA / RFI-CS / AL		
PROJECT NUMBER	983.3223		
SAMPLE ID	OWR - 1S	-	30.0-32.0'
SAMPLE TYPE	UD		

BOARD #	2
CELL #	2
Flow Pump Speed	10
Technician	GM

COMMENTS

Sample Data, Initial			
Height, inches	2.971	B-Value, f	1.00
Diameter, inches	2.855	Cell Pres.	101.0
Area, cm²	41.30	Bot. Pres.	80.0
Volume, cm³	311.68	Top Pres.	80.0
Mass, g	616.43	Tot. B.P.	80.0
Moisture Content, %	29.46	Head, max.	142.79
Dry Density, pcf	95.33	Head, min.	142.79
Spec. Gravity	2.784	Max. Grad.	18.97
Volume Solids, cm³	171.03	Min. Grad.	18.97
Volume Voids, cm³	140.65		
Void Ratio	082		
Saturation, %	99.7%		

Sample Data, Final	
Height, inches	2.964
Diameter, inches	2.854
Area, cm²	41.27
Volume, cm³	310.73
Mass, g	616.98
Moisture Content, %	29.58
Dry Density, pcf	95.62
Volume Solids, cm³	171.02
Volume Voids, cm³	139.70
Void Ratio	0.82
Saturation, %	100.8%

WATER CONTENTS		Trimmings Initial	Sample Final
Wt Soil & Tare, i	g	616.43	67335
Wt Soil & Tare, f	g	476.14	53255
Wt Tare	g	0.00	56.40
Wt Moisture Lost	g	140.29	140.80
Wt Dry Soil	g	476.14	475.95
Water Content	%	29.46%	29.58%

DESCRIPTION

Brownish Yellow, SILTY CLAY, some medium to fine sand.

FlowPump Rate 3.00E-05 cm³/sec

USCS CH

TIME FUNCTIONS, SECONDS								dP				
DATE	DAY	HOUR	MIN	TEMP (°C)	dt (min)	dt,acc (min)	dt (sec)	dt,acc (sec)	Reading (psi)	Head (cm)	Gradient	Permeability (cm/sec)
6/5/98	35951	16	30	20.3	0	0	0	0	2.03	142.79	18.97	3.8E-08
6/5/98	35951	16	35	20.3	5	5	300	300	2.03	142.79	18.97	3.8E-08
6/5/98	35951	16	40	20.3	5	10	300	600	2.03	142.79	18.97	3.8E-08
6/5/98	35951	16	45	20.3	5	15	300	900	2.03	142.79	18.97	3.8E-08 *
6/5/98	35951	16	50	20.3	5	20	300	1200	2.03	142.79	18.97	3.8E-08 *
6/5/98	35951	16	55	20.3	5	25	300	1500	2.03	142.79	18.97	3.8E-08 *
6/5/98	35951	17	0	20.3	5	30	300	1800	2.03	142.79	18.97	3.8E-08 *

*TRANSCRIBED FROM ORIGINAL DATA SHEETS

PERMEABILITY REPORTED AS ** 3.8E-08 cm/sec **

DATE 6/5/98
CHECK GM
REVIEW

Golder Construction Services, Inc.

ATTERBERG LIMITS
ASTM D-4318

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR - 2S -
PROJECT NUMBER	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	30.0 - 32.0'

SAMPLE PREPARATION

Wet or Dry: Dry

Minus #40 Sieve: Yes

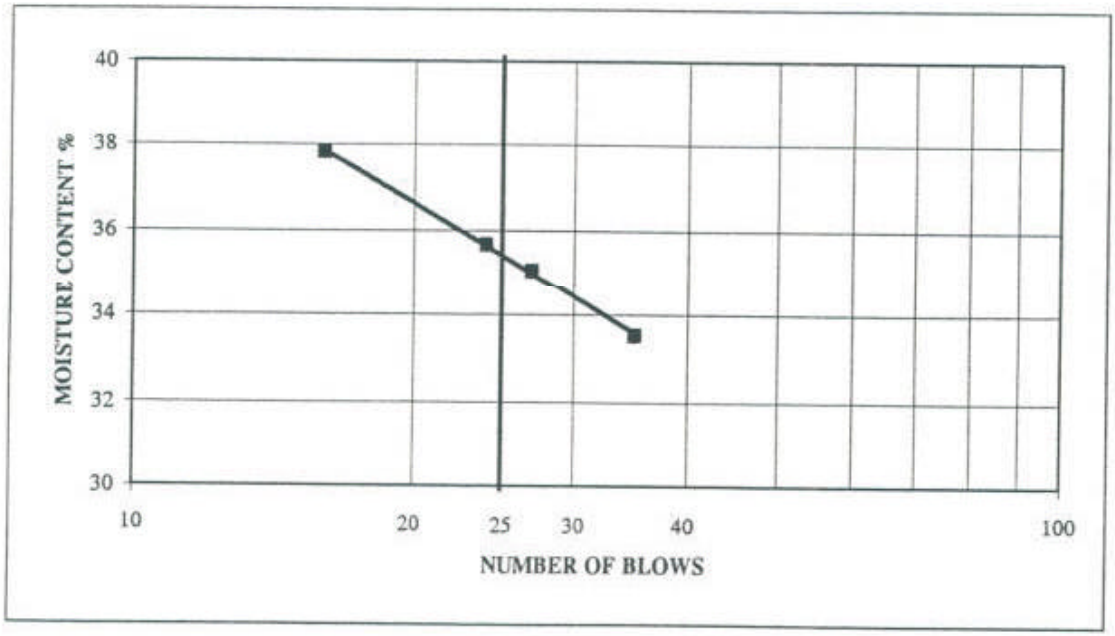
PLASTIC LIMIT DETERMINATION

					NATURAL MOISTURE
Weight of Wet Soil & Tare (gm)	(W1)	25.68	26.44	25.92	679.99
Weight of Dry Soil & Tare (gm)	(W2)	22.94	23.47	23.07	576.84
Weight of Tare (gm)	(W3)	11.84	11.41	11.48	0.00
Weight of Water (gm)	(W4=W1-W2)	2.74	2.97	2.85	103.15
Weight of Dry Soil (gm)	(W5=W2-W3)	11.10	12.06	11.59	576.84
Water Content %	(W4/W5)*100	24.68	24.63	24.59	17.88

LIQUID LIMIT DETERMINATION

Number of Blows		35	27	24	16
Weight of Wet Soil & Tare (gm)	(W6)	17.58	18.79	19.41	20.36
Weight of Dry Soil & Tare (gm)	(W7)	14.24	15.02	16.05	15.92
Weight of Tare (gm)	(W8)	4.28	4.27	6.63	4.18
Weight of Water (gm)	(W9=W6-W7)	3.34	3.77	3.36	4.44
Weight of Dry Soil (gm)	(W10=W7-W8)	9.96	10.75	9.42	11.74
Water Content %	(W9/W10)*100	33.53	35.07	35.67	37.82

NOTE:



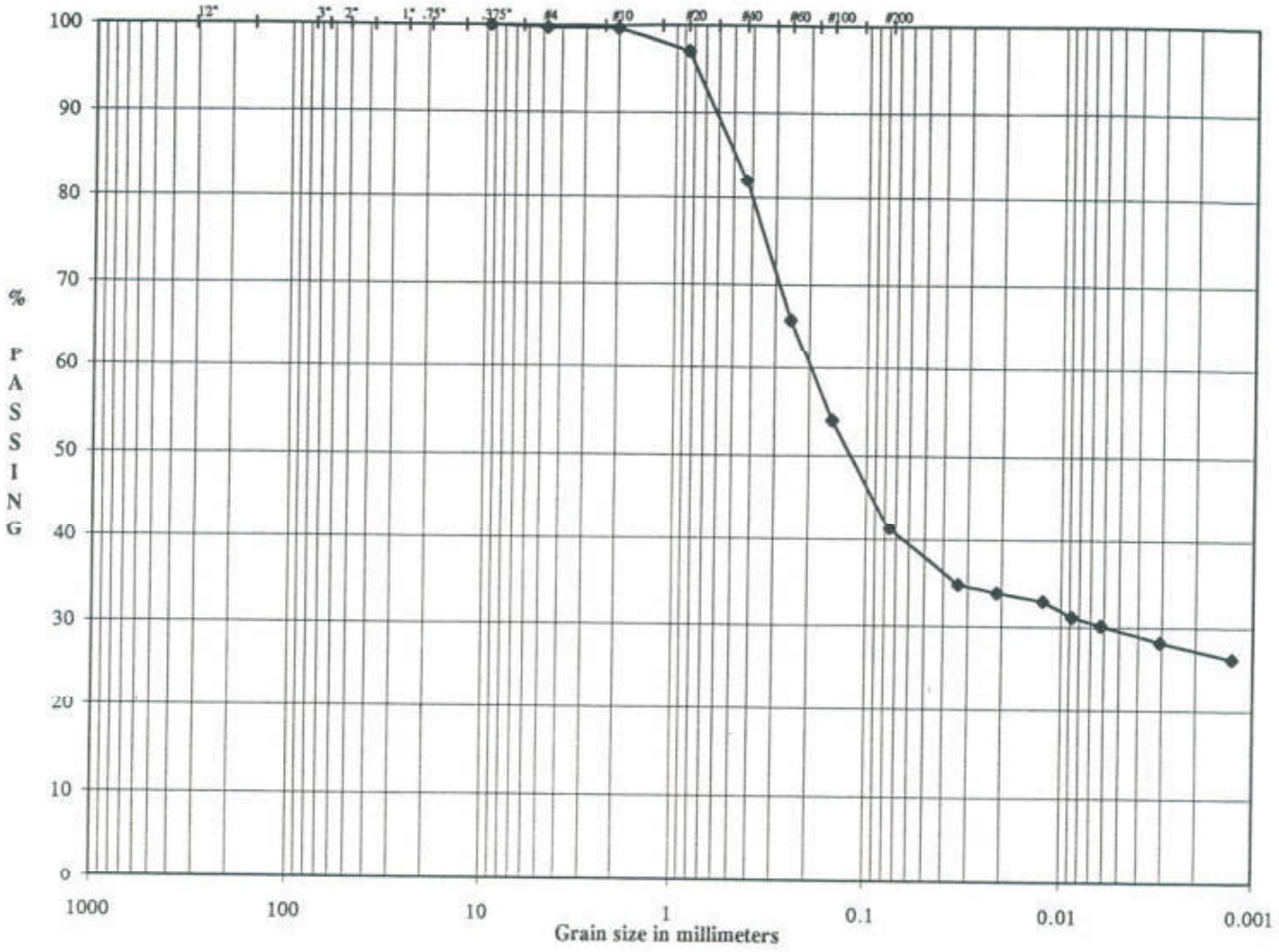
LIQUID LIMIT (Wl)	35.42	35
PLASTIC LIMIT (Wp)	24.63	25
PLASTICITY INDEX (Ip)		10
LIQUIDITY INDEX (I)		-0.67
MOISTURE CONTENT		17.88

DESCRIPTION: Yellowish Brown, MEDIUM TO FINE SAND, and clayey silt, trace fine gravel.

USCS: SM

TECH	TF
DATE	6/26/98
CHECK	
REVIEW	

PARTICLE SIZE DISTRIBUTION ASTM D 421 AND D 422
US STANDARD SIEVE OPENING SIZES



Boulders	Cobbles	Coarse Gravel	Fine Gravel	Cor SAND	Med SAND	Fine SAND	SILT OR CLAY FINES

SAMPLE ID	OWR - 2S
SAMPLE TYPE	UD
SAMPLE DEPTH	30.0 - 32.0'

LL	35
PL	25
PI	10

DESCRIPTION	Yellowish Brown, MEDIUM TO FINE SAND, and clayey silt, trace fine gravel.
USCS	SM

SOLUTIA / RFI-CS / AL
983-3223

TECH	JDR
DATE	6/25/08
CHECK	
REVIEW	

ASTM GRAIN SIZE ANALYSIS
ASTM C117, C136, D421, D422, D1140 and D2217

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR - 2S -
PROJECT NO.	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	30.0 - 32.0'

AS RECEIVED WATER CONTENT

Tare No.		-
Wt. Wet Soil & Tare (gm)	(W1)	679.99
Wt. Dry Soil & Tare (gm)	(W2)	576.84
Weight of Tare (gm)	(W3)	0.00
Weight of Water (gm)	(W4=W1-W2)	103.15
Weight of Dry Soil (gm)	(W5=W2-W3)	576.84
Moisture Content (%)	(W4/W5)*100	17.88

Hygroscopic Moisture For Sieve Sample

Wet Soil & Tare (gm)	43.91
Dry Soil & Tare (gm)	41.27
Tare Weight (gm)	3.24
Moisture Content (%)	6.94

Total Weight of Sample Used For Sieve Analysis Corrected For Hygroscopic Moisture

Weight + Tare, Before Separating On The #4 Sieve (gm)	859.80	
Tare Weight (gm)	218.45	
Total Weight (gm)	599.72	(W6)

Plus #4 Material Sieve

TARE WEIGHT: 0.00

	(Wt+Tare)	(((Wt-Tare)/W6)*100)	%PASSING		
12.0"				12.0"	cobbles
3.0"				3.0"	coarse gravel
2.5"				2.5"	coarse gravel
2.0"				2.0"	coarse gravel
1.5"				1.5"	coarse gravel
1.0"				1.0"	coarse gravel
0.75"				0.75"	fine gravel
0.50"				0.50"	fine gravel
0.375"	0.00	0.0	100.0	0.375"	fine gravel
#4	1.55	0.3	99.7	#4	coarse sand

HYDROMETER ANALYSIS

Specific Gravity	(assumed)	
Specific Gravity	(tested)	2.708
Amount Dispersing Agent (ml)		125.00
Type Dispersion Device		Mechanical
Length of Dispersion Period		1 Minute

Weight of Sample Used For Hydrometer Test

Weight of Sample Wet or Dry (gm)	56.16
Calculated Dry Wt. used in test (gm)	52.51
Hydrometer Bulb Number	624378
% Pass #4 Sieve For Whole Sample	99.74

TARE WEIGHT: 203.14

HYDROMETER BACKSIEVE (Percent Passing #10 - #200 Sieves)

	(Wt+Tare)	Cumul Wt. Retained	% PASSING		
#10	203.20	0.06	99.6	#10	medium sand
#20	204.59	1.45	97.0	#20	medium sand
#40	212.45	9.31	82.1	#40	fine sand
#60	220.98	17.84	65.9	#60	fine sand
#100	227.24	24.10	54.0	#100	fine sand
#200	233.91	30.77	41.3	#200	fines

HYDROMETER CALCULATIONS

DATE	TIME	ET	READING	TEMP	TEMP.COR.	HYD.COR.	READING	EFFECTIVE	
6/26/98	9:10	(min)	R	T	K	Cc	C	LENGTH	A
6/26/98	9:12	2.00	24.0	23.00	0.013	5.50	18.50	13.3	0.99
6/26/98	9:15	5.00	23.5	23.00	0.013	5.50	18.00	13.3	0.99
6/26/98	9:25	15.00	23.0	23.00	0.013	5.50	17.50	13.5	0.99
6/26/98	9:40	30.00	22.0	23.00	0.013	5.50	16.50	13.7	0.99
6/26/98	10:10	60.00	21.5	23.00	0.013	5.50	16.00	13.7	0.99
6/26/98	13:20	250.00	20.5	23.00	0.013	5.50	15.00	13.8	0.99
6/27/98	9:10	1440.00	19.5	23.00	0.013	5.50	14.00	14.0	0.99

Particle Diameter	% PASSING
0.0335	34.8
0.0212	33.8
0.0123	32.9
0.0088	31.0
0.0062	30.1
0.0031	28.2
0.0013	26.3

GRAIN SIZE PERCENTAGES

% COBBLES	0.00
% COARSE GRAVEL	0.00
% FINE GRAVEL	0.26
% COARSE SAND	0.11
% MEDIUM SAND	17.57
% FINE SAND	40.76
% FINES	41.30
% TOTAL SAMPLE	100.00

Description: Yellowish Brown, MEDIUM TO FINE SAND, and clayey silt, trace fine gravel.

USCS: SM

35	LL
25	PL
10	PI

TECH	JDR
DATE	6/25/98
CHECK	
REVIEW	PWM

UNIT WEIGHT DETERMINATION
ASTM D 2937

PROJECT NAME	SOLUTIA / RFI-CS / AL	**SAMPLE ID**	OWR - 2S
PROJECT NUMBER	983-3223	**SAMPLE TYPE**	UD
		SAMPLE DEPTH	30.0 - 32.0'

WEIGHT OF SOIL (g)	679.99
LENGTH OF SAMPLE (in)	3.124
DIAMETER OF SAMPLE (in)	2.871
AREA OF SAMPLE (in^2)	6.47
VOLUME OF SAMPLE (in^3)	20.22
VOLUME OF SAMPLE (cm^3)	331.35

WET UNIT WEIGHT (pcf)	128.1

WEIGHT WET SOIL & TARE (g)	679.99
WEIGHT DRY SOIL & TARE (g)	576.84
WEIGHT OF WATER (g)	103.15
WEIGHT OF TARE (g)	0.00
WEIGHT OF DRY SOIL (g)	576.84
WATER CONTENT (%)	17.88

DRY UNIT WEIGHT (pcf)	108.7

SPECIFIC GRAVITY	2.708
VOLUME OF SOLIDS (cm^3)	213.02
VOLUME OF VOIDS (cm^3)	118.33
POROSITY (%)	36

TECH	GM
DATE	6/29/98
CHECK	
REVIEW	

FLOW PUMP #1

FLEXIBLE WALL PERMEABILITY
ASTM D 5084
METHOD D, CONSTANT RATE OF FLOW

PROJECT TITLE	SOLUTIA / RFI-CS / AL		
PROJECT NUMBER	983-3223		
SAMPLE ID	OWE - 2S	-	30.0-32.0'
SAMPLE TYPE	UD		

BOARD #	2
CELL #	2
Flow Pump Speed	8
Technician	PWM

COMMENTS

Sample Data, Initial

Height, inches	3.124	B-Value, f	0.97
Diameter, inches	2.871	Cell Pres.	92.5
Area, cm²	41.77	Bot. Pres.	80.0
Volume, cm³	331.41	Top Pres.	80.0
Mass, g	679.99	Tot. B.P.	80.0
Moisture Content, %	17.88	Head, max.	81.59
Dry Density, pcf	108.61	Head, min.	81.59
Spec. Gravity	2.708	Max. Grad.	10.28
Volume Solids, cm³	213.01	Min. Grad.	10.28
Volume Voids, cm³	118.40		
Void Ratio	0.56		
Saturation, %	87.1%		

Sample Data, Final

Height, inches	3.125
Diameter, inches	2.871
Area, cm²	41.77
Volume, cm³	331.52
Mass, g	688.05
Moisture Content, %	19.28
Dry Density, pcf	108.57
Volume Solids, cm³	213.01
Volume Voids, cm³	118.51
Void Ratio	0.56
Saturation, %	93.9%

WATER CONTENTS		Trimmings Initial	Sample Final
Wt Soil & Tare, i	g	679.99	739.40
Wt Soil & Tare, f	g	576.84	628.24
Wt Tare	g	0.00	51.77
Wt Moisture Lost	g	103.15	111.16
Wt Dry Soil	g	576.84	576.47
Water Content	%	17.88%	19.28%

DESCRIPTION

Yellowish Brown, MEDIUM TO FINE SAND, and clayey silt, trace fine gravel.

Flow Pump Rate 1.40E-04 cm³/sec

USCS SM

TIME FUNCTIONS, SECONDS								dP				
DATE	DAY	HOUR	MIN	TEMP (°C)	dt (min)	dt,acc (min)	dt (sec)	dt,acc (sec)	Reading (psi)	Head (cm)	Gradient	Permeability (cm/sec)
6/26/98	359?2	12	40	20.9	0	0	0	0	1.16	81.59	10.28	3.2E-07
6/26/98	359?2	12	45	20.9	5	5	300	300	1.16	81.59	10.28	3.2E-07
6/26/98	359?2	12	50	20.9	5	10	300	600	1.16	81.59	10.28	3.2E-07
6/26/98	359?2	12	55	20.9	5	15	300	900	1.16	81.59	10.28	3.2E-07 *
6/26/98	359?2	13	0	20.9	5	20	300	1200	1.16	81.59	10.28	3.2E-07 *
6/26/98	359?2	13	5	20.9	5	25	300	1500	1.16	81.59	10.28	3.2E-07 *
6/26/98	359?2	13	10	20.9	5	30	300	1800	1.16	81.59	10.28	3.2E-07 *

*TRANSCRIBED FROM ORIGINAL DATA SHEETS

PERMEABILITY REPORTED AS ** 3.2E-07 cm/sec **

DATE 6/26/98
CHECK
REVIEW PWM

ATTERBERG LIMITS
ASTM D-4318

PROJECT TITLE	SOLUTIA / RFI-CS / AL	**SAMPLE ID**	OWR-3S -
PROJECT NUMBER	983-3223	**SAMPLE TYPE**	UD
		SAMPLE DEPTH	30.0 - 32.0'

SAMPLE PREPARATION

Wet or Dry: Dry

Minus #40 Sieve: Yes

PLASTIC LIMIT DETERMINATION

Weight of Wet Soil & Tare	(W1)	22.23	21.97	21.93
Weight of Dry Soil & Tare	(W2)	19.58	19.38	19.32
Weight of Tare	(W3)	11.25	11.42	11.24
Weight of Water	(W4=W1-W2)	2.65	2.59	2.61
Weight of Dry Soil	(W5=W2-W3)	8.33	7.96	8.08
Water Content	(W4/W5)*100	31.81%	32.54%	32.30%

NATURAL MOISTURE

577.28
415.05
0.00
162.23
415.05
39.09%

LIQUID LIMIT DETERMINATION

Number of Blows		29	29
Weight of Wet Soil & Tare	(W6)	12.97	13.28
Weight of Dry Soil & Tare	(W7)	9.23	10.42
Weight of Tare	(W8)	4.29	6.63
Weight of Water	(W9=W6-W7)	3.74	2.86
Weight of Dry Soil	W10=W7-W8)	4.94	3.79
Water Content	(W9/W10)*100	75.71%	75.46%

TEST RESULTS

	TRAIL 1	TRIAL 2
BLOWS:	**29**	**29**
K VALUE:	**1.018**	**1.018**

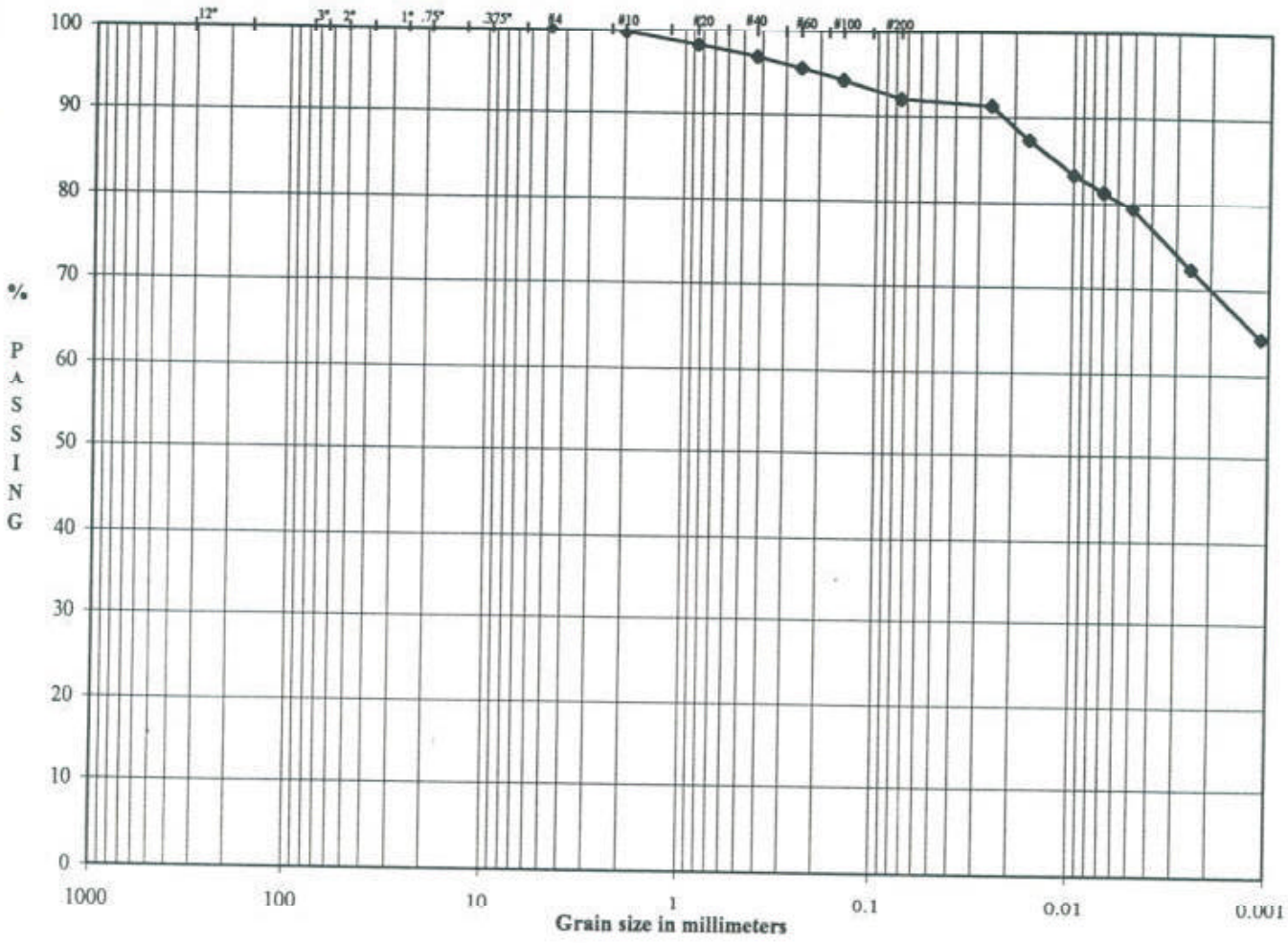
LIQUID LIMIT (WI)	76.95	77
PLASTIC LIMIT (Wp)	32.22	32
PLASTICITY INDEX (Ip)		45
LIQUIDITY INDEX (I)		0.15
MOISTURE CONTENT		39.09%

DESCRIPTION: Yellowish Brown, SILTY CLAY, little medium to fine sand.

USCS: CH

TECH	TF
DATE	6/26/98
CHECK	
REVIEW	

PARTICLE SIZE DISTRIBUTION ASTM D 421 AND D 422
US STANDARD SIEVE OPENING SIZES



Boulders	Cobbles	Coarse	Fine	Cor	Med	Fine	SILT OR CLAY
		Gravel		SAND			FINES

SAMPLE ID	OWR - 3S
SAMPLE TYPE	UD
SAMPLE DEPTH	30.0 - 32.0'

LL	77
PL	32
PI	45

DESCRIPTION	Yellowish Brown, SILTY CLAY, little medium to fine sand.
USCS	CH

SOLUTIA / RFI-CS / AL
983-3223

TECH	LB/AK
DATE	6/25/98
CHECK	
REVIEW	

ASTM GRAIN SIZE ANALYSIS
ASTM C117, C136, D421, D422, D1140 and D2217

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR - 3S -
PROJECT NO.	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	30.0 - 32.0'

AS RECEIVED WATER CONTENT

Tare No.		-
Wt. Wet Soil & Tare (gm)	(W1)	577.28
Wt. Dry Soil & Tare (gm)	(W2)	415.05
Weight of Tare (gm)	(W3)	0.00
Weight of Water (gm)	(W4=W1-W2)	162.23
Weight of Dry Soil (gm)	(W5=W2-W3)	415.05
Moisture Content (%)	(W4/W5)*100	39.09

Hygroscopic Moisture For Sieve Sample

Wet Soil & Tare (gm)	32.10
Dry Soil & Tare (gm)	29.31
Tare Weight (gm)	3.23
Moisture Content (%)	10.70

Total Weight of Sample Used For Sieve Analysis Corrected For Hygroscopic Moisture

Weight + Tare, Before Separating On The #4 Sieve (gm)	390.51	
Tare Weight (gm)	118.58	
Total Weight (gm)	245.65	(W6)

Plus #4 Material Sieve

TARE WEIGHT: 0.00

	(Wt+Tare)	(((Wt-Tare)/W6)*100)	%PASSING		
12.0"				12.0"	cobbles
3.0"				3.0"	coarse gravel
2.5"				2.5"	coarse gravel
2.0"				2.0"	coarse gravel
1.5"				1.5"	coarse gravel
1.0"				1.0"	coarse gravel
0.75"				0.75"	fine gravel
0.50"				0.50"	fine gravel
0.375"				0.375"	fine gravel
#4	0.00	0.0	100.0	#4	coarse sand

HYDROMETER ANALYSIS

Specific Gravity	(assumed)	
Specific Gravity	(tested)	2.835
Amount Dispersing Agent (ml)		125.00
Type Dispersion Device		Mechanical
Length of Dispersion Period		1 Minute

Weight of Sample Used For Hydrometer Test

Weight of Sample Wet or Dry (gm)	53.48
Calculated Dry Wt. used in test (gm)	48.31
Hydrometer Bulb Number	624378
% Pass #4 Sieve For Whole Sample	100.00

TARE WEIGHT: 203.14

HYDROMETER BACKSIEVE (Percent Passing #10 - #200 Sieves)

	(Wt+Tare)	Cumul Wt. Retained	% PASSING		
#10	203.33	0.19	99.6	#10	medium sand
#20	204.08	0.94	98.1	#20	medium sand
#40	204.71	1.57	96.8	#40	fine sand
#60	205.31	2.17	95.5	#60	fine sand
#100	205.95	2.81	94.2	#100	fine sand
#200	207.00	3.86	92.0	#200	fines

HYDROMETER CALCULATIONS

DATE	TIME	ET (min)	READING R	TEMP T	TEMP.COR. K	HYD.COR. Cc	READING C	EFFECTIVE LENGTH	A
6/26/98	9:12								
6/26/98	9:14	2.00	51.0	23.00	0.012	5.50	45.50	8.9	0.97
6/26/98	9:17	5.00	49.0	23.00	0.012	5.50	43.50	9.2	0.97
6/26/98	9:27	15.00	47.0	23.00	0.012	5.50	41.50	9.6	0.97
6/26/98	9:42	30.00	46.0	23.00	0.012	5.50	40.50	9.7	0.97
6/26/98	10:12	60.00	45.0	23.00	0.012	5.50	39.50	9.9	0.97
6/26/98	13:22	250.00	41.5	23.00	0.012	5.50	36.00	10.4	0.97
6/27/98	9:12	1440.00	37.5	23.00	0.012	5.50	32.00	11.1	0.97

GRAIN SIZE PERCENTAGES

Particle Diameter	% PASSING		
0.0262	91.4	% COBBLES	0.00
0.0168	87.3	% COARSE GRAVEL	0.00
0.0099	83.3	% FINE GRAVEL	0.00
0.0071	81.3	% COARSE SAND	0.39
0.0050	79.3	% MEDIUM SAND	2.86
0.0025	72.3	% FINE SAND	4.74
0.0011	64.2	% FINES	92.01
		% TOTAL SAMPLE	100.00

Description: Yellowish Brown, SILTY CLAY, little medium to fine sand.

USCS: CH

77	LL
32	PL
45	PI

TECH	LB/AK
DATE	6/25/98
CHECK	
REVIEW	

UNIT WEIGHT DETERMINATION
ASTM D 2937

PROJECT NAME	SOLUTIA / RFI-CS / AL	**SAMPLE ID**	OWR - 3S
PROJECT NUMBER	983-3223	**SAMPLE TYPE**	UD
		SAMPLE DEPTH	30.0 - 32.0'

WEIGHT OF SOIL (g)	577.28
LENGTH OF SAMPLE (in)	2.939
DIAMETER OF SAMPLE (in)	2.849
AREA OF SAMPLE (in^2)	6.37
VOLUME OF SAMPLE (in^3)	18.74
VOLUME OF SAMPLE (cm^3)	307.09

WET UNIT WEIGHT (pcf)	117.4

WEIGHT WET SOIL & TARE (g)	577.28
WEIGHT DRY SOIL & TARE (g)	415.05
WEIGHT OF WATER (g)	162.23
WEIGHT OF TARE (g)	0.00
WEIGHT OF DRY SOIL (g)	415.05
WATER CONTENT (%)	39.09

DRY UNIT WEIGHT (pcf)	84.4

SPECIFIC GRAVITY	2.835
VOLUME OF SOLIDS (cm^3)	146.40
VOLUME OF VOIDS (cm^3)	160.69
POROSITY (%)	52

TECH	GM
DATE	6/29/98
CHECK	
REVIEW	

FLOW PUMP #

FLEXIBLE WALL PERMEABILITY
ASTM D 5084
METHOD D, CONSTANT RATE OF FLOW

PROJECT TITLE	SOLUTIA / RFI-CS / AL		
PROJECT NUMBER	983-3223		
SAMPLE ID	OWR - 3S	-	30.0-32.0'
SAMPLE TYPE	UD		

BOARD #	3
CELL #	3
Flow PumpSpeed	9
Technician	PWM

COMMENTS

Sample Data, Initial

Height, inches	2.939	B-Value, f	0.97
Diameter, inches	2.849	Cell Pres.	92.5
Area, cm²	41.13	Bot. Pres.	80.0
Volume cm³	307.03	Top Pres.	80.0
Mass, g	577.28	Tot. B.P.	80.0
Moisture Content, %	39.09	Head, max.	206.80
Dry Density, pcf	84.35	Head, min.	204.69
Spec. Gravity	2.835	Max. Grad.	27.65
Volume Solids, cm³	146.40	Min. Grad.	27.36
Volume Voids, cm³	160.62		
Void Ratio	1.10		
Saturation, %	101.0%		

Sample Data, Final

Height, inches	2.945
Diameter, inches	2.865
Area, cm²	41.59
Volume, cm³	311.12
Mass, g	578.66
Moisture Content, %	39.42
Dry Density, pcf	83.24
Volume Solids, cm³	146.40
Volume Voids, cm³	164.72
Void Ratio	1.13
Saturation, %	99.3%

WATER CONTENTS		Trimmings Initial	Sample Final
Wt Soil & Tare, i	g	577.28	611.45
Wt Soil & Tare, f	g	415.05	457.91
Wt Tare	g	0.00	43.09
Wt Moisture Lost	g	162.23	163.54
Wt Dry Soil	g	415.05	414.82
Water Content	%	39.09%	39.42%

Flow Pump Rate: 5.70E-05 cm³/sec

USCS: CH

DESCRIPTION: Yellowish Brown, SILTY CLAY, little medium to fine sand.

TIME FUNCTIONS, SECONDS								dP				
DATE	DAY	HOUR	MIN	TEMP (°C)	dt (min)	dt,acc (min)	dt (sec)	dt,acc (sec)	Reading (psi)	Head (cm)	Gradient	Permeability (cm/sec)
6/26/98	35972	11	15	20.9	0	0	0	0	2.91	204.69	27.36	4.9E-08
6/26/98	35972	11	20	20.9	5	5	300	300	2.93	206.10	27.55	4.9E-08
6/26/98	35972	11	25	20.9	5	10	300	600	2.93	206.10	27.55	4.9E-08
6/26/98	35972	11	30	20.9	5	15	300	900	2.94	206.80	27.65	4.9E-08 *
6/26/98	35972	11	35	20.9	5	20	300	1200	2.94	206.80	27.65	4.9E-08 *
6/26/98	35972	11	40	20.9	5	25	300	1500	2.94	206.80	27.65	4.9E-08 *
6/26/98	35972	11	45	20.9	5	30	300	1800	2.94	206.80	27.65	4.9E-08 *

*TRANSCRIBED FROM ORIGINAL DATA SHEETS

PERMEABILITY REPORTED AS ** 4.9E-08 cm/sec **

DATE 6/26/98
CHECK
REVIEW

ATTERBERG LIMITS
ASTM D-4318

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR-8S -
PROJECT NUMBER	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	20.0 - 22.0'

SAMPLE PREPARATION

Wet or Dry: Dry

Minus #40 Sieve: Yes

PLASTIC LIMIT DETERMINATION

					NATURAL MOISTURE
Weight of Wet Soil & Tare	(W1)	21.51	21.11	21.12	235.02
Weight of Dry Soil & Tare	(W2)	19.31	18.91	18.97	199.71
Weight of Tare	(W3)	11.45	11.10	11.27	42.29
Weight of Water	(W4=W1-W2)	2.20	2.20	2.15	35.31
Weight of Dry Soil	(W5=W2-W3)	7.86	7.81	7.70	157.42
Water Content	(W4/W5)*100	27.99%	28.17%	27.92%	22.43%

LIQUID LIMIT DETERMINATION

Number of Blows		28	28
Weight of Wet Soil & Tare	(W6)	22.44	25.47
Weight of Dry Soil & Tare	(W7)	16.62	18.69
Weight of Tare	(W8)	4.27	4.24
Weight of Water	(W9=W6-W7)	5.82	6.78
Weight of Dry Soil	W10=W7-W8)	12.35	14.45
Water Content	(W9/W10)*100	47.13%	46.92%

TEST RESULTS

	TRAIL 1	TRIAL 2
BLOWS:	28	28
K VALUE:	1.014	1.014

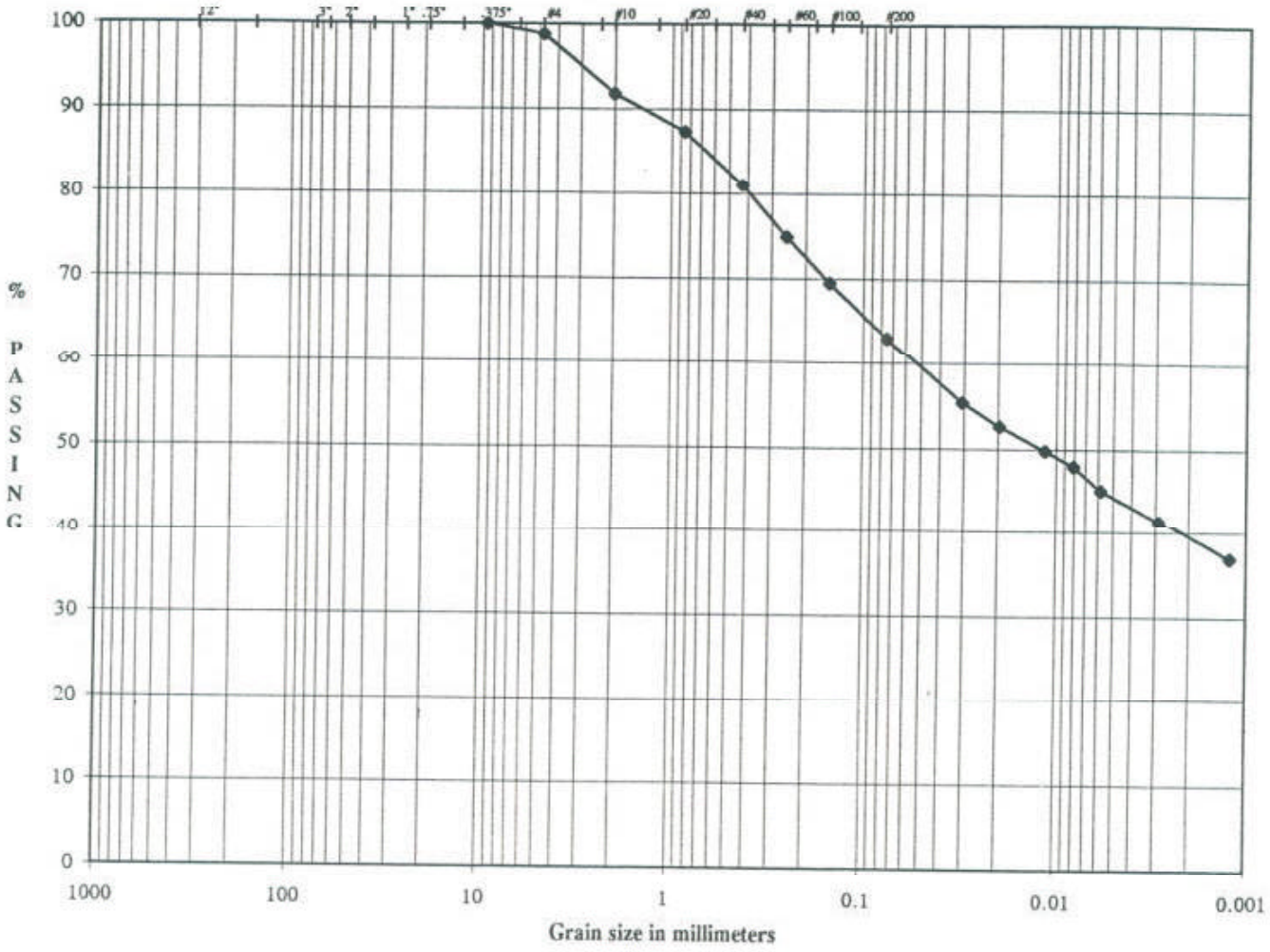
LIQUID LIMIT (WI)	47.68	48
PLASTIC LIMIT (Wp)	28.03	28
PLASTICITY INDEX (Ip)		20
LIQUIDITY INDEX (I)		-0.28
MOISTURE CONTENT		22.43%

DESCRIPTION: Reddish Yellow and Black, CLAYEY SILT, and coarse to fine sand, trace fine gravel.

USCS: ML

TECH	SW
DATE	6/29/98
CHECK	
REVIEW	

PARTICLE SIZE DISTRIBUTION ASTM D 421 AND D 422
US STANDARD SIEVE OPENING SIZES



Boulders	Cobbles	Gravel: Coarse	Gravel: Fine	SAND: Cor	SAND: Med	SAND: Fine	SILT OR CLAY FINES

SAMPLE ID	OWR - 8S
SAMPLE TYPE	UD
SAMPLE DEPTH	20.0 - 22.0'

LL	48
PL	28
PI	20

DESCRIPTION	Reddish Yellow and Black, CLAYEY SILT, and coarse to fine sand, trace fine gravel.
USCS	ML

SOLUTIA / RFI-CS / AL
983-3223

TECH	TF
DATE	6/26/08
CHECK	
REVIEW	

ASTM GRAIN SIZE ANALYSIS
ASTM C117, C136, D421, D422, D1140 and D2217

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR - 8S -
PROJECT NO.	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	20.0 - 22.0'

AS RECEIVED WATER CONTENT

Tare No.		-
Wt. Wet Soil & Tare (gm)	(W1)	235.02
Wt. Dry Soil & Tare (gm)	(W2)	199.71
Weight of Tare (gm)	(W3)	42.29
Weight of Water (gm)	(W4=W1-W2)	35.31
Weight of Dry Soil (gm)	(W5=W2-W3)	157.42
Moisture Content (%)	(W4/W5)*100	22.43

Hygroscopic Moisture For Sieve Sample

Wet Soil & Tare (gm)	106.40
Dry Soil & Tare (gm)	104.86
Tare Weight (gm)	43.12
Moisture Content (%)	2.49

Total Weight of Sample Used For Sieve Analysis Corrected For Hygroscopic Moisture

Weight + Tare, Before Separating On The #4 Sieve (gm)	761.92	
Tare Weight (gm)	235.20	
Total Weight (gm)	513.90	(W6)

Plus #4 Material Sieve

TARE WEIGHT: 203.18

	(Wt+Tare)	(((Wt-Tare)/W6)*100)	%PASSING		
12.0"				12.0"	cobbles
3.0"				3.0"	coarse gravel
2.5"				2.5"	coarse gravel
2.0"				2.0"	coarse gravel
1.5"				1.5"	coarse gravel
1.0"				1.0"	coarse gravel
0.75"				0.75"	fine gravel
0.50"				0.50"	fine gravel
0.375"	203.18	0.0	100.0	0.375"	fine gravel
#4	209.36	1.2	98.8	#4	coarse sand

HYDROMETER ANALYSIS

Specific Gravity	(assumed)	
Specific Gravity	(tested)	2.759
Amount Dispersing Agent (ml)		125.00
Type Dispersion Device		Mechanical
Length of Dispersion Period		1 Minute

Weight of Sample Used For Hydrometer Test

Weight of Sample Wet or Dry (gm)	53.82
Calculated Dry Wt. used in test (gm)	52.51
Hydrometer Bulb Number	624378
% Pass #4 Sieve For Whole Sample	98.80

TARE WEIGHT: 203.18

HYDROMETER BACKSIEVE (Percent Passing #10 - #200 Sieves)

	(Wt+Tare)	Cumul Wt. Retained	% PASSING		
#10	206.91	3.73	91.8	#10	medium sand
#20	209.27	6.09	87.3	#20	medium sand
#40	212.60	9.42	81.1	#40	fine sand
#60	215.86	12.68	74.9	#60	fine sand
#100	218.73	15.55	69.5	#100	fine sand
#200	222.15	18.97	63.1	#200	fines

HYDROMETER CALCULATIONS

DATE	TIME	ET (min)	READING R	TEMP T	TEMP.COR. K	HYD.COR. Cc	READING C	EFFECTIVE LENGTH	A
6/29/98	8:00								
6/29/98	8:02	2.00	35.5	23.00	0.013	5.50	30.00	11.4	0.98
6/29/98	8:05	5.00	34.0	23.00	0.013	5.50	28.50	11.7	0.98
6/29/98	8:15	15.00	32.5	23.00	0.013	5.50	27.00	11.9	0.98
6/29/98	8:30	30.00	31.5	23.00	0.013	5.50	26.00	12.0	0.98
6/29/98	9:00	60.00	30.0	23.00	0.013	5.50	24.50	12.4	0.98
6/29/98	12:10	250.00	28.0	23.00	0.013	5.50	22.50	12.7	0.98
6/30/98	8:00	1440.00	25.5	23.00	0.013	5.50	20.00	13.0	0.98

GRAIN SIZE PERCENTAGES

Particle Diameter	% PASSING		
0.0306	55.3	% COBBLES	0.00
0.0196	52.6	% COARSE GRAVEL	0.00
0.0114	49.8	% FINE GRAVEL	1.20
0.0081	47.9	% COARSE SAND	7.02
0.0058	45.2	% MEDIUM SAND	10.71
0.0029	41.5	% FINE SAND	17.97
0.0012	36.9	% FINES	63.11
		% TOTAL SAMPLE	100.00

Description: Reddish Yellow and Black, CLAYEY SILT, and coarse to fine sand, trace fine gravel.

USCS: ML

48	LL
28	PL
20	PI

TECH	TF
DATE	6/26/98
CHECK	
REVIEW	

UNIT WEIGHT DETERMINATION
ASTM D 2937

PROJECT NAME	SOLUTIA / RFI-CS / AL	**SAMPLE ID**	OWR - 8S
PROJECT NUMBER	983-3223	**SAMPLE TYPE**	UD
		SAMPLE DEPTH	20.0 - 22.0'

WEIGHT OF SOIL (g)	679.91
LENGTH OF SAMPLE (in)	3.221
DIAMETER OF SAMPLE (in)	2.852
AREA OF SAMPLE (in^2)	6.39
VOLUME OF SAMPLE (in^3)	20.58
VOLUME OF SAMPLE (cm^3)	337.24

WET UNIT WEIGHT (pcf)	125.9

WEIGHT WET SOIL & TARE (g)	235.02
WEIGHT DRY SOIL & TARE (g)	199.71
WEIGHT OF WATER (g)	35.31
WEIGHT OF TARE (g)	42.29
WEIGHT OF DRY SOIL (g)	157.42
WATER CONTENT (%)	22.43

DRY UNIT WEIGHT (pcf)	102.8

SPECIFIC GRAVITY	2.759
VOLUME OF SOLIDS (cm^3)	201.29
VOLUME OF VOIDS (cm^3)	135.95
POROSITY (%)	40

TECH	GM
DATE	7/1/98
CHECK	
REVIEW	

FLOW PUMP #1

FLEXIBLE WALL PERMEABILITY
ASTM D 5084
METHOD D, CONSTANT RATE OF FLOW

PROJECT TITLE	SOLUTIA / RFI-CS / AL		
PROJECT NUMBER	983-3223		
SAMPLE ID	OWR - 8S	-	20.0-22.0'
SAMPLE TYPE	UD		

BOARD #	10
CELL #	10
Flow Pump Speed	9
Technician	PWM

COMMENTS

Sample Data, Initial			
Height, inches	3.221	B-Value, f	0.97
Diameter, inches	2.852	Cell Pres.	90.0
Area, cm²	41.22	Bot. Pres.	80.0
Volume, cm³	337.19	Top Pres.	80.0
Mass, g	679.91	Tot. B.P.	80.0
Moisture Content, %	22.48	Head, max.	104.81
Dry Density, pcf	102.77	Head, min.	104.81
Spec. Gravity	2.759	Max. Grad.	13.02
Volume Solids, cm³	201.28	Min. Grad.	13.02
Volume Voids, cm³	135.91		
Void Ratio	0.68		
Saturation, %	91.7%		

Sample Data, Final	
Height, inches	3.168
Diameter, inches	2.829
Area, cm²	40.55
Volume, cm³	326.32
Mass, g	680.24
Moisture Content, %	23.93
Dry Density, pcf	104.96
Volume Solids, cm³	198.95
Volume Voids, cm³	127.37
Void Ratio	0.64
Saturation, %	103.1%

WATER CONTENTS		Trimmings Initial	Sample Final
Wt Soil & Tare i	g	235.02	731.3
Wt Soil & Tare f	g	199.71	600.0
Wt Tare	g	42.29	51.11
Wt Moisture Lost	g	35.31	131.3
Wt Dry Soil	g	157.42	548.8
Water Content	%	22.43%	23.93%

DESCRIPTION

Reddish Yellow and Black, CLAYEY SILT, and coarse to fine sand, trace fine gravel.

Flow Pump Rate 5.70E-05 cm³/sec

USCS ML

TIME FUNCTIONS, SECONDS								dP				
DATE	DAY	HOUR	MIN	TEMP (°C)	dt (min)	dt,acc (min)	dt (sec)	dt,acc (sec)	Reading (psi)	Head (cm)	Gradient	Permeability (cm/sec)
6/27/98	3597	8	10	21.4	0	0	0	0	1.49	104.81	13.02	1.0E-07
6/27/98	3597	8	15	21.4	5	5	300	300	1.49	104.81	13.02	1.0E-07
6/27/98	3597	8	20	21.4	5	10	300	600	1.49	104.81	13.02	1.0E-07
6/27/98	3597	8	25	21.4	5	15	300	900	1.49	104.81	13.02	1.0E-07 *
6/27/98	3597	8	30	21.4	5	20	300	1200	1.49	104.81	13.02	1.0E-07 *
6/27/98	3597	8	35	21.4	5	25	300	1500	1.49	104.81	13.02	1.0E-07 *
6/27/98	3597	8	40	21.4	5	30	300	1800	1.49	104.81	13.02	1.0E-07 *

*TRANSCRIBED FROM ORIGINAL DATA SHEETS

PERMEABILITY REPORTED AS ** 1.0E-07 cm/sec **

DATE 6/27/98
CHECK
REVIEW

ATTERBERG LIMITS
ASTM D-4318

PROJECT TITLE	SOLUTIA / RFI-CS / AL	**SAMPLE ID**	OWR-8S -
PROJECT NUMBER	983-3223	**SAMPLE TYPE**	UD
		SAMPLE DEPTH	30.0 - 32.0'

SAMPLE PREPARATION

Wet or Dry: Dry

Minus #40 Sieve: Yes

PLASTIC LIMIT DETERMINATION

					NATURAL MOISTURE
Weight of Wet Soil & Tare	(W1)	21.35	21.51	22.34	290.25
Weight of Dry Soil & Tare	(W2)	19.13	19.16	19.80	232.64
Weight of Tare	(W3)	11.84	11.46	11.48	51.70
Weight of Water	(W4=W1-W2)	2.22	2.35	2.54	57.61
Weight of Dry Soil	(W5=W2-W3)	7.29	7.70	8.32	180.94
Water Content	(W4/W5)*100	30.45%	30.52%	30.53%	31.84%

LIQUID LIMIT DETERMINATION

				TEST RESULTS		
Number of Blows		25	25		TRAIL 1	TRIAL 2
Weight of Wet Soil & Tare	(W6)	21.30	18.92			
Weight of Dry Soil & Tare	(W7)	15.34	13.81	BLOWS:	25	25
Weight of Tare	(W8)	4.28	4.27			
Weight of Water	(W9=W6-W7)	5.96	5.11			
Weight of Dry Soil	W10=W7-W8)	11.06	9.54	K VALUE:	1	1
Water Content	(W9/W10)*100	53.89%	53.56%			

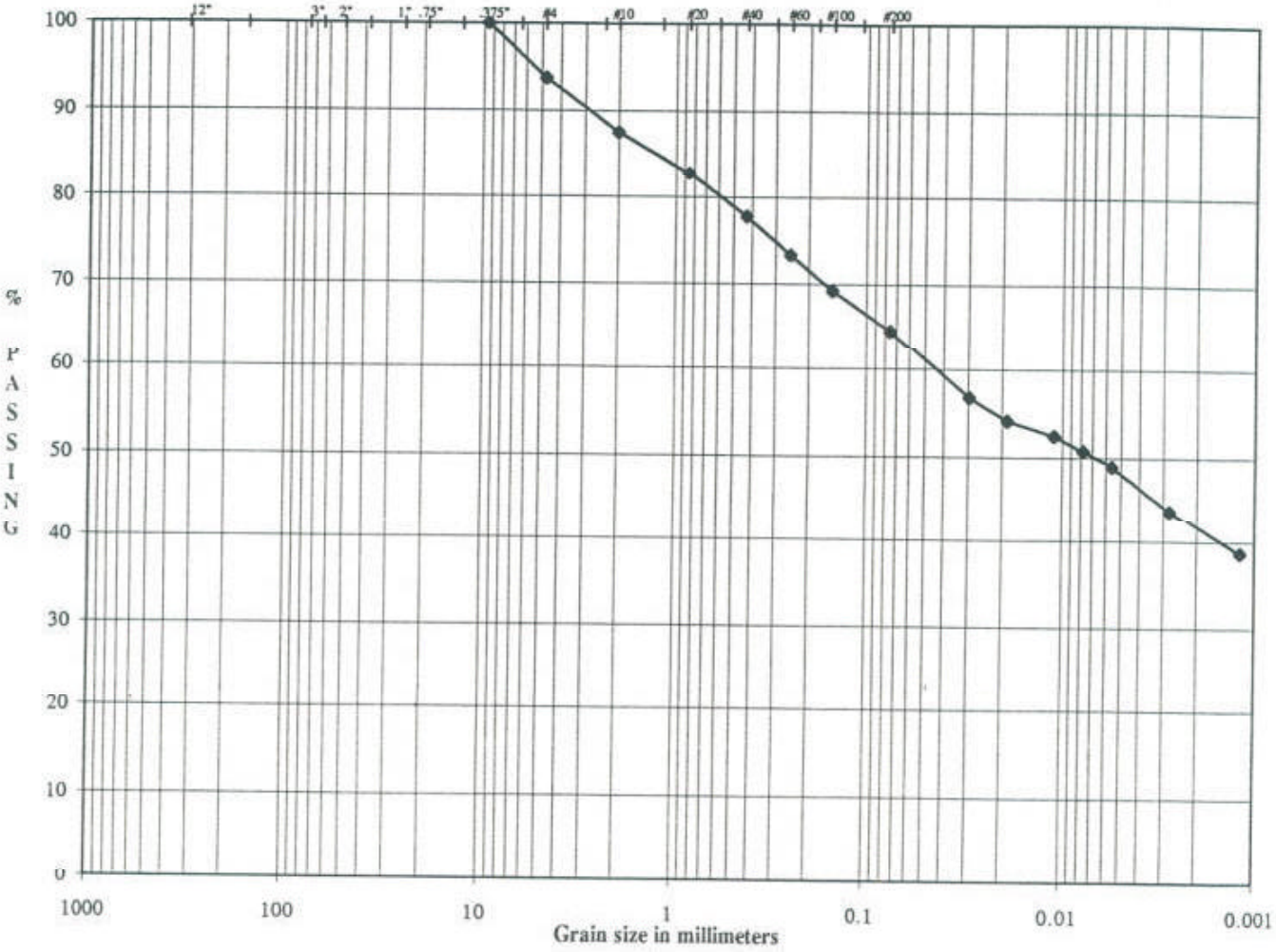
LIQUID LIMIT (WL)	53.73	54
PLASTIC LIMIT (Wp)	30.50	31
PLASTICITY INDEX (Ip)		23
LIQUIDITY INDEX (I)		0.06
MOISTURE CONTENT		31.84%

DESCRIPTION: Reddish Yellow and Black, CLAYEY SILT, some coarse to fine sand, little fine gravel.

USCS: MH

TECH	SW
DATE	6/29/98
CHECK	
REVIEW	

PARTICLE SIZE DISTRIBUTION ASTM D 421 AND D 422
US STANDARD SIEVE OPENING SIZES



Boulders	Cobbles	Coarse Gravel	Fine Gravel	Cor SAND	Med SAND	Fine SAND	SILT OR CLAY FINES

SAMPLE ID	OWR - 8S
SAMPLE TYPE	UD
SAMPLE DEPTH	30.0 - 32.0'

LL	54
PL	31
PI	23

DESCRIPTION	Reddish Yellow and Black, CLAYEY SILT, some coarse to fine sand, little fine gravel.
USCS	MH

SOLUTIA / RFI-CS / AL
983-3223

TECH	TF
DATE	6/26/98
CHECK	
REVIEW	

Golder Construction Services, Inc.

ASTM GRAIN SIZE ANALYSIS
ASTM C117, C136, D421, D422, D1140 and D2217

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR - 8S -
PROJECT NO.	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	30.0 - 32.0'

AS RECEIVED WATER CONTENT

Tare No.		-
Wt. Wet Soil & Tare (gm)	(W1)	290.25
Wt. Dry Soil & Tare (gm)	(W2)	232.64
Weight of Tare (gm)	(W3)	51.70
Weight of Water (gm)	(W4=W1-W2)	57.61
Weight of Dry Soil (gm)	(W5=W2-W3)	180.94
Moisture Content (%)	(W4/W5)*100	31.84

Hygroscopic Moisture For Sieve Sample

Wet Soil & Tare (gm)	101.73
Dry Soil & Tare (gm)	100.50
Tare Weight (gm)	50.78
Moisture Content (%)	2.47

Total Weight of Sample Used For Sieve Analysis Corrected For Hygroscopic Moisture

Weight + Tare, Before Separating On The #4 Sieve (gm)	665.66	
Tare Weight (gm)	167.80	
Total Weight (gm)	485.84	(W6)

Plus #4 Material Sieve

TARE WEIGHT: 203.18

	(Wt+Tare)	(((Wt-Tare)/W6)*100)	%PASSING		
12.0"				12.0"	cobbles
3.0"				3.0"	coarse gravel
2.5"				2.5"	coarse gravel
2.0"				2.0"	coarse gravel
1.5"				1.5"	coarse gravel
1.0"				1.0"	coarse gravel
0.75"				0.75"	fine gravel
0.50"				0.50"	fine gravel
0.375"	203.18	0.0	100.0	0.375"	fine gravel
#4	233.83	6.3	93.7	#4	coarse sand

HYDROMETER ANALYSIS

Specific Gravity	(assumed)	
Specific Gravity	(tested)	2.803
Amount Dispersing Agent (ml)		125.00
Type Dispersion Device		Mechanical
Length of Dispersion Period		1 Minute

Weight of Sample Used For Hydrometer Test

Weight of Sample Wet or Dry (gm)	54.19
Calculated Dry Wt. used in test (gm)	52.88
Hydrometer Bulb Number	624378
% Pass #4 Sieve For Whole Sample	93.69

TARE WEIGHT: 203.17

HYDROMETER BACKSIEVE (Percent Passing #10 - #200 Sieves)

	(Wt+Tare)	Cumul Wt. Retained	% PASSING		
#10	206.70	3.53	87.4	#10	medium sand
#20	209.31	6.14	82.8	#20	medium sand
#40	212.15	8.98	77.8	#40	fine sand
#60	214.67	11.50	73.3	#60	fine sand
#100	217.00	13.83	69.2	#100	fine sand
#200	219.58	16.41	64.6	#200	fines

HYDROMETER CALCULATIONS

DATE	TIME	ET	READING	TEMP	TEMP.COR.	HYD.COR.	READING	EFFECTIVE	
6/29/98	8:02	(min)	R	T	K	Cc	C	LENGTH	A
6/29/98	8:04	2.00	38.5	23.00	0.013	5.50	33.00	10.9	0.97
6/29/98	8:07	5.00	37.0	23.00	0.013	5.50	31.50	11.2	0.97
6/29/98	8:17	15.00	36.0	23.00	0.013	5.50	30.50	11.4	0.97
6/29/98	8:32	30.00	35.0	23.00	0.013	5.50	29.50	11.5	0.97
6/29/98	9:02	60.00	34.0	23.00	0.013	5.50	28.50	11.7	0.97
6/29/98	12:12	250.00	31.0	23.00	0.013	5.50	25.50	12.2	0.97
6/30/98	8:02	1440.00	28.0	23.00	0.013	5.50	22.50	12.7	0.97

GRAIN SIZE PERCENTAGES

Particle Diameter	% PASSING		
0.0294	56.7	% COBBLES	0.00
0.0189	54.1	% COARSE GRAVEL	0.00
0.0110	52.4	% FINE GRAVEL	6.31
0.0078	50.7	% COARSE SAND	6.25
0.0056	49.0	% MEDIUM SAND	9.66
0.0028	43.8	% FINE SAND	13.16
0.0012	38.7	% FINES	64.62
		% TOTAL SAMPLE	100.00

Description: Reddish Yellow and Black, CLAYEY SILT, some coarse to fine sand, little fine gravel.

USCS: MH

54	LL
31	PL
23	PI

TECH	TF
DATE	6/26/98
CHECK	
REVIEW	

UNIT WEIGHT DETERMINATION
ASTM D 2937

PROJECT NAME	SOLUTIA / RFI-CS / AL	**SAMPLE ID**	OWR - 8S
PROJECT NUMBER	983-3223	**SAMPLE TYPE**	UD
		SAMPLE DEPTH	30.0 - 32.0'

WEIGHT OF SOIL (g)	662.93
LENGTH OF SAMPLE (in)	3.238
DIAMETER OF SAMPLE (in)	2.837
AREA OF SAMPLE (in^2)	6.32
VOLUME OF SAMPLE (in^3)	20.47
VOLUME OF SAMPLE (cm^3)	335.44

WET UNIT WEIGHT (pcf)	123.4

WEIGHT WET SOIL & TARE (g)	290.25
WEIGHT DRY SOIL & TARE (g)	232.64
WEIGHT OF WATER (g)	57.61
WEIGHT OF TARE (g)	51.70
WEIGHT OF DRY SOIL (g)	180.94
WATER CONTENT (%)	31.84

DRY UNIT WEIGHT (pcf)	93.6

SPECIFIC GRAVITY	2.803
VOLUME OF SOLIDS (cm^3)	179.39
VOLUME OF VOIDS (cm^3)	156.05
POROSITY (%)	47

TECH	GM
DATE	7/1/98
CHECK	
REVIEW	

FLOW PUMP #2

FLEXIBLE WALL PERMEABILITY
ASTM D 5084
METHOD D, CONSTANT RATE OF FLOW

PROJECT TITLE	SOLUTIA / RFI-CS / AL		
PROJECT NUMBER	983-3123		
SAMPLE ID	OWR-8S	-	30.0-32.0'
SAMPLE TYPE	UD		

BOARD #	6
CELL #	6
Flow Pump Speed	10
Technician	PWM

COMMENTS

Sample Data, Initial			
Height, inches	3.218	B-Value, f	0.99
Diameter, inches	2.817	Cell Pres.	92.0
Area, cm²	40.78	Bot. Pres.	80.0
Volume, cm³	335.42	Top Pres.	80.0
Mass, g	662.93	Tot. B.P.	80.0
Moisture Content, %	31.84	Head, max.	140.68
Dry Density, pcf	93.55	Head, min.	140.68
Spec. Gravity	2.803	Max. Grad.	17.09
Volume Solds, cm³	179.39	Min. Grad.	17.09
Volume Voids, cm³	156.03		
Void Ratio	0.87		
Saturation, %	102.5%		

Sample Data, Final	
Height, inches	3.240
Diameter, inches	2.852
Area, cm²	41.22
Volume, cm³	339.18
Mass, g	662.32
Moisture Content, %	30.20
Dry Density, pcf	93.58
Volume Solids, cm³	181.48
Volume Voids, cm³	157.71
Void Ratio	0.87
Saturation, %	97.4%

WATER CONTENTS		Trimmings Initial	Sample Fina
Wt Soil & Tare, i	g	290.25	713.95
Wt Soil & Tare, f	g	232.64	560.34
Wt Tare	g	51.70	51.71
Wt Moisture Lost	g	57.61	153.61
Wt Dry Soil	g	180.94	508.55
Water Content	%	31.84%	30.20%

DESCRIPTION

Reddish Yellow and Black, CLAYEY SILT, some coarse to fine sand, little fine gravel.

Flow Pump Rate 2.80E-05 cm³/sec

USCS MH

TIME FUNCTIONS, SECONDS								dP				
DATE	DAY	HOUR	MIN	TEMP (°C)	dt (min)	dt,acc (min)	dt (sec)	dt,acc (sec)	Reading (psi)	Head (cm)	Gradient	Permeability (cm/sec)
6/27/98	359?3	8	30	21.5	0	0	0	0	2.00	140.68	17.09	3.8E-08
6/27/98	359?3	8	35	21.5	5	5	300	300	2.00	140.68	17.09	3.8E-08
6/27/98	359?3	8	40	21.5	5	10	300	600	2.00	140.68	17.09	3.8E-08
6/27/98	359?3	8	45	21.5	5	15	300	900	2.00	140.68	17.09	3.8E-08 *
6/27/98	359?3	8	50	21.5	5	20	300	1200	2.00	140.68	17.09	3.8E-08 *
6/27/98	359?3	8	55	21.5	5	25	300	1500	2.00	140.68	17.09	3.8E-08 *
6/27/98	359?3	9	0	21.5	5	30	300	1800	2.00	140.68	17.09	3.8E-08 *

*TRANSCRIBED FROM ORIGINAL DATA SHEETS

PERMEABILITY REPORTED AS ** 3.8E-08 cm/sec **

DATE 6/27/98

CHECK

REVIEW

ATTERBERG LIMITS
ASTM D-4318

PROJECT TITLE	SOLUTIA / RFI-CS / AL	**SAMPLE ID**	OWR-9S -
PROJECT NUMBER	983-3223	**SAMPLE TYPE**	UD
		SAMPLE DEPTH	20.0 - 22.0'

SAMPLE PREPARATION

Wet or Dry: Dry Minus #40 Sieve: Yes

PLASTIC LIMIT DETERMINATION

					NATURAL MOISTURE
Weight of Wet Soil & Tare	(W1)	21.66	23.91	25.53	624.94
Weight of Dry Soil & Tare	(W2)	18.99	20.66	22.01	488.22
Weight of Tare	(W3)	11.30	11.39	11.85	0.00
Weight of Water	(W4=W1-W2)	2.67	3.25	3.52	136.72
Weight of Dry Soil	(W5=W2-W3)	7.69	9.27	10.16	488.22
Water Content	(W4/W5)*100	34.72%	35.06%	34.65%	28.00%

LIQUID LIMIT DETERMINATION

				TEST RESULTS		
Number of Blows		28	28		TRAIL 1	TRIAL 2
Weight of Wet Soil & Tare	(W6)	23.39	23.03			
Weight of Dry Soil & Tare	(W7)	15.85	15.62	**BLOWS:**	**28**	**28**
Weight of Tare	(W8)	4.27	4.28			
Weight of Water	(W9=W6-W7)	7.54	7.41			
Weight of Dry Soil	W10=W7-W8)	11.58	11.34	**K VALUE:**	**1.014**	**1.014**
Water Content	(W9/W10)*100	65.11%	65.34%			

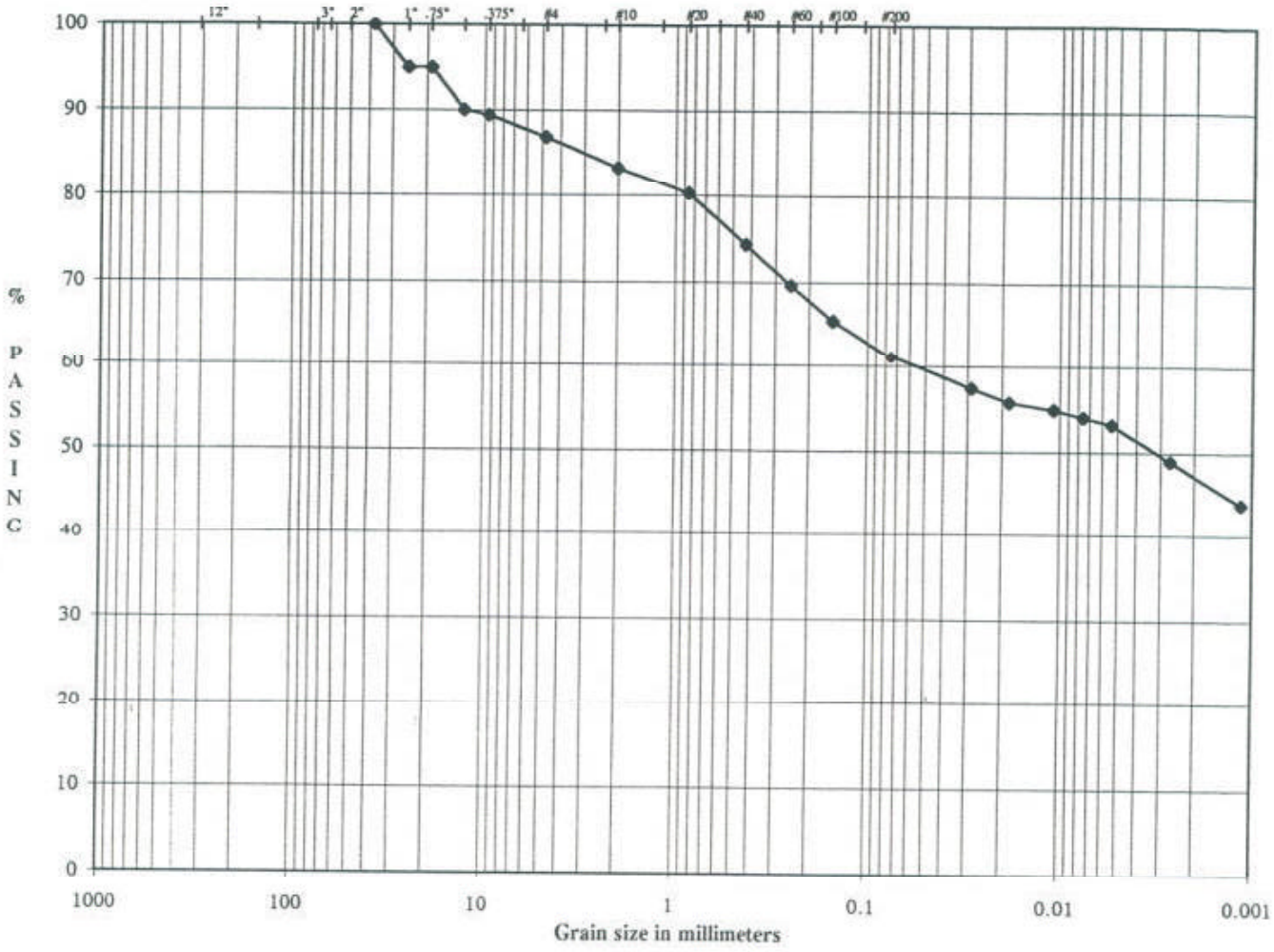
LIQUID LIMIT (WI)	**66.14**	**66**
PLASTIC LIMIT (Wp)	**34.81**	**35**
PLASTICITY INDEX (Ip)		**31**
LIQUIDITY INDEX (I)		**-0.22**
MOISTURE CONTENT		**28.00%**

DESCRIPTION: Reddish Yellow, CLAYEY SILT, some coarse to fine sand, some coarse to fine gravel.

USCS: MH

TECH	SW
DATE	6/29/98
CHECK	
REVIEW	

PARTICLE SIZE DISTRIBUTION ASTM D 421 AND D 422
US STANDARD SIEVE OPENING SIZES



Boulders	Cobbles	Coarse Gravel	Fine Gravel	Cor SAND	Med SAND	Fine SAND	SILT OR CLAY FINES

SAMPLE ID	OWR - 9S
SAMPLE TYPE	UD
SAMPLE DEPTH	20.0 - 22.0'

LL	66
PL	35
PI	31

DESCRIPTION	Reddish Yellow, CLAYEY SILT, some coarse to fine sand, some coarse to fine gravel.
USCS	MH

SOLUTIA / RFI-CS / AL
983-3223

TECH	TF
DATE	6/26/98
CHECK	
REVIEW	

ASTM GRAIN SIZE ANALYSIS
ASTM C117, C136, D421, D422, D1140 and D2217

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR - 9S
PROJECT NO.	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	20.0 - 22.0'

AS RECEIVED WATER CONTENT

Tare No.		-
Wt. Wet Soil & Tare (gm)	(W1)	624.94
Wt. Dry Soil & Tare (gm)	(W2)	488.22
Weight of Tare (gm)	(W3)	0.00
Weight of Water (gm)	(W4=W1-W2)	136.72
Weight of Dry Soil (gm)	(W5=W2-W3)	488.22
Moisture Content (%)	(W4/W5)*100	28.00

Hygroscopic Moisture For Sieve Sample

Wet Soil & Tare (gm)	101.70
Dry Soil & Tare (gm)	98.10
Tare Weight (gm)	41.90
Moisture Content (%)	6.41

Total Weight of Sample Used For Sieve Analysis Corrected For Hygroscopic Moisture

Weight + Tare, Before Separating On The #4 Sieve (gm)	994.90	
Tare Weight (gm)	234.20	
Total Weight (gm)	714.91	(W6)

Plus #4 Material Sieve

TARE WEIGHT: 203.19

	(Wt+Tare)	(((Wt-Tare)/W6)*100)	%PASSING		
12.0"				12.0"	cobbles
3.0"				3.0"	coarse gravel
2.5"				2.5"	coarse gravel
2.0"				2.0"	coarse gravel
1.5"	203.19	0.0	100.0	1.5"	coarse gravel
1.0"	238.82	5.0	95.0	1.0"	coarse gravel
0.75"	238.82	5.0	95.0	0.75"	fine gravel
0.50"	274.66	10.0	90.0	0.50"	fine gravel
0.375"	279.20	10.6	89.4	0.375"	fine gravel
#4	297.22	13.2	86.8	#4	coarse sand

HYDROMETER ANALYSIS

Specific Gravity	(assumed)	
Specific Gravity	(tested)	2.830
Amount Dispersing Agent (ml)		125.00
Type Dispersion Device		Mechanical
Length of Dispersion Period		1 Minute

Weight of Sample Used For Hydrometer Test

Weight of Sample Wet or Dry (gm)	53.11
Calculated Dry Wt. used in test (gm)	49.91
Hydrometer Bulb Number	624378
% Pass #4 Sieve For Whole Sample	86.85

TARE WEIGHT: 203.18

HYDROMETER BACKSIEVE (Percent Passing #10 - #200 Sieves)

	(Wt+Tare)	Cumul Wt. Retained	% PASSING		
#10	205.24	2.06	83.3	#10	medium sand
#20	206.95	3.77	80.3	#20	medium sand
#40	210.39	7.21	74.3	#40	fine sand
#60	213.07	9.89	69.6	#60	fine sand
#100	215.45	12.27	65.5	#100	fine sand
#200	217.93	14.75	61.2	#200	fines

HYDROMETER CALCULATIONS

DATE	TIME	ET (min)	READING R	TEMP T	TEMP.COR. K	HYD.COR. Cc	READING C	EFFECTIVE LENGTH	A
6/29/98	8:04								
6/29/98	8:06	2.00	39.5	23.00	0.012	5.50	34.00	10.7	0.97
6/29/98	8:09	5.00	38.5	23.00	0.012	5.50	33.00	10.9	0.97
6/29/98	8:19	15.00	38.0	23.00	0.012	5.50	32.50	11.1	0.97
6/29/98	8:34	30.00	37.5	23.00	0.012	5.50	32.00	11.1	0.97
6/29/98	9:04	60.00	37.0	23.00	0.012	5.50	31.50	11.2	0.97
6/29/98	12:14	250.00	34.5	23.00	0.012	5.50	29.00	11.5	0.97
6/30/98	8:04	1440.00	31.5	23.00	0.012	5.50	26.00	12.0	0.97

GRAIN SIZE PERCENTAGES

Particle Diameter	% PASSING		
0.0287	57.4	% COBBLES	0.00
0.0183	55.7	% COARSE GRAVEL	4.98
0.0107	54.9	% FINE GRAVEL	8.17
0.0075	54.0	% COARSE SAND	3.58
0.0054	53.2	% MEDIUM SAND	8.96
0.0027	48.9	% FINE SAND	13.12
0.0011	43.9	% FINES	61.18
		% TOTAL SAMPLE	100.00

Description: Reddish Yellow, CLAYEY SILT, some coarse to fine sand, some coarse to fine gravel.

USCS: MH

66	LL
35	PL
31	PI

TECH	TF
DATE	6/26/98
CHECK	
REVIEW	

UNIT WEIGHT DETERMINATION
ASTM D 2937

PROJECT NAME	SOLUTIA / RFI-CS / AL	**SAMPLE ID**	OWR - 9S
PROJECT NUMBER	983-3223	**SAMPLE TYPE**	UD
		SAMPLE DEPTH	20.0 - 22.0'

WEIGHT OF SOIL (g)	624.94
LENGTH OF SAMPLE (in)	2.968
DIAMETER OF SAMPLE (in)	2.869
AREA OF SAMPLE (in^2)	6.46
VOLUME OF SAMPLE (in^3)	19.19
VOLUME OF SAMPLE (cm^3)	314.47

WET UNIT WEIGHT (pcf)	124.1

WEIGHT WET SOIL & TARE (g)	624.94
WEIGHT DRY SOIL & TARE (g)	488.22
WEIGHT OF WATER (g)	136.72
WEIGHT OF TARE (g)	0.00
WEIGHT OF DRY SOIL (g)	488.22
WATER CONTENT (%)	28.00

DRY UNIT WEIGHT (pcf)	97.0

SPECIFIC GRAVITY	2.830
VOLUME OF SOLIDS (cm^3)	172.52
VOLUME OF VOIDS (cm^3)	141.95
POROSITY (%)	45

TECH	GM
DATE	7/1/98
CHECK	
REVIEW	

FLOW PUMP #2

FLEXIBLE WALL PERMEABILITY
ASTM D 5084
METHOD D, CONSTANT RATE OF FLOW

PROJECT TITLE	SOLUTIA / RFI-CS / AL		
PROJECT NUMBER	983-3223		
SAMPLE ID	OWR - 9S	-	20.0-22.0
SAMPLE TYPE	UD		

BOARD #	7
CELL #	7
Flow Pump Speed	10
Technidan	PWM

COMMENTS

Sample Data, Initial			
Height, inches	2.968	B-Value, f	0.98
Diameter, inches	2.869	Cell Pres.	90.0
Area, cm²	41.71	Bot. Pres.	80.0
Volume, cm³	314.42	Top Pres.	80.0
Mass, g	624.94	Tot. B.P.	80.0
Moisture Content, %	28.00	Head, max.	35.17
Dry Density, pcf	96.89	Head, min.	35.17
Spec. Gravity	2.830	Max. Grad.	4.65
Volume Solids, cm³	172.52	Min. Grad.	4.65
Volume Voids, cm³	141.91		
Void Ratio	0.82		
Saturation, %	96.1%		

Sample Data, Final	
Height, inches	2.977
Diameter, inches	2.918
Area, cm²	43.14
Volume, cm³	326.24
Mass, g	631.81
Moisture Content, %	29.41
Dry Density, pcf	93.39
Volume Solids, cm³	172.52
Volume Voids, cm³	153.72
Void Ratio	0.89
Saturation, %	93.4%

WATER CONTENTS		Trimmings Initial	Sample Final
Wt Soil & Tare, i	g	624.94	674.15
Wt Soil & Tare, f	g	488.22	531.33
Wt Tare	g	0.00	43.26
Wt Moisture Lost	g	136.72	143.52
Wt Dry Soil	g	488.22	488.07
Water Content	%	28.00%	29.41%

DESCRIPTION

Flow Pump Rate 1.80E-05 cm³/sec

USCS

TIME FUNCTIONS, SECONDS								dP				
DATE	DAY	HOUR	MIN	TEMP (°C)	dt (min)	dt,acc (min)	dt (sec)	dt,acc (sec)	Reading (psi)	Head (cm)	Gradient	Permeability (cm/sec)
6/27/98	35973	9	25	21.6	0	0	0	0	0.50	35.17	4.65	1.3E-07
6/27/98	35973	9	30	21.6	5	5	300	300	0.50	35.17	4.65	1.3E-07
6/27/98	35973	9	35	21.6	5	10	300	600	0.50	35.17	4.65	1.3E-07
6/27/98	35973	9	40	21.6	5	15	300	900	0.50	35.17	4.65	1.3E-07 *
6/27/98	35973	9	45	21.6	5	20	300	1200	0.50	35.17	4.65	1.3E-07 *
6/27/98	35973	9	50	21.6	5	25	300	1500	0.50	35.17	4.65	1.3E-07 *
6/27/98	35973	9	55	21.6	5	30	300	1800	0.50	35.17	4.65	1.3E-07 *

*TRANSCRIBED FROM ORIGINAL DATA SHEETS

PERMEABILITY REPORTED AS ** 1.3E-07 cm/sec **

DATE 6/27/98
CHECK
REVIEW

ATTERBERG LIMITS
ASTM D-4318

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR-9S -
PROJECT NUMBER	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	40.0 - 42.0'

SAMPLE PREPARATION

Wet or Dry: Dry

Minus #40 Sieve: Yes

PLASTIC LIMIT DETERMINATION

					NATURAL MOISTURE
Weight of Wet Soil & Tare	(W1)	22.91	21.35	22.04	256.96
Weight of Dry Soil & Tare	(W2)	20.55	19.25	19.81	221.01
Weight of Tare	(W3)	11.83	11.47	11.52	52.15
Weight of Water	(W4=W1-W2)	2.36	2.10	2.23	35.95
Weight of Dry Soil	(W5=W2-W3)	8.72	7.78	8.29	168.86
Water Content	(W4/W5)*100	27.06%	26.99%	26.90%	21.29%

LIQUID LIMIT DETERMINATION

				TEST RESULTS	
Number of Blows		20	20	TRAIL 1	TRIAL 2
Weight of Wet Soil & Tare	(W6)	23.55	26.56		
Weight of Dry Soil & Tare	(W7)	18.47	20.70	BLOWS: 20	20
Weight of Tare	(W8)	4.26	4.26		
Weight of Water	(W9=W6-W7)	5.08	5.86		
Weight of Dry Soil	W10=W7-W8)	14.21	16.44	K VALUE: 0.974	0.974
Water Content	(W9/W10)*100	35.75%	35.64%		

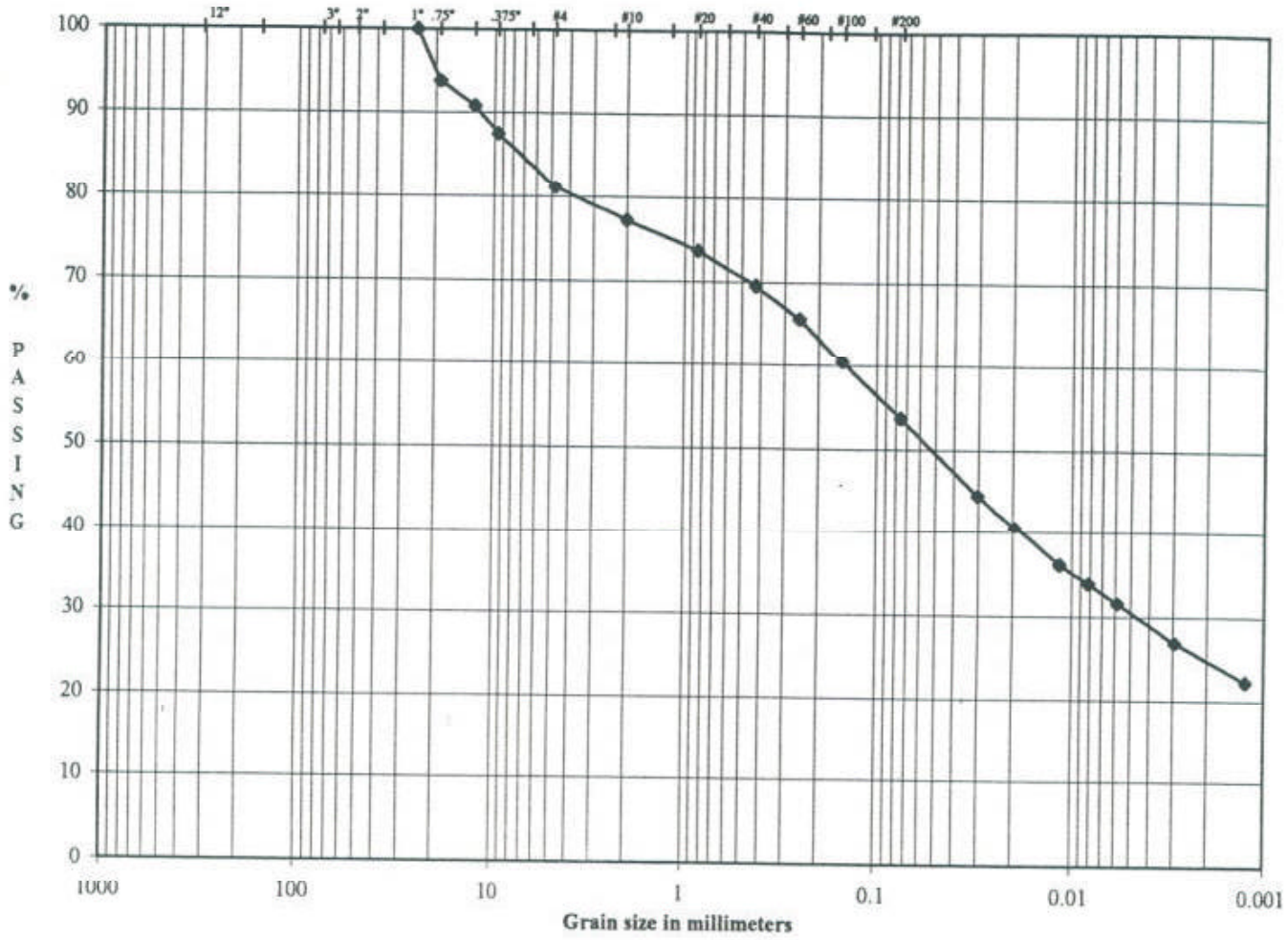
LIQUID LIMIT (WI)	34.77	35
PLASTIC LIMIT (Wp)	26.99	27
PLASTICITY INDEX (Ip)		8
LIQUIDITY INDEX (I)		-0.71
MOISTURE CONTENT		21.29%

DESCRIPTION: Brownish Yellow, CLAYEY SILT, some coarse to fine sand, some coarse to fine gravel.

USCS: ML

TECH	SW
DATE	6/29/98
CHECK	
REVIEW	

PARTICLE SIZE DISTRIBUTION ASTM D 421 AND D 422
US STANDARD SIEVE OPENING SIZES



Boulders	Cobbles	Coarse Gravel	Fine Gravel	Cor SAND	Med SAND	Fine SAND	SILT OR CLAY FINES

SAMPLE ID	OWR - 9S
SAMPLE TYPE	UD
SAMPLE DEPTH	40.0 - 42.0'

LL	35
PL	27
PI	8

DESCRIPTION	Brownish Yellow, CLAYEY SILT, some coarse to fine sand, some coarse to fine gravel.
USCS	ML

SOLUTIA / RFI-CS / AL
983-3223

TECH	TF
DATE	6/26/98
CHECK	
REVIEW	

ASTM GRAIN SIZE ANALYSIS
ASTM C117, C136, D421, D422, D1140 and D2217

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	OWR - 9S
PROJECT NO.	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	40.0 - 42.0'

AS RECEIVED WATER CONTENT

Tare No.		-
Wt. Wet Soil & Tare (gm)	(W1)	256.96
Wt. Dry Soil & Tare (gm)	(W2)	221.01
Weight of Tare (gm)	(W3)	52.15
Weight of Water (gm)	(W4 = W1-W2)	35.95
Weight of Dry Soil (gm)	(W5 = W2-W3)	168.86
Moisture Content (%)	(W4/W5)*100	21.29

Hygroscopic Moisture For Sieve Sample

Wet Soil & Tare (gm)	101.60
Dry Soil & Tare (gm)	99.51
Tare Weight (gm)	52.09
Moisture Content (%)	4.41

Total Weight of Sample Used For Sieve Analysis Corrected For Hygroscopic Moisture

Weight + Tare, Before Separating On The #4 Sieve (gm)	925.33	
Tare Weight (gm)	234.31	
Total Weight (gm)	661.85	(W6)

Plus #4 Material Sieve

TARE WEIGHT: 203.21

	(Wt+Tare)	(((Wt-Tare)/W6)*100)	%PASSING		
12.0"				12.0"	cobbles
3.0"				3.0"	coarse gravel
2.5"				2.5"	coarse gravel
2.0"				2.0"	coarse gravel
1.5"				1.5"	coarse gravel
1.0"	203.21	0.0	100.0	1.0"	coarse gravel
0.75"	244.06	6.2	93.8	0.75"	fine gravel
0.50"	264.02	9.2	90.8	0.50"	fine gravel
0.375"	285.92	12.5	87.5	0.375"	fine gravel
#4	328.27	18.9	81.1	#4	coarse sand

HYDROMETER ANALYSIS

Specific Gravity	(assumed)	
Specific Gravity	(tested)	2.818
Amount Dispersing Agent (ml)		125.00
Type Dispersion Device		Mechanical
Length of Dispersion Period		1 Minute

Weight of Sample Used For Hydrometer Test

Weight of Sample Wet or Dry (gm)	53.44
Calculated Dry Wt. used in test (gm)	51.18
Hydrometer Bulb Number	624378
% Pass #4 Sieve For Whole Sample	81.10

TARE WEIGHT: 203.17

HYDROMETER BACKSIEVE (Percent Passing #10 - #200 Sieves)

	(Wt+Tare)	Cumul Wt. Retained	% PASSING		
#10	205.61	2.44	77.2	#10	medium sand
#20	207.88	4.71	73.6	#20	medium sand
#40	210.45	7.28	69.6	#40	fine sand
#60	212.89	9.72	65.7	#60	fine sand
#100	216.23	13.06	60.4	#100	fine sand
#200	220.46	17.29	53.7	#200	fines

HYDROMETER CALCULATIONS

DATE	TIME	ET	READING	TEMP	TEMP.COR.	HYD.COR.	READING	EFFECTIVE	
6/29/98	8:06	(min)	R	T	K	Cc	C	LENGTH	A
6/29/98	8:08	2.00	34.5	23.00	0.013	5.50	29.00	11.5	0.97
6/29/98	8:11	5.00	32.0	23.00	0.013	5.50	26.50	12.0	0.97
6/29/98	8:21	15.00	29.0	23.00	0.013	5.50	23.50	12.5	0.97
6/29/98	8:36	30.00	27.5	23.00	0.013	5.50	22.00	12.7	0.97
6/29/98	9:06	60.00	26.0	23.00	0.013	5.50	20.50	13.0	0.97
6/29/98	12:16	250.00	23.0	23.00	0.013	5.50	17.50	13.5	0.97
6/30/98	8:06	1440.00	20.0	23.00	0.013	5.50	14.50	14.0	0.97

Particle Diameter	% PASSING
0.0302	44.6
0.0195	40.7
0.0115	36.1
0.0082	33.8
0.0059	31.5
0.0029	26.9
0.0012	22.3

GRAIN SIZE PERCENTAGES

% COBBLES	0.00
% COARSE GRAVEL	6.17
% FINE GRAVEL	12.72
% COARSE SAND	3.87
% MEDIUM SAND	7.67
% FINE SAND	15.86
% FINES	53.71
% TOTAL SAMPLE	100.00

Description: Brownish Yellow, CLAYEY SILT, some coarse to fine sand, some coarse to fine gravel.

USCS: ML

35	LL
27	PL
8	PI

TECH	TF
DATE	6/26/98
CHECK	
REVIEW	

UNIT WEIGHT DETERMINATION
ASTM D 2937

PROJECT NAME	SOLUTIA / RFI-CS / AL	**SAMPLE ID**	OWR - 9S
PROJECT NUMBER	983-3223	**SAMPLE TYPE**	UD
		SAMPLE DEPTH	40.0 - 42.0'

WEIGHT OF SOIL (g)	662.01
LENGTH OF SAMPLE (in)	3.243
DIAMETER OF SAMPLE (in)	2.855
AREA OF SAMPLE (in^2)	6.40
VOLUME OF SAMPLE (in^3)	20.76
VOLUME OF SAMPLE (cm^3)	340.19

WET UNIT WEIGHT (pcf)	121.5

WEIGHT WET SOIL & TARE (g)	256.96
WEIGHT DRY SOIL & TARE (g)	221.01
WEIGHT OF WATER (g)	35.95
WEIGHT OF TARE (g)	52.15
WEIGHT OF DRY SOIL (g)	168.86
WATER CONTENT (%)	21.29

DRY UNIT WEIGHT (pcf)	100.2

SPECIFIC GRAVITY	2.818
VOLUME OF SOLIDS (cm^3)	193.69
VOLUME OF VOIDS (cm^3)	146.50
POROSITY (%)	43

TECH	GM
DATE	7/1/98
CHECK	
REVIEW	

FLOW PUMP #2

FLEXIBLE WALL PERMEABILITY
ASTM D 5084
METHOD D, CONSTANT RATE OF FLOW

PROJECT TITLE	SOLUTIA / RFI-CS / AL		
PROJECT NUMBER	983-3223		
SAMPLE ID	OWE - 9S	-	40.0-42.0
SAMPLE TYPE	UD		

BOARD #	2
CELL #	2
Flow Pump Speed	7
Technician	LB

COMMENTS

Sample Data, Initial

Height, inches	3.243	B-Value, f	1.00
Diameter, inches	2.855	Cell Pres.	95.0
Area, cm²	41.30	Bot. Pres.	80.0
Volume, cm³	340.21	Top Pres.	80.0
Mass, g	662.01	Tot. B.P.	80.0
Moisture Content, %	21.29	Head, max.	54.87
Dry Density, pcf	100.11	Head, min.	54.87
Spec. Gravity	2.818	Max. Grad.	6.66
Volume Solids, cm³	193.69	Min. Grad.	6.66
Volume Voids, cm³	146.53		
Void Ratio	0.76		
Saturation, %	79.3%		

Sample Data, Final

Height, inches	3.243
Diameter, inches	2.853
Area, cm²	41.24
Volume, cm³	339.74
Mass, g	678.10
Moisture Content, %	26.86
Dry Density, pcf	98.18
Volume Solids, cm³	189.68
Volume Voids, cm³	150.05
Void Ratio	0.79
Saturation, %	95.7%

WATER CONTENTS		Trimmings Initial	Sample Final
Wt Soil & Tare, i	g	256.96	728.09
Wt Soil & Tare, f	g	221.01	584.73
Wt Tare	g	52.15	51.00
Wt Moisture Lost	g	35.95	143.36
Wt Dry Soil	g	168.86	533.73
Water Content	%	21.29%	26.86%

Flow Pump Rate: 2.70E-04 cm³/sec

USCS: ML

DESCRIPTION

Brownish Yellow, CLAYEY SILT, some coarse to fine sand, some coarse to fine gravel.

TIME FUNCTIONS, SECONDS								dP				
DATE	DAY	HOUR	MIN	TEMP (°C)	dt (min)	dt,acc (min)	dt (sec)	dt,acc (sec)	Reading (psi)	Head (cm)	Gradient	Permeability (cm/sec)
6/29/98	35975	11	40	21.5	0	0	0	0	0.78	54.87	6.66	9.5E-07
6/29/98	35975	11	45	21.5	5	5	300	300	0.78	54.87	6.66	9.5E-07
6/29/98	35975	11	50	21.5	5	10	300	600	0.78	54.87	6.66	9.5E-07
6/29/98	35975	11	55	21.5	5	15	300	900	0.78	54.87	6.66	9.5E-07
6/29/98	35975	12	0	21.5	5	20	300	1200	0.78	54.87	6.66	9.5E-07 *
6/29/98	35975	12	5	21.5	5	25	300	1500	0.78	54.87	6.66	9.5E-07 *
6/29/98	35975	12	10	21.5	5	30	300	1800	0.78	54.87	6.66	9.5E-07 *

*TRANSCRIBED FROM ORIGINAL DATA SHEETS

PERMEABILITY REPORTED AS ** 9.5E-07 cm/sec **

DATE 6/29/98

CHECK

REVIEW

JUNE 1998

983-3223

SOLUTIA / RFI-CS / AL
SUMMARY OF SOIL DATA

Sample Identification	Sample Type	Sample Depth	Soil Classification	Natural Moisture %	Atterberg Limits				Grain Size Distribution			Compaction		Gs	Unit Weight		Permeability (cm/sec)	Additional Tests Conducted (See Notes)
					L.L.	P.L.	P.I.	L.I.	% Finer No. 4 Sieve	% Finer No.200 Sieve	% Finer .005 mm	Maximum Dry Density (b/cuft)	Optimum Moisture %		Moisture %	Dry (lb/cuft)		
PZR - 1	UD	40.0-42.0'	ML	22.6	NP	NP	NP	NP	100.0	60.5	18.0	-	-	2.82	22.6	101.1	4.3E-05	PO, W_T
PZR - 2	UD	58.0-60.0'	ML	24.1	43	30	13	-0.49	100.0	73.9	24.5	-	-	2.81	24.1	99.9	1.3E-07	PO, W_T
PZR - 3	UD	20.0-22.0'	CH	25.3	53	28	25	-0.10	98.0	76.4	58.0	-	-	2.77	25.3	98.6	2.0E-07	PO, W_T
PZR - 3	UD	55.0-57.0'	ML	28.2	47	30	17	-0.09	100.0	88.8	49.0	-	-	2.79	28.2	94.7	8.1E-05	PO, W_T
PZR - 4	UD	58.0-60.0'	ML	31.0	37	29	8	0.30	100.0	76.4	30.0	-	-	2.73	31.0	88.7	3.6E-05	PO, W_T
PZR - 5	UD	40.0-42.0'	CL	16.9	29	19	10	-0.23	98.5	60.4	28.0	-	-	2.73	16.9	112.7	3.3E-08	PO, W_T
PZR - 6	UD	20.0-22.0'	CL	15.9	34	21	13	-0.36	100.0	75.8	38.5	-	-	2.74	15.9	113.4	8.2E-08	PO, W_T
PZR - 6	UD	39.0-41.0'	ML	17.2	36	25	11	-0.67	100.0	62.5	23.0	-	-	2.87	17.2	105.7	4.2E-07	PO, W_T

ABBREVIATIONS:
LIQUID LIMIT (LL)
PLASTIC LIMIT (PL)
PLASTICITY INDEX (PI)
LIQUIDITY INDEX (LI)
SPECIFIC GRAVITY (Gs)
MOISTURE (Mc)

NOTES:
T = TRIAXIAL TEST
U = UNCONFINED COMPRESSION TEST
C = CONSOLIDATION TEST
DS = DIRECT SHEAR TEST
O = ORGANIC CONTENT
P = pH
PO= POROSITY
W_T= WATER TABLE GIVEN 6-25-98

ATTERBERG LIMITS
ASTM D-4318

PROJECT TITLE	SOLUTIA / RFI-CS / AL	SAMPLE ID	PZR - 1 -
PROJECT NUMBER	983-3223	SAMPLE TYPE	UD
		SAMPLE DEPTH	40.0 - 42.0'

SAMPLE PREPARATION
Wet or Dry: Dry Minus #40 Sieve: Yes

PLASTIC LIMIT DETERMINATION

Weight of Wet Soil & Tare (gm)	(W1)	22.29	21.02	22.19
Weight of Dry Soil & Tare (gm)	(W2)	19.80	18.82	19.72
Weight of Tare (gm)	(W3)	11.44	11.42	11.41
Weight of Water (gm)	(W4=W1-W2)	2.49	2.20	2.47
Weight of Dry Soil (gm)	(W5=W2-W3)	8.36	7.40	8.31
Water Content %	(W4/W5)*100	29.78	29.73	29.72

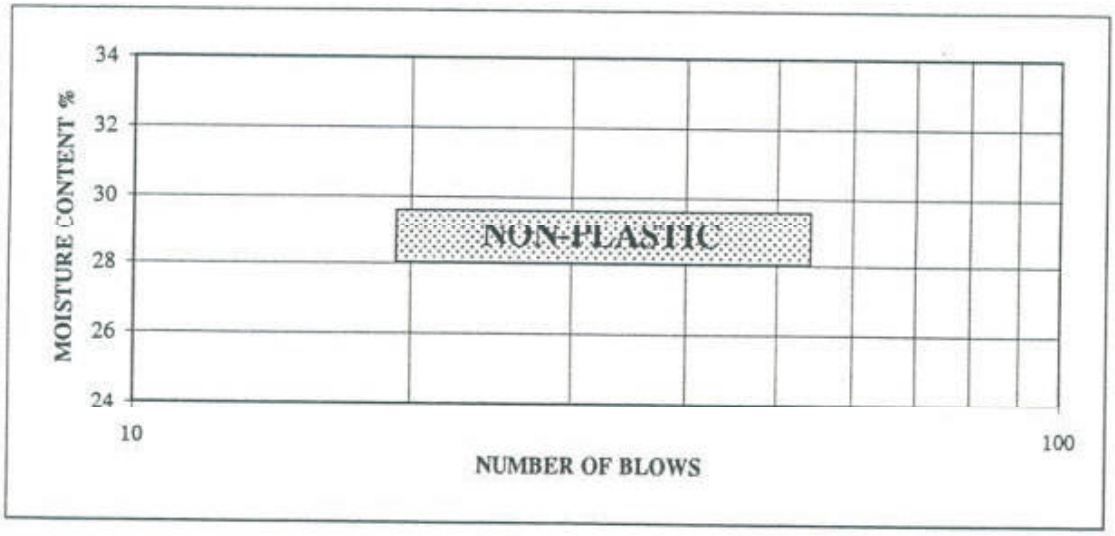
NATURAL MOISTURE

662.62
540.45
0.00
122.17
540.45
22.61

LIQUID LIMIT DETERMINATION

Number of Blows		17	17
Weight of Wet Soil & Tare (gm)	(W6)	20.58	24.74
Weight of Dry Soil & Tare (gm)	(W7)	16.43	20.08
Weight of Tare (gm)	(W8)	4.32	6.64
Weight of Water (gm)	(W9=W6-W7)	4.15	4.66
Weight of Dry Soil (gm)	(W10=W7-W8)	12.11	13.44
Water Content %	(W9/W10)*100	34.27	34.67

NOTE: DIFFICULT TO ROLL, SUSPECT TO BE NON-PLASTIC.



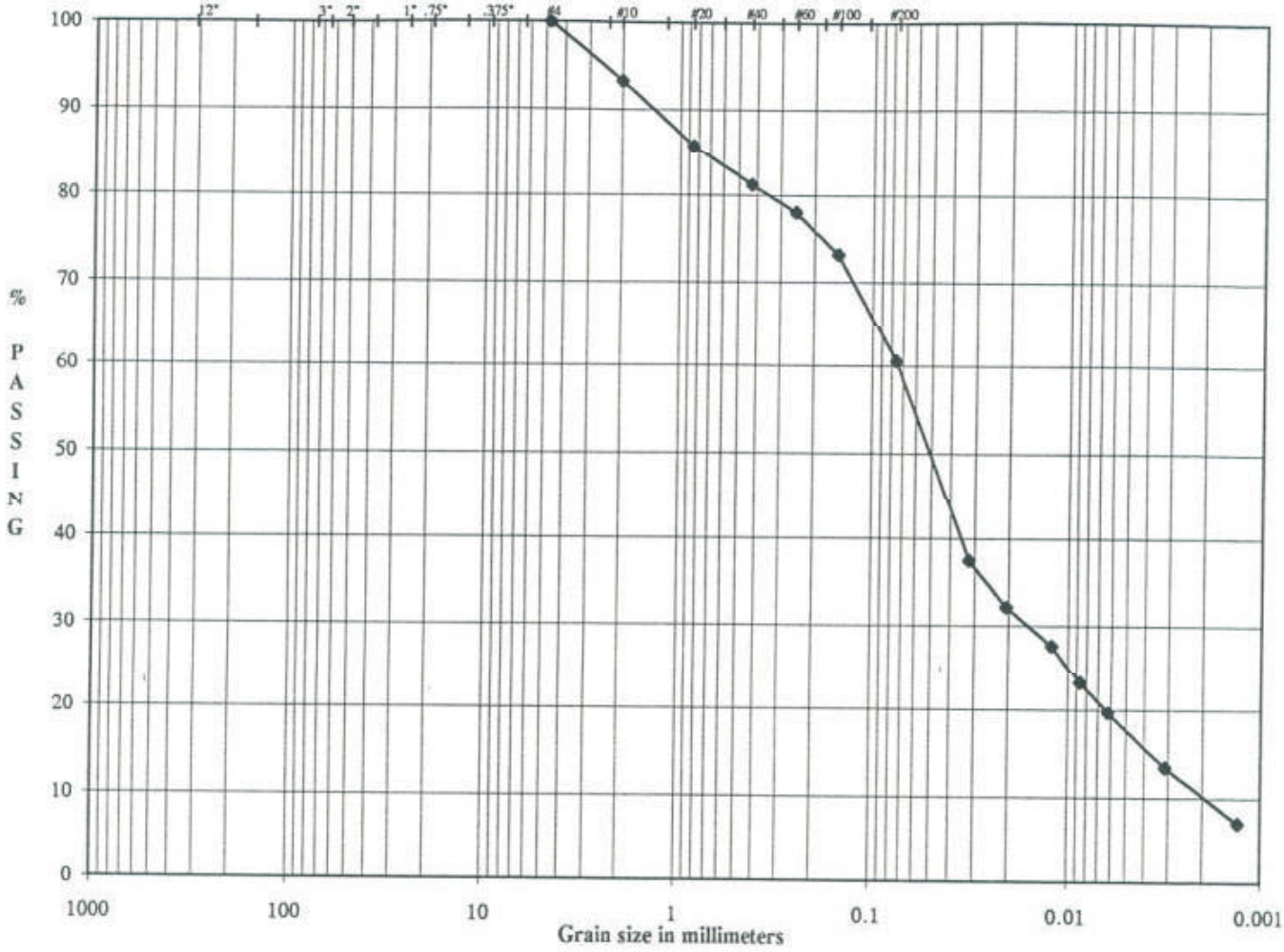
LIQUID LIMIT (WI)		NP
PLASTIC LIMIT (Wp)		NP
PLASTICITY INDEX (Ip)		NP
LIQUIDITY INDEX (I)		NP
MOISTURE CONTENT		22.61

DESCRIPTION: Dark Red and Yellow, CLAYEY SILT, and coarse to fine sand.

USCS: ML

TECH	SW
DATE	6/30/98
CHECK	
REVIEW	

PARTICLE SIZE DISTRIBUTION ASTM D 421 AND D 422
US STANDARD SIEVE OPENING SIZES



Boulders	Cobbles	Coarse Gravel	Fine Gravel	Cor SAND	Med SAND	Fine SAND	SILT OR CLAY FINES

SAMPLE ID	PZR - 1
SAMPLE TYPE	UD
SAMPLE DEPTH	40.0 - 42.0'

LL	NP
PL	NP
PI	NP

DESCRIPTION	Dark Red and Yellow, CLAYEY SILT, and coarse to fine sand.
USCS	ML

SOLUTIA / RFI-CS / AL
983-3223

TECH	ZP
DATE	6/29/98
CHECK	
REVIEW	

APPENDIX G

Analytical Laboratory Reports

APPENDIX G-1

RFIAnalytical Laboratory Reports

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-83314
Received: 08 JUN 98
Reported: 18 JUN 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 154180618

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
83314-1	OWR-15-33	06-02-98/1000
83314-2	OWR-6D-63	06-03-98/1200
83314-7	OWR-5D-65	06-04-98/1600

PARAMETER	83314-1	83314-2	83314-7
Cation Exchange Capacity			
Cation Exchange Capacity, meq/100g	0.022	0.012	0.0045
Preparation Date	06.09.98	06.09.98	06.09.98
Date Analyzed	06.10.98	06.10.98	06.10.98
Dilution factor	1.0	1.0	1.0
Batch ID	0609W	0609W	0609W
Total Organic Carbon (9060)			
Total Organic Carbon, mg/kg dw	1200	640	330
Preparation Date	06.18.98	06.18.98	06.18.98
Date Analyzed	06.18.98	06.18.98	06.18.98
Dilution factor	1.0	1.0	1.0
Batch ID	0618X	0618X	0618X
Organic Carbon (Walkley-Black)			
Organic Carbon (Walkley Black), mg/kg dw	<120	9700	8000
Preparation Date	06.17.98	06.17.98	06.17.98
Date Analyzed	06.17.98	06.17.98	06.17.98
Dilution factor	1.0	1.0	1.0
Batch ID	0617A	0617A	0617A

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-83314
Received: 08 JUN 98
Reported: 18 JUN 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 154180618

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
83314-1	OWR-15-33	06-02-98/1000
83314-2	OWR-6D-62	06-03-98/1200
83314-7	OWR-5D-65	06-04-98/1600

PARAMETER	83314-1	83314-2	83314-7
Acid Volatile Sulfide			
Acid Volatile Sulfide, mg/kg dw	<13	<15	<12
Preparation Date	06.10.98	06.10.98	06.10.98
Date Analyzed	06.11.98	06.11.98	06.11.98
Dilution factor	1.0	1.0	1.0
Batch ID	0610A	0610A	0610A
Percent Solids	76	65	83

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-83314
Received: 08 JUN 98
Reported: 18 JUN 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223/MONSANTO RFI-ANNISTON
Sampled By: Client
Code. 154180618

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED
83314-8	Method Blank	
83314-9	Lab Control Standard % Recovery	
83314-10	LCS Accuracy Control Limit (%R)	
83314-11	Analyst (First Initial.Last Name)	

PARAMETER	83314-8	83314-9	83314-10	83314-11
Cation Exchange Capacity				
Cation Exchange Capacity, meq/100g	<0.0033	121 %	70-130 %	L.RILEY
Preparation Date	06.09.98	---	---	---
Date Analyzed	06.10.98	---	---	---
Dilution factor	1.0	---	---	---
Batch ID	0609W	---	---	---
Total Organic Carbon (9060)				
Total Organic Carbon, mg/kg dw	<100	104 %	60-140 %	LRILEY
Preparation Date	06.18.98	---	---	---
Date Analyzed	06.18.98	---	---	---
Dilution factor	1.0	---	---	---
Batch ID	0618X	---	---	---
Organic Carbon (Walkley Black)				
Organic Carbon (Walkley-Black), mg/kg dw	<100	81 %	60-140 %	K.BLACKSHE
Preparation Date	06.17.98	---	---	---
Date Analyzed	06.17.98	---	---	---
Dilution factor	1.0	---	---	---
Batch ID	0617A	---	---	---

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-83314
Received: 08 JUN 98
Reported: 18 JUN 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 9263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 154100610

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED
83314-8	Method Blank	
83314-9	Lab Control Standard % Recovery	
83314-10	LCS Accuracy Control Limit (%R)	
83314-11	Analyst (First Initial.Last Name)	

PARAMETER	83314-8	83314-9	83314-10	83314-11
Acid Volatile Sulfide				
Acid Volatile Sulfide, mg/kg dw	<10	85 %	50-150 %	L.RILEY
Preparation Date	06.10.98	---	---	---
Date Analyzed	06.11.98	---	---	---
Dilution factor	1.0	---	---	---
Batch ID	0610A	---	---	---

Methods: EPA SW-846, Update III.

Elizabeth F. Beauchamp, Project Manager

Final Page Of Report

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-83410A
Received: 11 JUN 98
Reported: 23 JUN 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 025700623

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
83410A-1	OWR-3S-34	06-09-98/1630
83410A-2	OWR-ID-66	06-09-98/0000
83410A-7	PZR-3-52	06-10-98/1000

PARAMETER	83410A-1	83410A-2	83410A-7
Cation Exchange Capacity			
Cation Exchange Capacity, meq/100g	13	10	7.9
Preparation Date	06.19.98	06.19.98	06.19.98
Date Analyzed	06.22.98	06.22.98	06.22.98
Dilution factor	20	20	20
Batch ID	0619W	0619W	0619W
Total Organic Carbon (9060)			
Total Organic Carbon, mg/kg dw	190	570	400
Preparation Date	06.22.98	06.22.98	06.22.98
Date Analyzed	06.22.98	06.22.98	06.22.98
Dilution factor	1.0	1.0	1.0
Batch ID	0622X	0622X	0622X
Organic Carbon (Walkley-Black)			
Organic Carbon (Walkley-Black), mg/kg	6900	3200	9300
Preparation Date	06.17.98	06.17.98	06.17.98
Date Analyzed	06.17.98	06.17.98	06.17.98
Dilution factor	1.0	1.0	1.0
Batch ID	0617A	0617A	0617A
Acid Volatile Sulfide			
Acid Volatile Sulfide, mg/kg	<14	<12	<13
Preparation Date	06.17.98	06.17.98	06.17.98
Date Analyzed	06.22.98	06.22.98	06.22.98
Dilution factor	1.0	1.0	1.0
Batch ID	0617A	0617A	0617A

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354 7858 • Fax (912) 352 0165

LOG NO: S8-83410A
Received: 11 JUN 98
Reported: 23 JUN 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 095700623

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
83410A-1	OWR-3S-34	06-09-98/1630
83410A-2	OWR-TD-66	06-09-98/0800
83410A-7	PZR-3-52	06-10-98/1000

PARAMETER	83410A-1	83410A-2	83410A-7
Percent Solids	72	81	76

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-83410A
Received: 11 JUN 98
Reported: 23 JUN 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223/MONSANTO RFI-ANNISTON
Sampled By: Client
Code. 025780623

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED
83410A-8	Method Blank	
83410A-9	Lab Control Standard % Recovery	
83410A-10	LCS Accuracy Control Limit (%R)	
83410A-11	Analyst (First Initial.Last Name)	

PARAMETER	83410A-8	83410A-9	83410A-10	83410A-11
Cation Exchange Capacity				
Cation Exchange Capacity, meq/100g	<0.0033	99 %	70-130 %	L.RILEY
Preparation Date	06.19.98	---	---	---
Date Analyzed	06.22.98	---	---	---
Dilution factor	1.0	---	---	---
Batch ID	0619W	---	---	---
Total Organic Carbon (9060)				
Total Organic Carbon, mg/kg dw	<100	100 %	60-140 %	LRILEY
Preparation Date	06.22.98	---	---	---
Date Analyzed	06.22.98	---	---	---
Dilution factor	1.0	---	---	---
Batch ID	0622X	---	---	---
Organic Carbon (Walkley-Black)				
Organic Carbon (Walkley-Black), mg/kg dw	<100	81 %	60-140 %	K.BLACKSHE
Preparation Date	06.17.98	---	---	---
Date Analyzed	06.17.98	---	---	---
Dilution factor	1.0	---	---	---
Batch ID	0617A	---	---	---

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-83410A
Received: 11 JUN 98
Reported: 23 JUN 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 025700623

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED
83410A-8	Method Blank	
83410A-9	Lab Control Standard % Recovery	
83410A-10	LCS Accuracy Control Limit (%R)	
83410A-11	Analyst (First Initial.Last Name)	

PARAMETER	83410A-8	83410A-9	83410A-10	83410A-11
Acid Volatile Sulfide				
Acid Volatile Sulfide, mg/kg dw	<10	105 %	50-150 %	K.HAMMOND
Preparation Date	06.17.98	---	---	---
Date Analyzed	06.22.98	---	---	---
Dilution factor	1.0	---	---	---
Batch ID	0617A	---	---	---

Methods: EPA SW-846, Update III.

Elizabeth F. Beauchamp

Elizabeth F. Beauchamp, Project Manager EFB

Final Page Of Report

Serial Number 128391

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

☐ 5102 LaRoche Avenue, Savannah, GA 31404 Phone: (912) 354-7858 Fax: (912) 352-0165
☐ 2846 Industrial Plaza Drive Tallahassee, FL 32301 Phone: (904) 878-3994 Fax: (904) 878-9504
☐ 414 SW 12th Avenue, Deerfield Beach, FL 33442 Phone: (954) 421-7400 Fax: (954) 421-2584
☐ 900 Lakeside Drive, Mobile AL 36693 Phone: (334) 666-6633 Fax: (334) 666-6696
☐ 6712 Benjamin Road, Suite 100, Tampa, FL 33634 Phone: (813) 885-7427 Fax: (813) 885-7049
☐ 100 Alpha Drive, Suite 110, Destrehan, LA 70047 Phone: (504) 764-1100 Fax: (504) 725-1163

4.0

PROJECT REFERENCE	PROJECT NO.	P.O. NUMBER
Solutia / RFI / AL	983-3223.2	

PROJECT LOC. (State)	SAMPLER(s) NAME	PHONE
AL	Jon Rodtke	770 496-1893
		FAX 770 ?

CLIENT NAME	CLIENT PROJECT MANAGER
Golder Assoc.	Jon Rodtke

CLIENT ADDRESS (CITY, STATE, ZIP): 3730 Chamblee-Tucker Rd, Atlanta GA 30341

MATRIX TYPE: AQUEOUS (WATER) / SOLID OR SEMISOLID / AIR / NONAQUEOUS LIQUID (oil, solvent, etc)

REQUIRED ANALYSES: PCB; AVS Sulfide; CEC; TOC; Fe & Walkley Black

PAGE ___ OF ___

☐ STANDARD REPORT DELIVERY

☐ EXPEDITED REPORT DELIVERY (surcharge)

Date Due: _____

SAMPLE DATE	SAMPLE TIME	SL NO.	SAMPLE IDENTIFICATION	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (oil, solvent, etc)	NUMBER OF CONTAINERS SUBMITTED: PCB	AVS Sulfide	CEC	TOC	Fe & Walkley Black	REMARKS
			ice					ice	ice	ice	ice	ice	
6/9	16:56		DW-8-6/9	✓				2					extract and hold PCB samples
6/9	15:50		DW-21-6/9	✓				2					
6/10	13:30		DW-16-6/10	✓				2					
6/9	16:30		DWR-35-34		✓				1	1	1	1	
6/9	08:00		DWR-1D-66		✓				1	1	1	1	
6/10	10:00		PZR-3-52		✓				1	1	1	1	

PRELIMINARY SUBJECT TO REVISION

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
S. Campbell	6/4/98	245						
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME
J. Rodtke	6/10/98	14:15	C. Vaughn	6/11/98	9:30			

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SL LOG NO.	LABORATORY REMARKS:
			☑ YES ☐ NO		SB-83410	Feb 6

FedEx USA Airbill

Tracking Number 804839366700

Form ID No. 0200

Recipient's Copy

1 From

Date

Sender's Name Phone ( )

Company

Address

Dept./Floor/Suite/Room

City State ZIP

2 Your Internal Billing Reference Information

3 To

Recipient's Name Phone ( )

Company

Address

Dept./Floor/Suite/Room

City State ZIP

☐ Check here if residence

For HOLD at FedEx Location check here

☐ Hold Weekday ☐ Hold Saturday ☐ Saturday Delivery ☐ NEW Sunday Delivery

8 0 4 8 3 9 3 6 6 7 0 0

4a Express Package Service *Packages under 150 lbs.*

Delivery commitment may be later in some areas

☒ FedEx Priority Overnight ☐ FedEx Standard Overnight

☐ FedEx First Overnight

☐ FedEx 2Day ☐ FedEx Express Saver

4b Express Freight Service *Packages over 150 lbs.*

Delivery commitment may be later in some areas

☐ FedEx Overnight Freight ☐ FedEx 2Day Freight ☐ FedEx Express Saver Freight

(Call for delivery schedule. See back for detailed descriptions of freight services.)

5 Packaging ☐ FedEx Letter ☐ FedEx Pak ☐ FedEx Box ☐ FedEx Tube ☐ Other Pkg

6 Special Handling

Does this shipment contain dangerous goods?* ☐ No ☐ Yes ☐ Yes

☐ Dry Ice ☐ Cargo Aircraft Only

*Dangerous Goods cannot be shipped in FedEx packaging

7 Payment

Bill to: ☒ Sender ☐ Recipient ☐ Third Party ☐ Credit Card ☐ Cash/Check

Total Packages	Total Weight	Total Declared Value	Total Charges
		$ .00	$

Credit Card Auth

8 Release Signature

Your signature authorizes Express to deliver this shipment without obtaining signature and agrees to indemnify and hold harmless Express from any resulting claims.

322

Questions?

Call 1-800-Go FedEx (800)463-3339

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354 7858 • Fax (912) 352-0165

LOG NO: S8-83486
Received: 13 JUN 98
Reported: 24 JUN 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223/MONSANTO RFI-ANNISTON
Sampled By: Client
Code. 1G2200624

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
83486-1	OWR-3-D-58	06-10-98/1700
83486-2	OWR-95-22	06-12-98/0800

PARAMETER	83486-1	83486-2
Cation Exchange Capacity		
Cation Exchange Capacity, meq/100g	10	9.8
Preparation Date	06.19.98	06.19.98
Date Analyzed	06.22.98	06.22.98
Dilution factor	20	20
Batch ID	0619W	0619W
Total Organic Carbon (9060)		
Total Organic Carbon, mg/kg dw	15000	320
Preparation Date	06.22.98	06.22.98
Date Analyzed	06.22.98	06.23.98
Dilution factor	1.0	1.0
Batch ID	0622X	0622X
Organic Carbon (Walkley-Black)		
Organic Carbon (Walkley-Black), mg/kg	6500	7000
Preparation Date	06.17.98	06.17.98
Date Analyzed	06.17.98	06.17.98
Dilution factor	1.0	1.0
Batch ID	0617A	0617A
Acid Volatile Sulfide		
Acid Volatile Sulfide, mg/kg	<12	<13
Preparation Date	06.17.98	06.17.98
Date Analyzed	06.22.98	06.22.98
Dilution factor	1.0	1.0
Batch ID	0617A	0617A

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-83486
Received: 13 JUN 98
Reported: 24 JUN 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 162200621

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
83486-1	OWR-3-D-58	06-10-98/1700
83486-2	OWR-85-33	06-12-98/0800

PARAMETER	83486-1	83486-2
Percent Solids	82	76

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-83486
Received: 13 JUN 98
Reported: 24 JUN 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223/MONSANTO RFI-ANNISTON
Sampled By: Client
Code. 162200624

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED
83486-3	Method Blank	
83486-4	Lab Control Standard % Recovery	
83486-5	LCS Accuracy Control Limit (%R)	
83486-6	Analyst (First Initial.Last Name)	

PARAMETER	83486-3	83486-4	83486-5	83486-6
Cation Exchange Capacity				
Cation Exchange Capacity, meq/100g	<0.0033	99 %	70-130 %	L.RILEY
Preparation Date	06.19.98	---	---	---
Date Analyzed	06.22.98	---	---	---
Dilution factor	1.0	---	---	---
Batch ID	0619W	---	---	---
Total Organic Carbon (9060)				
Total Organic Carbon, mg/kg dw	<100	104 %	60-140 %	LRILEY
Preparation Date	06.22.98	---	---	---
Date Analyzed	06.22.98	---	---	---
Dilution factor	1.0	---	---	---
Batch ID	0622X	---	---	---
Organic Carbon (Walkley-Black)				
Organic Carbon (Walkley-Black), mg/kg dw	<100	81 %	60-140 %	K.BLACKSHE
Preparation Date	06.17.98	---	---	---
Date Analyzed	06.17.98	---	---	---
Dilution factor	1.0	---	---	---
Batch ID	0617A	---	---	---

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-83486
Received: 13 JUN 98
Reported: 24 JUN 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223/MONSANTO RFI-ANNISTON
Sampled By: Client
Code. 162280624

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED
83486-3	Method Blank	
83486-4	Lab Control Standard % Recovery	
83486-5	LCS Accuracy Control Limit (%R)	
83486-6	Analyst (First Initial Last Name)	

PARAMETER	83486-3	83486-4	83486-5	83486-6
Acid Volatile Sulfide				
Acid Volatile Sulfide, mg/kg dw	<10	105 %	50-150 %	K.HAMMOND
Preparation Date	06.17.98	---	---	---
Date Analyzed	06.22.98	---	---	---
Dilution factor	1.0	---	---	---
Batch ID	0617A	---	---	---

Methods: EPA SW-846, Update III.

Elizabeth F. Beauchamp, Project Manager

EBH

Final Page Of Report

Serial Number

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

☐ 5102 LaRoche Avenue, Savannah, GA 31404 — Phone: (912) 354-7858 — Fax: (912) 352-0165
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☐ 900 Lakeside Drive, Mobile, AL 36693 — Phone: (334) 666-6633 — Fax: (334) 666-6696
☐ 6712 Benjamin Road, Suite 100, Tampa, FL 33634 — Phone: (813) 885-7427 — Fax: (813) 885-7049
☐ 100 Alpha Drive, Suite 110 Destrehan, LA 70047 — Phone: (504) 764-1100 — Fax: (504) 725-1163

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

PROJECT REFERENCE	PROJECT NO.	P.O. NUMBER

PROJECT LOC. (State)	SAMPLER(S) NAME	PHONE
		FAX

CLIENT NAME	CLIENT PROJECT MANAGER

CLIENT ADDRESS (CITY, STATE, ZIP)

MATRIX TYPE: AQUEOUS/WATER; SOLID OR SEMI-SOLID; AIR; NONAQUEOUS LIQUID (e.g. HEXANE, ETC.)

REQUIRED ANALYSES

PAGE ___ OF ___

☐ STANDARD REPORT DELIVERY

☐ EXPEDITED REPORT DELIVERY (surcharge)

Date Due

SAMPLE DATE	SAMPLE TIME	SL NO.	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS SUBMITTED	REMARKS

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY (SIGNATURE)	DATE	TIME	RELINQUISHED BY (SIGNATURE)	DATE	TIME
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SL LOG NO.	LABORATORY REMARKS
			☐ YES ☐ NO			

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-83638
Received: 19 JUN 98
Reported: 02 JUL 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 11188072

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
83638-1	PZR-2-56	06-16-98/1030
83638-2	PZR-4-56	06-15-98/1500

PARAMETER	83638-1	83638-2
Cation Exchange Capacity		
Cation Exchange Capacity, meq/100g	10	15
Preparation Date	06.26.98	06.26.98
Date Analyzed	06.29.98	06.29.98
Dilution factor	20	40
Batch ID	0626f	0626F
Total Organic Carbon (9060)		
Total Organic Carbon, mg/kg dw	230	510
Preparation Date	07.01.98	07.01.98
Date Analyzed	07.01.98	07.01.98
Dilution factor	1.0	1.0
Batch ID	0701X	0701X
Organic Carbon (Walkley-Black)		
Organic Carbon (Walkley-Black), mg/kg dw	4700	1800
Preparation Date	06.25.98	06.25.98
Date Analyzed	06.25.98	06.25.98
Dilution factor	1.0	1.0
Batch ID	0625X	0625X
Acid Volatile Sulfide		
Acid Volatile Sulfide, mg/kg dw	<12	<15
Preparation Date	06.24.98	06.24.98
Date Analyzed	06.24.98	06.24.98
Dilution factor	1.0	1.0
Batch ID	0624A	0624A

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

6102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-83638
Received: 19 JUN 98
Reported: 02 JUL 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 11199072

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
83638-1	PZR-2-56	06-16-98/1030
83638-2	PZR-4-56	06-15-98/1500

PARAMETER	83638-1	83638-2
Percent Solids	81	67

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

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LOG NO: S8-83638
Received: 19 JUN 98
Reported: 02 JUL 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 11199072

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID
83638-3	Method Blank
83638-4	Lab Control Standard % Recovery
83638-5	LCS Accuracy Control Limit (%R)
83638-6	Analyst (First Initial.Last Name)

PARAMETER	83638-3	83638-4	83638-5	83638-6
Cation Exchange Capacity				
Cation Exchange Capacity, meq/100g	<0.0033	117 %	70-130 %	L.RILEY
Preparation Date	06.26.98	---	---	---
Date Analyzed	06.29.98	---	---	---
Dilution factor	1.0	---	---	---
Batch ID	0626F	---	---	---
Total Organic Carbon (9060)				
Total Organic Carbon, mg/kg dw	<100	108 %	60-140 %	LRILEY
Preparation Date	07.01.98	---	---	---
Date Analyzed	07.01.98	---	---	---
Dilution factor	1.0	---	---	---
Batch ID	0701X	---	---	---
Organic Carbon (Walkley-Black)				
Organic Carbon (Walkley-Black), mg/kg dw	<100	85 %	60-140 %	K.BLACKSHE
Preparation Date	06.25.98	---	---	---
Date Analyzed	06.25.98	---	---	---
Dilution factor	1.0	---	---	---
Batch ID	0625X	---	---	---

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-83638
Received: 19 JUN 98
Reported: 02 JUL 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 11100072

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID
83638-3	Method Blank
83638-4	Lab Control Standard % Recovery
83638-5	LCS Accuracy Control Limit (%R)
83638-6	Analyst (First Initial.Last Name)

PARAMETER	83638-3	83638-4	83638-5	83638-6
Acid Volatile Sulfide				
Acid Volatile Sulfide, mg/kg dw	<10	84 %	50-150 %	K.HAMMOND
Preparation Date	06.24.98	---	---	---
Date Analyzed	06.24.98	---	---	---
Dilution factor	1.0	---	---	---
Batch ID	0624A	---	---	---

Methods: EPA SW-846, Update III.

Elizabeth F. Beauchamp

Elizabeth F. Beauchamp, Project Manager EBH

Final Page Of Report

FedEx *USA Airbill*

Recipient's Copy

1 From

Date: 12-98 [redacted]

Sender's Name: Smith Phone: (770) 466 1893

Company: Dept/Floor/Suite/Room

Address: Cumber

City: Fort State: GA Zip: 6341

2 Your Internal Billing Reference Information: 228

3 To

Recipient's Name: Phone: (813) 4 7000

Company: Dept/Floor/Suite/Room

Address: 2 Fort Lake Avenue

(Only 1 FedEx tax name, and FedEx address here)

City: Fort State: GA Zip: 1409

For HOLD at FedEx Location check here

☐ Hold Weekday ☐ Hold Saturday

For Saturday Delivery check here

4975331056

4a Express Package Service *Packages under 150 lbs.*

☒ FedEx Priority Overnight ☐ FedEx Standard Overnight ☐ FedEx 2Day*

☐ FedEx First Overnight

4b Express Freight Service *Packages over 150 lbs.*

☐ FedEx Overnight Freight ☐ FedEx 2Day Freight ☐ FedEx Express Saver Freight

(Call for delivery schedule. See back for detailed descriptions of freight products.)

5 Packaging ☐ FedEx Letter ☐ FedEx Pak ☐ FedEx Box ☐ FedEx Tube ☒ Other Pkg

6 Special Handling

Does this shipment contain dangerous goods? ☐ Yes ☐ Yes

☐ Dry Ice CA ☐ Cargo Aircraft Only

7 Payment

Bill to: ☐ Sender ☐ Recipient ☐ Third Party ☐ Credit Card ☐ Cash/Check

[redacted]

Total Packages	Total Weight	Total Declared Value	Total Charges
1	25 lbs	$ 100.00	$

Credit Card Auth

8 Release Signature

Questions?
Call 1-800-Go-FedEx
(1-800-463-3339)

272

Serial Number

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES INC.

ANALYSIS REQUEST AND CHAIN OFCUSTODY RECORD

☐ 5102 LaRoche Avenue, Savannah, GA 31404 — Phone: (912) 354-7858 — Fax: (912) 352-0165
☐ 2846 Industrial Plaza Drive, Tallahassee, FL 32301 — Phone: (904) 878-3994 — Fax: (904) 878-9504
☐ 414 SW 12th Avenue, Deerfield Beach, FL 33442 — Phone: (954) 421-7400 — Fax: (954) 421-2584
☐ 900 Lakeside Drive, Mobile, AL 36693 — Phone: (334) 666-6633 — Fax: (334) 666 6696
☐ 6712 Benjamin Road, Suite 100, Tampa, FL 33634 — Phone: (813) 885-7427 — Fax: (813) 885-7049
☐ 100 Alpha Drive, Suite 110, Destrehan, LA 70047 — Phone: (504) 764-1100 — Fax: (504) 725-1163

PROJECT REFERENCE	PROJECT IO	PO NUMBER

PROJECT LOC (State)	SAMPLER(s) NAME	PHONE
		FAX

CLIENT NAME	CLIENT PROJECT MANAGER

CLIENT ADDRESS (CITY, STATE, ZIP)

MATRIX TYPE — REQUIRED ANALYSES — PAGE ___ OF ___

☐ STANDARD REPORT DELIVERY

☐ EXPEDITED REPORT DELIVERY (surcharge)

Date Due

SAMPLE DATE	SAMPLE TIME	SL NO	SAMPLE IDENTIFICATION	WASTEWATER	SOLID OR SEMI-SOLID	AIR	NONAQUEOUS LIQUID (OTHER)	PRESERVED	NUMBER OF CONTAINERS SUBMITTED	REMARKS

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: SIGNATURE)	DATE	TIME

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO	SL LOG NO	LABORATORY REMARKS
			☐ YES ☐ NO			

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-83147
Received: 30 MAY 98
Reported: 11 JUN 98

Ms. Gayle Pittman
Golder Associates, Inc
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 171990611

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
83147-1	OWR-40-7	05-27-98/1600
83147-2	OWR-70-64	05-28-98/1500

PARAMETER	83147-1	83147-2
Cation Exchange Capacity		
Cation Exchange Capacity, meq/100g	0.017	0.0080
Preparation Date	06.09.98	06.09.98
Date Analyzed	06.10.98	06.10.98
Dilution factor	1.0	1.0
Batch ID	0609W	0609W
Total Organic Carbon (9060)		
Total Organic Carbon, mg/kg dw	450	980
Preparation Date	06.10.98	06.10.98
Date Analyzed	06.10.98	06.10.98
Dilution factor	1	1
Batch ID	0610X	0610X
Organic Carbon (Walkley-Black)		
Organic Carbon (Walkley-Black), mg/kg dw	<100	<100
Preparation Date	06.05.98	06.05.98
Date Analyzed	06.05.98	06.05.98
Dilution factor	1.0	1.0
Batch ID	0605X	0605X
Acid Volatile Sulfide		
Acid Volatile Sulfide, mg/kg dw	<14	<14
Preparation Date	06.4.98	06.04.98
Date Analyzed	06.04.98	06.04.98
Dilution factor	1.0	1.0
Batch ID	0604A	0604A

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-83147
Received: 30 MAY 98
Reported: 11 JUN 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 171880611

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
83147-1	OWR-40-7	05-27-98/1600
83147-2	OWR-70-64	05-28-98/1500

PARAMETER	83147-1	83147-2
Percent Solids	73	72

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-83147
Received: 30 MAY 98
Reported: 11 JUN 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 171890611

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED
83147-3	Method Blank	
83147-4	Lab Control Standard % Recovery	
83147-5	LCS Accuracy Control Limit (%R)	
83147-6	Analyst (First Initial.Last Name)	

PARAMETER	83147-3	83147-4	83147-5	83147-6
Cation Exchange Capacity				
Cation Exchange Capacity, meq/100g	<0.0030	121 %	70-130 %	L.RILEY
Preparation Date	06.09.98	---	---	---
Date Analyzed	06.10.98	---	---	---
Dilution factor	1.0	---	---	---
Batch ID	0609W	---	---	---
Total Organic Carbon (9060)				
Total Organic Carbon, mg/kg dw	<100	124 %	60-140 %	LRILEY
Preparation Date	06.10.98	---	---	---
Date Analyzed	06.10.98	---	---	---
Dilution factor	1	---	---	---
Batch ID	0610X	---	---	---
Organic Carbon (Walkley-Black)				
Organic Carbon (Walkley-Black), mg/kg dw	<100	82 %	60-140 %	K.BLACKSHE
Preparation Date	06.05.98	---	---	---
Date Analyzed	06.05.98	---	---	---
Dilution factor	1.0	---	---	---
Batch ID	0605X	---	---	---

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-83147
Received: 30 MAY 98
Reported: 11 JUN 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223/MONSANTO RFI-ANNISTON
Sampled By: Client
Code. 171080611

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED
83147-3	Method Blank	
83147-4	Lab Control Standard % Recovery	
83147-5	LCS Accuracy Control Limit (%R)	
83147-6	Analyst (First Initial.Last Name)	

PARAMETER	83147-3	83147-4	83147-5	83147-6
Acid Volatile Sulfide				
Acid Volatile Sulfide, mg/kg dw	<10	84 %	50-150 %	L.RILEY
Preparation Date	06.04.98	---	---	---
Date Analyzed	06.04.98	---	---	---
Dilution factor	1.0	---	---	---
Batch ID	0604A	---	---	---

Methods: EPA SW-846, Update III.

Elizabeth F. Beauchamp, Project Manager

Final Page Of Report

Serial Number 17178

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

☒ 5102 LaRoche Avenue, Savannah, GA 31404 — Phone: (912) 354-7858 — Fax: (912) 352-0165
☐ 2846 Industrial Plaza Drive, Tallahassee, FL 32301 — Phone: (904) 878-3994 — Fax: (904) 878-9504
☐ 1414 SW 12th Avenue, Deerfield Beach, FL 33442 — Phone: (954) 421-7400 — Fax: (954) 421-2584
☐ 900 Lakeside Drive, Mobile, AL 36693 — Phone: (334) 666-6633 — Fax: (334) 666-6696
☐ 6712 Benjamin Road, Suite 100, Tampa, FL 33634 — Phone: (813) 885-7427 — Fax: (813) 885-7049
☐ 100 Atlha Drive, Suite 110, Destrehan, LA 70047 — Phone: (504) 764-1100 — Fax: (504) 725-1163

PROJECT REFERENCE	PROJECT NO.	PO NUMBER
Solutia - Anniston	993-3223	

PROJECT LOC. (State)	SAMPLER(S) NAME	PHONE / FAX
AL	Chris Hemingway	PHONE 770-496-1893 / FAX

CLIENT NAME	CLIENT PROJECT MANAGER
Geber Associates	Gayle Pittman

CLIENT ADDRESS (CITY, STATE, ZIP): 3730 Chamblee Tucker Rd

MATRIX TYPE: AQUEOUS WATER / SOLID / SEDIMENT / SOIL / OIL / SOLVENT / OTHER

REQUIRED ANALYSES: CEC, TOC, Wet Chem, AVS

PAGE 1 OF 1

☐ STANDARD REPORT / DELIVERY

☐ EXPEDITED REPORT / DELIVERY (charge)

Due Date

SAMPLE DATE	SAMPLE TIME	SL NO.	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS SUBMITTED									REMARKS
5-27-99	16:00		OWR-90-77	X	1	1	1	1					
5-28-99	15:00		OWR-90-64	X	1	1	1	1					

RELINQUISHED BY (SIGNATURE)	DATE	TIME	RELINQUISHED BY (SIGNATURE)	DATE	TIME	RELINQUISHED BY (SIGNATURE)	DATE	TIME
[signature]	5/26/99	4:00	[signature]	5-28-99	1200			

RECEIVED BY (SIGNATURE)	DATE	TIME	RECEIVED BY (SIGNATURE)	DATE	TIME	RECEIVED BY (SIGNATURE)	DATE	TIME
[signature]	5/28/99	14:00						

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SL LOG NO.	LABORATORY REMARKS
[signature]	5/28/99	11:45	☒ YES ☐ NO		S8-53147	

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-83672
Received: 20 JUN 98
Reported: 01 JUL 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 14558071

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
83672-1	OWR-9S-45	06-16-98/0900
83672-2	OWR-2S-33	06-16-98/1600
83672-7	PZR-5-43	06-17-98/1600
83672-12	PZR-6-37	06-18-98/1000
83672-13	PZR-1-55	06-18-98/1500

PARAMETER	83672-1	83672-2	83672-7	83672-12	83672-13
Cation Exchange Capacity					
Cation Exchange Capacity, meq/100g	9.1	3.6	1.7	7.3	11
Preparation Date	06.26.98	06.26.98	06.26.98	06.26.98	06.26.98
Date Analyzed	06.29.98	06.29.98	06.29.98	06.29.98	06.29.98
Dilution factor	20	20	20	20	20
Batch ID	0626F	0626F	0626F	0626F	0626F
Total Organic Carbon (9060)					
Total Organic Carbon, mg/kg dw	1400	760	610	1000	260
Preparation Date	06.29.98	06.29.98	06.29.98	06.29.98	06.29.98
Date Analyzed	06.29.98	06.29.98	06.29.98	06.29.98	06.30.98
Dilution factor	1.0	1.0	1.0	1.0	1.0
Batch ID	0629X	0629X	0629X	0629X	0629X
Organic Carbon (Walkley-Black)					
Organic Carbon (Walkley-Black), mg/kg dw	3700	3800	1400	2900	290
Preparation Date	06.26.98	06.26.98	06.26.98	06.26.98	06.26.98
Date Analyzed	06.26.98	06.26.98	06.26.98	06.26.98	06.26.98
Dilution factor	1.0	1.0	1.0	1.0	1.0
Batch ID	0626X	0626X	0626X	0626X	0626X

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-83672
Received: 20 JUN 98
Reported: 01 JUL 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 14559071

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
83672-1	OWR-9S-45	06-16-98/0900
83672-2	OWR-2S-33	06-16-98/1600
83672-7	PZR-5-43	06-17-98/1600
83672-12	PZR-6-37	06-18-98/1000
83672-13	PZR-1-55	06-18-98/1500

PARAMETER	83672-1	83672-2	83672-7	83672-12	83672-13
Acid Volatile Sulfide					
Acid Volatile Sulfide, mg/kg dw	<13	<12	<11	<12	<15
Preparation Date	06.24.98	06.24.98	06.24.98	06.24.98	06.24.98
Date Analyzed	06.24.98	06.24.98	06.24.98	06.24.98	06.24.98
Dilution factor	1.0	1.0	1.0	1.0	1.0
Batch ID	0624A	0624A	0624A	0624A	0624A
Percent Solids	75	84	88	83	66

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

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LOG NO: S8-83672
Received: 20 JUN 98
Reported: 01 JUL 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 14559071

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED
83672-8	Method Blank	
83672-9	Lab Control Standard % Recovery	
83672-10	LCS Accuracy Control Limit (%R)	
83672-11	Analyst (First Initial.Last Name)	

PARAMETER	83672-8	83672-9	83672-10	83672-11
Cation Exchange Capacity				
Cation Exchange Capacity, meq/100g	<0.0033	117 %	70-130 %	L.RILEY
Preparation Date	06.26.98	---	---	---
Date Analyzed	06.29.98	---	---	---
Dilution factor	1.0	---	---	---
Batch ID	0626F	---	---	---
Total Organic Carbon (9060)				
Total Organic Carbon, mg/kg dw	<100	105 %	60-140 %	L.RILEY
Preparation Date	06.29.98	---	---	---
Date Analyzed	06.29.98	---	---	---
Dilution factor	1.0	---	---	---
Batch ID	0629X	---	---	---
Organic Carbon (Walkley-Black)				
Organic Carbon (Walkley-Black), mg/kg dw	<100	102 %	60-140 %	K.BLACKSHE
Preparation Date	06.26.98	---	---	---
Date Analyzed	06.26.98	---	---	---
Dilution factor	1.0	---	---	---
Batch ID	0626X	---	---	---

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

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LOG NO: S8-83672
Received: 20 JUN 98
Reported: 01 JUL 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223/MONSANTO RFI-ANNISTON
Sampled By: Client
Code. 14558071

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED
83672-8	Method Blank	
83672-9	Lab Control Standard % Recovery	
83672-10	LCS Accuracy Control Limit (%R)	
83672-11	Analyst (First Initial.Last Name)	

PARAMETER	83672-8	83672-9	83672-10	83672-11
Acid Volatile Sulfide				
Acid Volatile Sulfide, mg/kg dw	<10	84 %	50-150 %	K.HAMMOND
Preparation Date	06.24.98	---	---	---
Date Analyzed	06.24.98	---	---	---
Dilution factor	1.0	---	---	---
Batch ID	0624A	---	---	---

Methods: EPA SW-846, Update III.

Elizabeth F. Beauchamp
Elizabeth F. Beauchamp, Project Manager EBH

Final Page Of Report

Serial Number

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

5102 LaRoche Avenue, Savannah, GA 31404 — Phone: (912) 354-7858 — Fax: (912) 352-0165
7645 Industrial Plaza Drive, Tallahassee, FL 32311 — Phone: (904) 878-3994 — Fax: (904) 878-9504
3174 SW 12th Avenue, Deerfield Beach, FL 33442 — Phone: (954) 421-7400 — Fax: (954) 421-2584
900 Lakeside Drive, Mobile, AL 36693 — Phone: (334) 666-6633 — Fax: (334) 666-6696
6712 Benjamin Road, Suite 100, Tampa, FL 33634 — Phone: (813) 885-7427 — Fax: (813) 885-7049
100 Alpha Drive, Suite 110, Destrehan, LA 70047 — Phone: (504) 764-1100 — Fax: (504) 725-1182

PROJECT REFERENCE: Scottish [illegible]
PROJECT NO: 45J-3223
P.O. NUMBER:
PROJECT LOC. (State): AL
SAMPLER(S) NAME: [illegible]
PHONE:
FAX:
CLIENT NAME: Coler Associates, Inc.
CLIENT PROJECT MANAGER: Gayle Pittman
CLIENT ADDRESS (CITY, STATE, ZIP): 3730 Chamblee Tucker Rd Atlanta 30341

MATRIX TYPE: GROUNDWATER (GW) / WASTEWATER (WW) / SOIL/SOLID WASTE (SW) / OTHER (OT)

REQUIRED ANALYSES: 8260 / RCRA Metals / TCLP Metals / PCBs

PAGE 1 OF 1

STANDARD TURNAROUND

RUSH (CONFIRMED BY PHONE/FAX) Date Due: see below

SAMPLE DATE	SAMPLE TIME	SL NO.	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS SUBMITTED	REMARKS
6/14	2??		SWR-SS-45		* 5D. delivery in solid samples 3-day turnaround on 8260 and PCB analyses *
6/14	16??		SWR-SS-[illegible]		
6/14	16??		PBR-SS-43		
6/14	[illegible]		[illegible]		
6/14	12??		[illegible]		
6/14	[illegible]		DUP-01A-SL/14	2	
6/14	[illegible]		DUP-02A-SL/14	3	
6/14	[illegible]		DUP-03A-SL/14	3	

RELINQUISHED BY (SIGNATURE)	DATE	TIME	RELINQUISHED BY (SIGNATURE)	DATE	TIME	RELINQUISHED BY (SIGNATURE)	DATE	TIME
S. Campbell	6/14/[illegible]	515	[illegible]	6/14	12:20			
RECEIVED BY (SIGNATURE)	DATE	TIME	RECEIVED BY (SIGNATURE)	DATE	TIME	RECEIVED BY (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY

RECEIVED BY (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEALED	SL LOG NO.	LABORATORY REMARKS
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-83723
Received: 24 JUN 98
Reported: 07 JUL 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223/MONSANTO RFI-ANNISTON
Sampled By: Client
Code. 13060077

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
83723-1	OWR-2D-108	06-23-98/1400

PARAMETER	83723-1
Cation Exchange Capacity	
Cation Exchange Capacity, meq/100g	16
Preparation Date	06.26.98
Date Analyzed	06.29.98
Dilution factor	40
Batch ID	0626F
Total Organic Carbon (9060)	
Total Organic Carbon, mg/kg dw	350
Preparation Date	06.29.98
Date Analyzed	06.30.98
Dilution factor	1.0
Batch ID	0629X
Organic Carbon (Walkley-Black)	
Organic Carbon (Walkley-Black), mg/kg dw	3400
Preparation Date	06.25.98
Date Analyzed	06.25.98
Dilution factor	1.0
Batch ID	0625X
Acid Volatile Sulfide	
Acid Volatile Sulfide, mg/kg dw	<14
Preparation Date	06.24.98
Date Analyzed	06.24.98
Dilution factor	1.0
Batch ID	0624A
Percent Solids	72

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-83723
Received: 24 JUN 98
Reported: 07 JUL 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 13068077

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED
83723-3	Method Blank	
83723-4	Lab Control Standard % Recovery	
83723-5	LCS Accuracy Control Limit (%R)	
83723-6	Analyst (First Initial.Last Name)	

PARAMETER	83723-3	83723-4	83723-5	83723-6
Cation Exchange Capacity				
Cation Exchange Capacity, meq/100g	<0.0033	117 %	70-130 %	L.RILEY
Preparation Date	06.26.98	---	---	---
Date Analyzed	06.29.98	---	---	---
Dilution factor	1.0	---	---	---
Batch ID	0626F	---	---	---
Total Organic Carbon (9060)				
Total Organic Carbon, mg/kg dw	<100	105 %	60-140 %	LRILEY
Preparation Date	06.29.98	---	---	---
Date Analyzed	06.30.98	---	---	---
Dilution factor	1.0	---	---	---
Batch ID	0629X	---	---	---
Organic Carbon (Walkley-Black)				
Organic Carbon (Walkley-Black), mg/kg dw	<100	85 %	60-140 %	K.BLACKSHE
Preparation Date	06.25.98	---	---	---
Date Analyzed	06.25.98	---	---	---
Dilution factor	1.0	---	---	---
Batch ID	0625X	---	---	---

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-83723
Received: 24 JUN 98
Reported: 07 JUL 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 13068077

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED
83723-3	Method Blank	
83723-4	Lab Control Standard % Recovery	
83723-5	LCS Accuracy Control Limit (%R)	
83723-6	Analyst (First Initial.Last Name)	

PARAMETER	83723-3	83723-4	83723-5	83723-6
Acid Volatile Sulfide				
Acid Volatile Sulfide, mg/kg dw	<10	84 %	50-150 %	K.HAMMOND
Preparation Date	06.24.98	---	---	---
Date Analyzed	06.24.98	---	---	---
Dilution factor	1.0	---	---	---
Batch ID	0624A	---	---	---

Methods: EPA SW-846, Update III.

Elizabeth F. Beauchamp, Project Manager

Final Page Of Report

Serial Number 26173

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

- [x] 5102 LaRoche Avenue, Savannah, GA 31404 — Phone: (912) 354-7858 — Fax: (912) 352-0165
- [ ] 2346 Industrial Plaza Drive, Tallahassee, FL 32301 — Phone: (904) 878-3994 — Fax: (904) 878-9504
- [ ] 414 SW 12th Avenue, Deerfield Beach, FL 33442 — Phone: (954) 421-7400 — Fax: (954) 421-2584
- [ ] 906 LaFesta Drive, Mobile, AL 36693 — Phone: (334) 666-6633 — Fax: (334) 666-6696
- [ ] 6712 Benjamin Road, Suite 100, Tampa, FL 33634 — Phone: (813) 885-7427 — Fax: (813) 885-7049
- [ ] 100 Alpha Drive, Suite 110, Destrehan, LA 70047 — Phone: (504) 764-1100 — Fax: (504) 725-1163

PROJECT REFERENCE: Skokie / RFI / IL
PROJECT NO.: 463223
P.O. NUMBER:
PROJECT LOC. (STATE): IL
SAMPLER(S) NAME: Ryan Smith / Chris Hennessy
PHONE: (770) 496-1443
FAX:
CLIENT NAME: Golder Associates
CLIENT PROJECT MANAGER: Cindy Pitterson
CLIENT ADDRESS / CITY / STATE / ZIP: 3225 Skokie Valley Rd, Highland Park, IL 60035

MATRIX TYPE: (AQUEOUS/WATER, SOLID/SOIL/SEDIMENT, OIL, OTHER (LIQUID or SOLID))

REQUIRED ANALYSES: PCB's, MLS, Wilkinson Filter, VOC, TCL

PAGE 1 OF 1

STANDARD REPORT DELIVERY

[X] EXPEDITED REPORT DELIVERY (surcharge)
Date Due: See below

SAMPLE DATE	SAMPLE TIME	SL NO.	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS SUBMITTED	REMARKS
9/8 6 23	1100		Grab - 125	X 3	x 3-day turnaround
9/8 6 23	0930		Grab - 125	X 2	
9/8 6 23	1400		Grab - FD - 125	X 2	VOA 99 unless PCB requires 1-liter oil x

RUSH

RELINQUISHED BY (SIGNATURE)	DATE	TIME	RELINQUISHED BY (SIGNATURE)	DATE	TIME	RELINQUISHED BY (SIGNATURE)	DATE	TIME
	9/8/23	5:15		9/8/23	1500			
RECEIVED BY (SIGNATURE)	DATE	TIME	RECEIVED BY (SIGNATURE)	DATE	TIME	RECEIVED BY (SIGNATURE)	DATE	TIME
N/A								

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SL LOG NO.	LABORATORY REMARKS
M. Sancamillo	9/8/23	0932	[x] YES [ ] NO		98-83723	

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-85017
Received: 20 AUG 98
Reported: 12 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS01/983-3223.002/MONSANTO RFI-ANNISTON

Sampled By: Client
Code: 112780912

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	SDG#
85017-2	SSR-1	08-19-98	RFIS01
85017-3	SSR-2	08-19-98	RFIS01
85017-5	SSR-3	08-19-98	RFIS01
85017-6	SSR-5	08-19-98	RFIS01
85017-8	SSR-6	08-19-98	RFIS01

PARAMETER,	85017-2	85017-3	85017-5	85017-6	85017-8
Volatiles by GC/MS (8260)					
Methylene chloride (Dichloromethane), ug/kg dw	<5.0	<5.2	<5.0	<5.0	<5.6
1,1,2,2-Tetrachloroethane, ug/kg dw	<5.0	<5.2	<5.0	<5.0	<5.6
Chlorobenzene, ug/kg dw	<5.0	<5.2	<5.0	<5.0	<5.6
Isopropylbenzene, ug/kg dw	<5.0	<5.2	<5.0	<5.0	<5.6
Surrogate - Toluene-d8	84 %	88 %	82 %	88 %	91 %
Surrogate - 4-Bromofluorobenzene	102 %	115 %	120 %	120 %	100 %
Surrogate - Dibromofluoromethane	100 %	106 %	102 %	100 %	98 %
Date Analyzed	08.20.98	08.20.98	08.20.98	08.20.98	08.21.98
Dilution factor	1.0	1.0	1.0	1.0	1.0
Batch ID	2H0820	2H0820	2H0820	2H0820	2H0820

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

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LOG NO: S8-85017
Received: 20 AUG 98
Reported: 12 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS01/983-3223.002/MONSANTO RFI-ANNISTON

Sampled By: Client
Code: 112780912

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	SDG#
85017-2	SSR-1	08-19-98	RFIS01
85017-3	SSR-2	08-19-98	RFIS01
85017-5	SSR-3	08-19-98	RFIS01
85017-6	SSR-5	08-19-98	RFIS01
85017-8	SSR-6	08-19-98	RFIS01

PARAMETER	85017-2	85017-3	85017-5	85017-6	85017-8
Acids and Base Neutrals (8270-APP9)					
p-Dichlorobenzene, ug/kg dw	<400	<400	<370	<380	<390
o-Dichlorobenzene, ug/kg dw	<400	<400	<370	<380	<390
p-Nitrophenol, ug/kg dw	<2100	<2000	<1900	<2000	<2000
2,4-Dichlorophenol, ug/kg dw	<400	<400	<370	<380	<390
Pentachlorophenol, ug/kg dw	<2100	<2000	<1900	<2000	<2000
Phenol, ug/kg dw	<400	<400	<370	<380	<390
2,4,5-Trichlorophenol, ug/kg dw	<400	<400	<370	<380	<390
2,4,6-Trichlorophenol, ug/kg dw	<400	<400	<370	<380	<390
o,o,o-Triethyl phosphorothioate, ug/kg dw	<400	<400	<370	<380	<390
Surrogate - Phenol d5	75 %	90 %	89 %	82 %	85 %
Surrogate - 2-Fluorophenol	68 %	78 %	73 %	67 %	72 %
Surrogate - 2,4,6-Tribromophenol	55 %	70 %	73 %	64 %	60 %
Surrogate - Nitrobenzene - d5	70 %	90 %	84 %	74 %	75 %
Surrogate - 2-Fluorobiphenyl	60 %	80 %	74 %	68 %	70 %
Surrogate - Terphenyl - d14	70 %	80 %	84 %	74 %	85 %
Date Extracted	08.21.98	08.21.98	08.21.98	08.21.98	08.21.98
Date Analyzed	09.10.98	09.10.98	09.10.98	09.10.98	09.10.98
Dilution factor	1.0	1.0	1.0	1.0	1.0
Batch ID	0821A	0821A	0821A	0821A	0821A
Instrument ID	MSE5970	MSE5970	MSE5970	MSE5970	MSE5970

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354 7858 • Fax (912) 352 0165

LOG NO: S8-85017
Received: 20 AUG 98
Reported: 12 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS01/983-3223.002/MONSANTO RFI-ANNISTON

Sampled By: Client
Code: 112760912

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	SDG#
85017-2	SSR-1	08-19-98	RFIS01
85017-3	SSR-2	08-19-98	RFIS01
85017-5	SSR-3	08-19-98	RFIS01
85017-6	SSR-5	08-19-98	RFIS01
85017-8	SSR-6	08-19-98	RFIS01

PARAMETER	85017-2	85017-3	85017-5	85017-6	85017-8
PCB's (8081/See Qualifier Z)					
PCB-1016, ug/kg dw	0	0	0	0	0
PCB-1221, ug/kg dw	0	0	0	0	0
PCB-1232, ug/kg dw	0	0	0	0	0
PCB-1242, ug/kg dw	0	0	0	0	0
PCB-1248, ug/kg dw	0	0	0	35000	0
PCB-1254, ug/kg dw	23	4000	770	44000	5200
PCB-1260, ug/kg dw	0	7200	1400	27000	4100
Total Polychlorinated Biphenyls, ug/kg dw	23	11000	2200	110000	9300
Surrogate - TCX	34 %	*F33	*F33	*F33	*F33
Date Extracted	08.21.98	08.21.98	08.21.98	08.21.98	08.21.98
Date Analyzed	08.31.98	08.27.98	08.27.98	08.27.98	08.27.98
Dilution factor	1.0	50.0	10.0	100.0	50.0
Arsenic (6010)					
Arsenic, mg/kg dw	3.9	7.6	3.1	11	7.9
Preparation Date	08.21.98	08.21.98	08.21.98	08.21.98	08.21.98
Date Analyzed	08.25.98	08.25.98	08.25.98	08.25.98	08.25.98
Dilution factor	1.0	1.0	1.0	1.0	1.0
Batch ID	0821B	0821B	0821B	0821B	0821B

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LOG NO: S8-85017
Received: 20 AUG 98
Reported: 15 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

Contract No.: S7219
CC: Mr. Alan G. Faust Project: RFIS01/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 105521014

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	SDG#
85017-2	SSR-1	08-19-98	RFIS01
85017-3	SSR-2	08-19-98	RFIS01
85017-5	SSR-3	08-19-98	RFIS01
85017-6	SSR-5	08-19-98	RFIS01
85017-8	SSR-6	08-19-98	RFIS01

PARAMETER	85017-2	85017-3	85017-5	85017-6	85017-8
PCB's (8081/See Qualifier Z) (608)					
PCB-1016, ug/kg dw	<40	<2000	<370	<3800	<2000
PCB-1221, ug/kg dw	<40	<2000	<370	<3800	<2000
PCB-1232, ug/kg dw	<40	<2000	<370	<3800	<2000
PCB-1242, ug/kg dw	<40	<2000	<370	<3800	<2000
PCB-1248, ug/kg dw	<40	<2000	<370	35000	<2000
PCB-1254, ug/kg dw	23	4000	770	44000	5200
PCB-1260, ug/kg dw	<40	7200	1400	27000	4100
Total Polychlorinated Biphenyls, ug/kg dw	23	11000	2200	110000	9300
Surrogate - TCX	34 %	*F33	*F33	*F33	*F33
Date Extracted	08.21.98	08.21.98	08.21.98	08.21.98	08.21.98
Date Analyzed	08.31.98	08.27.98	08.27.98	08.27.98	08.27.98
Dilution factor	1.0	50.0	10.0	100.0	50.0
Percent Solids	82	82	89	86	84

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LOG NO: S8-85017
Received: 20 AUG 98
Reported: 12 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS01/983-3223.002/MONSANTO RFI-ANNISTON

Sampled By: Client
Code: 112700912

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	SDG#
85017-2	SSR-1	08-19-98	RFIS01
85017-3	SSR-2	08-19-98	RFIS01
85017-5	SSR-3	08-19-98	RFIS01
85017-6	SSR-5	08-19-98	RFIS01
85017-8	SSR-6	08-19-98	RFIS01

PARAMETER	85017-2	85017-3	85017-5	85017-6	85017-8
Barium (6010)					
Barium, mg/kg dw	18	150	22	51	38
Preparation Date	08.21.98	08.21.98	08.21.98	08.21.98	08.21.98
Date Analyzed	08.25.98	08.25.98	08.25.98	08.25.98	08.25.98
Dilution factor	1.0	1.0	1.0	1.0	1.0
Batch ID	0821B	0821B	0821B	0821D	0821D
Beryllium (6010)					
Beryllium, mg/kg dw	<0.55	1.0	<0.51	<0.58	<0.50
Preparation Date	08.21.98	08.21.98	08.21.98	08.21.98	08.21.98
Date Analyzed	08.25.98	08.25.98	08.25.98	08.25.98	08.25.98
Dilution factor	1.0	1.0	1.0	1.0	1.0
Batch ID	0821B	0821B	0821B	0821D	0821D
Cadmium (6010)					
Cadmium, mg/kg dw	<0.55	<0.55	<0.51	<0.58	<0.50
Preparation Date	08.21.98	08.21.98	08.21.98	08.21.98	08.21.98
Date Analyzed	08.25.98	08.25.98	08.25.98	08.25.98	08.25.98
Dilution factor	1.0	1.0	1.0	1.0	1.0
Batch ID	0821B	0821B	0821B	0821D	0821D

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Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS01/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 112780912

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	SDG#
85017-2	SSR-1	08-19-98	RFIS01
85017-3	SSR-2	08-19-98	RFIS01
85017-5	SSR-3	08-19-98	RFIS01
85017-6	SSR-5	08-19-98	RFIS01
85017-8	SSR-6	08-19-98	RFIS01

PARAMETER	85017-2	85017-3	85017-5	85017-6	85017-8
Chromium (6010)					
Chromium, mg/kg dw	18	20	7.4	38	23
Preparation Date	08.21.98	08.21.98	08.21.98	08.21.98	08.21.98
Date Analyzed	08.25.98	08.25.98	08.25.98	08.25.98	08.25.98
Dilution factor	1.0	1.0	1.0	1.0	1.0
Batch ID	0821B	0821B	0821B	0821B	0821B
Cobalt (6010)					
Cobalt, mg/kg dw	2.0	9.1	2.2	6.1	8.9
Preparation Date	08.21.98	08.21.98	08.21.98	08.21.98	08.21.98
Date Analyzed	08.25.98	08.25.98	08.25.98	08.25.98	08.25.98
Dilution factor	1.0	1.0	1.0	1.0	1.0
Batch ID	0821B	0821B	0821B	0821B	0821B
Lead (7421)					
Lead, mg/kg dw	8.7	88	25	52	48
Preparation Date	08.21.98	08.21.98	08.21.98	08.21.98	08.21.98
Date Analyzed	08.31.98	08.31.98	08.31.98	0831.98	08.31.98
Dilution factor	2.0	10	10	10	20
Batch ID	0821A	0821A	0821A	0821A	0821A

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Sampled By: Client
Code: 112780912

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	SDG#
85017-2	SSR-1	08-19-98	RFIS01
85017-3	SSR-2	08-19-98	RFIS01
85017-5	SSR-3	08-19-98	RFIS01
85017-6	SSR-5	08-19-98	RFIS01
85017-8	SSR-6	08-19-98	RFIS01

PARAMETER	85017-2	85017-3	85017-5	85017-6	85017-8
Manganese (6010)					
Manganese, mg/kg dw	70	590	220	610	690
Preparation Date	08.21.98	08.21.98	08.21.98	08.21.98	08.21.98
Date Analyzed	08.25.98	08.25.98	08.25.98	08.25.98	08.25.98
Dilution factor	1.0	1.0	1.0	1.0	1.0
Batch ID	0821B	0821B	0821B	0821B	0821B
Mercury (7471)					
Mercury, mg/kg dw	<0.033	0.21	0.052	1.8	0.33
Preparation Date	08.21.98	08.21.98	08.21.98	08.21.98	08.21.98
Date Analyzed	08.23.98	08.23.98	08.23.98	08.25.98	08.25.98
Dilution factor	1.0	1.0	1.0	20	2.0
Batch ID	0821B	0821B	0821B	0821B	0821B
Nickel (6010)					
Nickel, mg/kg dw	<4.4	18	5.7	15	39
Preparation Date	08.21.98	08.21.98	08.21.98	08.21.98	08.21.98
Date Analyzed	08.25.98	08.25.98	08.25.98	08.25.98	08.25.98
Dilution factor	1.0	1.0	1.0	1.0	1.0
Batch ID	0821B	0821B	0821B	0821B	0821B

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Received: 20 AUG 98
Reported: 12 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS01/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code. 112780912

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	SDG#
85017-2	SSR-1	08-19-98	RFIS01
85017-3	SSR-2	08-19-98	RFIS01
85017-5	SSR-3	08-19-98	RFIS01
85017-6	SSR-5	08-19-98	RFIS01
85017-8	SSR-6	08-19-98	RFIS01

PARAMETER	85017-2	85017-3	85017-5	85017-6	85017-8
Vanadium (6010)					
Vanadium, mg/kg dw	31	39	10	42	50
Preparation Date	08.21.98	08.21.98	08.21.98	08.21.98	08.21.98
Date Analyzed	08.25.98	08.25.98	08.25.98	08.25.98	08.25.98
Dilution factor	1.0	1.0	1.0	1.0	1.0
Batch ID	0821D	0821D	0821D	0821D	0821D
Organophosphorus Pesticides (8141)					
Ethyl Parathion, mg/kg dw	<0.040	<0.040	<0.037	<0.038	<0.039
Methyl Parathion, mg/kg dw	<0.020	<0.021	<0.019	<0.020	<0.020
Tetraethyl dithiopyrophosphate (Sulfotepp), mg/kg dw	<0.020	<0.021	<0.019	<0.020	<0.020
Surrogate - Triphenylphosphate	47 %	54 %	52 %	77 %	60 %
Date Extracted	08.21.98	08.21.98	08.21.98	08.21.98	08.21.98
Date Analyzed	08.29.98	08.29.98	08.29.98	08.29.98	08.29.98
Dilution factor	1.0	1.0	1.0	1.0	1.0
Batch ID	0821O	0821O	0821O	0821O	0821O
Instrument ID	3GONPD	3GONPD	3GONPD	3GONPD	3GONPD
Percent Solids	82	82	89	86	84

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LOG NO: S8-85017
Received: 20 AUG 98
Reported: 12 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS01/983-3223.002/MONSANTO RFI-ANNISTON

Sampled By: Client
Code: 112700912

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	SDG#
85017-9	SSR-7	08-19-98	RFIS01
85017-10	SSR-8	08-19-98	RFIS01
85017-11	SSR-9	08-19-98	RFIS01

PARAMETER	85017-9	85017-10	85017-11
Volatiles by GC/MS (8260)			
Methylene chloride (Dichloromethane), ug/kg dw	<5.2	<5.0	<4.7
1,1,2,2-Tetrachloroethane, ug/kg dw	<5.2	<5.0	<4.7
Chlorobenzene, ug/kg dw	<5.2	<5.0	<4.7
Isopropylbenzene, ug/kg dw	<5.2	<5.0	<4.7
Surrogate - Toluene-d8	73 %	80 %	83 %
Surrogate - 4-Bromofluorobenzene	165 %	112 %	145 %
Surrogate - Dibromofluoromethane	98 %	90 %	85 %
Date Analyzed	08.21.98	08.21.98	08.21.98
Dilution factor	1.0	1.0	1.0
Batch ID	2H0820	1H0821	1H0821

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LOG NO: S8-85017
Received: 20 AUG 98
Reported: 12 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 9263-1-0006

CC: Mr. Alan G. Faust Project: RFIS01/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 113780913

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	SDG#
85017-9	SSR-7	08-19-98	RFIS01
85017-10	SSR-8	08-19-98	RFIS01
85017-11	SSR-9	08-19-98	RFIS01

PARAMETER	85017-9	85017-10	85017-11
Acids and Base Neutrals (8270-APP9)			
p-Dichlorobenzene, ug/kg dw	<1900*F65	<400	<360
o-Dichlorobenzene, ug/kg dw	<1900	<400	<360
p-Nitrophenol, ug/kg dw	<10000	<2100	<1900
2,4-Dichlorophenol, ug/kg dw	<1900	<400	<360
Pentachlorophenol, ug/kg dw	<10000	<2100	<1900
Phenol, ug/kg dw	<1900	<400	<360
2,4,5-Trichlorophenol, ug/kg dw	<1900	<400	<360
2,4,6-Trichlorophenol, ug/kg dw	<1900	<400	<360
o,o,o-Triethyl phosphorothioate, ug/kg dw	<1900	<400	<360
Surrogate - Phenol d5	*F33	88 %	84 %
Surrogate - 2-Fluorophenol	*F33	78 %	68 %
Surrogate - 2,4,6-Tribromophenol	*F33	63 %	59 %
Surrogate - Nitrobenzene - d5	*F33	80 %	78 %
Surrogate - 2-Fluorobiphenyl	*F33	75 %	72 %
Surrogate - Terphenyl - d14	*F33	85 %	44 %
Date Extracted	08.21.98	08.21.98	08.21.98
Date Analyzed	09.11.98	09.10.98	09.10.98
Dilution factor	5.0	1.0	1.0
Batch ID	0821A	0821A	0821A
Instrument ID	MSD5970	MSE5970	MSE5970

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LOG NO: S8-85017
Received: 20 AUG 98
Reported: 12 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS01/983-3223.002/MONSANTO RFI-ANNISTON

Sampled By: Client
Code: 112780913

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	SDG#
85017-9	SSR-7	08-19-98	RFIS01
85017-10	SSR-8	08-19-98	RFIS01
85017-11	SSR-9	08-19-98	RFIS01

PARAMETER	85017-9	85017-10	85017-11
PCB's (8081/See Qualifier Z)			
PCB-1016, ug/kg dw	0	0	0
PCB-1221, ug/kg dw	0	0	0
PCB-1232, ug/kg dw	0	0	67000
PCB-1242, ug/kg dw	0	0	0
PCB-1248, ug/kg dw	0	0	0
PCB-1254, ug/kg dw	170000	0	120000
PCB-1260, ug/kg dw	59000	34	95000
Total Polychlorinated Biphenyls, ug/kg dw	230000	34	280000
Surrogate - TCX	*F33	41 %	*F33
Date Extracted	08.21.98	08.21.98	08.21.98
Date Analyzed	08.29.98	08.27.98	08.27.98
Dilution factor	1000.0	1.0	200.0
Arsenic (6010)			
Arsenic, mg/kg dw	12	10	14
Preparation Date	08.21.98	08.21.98	08.21.98
Date Analyzed	08.25.98	08.25.98	08.31.98
Dilution factor	1.0	1.0	5.0
Batch ID	0821B	0821B	0821B

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REISSUED 10/15/02

LOG NO: S8-85017
Received: 20 AUG 98
Reported: 15 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

Contract No.: S7219

CC: Mr. Alan G. Faust Project: RFIS01/983-3223.002/MONSANTO RFI-ANNISTON

Sampled By: Client
Code: 103521014

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	SDG#
85017-9	SSR-7	08-19-98	RFIS01
85017-10	SSR-8	08-19-98	RFIS01
85017-11	SSR-9	08-19-98	RFIS01

PARAMETER	85017-9	85017-10	85017-11
PCB's (8081/See Qualifier Z) (608)			
PCB-1016, ug/kg dw	<39,000	<41	<7300
PCB-1221, ug/kg dw	<39,000	<41	<7300
PCB-1232, ug/kg dw	<39,000	<41	67000
PCB-1242, ug/kg dw	<39,000	<41	<7300
PCB-1248, ug/kg dw	<39,000	<41	<7300
PCB-1254, ug/kg dw	170000	<41	120000
PCB-1260, ug/kg dw	59000	34	95000
Total Polychlorinated Biphenyls, ug/kg dw	230000	34	280000
Surrogate - TCX	*F33	41 %	*F33
Date Extracted	08.21.98	08.21.98	08.21.98
Date Analyzed	08.29.98	08.27.98	08.27.98
Dilution factor	1000.0	1.0	200.0
Percent Solids	85	81	90

for Elizabeth F. Beauchamp, Project Manager

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LOG NO: S8-85017
Received: 20 AUG 98
Reported: 12 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 9363-1-0006

CC: Mr. Alan G. Faust Project: RFIS01/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 112700913

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	SDG#
85017-9	SSR-7	08-19-98	RFIS01
85017-10	SSR-8	08-19-98	RFIS01
85017-11	SSR-9	08-19-98	RFIS01

PARAMETER	85017-9	85017-10	85017-11
Barium (6010)			
Barium, mg/kg dw	62	52	700
Preparation Date	08.21.98	08.21.98	08.21.98
Date Analyzed	08.25.98	08.25.98	08.25.98
Dilution factor	1.0	1.0	1.0
Batch ID	0821B	0821B	0821B
Beryllium (6010)			
Beryllium, mg/kg dw	<0.53	<0.56	0.70
Preparation Date	08.21.98	08.21.98	08.21.98
Date Analyzed	08.25.98	08.25.98	08.25.98
Dilution factor	1.0	1.0	1.0
Batch ID	0821B	0821B	0821B
Cadmium (6010)			
Cadmium, mg/kg dw	<0.53	<0.56	0.92
Preparation Date	08.21.98	08.21.98	08.21.98
Date Analyzed	08.25.98	08.25.98	08.25.98
Dilution factor	1.0	1.0	1.0
Batch ID	0821B	0821B	0821B

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Received: 20 AUG 98
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Ms. Gayle Pittman
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Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS01/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 112790912

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	SDG#
85017-9	SSR-7	08-19-98	RFIS01
85017-10	SSR-8	08-19-98	RFIS01
85017-11	SSR-9	08-19-98	RFIS01

PARAMETER	85017-9	85017-10	85017-11
Chromium (6010)			
Chromium, mg/kg dw	48	18	14
Preparation Date	08.21.98	08.21.98	08.21.98
Date Analyzed	08.25.98	08.25.98	08.31.98
Dilution factor	1.0	1.0	5.0
Batch ID	0821B	0821B	0821B
Cobalt (6010)			
Cobalt, mg/kg dw	17	9.9	12
Preparation Date	08.21.98	08.21.98	08.21.98
Date Analyzed	08.25.98	08.25.98	08.31.98
Dilution factor	1.0	1.0	5.0
Batch ID	0821B	0821B	0821B
Lead (7421)			
Lead, mg/kg dw	220	41	150
Preparation Date	08.21.98	08.21.98	08.21.98
Date Analyzed	08.31.98	08.31.98	08.31.98
Dilution factor	50	10	20
Batch ID	0821A	0821A	0821A

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5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-85017
Received: 20 AUG 98
Reported: 12 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS01/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 112780912

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	SDG#
85017-9	SSR-7	08-19-98	RFIS01
85017-10	SSR-8	08-19-98	RFIS01
85017-11	SSR-9	08-19-98	RFIS01

PARAMETER	85017-9	85017-10	85017-11
Manganese (6010)			
Manganese, mg/kg dw	620	520	12000
Preparation Date	08.21.98	08.21.98	08.21.98
Date Analyzed	08.25.98	08.31.98	08.31.98
Dilution factor	1.0	1.0	5.0
Batch ID	0821B	0821B	0821B
Mercury (7471)			
Mercury, mg/kg dw	1.4	0.093	0.46
Preparation Date	08.21.98	08.21.98	08.21.98
Date Analyzed	08.25.98	08.25.98	08.25.98
Dilution factor	20	1.0	2.0
Batch ID	0821R	0821R	0821R
Nickel (6010)			
Nickel, mg/kg dw	2400	12	120
Preparation Date	08.21.98	08.21.98	08.21.98
Date Analyzed	08.25.98	08.25.98	08.25.98
Dilution factor	5.0	1.0	1.0
Batch ID	0821B	0821B	0821B

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LOG NO: S8-85017
Received: 20 AUG 98
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Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS01/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 112780912

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	SDG#
85017-9	SSR-7	08-19-98	RFIS01
85017-10	SSR-8	08-19-98	RFIS01
85017-11	SSR-9	08-19-98	RFIS01

PARAMETER	85017-9	85017-10	85017-11
Vanadium (6010)			
Vanadium, mg/kg dw	51	45	26
Preparation Date	08.21.98	08.21.98	08.21.98
Date Analyzed	08.25.98	08.25.98	08.25.98
Dilution factor	1.0	1.0	1.0
Batch ID	0821B	0821B	0821B
Organophosphorus Pesticides (8141)			
Ethyl Parathion, mg/kg dw	<0.029	<0.041	<0.027
Methyl Parathion, mg/kg dw	<0.020	<0.021	<0.018
Tetraethyl dithiopyrophosphate (Sulfotepp), mg/kg dw	<0.020	<0.021	<0.018
Surrogate - Triphenylphosphate	40 %	54 %	98 %
Date Extracted	08.21.98	08.21.98	08.21.98
Date Analyzed	08.29.98	08.29.98	08.29.98
Dilution factor	1.0	1.0	1.0
Batch ID	0821O	0821O	0821O
Instrument ID	SGONPD	SGONPD	SGONPD
Percent Solids	85	81	90

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LOG NO: S8-85017
Received: 20 AUG 98
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Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS01/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 112700912

REPORT OF RESULTS Page 15

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
85017-7	Trip Blank	08-19-98	RFIS01

PARAMETER	85017-7
Volatiles by GC/MS (8260)	
Methylene chloride (Dichloromethane), ug/l	<5.0
1,1,2,2-Tetrachloroethane, ug/l	<5.0
Chlorobenzene, ug/l	<5.0
Isopropylbenzene, ug/l	<5.0
Surrogate - Toluene-d8	88 %
Surrogate - 4-Bromofluorobenzene	110 %
Surrogate - Dibromofluoromethane	100 %
Date Analyzed	08.21.98
Dilution factor	1.0
Batch ID	1H0821

Methods: EPA SW-846, Update III.

*F33 = Because the sample was diluted prior to analysis, surrogate recoveries are not reported.

*F65 = Elevated detection limits were reported due to sample matrix interference which required sample or extract dilution.

Elizabeth F. Beauchamp

Serial Number

SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC

5102 LaRoche Avenue, Savannah, GA 31404 — Phone: (912) 354-7858 — Fax: (912) 352-0165
2846 Industrial Plaza Drive, Tallahassee, FL 32301 — Phone: (904) 878-3994 — Fax: (904) 878-8504
414 SW 12th Avenue, Deerfield Beach, FL 33442 — Phone: (954) 421-7400 — Fax: (954) 421-2584
900 Lakeside Drive, Mobile, AL 36693 — Phone: (334) 666-6633 — Fax: (334) 666-6696
6712 Benjamin Road, Suite 100, Tampa, FL 33634 — Phone: (813) 885-7427 — Fax: (813) 885-7049
129 Alpha Drive, Suite 110, Destrehan, LA 70047 — Phone: (504) 764-1100 — Fax: (504) 725-1163

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

PROJECT/REFERENCE: Saluda/RFI/AL
PROJECT NO.: 983-3223.4
P.O. NUMBER:
PROJECT LOC. (State): AL
SAMPLER(S) NAME: Chris Hennigsey
PHONE: 770 496 1893
FAX:
CLIENT NAME: Groller Associates
CLIENT PROJECT MANAGER: Jon Rod Ike
CLIENT ADDRESS/CITY, STATE, ZIP: 3730 Chamblee Tucker Rd Atlanta GA [redacted] 30341

MATRIX TYPE — REQUIRED ANALYSES — PAGE 1 OF 1

STANDARD REPORT DELIVERY ☑
EXPEDITED REPORT DELIVERY (SURCHARGE) ☐

SAMPLE DATE	SAMPLE TIME	SL NO.	SAMPLE IDENTIFICATION	MATRIX	NUMBER OF CONTAINERS SUBMITTED	REMARKS
8-19	9:00		SSR-1	X	1 1 2 1	Please see Betsy Deschamps for target analytes & quantitation limits.
8-19	11:00		SSR-2	X	1 1 2 1	
8-19	10:30		SSR-3	X	1 1 2 1	
8-19	12:00		SSR-5	X	1 1 2 1	
8-19	15:30		SSR-6	X	1 1 2 1	
8-19	14:00		SSR-7	X	1 1 2 1	
8-19	15:00		SSR-8	X	1 1 2 1	
8-19	14:30		SSR-9	X	1 1 2 1	
8-19			Trip blank	X	1	

RELINQUISHED BY (SIGNATURE)	DATE	TIME	RELINQUISHED BY (SIGNATURE)	DATE	TIME	RELINQUISHED BY (SIGNATURE)	DATE	TIME
[signature]	8/13/98		[signature]	8-19-98	12:00			
RECEIVED BY (SIGNATURE)	DATE	TIME	RECEIVED BY (SIGNATURE)	DATE	TIME	RECEIVED BY (SIGNATURE)	DATE	TIME
[signature]	8-18	8:00	[signature]					

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SL LOG NO.	LABORATORY REMARKS
[signature]	[illegible]	[illegible]	☐ YES ☐ NO		SL-8507	

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4a Express Package Service Packages under 150 lbs.

Delivery commitment may be later in some areas

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FedEx Standard Overnight

FedEx 2Day*

FedEx Express Saver*

FedEx First Overnight

*FedEx Letter Rate not available. Minimum charge one pound rate.

4b Express Freight Service Packages over 150 lbs.

Delivery commitment may be later in some areas

FedEx Overnight Freight

FedEx 2Day Freight

FedEx Express Saver Freight

Call for delivery schedule. See back for detailed descriptions of freight services.

5 Packaging

FedEx Letter

FedEx Pak

FedEx Box

FedEx Tube

Other Pkg

Declared value limit $500

6 Special Handling

Does this shipment contain dangerous goods?

Yes

Yes

No

Dry Ice

CA Cargo Aircraft Only

7 Payment

Bill to:

Sender

Recipient

Third Party

Credit Card

Cash/ Check

Total Packages

Total Weight

Total Declared Value

$ .00

Total Charges

$

Credit Card Auth

8 Release Signature

Questions?

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FedEx 2Day Freight

FedEx Express Saver Freight

5 Packaging

FedEx Letter

FedEx Pak

FedEx Box

FedEx Tube

Other Pkg

6 Special Handling

Does this shipment contain dangerous goods?

Yes

Yes

Dry Ice

Cargo Aircraft Only

7 Payment

Bill to:

Sender

Recipient

Third Party

Credit Card

Cash/ Check

Total Packages

Total Weight

Total Declared Value

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Total Charges

Credit Card Auth.

8 Release Signature

272

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5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-84964
Received: 18 AUG 98
Reported: 10 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS01/983-3223.002/MONSANTO RFI-ANNISTON

Sampled By: Client
Code: 122880910

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	SDG#
84964-1	SSR-4	08-17-98/1627	RFIS01

PARAMETER	84964-1
Organophosphorus Pesticides (8141)	
Ethyl Parathion, mg/kg dw	<0.040
Methyl Parathion, mg/kg dw	<0.021
Tetraethyl dithiopyrophosphate (Sulfotepp), mg/kg dw	<0.021
Surrogate - Triphenylphosphate	60 %
Date Extracted	08.20.98
Date Analyzed	08.28.98
Dilution factor	1.0
Batch ID	0820N
Instrument ID	SGONPD
PCB's (8081/See Qualifier Z)	
PCB-1016, ug/kg dw	0
PCB-1221, ug/kg dw	0
PCB-1232, ug/kg dw	70000
PCB-1242, ug/kg dw	0
PCB-1248, ug/kg dw	0
PCB-1254, ug/kg dw	24000
PCB-1260, ug/kg dw	10000
Total Polychlorinated Biphenyls, ug/kg dw	100000
Surrogate - TCX	*F33
Date Extracted	08.20.98
Date Analyzed	08.25.98
Dilution factor	200.0

SEVERN TRENT SERVICES
STL Savannah
5102 LaRoche Avenue • Savannah, GA 31404 • Tel: 912 354 7858 • Fax: 912 352 0165 • www.stl-inc.com

REISSUED 10/15/02

LOG NO: S8-84964
Received: 18 AUG 98
Reported: 15 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

Contract No.: S7219
CC: Mr. Alan G. Faust Project: RFIS01/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 103321015

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	SDG#
84964-1	SSR-4	08-17-98/1627	RFIS01

PARAMETER	84964-1
PCB's (8081/See Qualifier Z) (608)	
PCB-1016, ug/kg dw	<8000
PCB-1221, ug/kg dw	<8000
PCB-1232, ug/kg dw	70000
PCB-1242, ug/kg dw	<8000
PCB-1248, ug/kg dw	<8000
PCB-1254, ug/kg dw	24000
PCB-1260, ug/kg dw	10000
Total Polychlorinated Biphenyls, ug/kg dw	100000
Surrogate - TCX	*F33
Date Extracted	08.20.98
Date Analyzed	08.25.98
Dilution factor	200.0
Percent Solids	82

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LOG NO: S8-84964
Received: 18 AUG 98
Reported: 10 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS01/983-3223.002/MONSANTO RFI-ANNISTON

Sampled By: Client
Code: 122980910

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	SDG#
84964-1	SSR-4	08-17-98/1627	RFIS01

PARAMETER	84964-1
Acids and Base Neutrals (8270-APP9)	
p-Dichlorobenzene, ug/kg dw	<400
o-Dichlorobenzene, ug/kg dw	<400
p-Nitrophenol, ug/kg dw	<2100
2,4-Dichlorophenol, ug/kg dw	<400
Pentachlorophenol, ug/kg dw	<2100
Phenol, ug/kg dw	<400
2,4,5-Trichlorophenol, ug/kg dw	<400
2,4,6-Trichlorophenol, ug/kg dw	<400
O,O,O-Triethyl phosphorothioate, ug/kg dw	<400
Surrogate - Phenol d5	35 %
Surrogate - 2-Fluorophenol	32 %
Surrogate - 2,4,6-Tribromophenol	42 %
Surrogate - Nitrobenzene - d5	30 %
Surrogate - 2-Fluorobiphenyl	40 %
Surrogate - Terphenyl - d14	50 %
Date Extracted	08.20.98
Date Analyzed	09.04.98
Dilution factor	1.0
Batch ID	0820A
Instrument ID	MSG5970

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LOG NO: S8-84964
Received: 18 AUG 98
Reported: 10 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS01/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 122990910

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	SDG#
84964-1	SSR-4	08-17-98/1627	RFIS01

PARAMETER	84964-1
Volatiles by GC/MS (8260)	
Methylene chloride (Dichloromethane), ug/kg dw	<7.1
1,1,2,2-Tetrachloroethane, ug/kg dw	<7.1
Chlorobenzene, ug/kg dw	<7.1
Isopropylbenzene, ug/kg dw	<7.1
Surrogate - Toluene-d8	90 %
Surrogate - 4-Bromofluorobenzene	104 %
Surrogate - Dibromofluoromethane	100 %
Date Analyzed	08.20.98
Dilution factor	1.0
Batch ID	2H0819
Total Organic Carbon (9060)	
Total Organic Carbon, mg/kg dw	4500
Preparation Date	08.19.98
Date Analyzed	08.19.98
Dilution factor	1.0
Batch ID	0819X
Organic Carbon (Walkley-Black)	
Organic Carbon (Walkley-Black), mg/kg dw	1600
Preparation Date	08.28.98
Date Analyzed	08.28.98
Dilution factor	1.0
Batch ID	0828X

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LOG NO: S8-84964
Received: 18 AUG 98
Reported: 10 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS01/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 123980910

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	SDG#
84964-1	SSR-4	08-17-98/1627	RFIS01

PARAMETER	84964-1
Cation Exchange Capacity	
Cation Exchange Capacity, meq/100g	9.4
Preparation Date	08.25.98
Date Analyzed	08.27.98
Dilution factor	80
Batch ID	0825A
Arsenic (6010)	
Arsenic, mg/kg dw	4.2
Preparation Date	08.19.98
Date Analyzed	08.20.98
Dilution factor	1.0
Batch ID	0819A
Barium (6010)	
Barium, mg/kg dw	43
Preparation Date	08.19.98
Date Analyzed	08.20.98
Dilution factor	1.0
Batch ID	0819A
Beryllium (6010)	
Beryllium, mg/kg dw	<0.55
Preparation Date	08.19.98
Date Analyzed	08.20.98
Dilution factor	1.0
Batch ID	0819A

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LOG NO: S8-84964
Received: 18 AUG 98
Reported: 10 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS01/983-3223.002/MONSANTO RFI-ANNISTON

Sampled By: Client
Code: 122000910

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	SDG#
84964-1	SSR-4	08-17-98/1627	RFIS01

PARAMETER	84964-1
Cadmium (6010)	
Cadmium, mg/kg dw	<0.55
Preparation Date	08.19.98
Date Analyzed	08.20.98
Dilution factor	1.0
Batch ID	0819A
Chromium (6010)	
Chromium, mg/kg dw	19
Preparation Date	08.19.98
Date Analyzed	08.20.98
Dilution factor	1.0
Batch ID	0819A
Cobalt (6010)	
Cobalt, mg/kg dw	5.0
Preparation Date	08.19.98
Date Analyzed	08.20.98
Dilution factor	1.0
Batch ID	0819A
Lead (7421)	
Lead, mg/kg dw	41
Preparation Date	08.20.98
Date Analyzed	08.24.98
Dilution factor	20
Batch ID	0820B

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LOG NO: S8-84964
Received: 18 AUG 98
Reported: 10 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS01/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 122000910

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	SDG#
84964-1	SSR-4	08-17-98/1627	RFIS01

PARAMETER	84964-1
Manganese (6010)	
Manganese, mg/kg dw	120
Preparation Date	08.19.98
Date Analyzed	08.20.98
Dilution factor	1.0
Batch ID	0819A
Mercury (7471)	
Mercury, mg/kg dw	1.1
Preparation Date	08.21.98
Date Analyzed	08.25.98
Dilution factor	10
Batch ID	0821R
Nickel (6010)	
Nickel, mg/kg dw	7.5
Preparation Date	08.19.98
Date Analyzed	08.20.98
Dilution factor	1.0
Batch ID	0819A
Vanadium (6010)	
Vanadium, mg/kg dw	33
Preparation Date	08.19.98
Date Analyzed	08.20.98
Dilution factor	1.0
Batch ID	0819A

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LOG NO: S8-84964
Received: 18 AUG 98
Reported: 10 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS01/983-3223.002/MONSANTO RFI-ANNISTON

Sampled By: Client
Code: 122880910

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	SDG#
84964-1	SSR-4	08-17-98/1627	RFIS01

PARAMETER	84964-1
Acid Volatile Sulfide	
Acid Volatile Sulfide, mg/kg dw	<1.2
Preparation Date	08.25.98
Date Analyzed	08.25.98
Dilution factor	1.0
Batch ID	0825A
Percent Solids	82

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-84964
Received: 18 AUG 98
Reported: 10 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS01/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 123080910

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	SDG#
84964-2	SSR-15	08-17-98/1500	RFIS01
84964-3	DUPE 1	08-17-98/1600	RFIS01

PARAMETER	84964-2	84964-3
Volatiles by GC/MS (8260)		
Methylene chloride (Dichloromethane), ug/kg dw	<5.0	<4.8
1,1,2,2-Tetrachloroethane, ug/kg dw	<5.0	<4.8
Chlorobenzene, ug/kg dw	8.8	17
Isopropylbenzene, ug/kg dw	<5.0	<4.8
Surrogate - Toluene-d8	92 %	92 %
Surrogate - 4-Bromofluorobenzene	100 %	98 %
Surrogate - Dibromofluoromethane	102 %	100 %
Date Analyzed	08.20.98	08.20.98
Dilution factor	1.0	1.0
Batch ID	2H0819	2H0819

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LOG NO: S8-84964
Received: 18 AUG 98
Reported: 10 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS01/983-3223.002/MONSANTO RFI-ANNISTON

Sampled By: Client
Code. 122000210

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	SDG#
84964-2	SSR-15	08-17-98/1500	RFIS01
84964-3	DUPE 1	08-17-98/1600	RFIS01

PARAMETER	84964-2	84964-3	
Acids and Base Neutrals (8270-APP9)			
p-Dichlorobenzene, ug/kg dw	<390	<390	
o-Dichlorobenzene, ug/kg dw	<390	<390	
p-Nitrophenol, ug/kg dw	<2000	<2000	
2,4-Dichlorophenol, ug/kg dw	<390	<390	
Pentachlorophenol, ug/kg dw	<2000	<2000	
Phenol, ug/kg dw	<390	<390	
2,4,5-Trichlorophenol, ug/kg dw	<390	<390	
2,4,6-Trichlorophenol, ug/kg dw	<390	<390	
o,o,o-Triethyl phosphorothioate, ug/kg dw	<390	<390	
Surrogate - Phenol d5	38 %	41 %	
Surrogate - 2-Fluorophenol	38 %	38 %	
Surrogate - 2,4,6-Tribromophenol	45 %	49 %	
Surrogate - Nitrobenzene - d5	34 %	33 %	
Surrogate - 2-Fluorobiphenyl	44 %	47 %	
Surrogate - Terphenyl - d14	50 %	50 %	
Date Extracted	08.20.98	08.20.98	
Date Analyzed	09.04.98	09.04.98	
Dilution factor	1.0	1.0	
Batch ID	0820A	0820A	
Instrument ID	M3G5970	M3G5970	

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LOG NO: S8-85061
Received: 21 AUG 98
Reported: 23 NOV 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263 1-0006

CC: Mr. Alan G. Faust Project: RFIS02/983-3223.002/MONSANTO RFI-ANNISTON

Sampled By: Client
Code. 094701123

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	SDG#
85061-8	DUPE4	08-20-98	RFIS02
85061-8-RE	DUPE4	08 20 98	RFIS02

PARAMETER	85061-8	85061-8-RE
PCB's (8081/See Qualifier Z)		
PCB-1016, ug/kg dw	0	0
PCB-1221, ug/kg dw	0	0
PCB-1232, ug/kg dw	0	0
PCB-1242, ug/kg dw	0	0
PCB-1248, ug/kg dw	9800000	7300000
PCB-1254, ug/kg dw	0	0
PCB-1260, ug/kg dw	0	0
Total Polychlorinated Biphenyls, ug/kg dw	9800000	7300000
Surrogate - TCX	*F33	*F33
Date Extracted	08.27.98	09.10.98
Date Analyzed	09.11.98	09.11.98
Dilution factor	100000	20000

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LOG NO: S8-85061
Received: 21 AUG 98
Reported: 23 NOV 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

Contract No.: S7219

CC: Mr. Alan G. Faust Project: RFIS02/983-3223.002/MONSANTO RFI-ANNISTON

Sampled By: Client
Code: 144021015

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	SDG#
85061-8	DUPE4	08-20-98	RFIS02
85061-8-RE	DUPE4	08-20-98	RFIS02

PARAMETER	85061-8	85061-8-RE
PCB's (8081/See Qualifier Z) (608)		
PCB-1016, ug/kg dw	<3800000	<3800000
PCB-1221, ug/kg dw	<3800000	<3800000
PCB-1232, ug/kg dw	<3800000	<3800000
PCB-1242, ug/kg dw	<3800000	<3800000
PCB-1248, ug/kg dw	9800000	7300000
PCB-1254, ug/kg dw	<3800000	<3800000
PCB-1260, ug/kg dw	<3800000	<3800000
Total Polychlorinated Biphenyls, ug/kg dw	9800000	7300000
Surrogate - TCX	*F33	*F33
Date Extracted	08.27.98	09.10.98
Date Analyzed	09.11.98	09.11.98
Dilution factor	100000	20000
Percent Solids	88	---

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LOG NO: S8-85061
Received: 21 AUG 98
Reported: 23 NOV 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS02/983-3223.002/MONSANTO RFI-ANNISTON

Sampled By: Client
Code: 094781123

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	SDG#
85061-8	DUPE4	08-20-98	RFIS02
85061-8-RE	DUPE4	08-20-98	RFIS02

PARAMETER	85061-8	85061-8-RE
Acids and Base Neutrals (8270-APP9)		
p-Dichlorobenzene, ug/kg dw	<38000*F65	---
o-Dichlorobenzene, ug/kg dw	<38000	---
p-Nitrophenol, ug/kg dw	<190000	---
2,4-Dichlorophenol, ug/kg dw	<38000	---
Pentachlorophenol, ug/kg dw	<190000	---
Phenol, ug/kg dw	<38000	---
2,4,5-Trichlorophenol, ug/kg dw	<38000	---
2,4,6-Trichlorophenol, ug/kg dw	<38000	---
o,o,o-Triethyl phosphorothioate, ug/kg dw	<38000	---
Surrogate - Phenol d5	*F33	---
Surrogate - 2-Fluorophenol	*F33	---
Surrogate - 2,4,6-Tribromophenol	*F33	---
Surrogate - Nitrobenzene - d5	*F33	---
Surrogate - 2-Fluorobiphenyl	*F33	---
Surrogate - Terphenyl - d14	*F33	---
Date Extracted	08.25.98	---
Date Analyzed	09.11.98	---
Dilution factor	100.0	---
Batch ID	0825A	---
Instrument ID	MSD5970	---

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LOG NO: S8-85061
Received: 21 AUG 98
Reported: 23 NOV 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS02/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 094781123

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	SDG#
85061-8	DUPE4	08-20-98	RFIS02
85061-8 RE	DUPE4	08-20-98	RFIS02

PARAMETER	85061-8	85061-8-RE
Volatiles by GC/MS (8260)		
Methylene chloride (Dichloromethane), ug/kg dw	<4.9	---
1,1,2,2-Tetrachloroethane, ug/kg dw	<4.9	---
Chlorobenzene, ug/kg dw	<4.9	---
Isopropylbenzene, ug/kg dw	<4.9	---
Surrogate - Toluene-d8	57 %	---
Surrogate - 4 Bromofluorobenzene	245 %	---
Surrogate - Dibromofluoromethane	90 %	---
Date Analyzed	08.27.98	---
Dilution factor	1.0	---
Batch ID	2H0827	---
Arsenic (6010)		
Arsenic, mg/kg dw	19	---
Preparation Date	08.26.98	---
Date Analyzed	08.28.98	---
Dilution factor	1.0	---
Batch ID	0826A	---

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LOG NO: S8-85061
Received: 21 AUG 98
Reported: 23 NOV 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS02/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 094/81123

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	SDG#
85061-8	DUPE4	08-20-98	RFIS02
85061-8-RE	DUPE4	08-20-98	RFIS02

PARAMETER	85061-8	85061-8-RE
Barium (6010)		
Barium, mg/kg dw	30	---
Preparation Date	08.26.98	---
Date Analyzed	08.28.98	---
Dilution factor	1.0	---
Batch ID	0826A	---
Beryllium (6010)		
Beryllium, mg/kg dw	<0.52	---
Preparation Date	08.26.98	---
Date Analyzed	08.28.98	---
Dilution factor	1.0	---
Batch ID	0826A	---
Cadmium (6010)		
Cadmium, mg/kg dw	<0.52	---
Preparation Date	08.26.98	---
Date Analyzed	08.28.98	---
Dilution factor	1.0	---
Batch ID	0826A	---
Chromium (6010)		
Chromium, mg/kg dw	19	---
Preparation Date	08.26.98	---
Date Analyzed	08.28.98	---
Dilution factor	1.0	---
Batch ID	0826A	---

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LOG NO: S8-85061
Received: 21 AUG 98
Reported: 23 NOV 98

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Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS02/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 094781123

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	SDG#
85061-8	DUPE4	08-20-98	RFIS02
85061-8 RE	DUPE4	08-20-98	RFIS02

PARAMETER	85061-8	85061-8-RE
Cobalt (6010)		
Cobalt, mg/kg dw	3.3	---
Preparation Date	08.26.98	---
Date Analyzed	08.28.98	---
Dilution factor	1.0	---
Batch ID	0826A	---
Lead (7421)		
Lead, mg/kg dw	85	---
Preparation Date	08.26.98	---
Date Analyzed	08.31.98	---
Dilution factor	10	---
Batch ID	0826B	---
Manganese (6010)		
Manganese, mg/kg dw	270	---
Preparation Date	08.26.98	---
Date Analyzed	08.28.98	---
Dilution factor	1.0	---
Batch ID	0826A	---
Mercury (7471)		
Mercury, mg/kg dw	0.28	---
Preparation Date	08.26.98	---
Date Analyzed	08.28.98	---
Dilution factor	2.0	---
Batch ID	0826R	---

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LOG NO: S8-85061
Received: 21 AUG 98
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Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS02/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 094781123

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	SDG#
85061-8	DUPE4	08-20-98	RFIS02
85061-8-RE	DUPE4	08-20-98	RFIS02

PARAMETER	85061-8	85061-8-RE
Nickel (6010)		
Nickel, mg/kg dw	13	---
Preparation Date	08.26.98	---
Date Analyzed	08.28.98	---
Dilution factor	1.0	---
Batch ID	0826A	---
Vanadium (6010)		
Vanadium, mg/kg dw	9.7	---
Preparation Date	08.26.98	---
Date Analyzed	08.28.98	---
Dilution factor	1.0	---
Batch ID	0826A	---
Percent Solids	88	---

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LOG NO: S8-85061
Received: 21 AUG 98
Reported: 23 NOV 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS02/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 094781123

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	SDG#
85061-2	SSR-20	08-20-98/1230	RFIS02
85061-3	SSR-22	08-20-98/1300	RFIS02
85061-9	DUPE 3	08-20-98	RFIS02

PARAMETER	85061-2	85061-3	85061-9
Petroleum Hydrocarbons (9073)			
Petroleum Hydrocarbons, mg/kg dw	<11	<11	12
Preparation Date	08.26.98	08.26.98	08.26.98
Date Analyzed	08.26.98	08.26.98	08.26.98
Dilution factor	1.0	1.0	1.0
Batch ID	0826I	0826I	0826I
Percent Solids	92	91	92

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LOG NO: S8-85061
Received: 21 AUG 98
Reported: 23 NOV 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS02/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 094781123

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
85061-10	RBLK-1	08-20-98/1500	RFIS02

PARAMETER	85061-10
Organophosphorus Pesticides (8141)	
Ethyl Parathion, mg/l	<0.0010
Methyl Parathion, mg/l	<0.00050
Tetraethyl dithiopyrophosphate (Sulfotepp), mg/l	<0.00050
Surrogate - Triphenylphosphate	108 %
Date Extracted	08.27.98
Date Analyzed	09.11.98
Dilution factor	1.0
Batch ID	0827N
Instrument ID	SGONPD
Vanadium (6010)	
Vanadium, mg/l	<0.010
Preparation Date	08.26.98
Date Analyzed	08.28.98
Dilution factor	1.0
Batch ID	0826H
Nickel (6010)	
Nickel, mg/l	<0.0040
Preparation Date	08.26.98
Date Analyzed	08.28.98
Dilution factor	1.0
Batch ID	0826H

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LOG NO: S8-85061
Received: 21 AUG 98
Reported: 23 NOV 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS02/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 094/81123

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
85061-10	RBLK-1	08-20-98/1500	RFIS02

PARAMETER	85061-10
Mercury (7470)	
Mercury, mg/l	<0.00060
Preparation Date	08.27.98
Date Analyzed	08.28.98
Dilution factor	1.0
Batch ID	0827T
Manganese (6010)	
Manganese, mg/l	<0.010
Preparation Date	08.28.98
Date Analyzed	08.31.98
Dilution factor	1.0
Batch ID	0828A
Lead (7421)	
Lead, mg/l	<0.0050
Preparation Date	08.26.98
Date Analyzed	08.31.98
Dilution factor	1.0
Batch ID	0826G
Cobalt (6010)	
Cobalt, mg/l	<0.010
Preparation Date	08.26.98
Date Analyzed	08.28.98
Dilution factor	1.0
Batch ID	0826H

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LOG NO: S8-85061
Received: 21 AUG 98
Reported: 23 NOV 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS02/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 094/81123

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
85061-10	RBLK-1	08-20-98/1500	RFIS02

PARAMETER	85061-10
Chromium (6010)	
Chromium, mg/l	<0.010
Preparation Date	08.26.98
Date Analyzed	08.28.98
Dilution factor	1.0
Batch ID	0826H
Cadmium (6010)	
Cadmium, mg/l	<0.0050
Preparation Date	08.26.98
Date Analyzed	08.28.98
Dilution factor	1.0
Batch ID	0826H
Beryllium (6010)	
Beryllium, mg/l	<0.0040
Preparation Date	08.26.98
Date Analyzed	08.28.98
Dilution factor	1.0
Batch ID	0826H
Barium (6010)	
Barium, mg/l	<0.010
Preparation Date	08.26.98
Date Analyzed	08.28.98
Dilution factor	1.0
Batch ID	0826H

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LOG NO: S8-85061
Received: 21 AUG 98
Reported: 23 NOV 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS02/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 094781123

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
85061-10	RBLK-1	08-20-98/1500	RFIS02

PARAMETER	85061-10
Arsenic (6010)	
Arsenic, mg/l	<0.010
Preparation Date	08.26.98
Date Analyzed	08.28.98
Dilution factor	1.0
Batch ID	0826H
PCB's (8081/See Qualifier Z)	
PCB-1016, ug/l	0
PCB-1221, ug/l	0
PCB-1232, ug/l	0
PCB-1242, ug/l	0
PCB-1248, ug/l	0
PCB-1254, ug/l	0
PCB-1260, ug/l	0
Total Polychlorinated Biphenyls, ug/l	0
Surrogate TCX	70 %
Date Extracted	08.27.98
Date Analyzed	09.01.98
Dilution factor	1.0

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LOG NO: S8-85061
Received: 21 AUG 98
Reported: 23 NOV 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

Contract No.: S7219
CC: Mr. Alan G. Faust Project: RFIS02/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 144021015

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
85061-10	RBLK-1	08-20-98/1500	RFIS02

PARAMETER	85061-10
PCB's (8081/See Qualifier Z) (608)	
PCB-1016, ug/l	<1
PCB-1221, ug/l	<1
PCB-1232, ug/l	<1
PCB-1242, ug/l	<1
PCB-1248, ug/l	<1
PCB-1254, ug/l	<1
PCB-1260, ug/l	<1
Total Polychlorinated Biphenyls, ug/l	<1
Surrogate - TCX	70 %
Date Extracted	08.27.98
Date Analyzed	09.01.98
Dilution factor	1.0

Elizabeth F. Beauchamp, Project Manager

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LOG NO: S8-85061
Received: 21 AUG 98
Reported: 23 NOV 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS02/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 094781123

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
85061-10	RBLK-1	08-20-98/1500	RFIS02

PARAMETER	85061-10
Acids and Base Neutrals (8270-APP9)	
p-Dichlorobenzene, ug/l	<10
o-Dichlorobenzene, ug/l	<10
p-Nitrophenol, ug/l	<50
2,4-Dichlorophenol, ug/l	<10
Pentachlorophenol, ug/l	<50
Phenol, ug/l	<10
2,4,5-Trichlorophenol, ug/l	<10
2,4,6-Trichlorophenol, ug/l	<10
o,o,o-Triethyl phosphorothioate, ug/l	<10
Surrogate - Phenol d5	78 %
Surrogate - 2-Fluorophenol	71 %
Surrogate - 2,4,6-Tribromophenol	71 %
Surrogate - Nitrobenzene - d5	76 %
Surrogate - 2-Fluorobiphenyl	74 %
Surrogate - Terphenyl - d14	76 %
Date Extracted	08.29.98
Date Analyzed	09.09.98
Dilution factor	1.0
Batch ID	0829A
Instrument ID	MSF5970

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LOG NO: S8-85061
Received: 21 AUG 98
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Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
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Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS02/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 094781123

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
85061-10	RBLK-1	08-20-98/1500	RFIS02

PARAMETER	85061-10
Volatiles by GC/MS (8260)	
Methylene chloride (Dichloromethane), ug/l	<5.0
1,1,2,2 Tetrachloroethane, ug/l	<5.0
Chlorobenzene, ug/l	<5.0
Isopropylbenzene, ug/l	<5.0
Surrogate - Toluene-d8	92 %
Surrogate - 4-Bromofluorobenzene	96 %
Surrogate - Dibromofluoromethane	102 %
Date Analyzed	08.31.98
Dilution factor	1.0
Batch ID	2A0830

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LOG NO: S8-85061
Received: 21 AUG 98
Reported: 23 NOV 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS02/983-3223.002/MONSANTO RFI-ANNISTON

Sampled By: Client
Code: 094781123

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
85061-11	Trip Blank	08-20-98	RFIS02

PARAMETER	85061-11
Volatiles by GC/MS (8260)	
Methylene chloride (Dichloromethane), ug/l	<5.0
1,1,2,2-Tetrachloroethane, ug/l	<5.0
Chlorobenzene, ug/l	<5.0
Isopropylbenzene, ug/l	<5.0
Surrogate - Toluene-d8	90 %
Surrogate - 4-Bromofluorobenzene	96 %
Surrogate - Dibromofluoromethane	98 %
Date Analyzed	08.31.98
Dilution factor	1.0
Batch ID	2A0830

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& ENVIRONMENTAL SERVICES, INC.

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LOG NO: S8-85061
Received: 21 AUG 98
Reported: 23 NOV 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS02/983-3223.002/MONSANTO RFI-ANNISTON

Sampled By: Client
Code: 094781123

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
PARAMETER			

X = Identification of target analytes using GC methodology is based on retention time. Although two dissimilar GC columns confirmed the presence of the target analyte in the sample, % difference is >40%. Thus, reviewer discretion should be employed during data review and interpretation of results for this target compound.

*F33 = Because the sample was diluted prior to analysis, surrogate recoveries are not reported.

*F36 = Surrogate recovery was outside established limits due to coeluting matrix interference in the sample.

*F65 = Elevated detection limits were reported due to sample matrix interference which required sample or extract dilution.

Elizabeth P. Beauchamp, Project Manager

Final Page Of Report

Serial Number 1 7624

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ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

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☐ 2846 Industrial Plaza Drive Tallahassee, FL 32301 — Phone: (904) 878-3994 — Fax: (904) 878-9504
☐ 414 SW 12th Avenue, Deerfield Beach, FL 33442 — Phone: (954) 421-7400 — Fax: (954) 421-2584
☐ 900 Lakeside Drive, Mobile, AL 36693 — Phone: (334) 666-6633 — Fax: (334) 666-6696
☐ 6712 Benjamin Road, Suite 100, Tampa, FL 33634 — Phone: (813) 885-7427 — Fax: (813) 885-7049
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PROJECT REFERENCE	PROJECT NO.	P.O. NUMBER

PROJECT LOC. (State)	SAMPLER(s) NAME	PHONE / FAX

CLIENT NAME	CLIENT PROJECT MANAGER

CLIENT ADDRESS (CITY, STATE, ZIP)

PAGE / OF /

☑ STANDARD REPORT DELIVERY

☐ EXPEDITED REPORT DELIVERY (surcharge)

Date Due:

SAMPLE DATE	SAMPLE TIME	SL NO.	SAMPLE IDENTIFICATION	MATRIX TYPE: AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (oil, solvent, etc.)	NUMBER OF CONTAINERS SUBMITTED	REMARKS

REQUIRED ANALYSES

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SL LOG NO.	LABORATORY REMARKS:
			☐ YES ☐ NO			

SL SAVANNAH LABORATORIES
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LOG NO: S8-84758
Received: 07 AUG 98
Reported: 27 AUG 98
Revised 9/1/98
Client PO. No.: 8263-1-0006

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 091380910

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84758-1	Rinsate	08-06-98/1030

PARAMETER	84758-1
Volatiles by GC/MS (8260)	
Methylene chloride (Dichloromethane), ug/l	<5.0
1,1,2,2 Tetrachloroethane, ug/l	<5.0
Chlorobenzene, ug/l	<5.0
Isopropylbenzene, ug/l	<5.0
Surrogate - Toluene-d8	100 %
Surrogate - 4-Bromofluorobenzene	98 %
Surrogate - Dibromofluoromethane	100 %
Date Analyzed	08.13.98
Dilution factor	1.0
Batch ID	100812

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Received: 07 AUG 98
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Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 091380910

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84758-1	Rinsate	08-06-98/1030

PARAMETER	84758-1
Acid & Base Neutral Extractables (8270)	
1,4-Dichlorobenzene, ug/l	<10
1,2-Dichlorobenzene, ug/l	<10
Phenol, ug/l	<10
2,4-Dichlorophenol, ug/l	<10
2,4,6-Trichlorophenol, ug/l	<10
Pentachlorophenol, ug/l	<1.0
4-Nitrophenol, ug/l	<50
2,4,5-Trichlorophenol, ug/l	<10
o,o,o Triethyl phosphorothioate, ug/l	<10
Surrogate-2FP	94 %
Surrogate-PHL	92 %
Surrogate-NBZ	90 %
Surrogate-2FBP	82 %
Surrogate TBP	79 %
Surrogate-TPH	100 %
Date Extracted	08.10.98
Date Analyzed	08.25.98
Dilution factor	1.0
Batch ID	0810D
Instrument ID	MSF5970

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Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 091380910

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84758-1	Rinsate	08-06-98/1030

PARAMETER	84758-1
Organophosphorus Pesticides (8141)	
Methyl Parathion, ug/l	<0.50
Tetraethyl dithiopyrophosphate (Sulfotepp), ug/l	<0.50
Ethyl Parathion, ug/l	<1.0
Date Extracted	08.10.98
Date Analyzed	08.17.98
PCB's (8081/See Qualifier Z)	
PCB-1016, ug/l	0
PCB-1221, ug/l	0
PCB-1232, ug/l	0
PCB-1242, ug/l	0
PCB-1248, ug/l	0
PCB-1254, ug/l	0
PCB-1260, ug/l	0
Total Polychlorinated Biphenyls, ug/l	0
Surrogate - TCX	44 %
Date Extracted	08.10.98
Date Analyzed	08.14.98
Dilution factor	1.0

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LOG NO: S8-84758
Received: 07 AUG 98
Reported: 27 AUG 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

Contract No.: S7219

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 102921015

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84759 1	Rinsate	08-06-98/1030

PARAMETER	84758-1
PCB's (8081/See Qualifier Z) (608)	
PCB-1016, ug/l	<1
PCB-1221, ug/l	<1
PCB-1232, ug/l	<1
PCB-1242, ug/l	<1
PCB-1248, ug/l	<1
PCB-1254, ug/l	<1
PCB-1260, ug/l	<1
Total Polychlorinated Biphenyls, ug/l	<1
Surrogate - TCX	44 %
Date Extracted	08.10.98
Date Analyzed	08.14.98
Dilution factor	1.0

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LOG NO: S8-84758
Received: 07 AUG 98
Reported: 27 AUG 98
Revised 9/1/98
Client PO. No.: 8263-1-0006

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 091380910

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84758-1	Rinsate	08-06-98/1030

PARAMETER	84758-1
Arsenic (6010)	
Arsenic, mg/l	<0.010
Preparation Date	08.10.98
Date Analyzed	08.11.98
Dilution factor	1.0
Batch ID	0810G
Barium (6010)	
Barium, mg/l	<0.010
Preparation Date	08.10.98
Date Analyzed	08.11.98
Dilution factor	1.0
Batch ID	0810G
Beryllium (6010)	
Beryllium, mg/l	<0.0040
Preparation Date	08.10.98
Date Analyzed	08.11.98
Dilution factor	1.0
Batch ID	0810G
Cadmium (6010)	
Cadmium, mg/l	<0.0050
Preparation Date	08.10.98
Date Analyzed	08.11.98
Dilution factor	1.0
Batch ID	0810G

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LOG NO: S8-84758
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Client PO. No.: 8263-1-0006

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 091380910

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84758-1	Rinsate	08-06-98/1030

PARAMETER	84758-1
Chromium (6010)	
Chromium, mg/l	<0.010
Preparation Date	08.10.98
Date Analyzed	08.11.98
Dilution factor	1.0
Batch ID	0810G
Cobalt (6010)	
Cobalt, mg/l	<0.010
Preparation Date	08.10.98
Date Analyzed	08.11.98
Dilution factor	1.0
Batch ID	0810G
Lead (7421)	
Lead, mg/l	<0.0050
Preparation Date	08.10.98
Date Analyzed	08.10.98
Dilution factor	1.0
Batch ID	0810H
Manganese (6010)	
Manganese, mg/l	<0.010
Preparation Date	08.10.98
Date Analyzed	08.11.98
Dilution factor	1.0
Batch ID	0810G

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Client PO. No.: 8263-1-0006

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Atlanta, GA 30341

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 091380910

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84758-1	Rinsate	08-06-98/1030

PARAMETER	84758-1
Mercury (7470)	
Mercury, mg/l	<0.00020
Preparation Date	08.11.98
Date Analyzed	08.12.98
Dilution factor	1.0
Batch ID	0811R
Nickel (6010)	
Nickel, mg/l	<0.0040
Preparation Date	08.10.98
Date Analyzed	08.11.98
Dilution factor	1.0
Batch ID	0810G
Vanadium (6010)	
Vanadium, mg/l	<0.010
Preparation Date	08.10.98
Date Analyzed	08.11.98
Dilution factor	1.0
Batch ID	0810G
Total Organic Carbon (9060)	
Total Organic Carbon, mg/l	<1.0
Preparation Date	08.12.98
Date Analyzed	08.12.98
Dilution factor	1.0
Batch ID	0812A

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LOG NO: S8-84758
Received: 07 AUG 98
Reported: 27 AUG 98
Revised 9/1/98
Client PO. No.: 8263-1-0006

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 091380910

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84758-1	Rinsate	08-06-98/1030

PARAMETER	84758-1
Phosphorus, Total	
Total Phosphorus, mg/l	<0.044
Preparation Date	08.14.98
Date Analysed	08.16.98
Dilution factor	1.0
Batch ID	0814B
Total Kjeldahl Nitrogen (351.2)	
Total Kjeldahl Nitrogen-N, mg/l	<0.20
Preparation Date	08.11.98
Date Analysed	08.13.98
Dilution factor	1.0
Batch ID	0811B
Total Organic Halogen (9020A)	
Total Organic Halogen , mg/l	<0.010
Preparation Date	08.17.98
Date Analysed	08.17.98
Dilution factor	1.0
Batch ID	0817C
Sulfide (376.2)	
Sulfide , mg/l	<0.10
Preparation Date	08.10.98
Date Analysed	08.10.98
Dilution factor	1.0
Batch ID	0810A

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Atlanta, GA 30341

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 091380910

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84758-1	Rinsate	08-06-98/1030

PARAMETER	84758-1
Phenolics, Total Recoverable (9065)	
Phenolics, Total Recoverables, mg/l	<0.050
Preparation Date	08.07.98
Date Analyzed	08.07.98
Dilution factor	1.0
Batch ID	0807A
Sulfate as SO4	
Sulfate as SO4, mg/l	<5.0
Preparation Date	08.13.98
Date Analyzed	08.13.98
Dilution factor	1.0
Batch ID	0813A
Nitrate-N (353.2)	
Nitrate-N, mg/l	2.7
Preparation Date	08.07.98
Date Analyzed	08.07.98
Dilution factor	2.0
Batch ID	0819D
Total Dissolved Solids (160.1)	
Total Dissolved Solids, mg/l	12
Preparation Date	08.10.98
Date Analyzed	08.10.98
Dilution factor	1.0
Batch ID	0810A

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LOG NO: S8-84758
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Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 091380910

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84758-1	Rinsate	08-06-98/1030

PARAMETER	84758-1
Suspended Solids (160.2)	
Suspended Solids, mg/l	6.0
Preparation Date	08.11.98
Date Analyzed	08.12.98
Dilution factor	2.0
Batch ID	0811A
Alkalinity (to pH 4.5) as CaCO3 (310.1)	
Alkalinity (to pH 4.5) as CaCO3, mg/l	<1.0
Preparation Date	08.11.98
Date Analyzed	08.11.98
Dilution factor	1.0
Batch ID	0811A
Ferrous Iron (3500-Fe D)	
Iron, Ferrous (2+), mg/l	<0.050
Preparation Date	08.10.98
Date Analyzed	08.10.98
Dilution factor	1.0
Batch ID	0810Y
Standard Plate Count	
Standard Plate Count, CFU/ml	10
Preparation Date	08.07.98
Date Analyzed	08.07.98
Batch ID	0807A

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Atlanta, GA 30341

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 091380910

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84758-5	Rinsate F	08-06-98/1110
84758-19	OWR-7D-F	08-05-98/1555

PARAMETER	84758-5	84758-19
PCB's (8081/See Qualifier Z)		
PCB-1016, ug/l	0	0
PCB-1221, ug/l	0	0
PCB-1232, ug/l	0	0
PCB-1242, ug/l	0	0
PCB-1248, ug/l	0	0
PCB-1254, ug/l	0	0
PCB-1260, ug/l	0	0
Total Polychlorinated Biphenyls, ug/l	0	0
Surrogate - TCX	32 %	35 %
Date Extracted	08.10.98	08.10.98
Date Analyzed	08.14.98	08.14.98
Dilution factor	1.0	1.0
Arsenic (6010)		
Arsenic, mg/l	<0.010	<0.010
Preparation Date	08.10.98	08.10.98
Date Analyzed	08.11.98	08.11.98
Dilution factor	1.0	1.0
Batch ID	0810G	0810G

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LOG NO: S8-84758
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Reported: 27 AUG 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

Contract No.: S7219

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON

Sampled By: Client
Code: 102921015

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84758-5	Rinsate F	08-06-98/1110
84758-19	OWR-7D-F	08-05-98/1555

PARAMETER	84758-5	84758-19
PCB's (8081/See Qualifier Z) (608)		
PCB-1016, ug/l	<1	<1
PCB-1221, ug/l	<1	<1
PCB-1232, ug/l	<1	<1
PCB-1242, ug/l	<1	<1
PCB-1248, ug/l	<1	<1
PCB-1254, ug/l	<1	<1
PCB-1260, ug/l	<1	<1
Total Polychlorinated Biphenyls, ug/l	<1	<1
Surrogate - TCX	32 %	35 %
Date Extracted	08.10.98	08.10.98
Date Analyzed	08.14.98	08.14.98
Dilution factor	1.0	1.0

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LOG NO: S8-84758
Received: 07 AUG 98
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Client PO. No.: 8263-1-0006

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 091380910

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84758-5	Rinsate F	08-06-98/1110
84758-19	OWN 7D F	08-05-98/1555

PARAMETER	84758-5	84758-19
Barium (6010)		
Barium, mg/l	<0.010	0.017
Preparation Date	08.10.98	08.10.98
Date Analyzed	08.11.98	08.11.98
Dilution factor	1.0	1.0
Batch ID	0810G	0810G
Beryllium (6010)		
Beryllium, mg/l	<0.0040	<0.0040
Preparation Date	08.10.98	08.10.98
Date Analyzed	08.11.98	08.11.98
Dilution factor	1.0	1.0
Batch ID	0810G	0810G
Cadmium (6010)		
Cadmium, mg/l	<0.0050	<0.0050
Preparation Date	08.10.98	08.10.98
Date Analyzed	08.11.98	08.11.98
Dilution factor	1.0	1.0
Batch ID	0810G	0810G
Chromium (6010)		
Chromium, mg/l	<0.010	0.039
Preparation Date	08.10.98	08.10.98
Date Analyzed	08.11.98	08.11.98
Dilution factor	1.0	1.0
Batch ID	0810G	0810G

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LOG NO: S8-84758
Received: 07 AUG 98
Reported: 27 AUG 98
Revised 9/1/98
Client PO. No.: 8263-1-0006

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 091380910
Page 12

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84758-5	Rinsate F	08-06-98/1110
84758-19	OWR-7D-F	08-05-98/1555

PARAMETER	84758-5	84758-19
Cobalt (6010)		
Cobalt, mg/l	<0.010	<0.010
Preparation Date	08.10.98	08.10.98
Date Analyzed	08.11.98	08.11.98
Dilution factor	1.0	1.0
Batch ID	0810G	0810G
Lead (7421)		
Lead, mg/l	<0.0050	0.013
Preparation Date	08.10.98	08.10.98
Date Analyzed	08.10.98	08.10.98
Dilution factor	1.0	1.0
Batch ID	0810H	0810H
Manganese (6010)		
Manganese, mg/l	<0.010	<0.010
Preparation Date	08.10.98	08.10.98
Date Analyzed	08.11.98	08.11.98
Dilution factor	1.0	1.0
Batch ID	0810G	0810G
Mercury (7470)		
Mercury, mg/l	<0.00020	<0.00020
Preparation Date	08.11.98	08.11.98
Date Analyzed	08.12.98	08.12.98
Dilution factor	1.0	1.0
Batch ID	0811R	0811R

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84758-5	Rinsate F	08-06-98/1110
84758-19	OWR 7D F	08-05-98/1555

PARAMETER	84758-5	84758-19
Nickel (6010)		
Nickel, mg/l	<0.0040	<0.0040
Preparation Date	08.10.98	08.10.98
Date Analyzed	08.11.98	08.11.98
Dilution factor	1.0	1.0
Batch ID	0810G	0810G
Vanadium (6010)		
Vanadium, mg/l	<0.010	<0.010
Preparation Date	08.10.98	08.10.98
Date Analyzed	08.11.98	08.11.98
Dilution factor	1.0	1.0
Batch ID	0810G	0810G

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84758-10	OWR-1D	08-03-98/1038

PARAMETER	84758-10
Acid & Base Neutral Extractables (8270)	
1,4-Dichlorobenzene, ug/l	<10
1,2-Dichlorobenzene, ug/l	<10
Phenol, ug/l	<10
2,4-Dichlorophenol, ug/l	<10
2,4,6-Trichlorophenol, ug/l	<10
Pentachlorophenol, ug/l	<1.0
4-Nitrophenol, ug/l	<50
2,4,5-Trichlorophenol, ug/l	<10
o,o,o Triethyl phosphorothioate, ug/l	<10
Surrogate-2FP	80 %
Surrogate-PHL	89 %
Surrogate-NBZ	86 %
Surrogate-2FBP	74 %
Surrogate-TBP	94 %
Surrogate-TPH	34 %
Date Extracted	08.10.98
Date Analyzed	08.25.98
Dilution factor	1.0
Batch ID	0810D
Instrument ID	M5F5970

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Code: 091380910

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84758-10	OWR-1D	08-03-98/1038

PARAMETER	84758-10
PCB's (8081/See Qualifier Z)	
PCB-1016, ug/l	0
PCB-1221, ug/l	0
PCB-1232, ug/l	0
PCB-1242, ug/l	0
PCB-1248, ug/l	0
PCB-1254, ug/l	0
PCB-1260, ug/l	0
Total Polychlorinated Biphenyls, ug/l	0
Surrogate TCX	32 %
Date Extracted	08.10.98
Date Analyzed	08.14.98
Dilution factor	1.0
Organophosphorus Pesticides (8141)	
Methyl Parathion, ug/l	<0.50
Tetraethyl dithiopyrophosphate (Sulfotepp), ug/l	<0.50
Ethyl Parathion, ug/l	<1.0
Date Extracted	08.10.98
Date Analyzed	08.17.98

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LOG NO: S8-84758
Received: 07 AUG 98
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Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

Contract No.: S7219

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON

Sampled By: Client
Code: 102921015

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84758-10	OWR-1D	08-03-98/1038

PARAMETER	84758-10
PCB's (8081/See Qualifier Z) (608)	
PCB-1016, ug/l	<1
PCB-1221, ug/l	<1
PCB-1232, ug/l	<1
PCB-1242, ug/l	<1
PCB-1248, ug/l	<1
PCB-1254, ug/l	<1
PCB-1260, ug/l	<1
Total Polychlorinated Biphenyls, ug/l	<1
Surrogate - TCX	32 %
Date Extracted	08.10.98
Date Analyzed	08.14.98
Dilution factor	1.0

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Code: 091380910

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84758-10	OWR-1D	08-03-98/1038

PARAMETER	84758-10
Arsenic (6010)	
Arsenic, mg/l	<0.010
Preparation Date	08.10.98
Date Analysed	08.11.98
Dilution factor	1.0
Batch ID	0810G
Barium (6010)	
Barium, mg/l	0.21
Preparation Date	08.10.98
Date Analysed	08.11.98
Dilution factor	1.0
Batch ID	0810G
Beryllium (6010)	
Beryllium, mg/l	<0.0040
Preparation Date	08.10.98
Date Analysed	08.11.98
Dilution factor	1.0
Batch ID	0810G
Cadmium (6010)	
Cadmium, mg/l	<0.0050
Preparation Date	08.10.98
Date Analysed	08.11.98
Dilution factor	1.0
Batch ID	0810G

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84758-10	OWR-1D	08-03-98/1038

PARAMETER	84758-10
Chromium (6010)	
Chromium, mg/l	<0.010
Preparation Date	08.10.98
Date Analyzed	08.11.98
Dilution factor	1.0
Batch ID	0810G
Cobalt (6010)	
Cobalt, mg/l	<0.010
Preparation Date	08.10.98
Date Analyzed	08.11.98
Dilution factor	1.0
Batch ID	0810G
Lead (7421)	
Lead, mg/l	<0.0050
Preparation Date	08.10.98
Date Analyzed	08.10.98
Dilution factor	1.0
Batch ID	0810H
Manganese (6010)	
Manganese, mg/l	2.3
Preparation Date	08.10.98
Date Analyzed	08.11.98
Dilution factor	1.0
Batch ID	0810G

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84758-10	OWR-1D	08-03-98/1038

PARAMETER	84758-10
Mercury (7470)	
Mercury, mg/l	<0.00020
Preparation Date	08.11.98
Date Analyzed	08.12.98
Dilution factor	1.0
Batch ID	0811R
Nickel (6010)	
Nickel, mg/l	<0.0040
Preparation Date	08.10.98
Date Analyzed	08.11.98
Dilution factor	1.0
Batch ID	0810G
Vanadium (6010)	
Vanadium, mg/l	<0.010
Preparation Date	08.10.98
Date Analyzed	08.11.98
Dilution factor	1.0
Batch ID	0810G
Total Organic Carbon (9060)	
Total Organic Carbon, mg/l	8.2
Preparation Date	08.12.98
Date Analyzed	08.12.98
Dilution factor	1.0
Batch ID	0812A

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84758-10	OWR-1D	08-03-98/1038

PARAMETER	84758-10
Phosphorus, Total	
Total Phosphorus, mg/l	<0.044
Preparation Date	08.14.98
Date Analyzed	08.16.98
Dilution factor	1.0
Batch ID	0814B
Total Kjeldahl Nitrogen (351.2)	
Total Kjeldahl Nitrogen-N, mg/l	<0.20
Preparation Date	08.11.98
Date Analyzed	08.13.98
Dilution factor	1.0
Batch ID	0811B
Total Organic Halogen (9020A)	
Total Organic Halogen , mg/l	110
Preparation Date	08.17.98
Date Analyzed	08.17.98
Dilution factor	2.0
Batch ID	0817C
Sulfide (376.2)	
Sulfide , mg/l	<0.10
Preparation Date	08.10.98
Date Analyzed	08.10.98
Dilution factor	1.0
Batch ID	0810A

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Code: 091380910

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84758-10	OWR-1D	08-03-98/1038

PARAMETER	84758-10
Phenolics, Total Recoverable (9065)	
Phenolics, Total Recoverables, mg/l	<0.050
Preparation Date	08.07.98
Date Analyzed	08.07.98
Dilution factor	1.0
Batch ID	0807A

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84758-22	Trip Blank	

PARAMETER	84758-22
Volatiles by GC/MS (8260)	
Methylene chloride (Dichloromethane), ug/l	<5.0
1,1,2,2-Tetrachloroethane, ug/l	<5.0
Chlorobenzene, ug/l	<5.0
Isopropylbenzene, ug/l	<5.0
Surrogate - Toluene-d8	100 %
Surrogate - 4-Bromofluorobenzene	98 %
Surrogate - Dibromofluoromethane	98 %
Date Analyzed	08.13.98
Dilution factor	1.0
Batch ID	100812

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84758-23	OWR-7D	08-05-98/1050

PARAMETER	84758-23
Volatiles by GC/MS (8260)	
Methylene chloride (Dichloromethane), ug/l	<5.0
1,1,2,2-Tetrachloroethane, ug/l	<5.0
Chlorobenzene, ug/l	<5.0
Isopropylbenzene, ug/l	<5.0
Surrogate - Toluene-d8	100 %
Surrogate - 4-Bromofluorobenzene	98 %
Surrogate - Dibromofluoromethane	96 %
Date Analyzed	08.13.98
Dilution factor	1.0
Batch ID	100812

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84758-23	OWR-7D	08-05-98/1050

PARAMETER	84758-23
Acid & Base Neutral Extractables (8270)	
1,4-Dichlorobenzene, ug/l	<10
1,2-Dichlorobenzene, ug/l	<10
Phenol, ug/l	<10
2,4-Dichlorophenol, ug/l	<10
2,4,6-Trichlorophenol, ug/l	<10
Pentachlorophenol, ug/l	<1.0
4-Nitrophenol, ug/l	<50
2,4,5-Trichlorophenol, ug/l	<10
o,o,o-Triethyl phosphorothioate, ug/l	<10
Surrogate-2FP	94 %
Surrogate-PHL	95 %
Surrogate-NBZ	90 %
Surrogate-2FBP	86 %
Surrogate-TBP	80 %
Surrogate-TPH	96 %
Date Extracted	08.14.98
Date Analyzed	08.27.98
Dilution factor	1.0
Batch ID	0814C
Instrument ID	MSD5970

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84758-23	OWR-7D	08-05-98/1050

PARAMETER	84758-23
PCB's (8081/See Qualifier Z)	
PCB-1016, ug/l	0
PCB-1221, ug/l	0
PCB-1232, ug/l	0
PCB-1242, ug/l	0
PCB-1248, ug/l	2.2
PCB-1254, ug/l	0
PCB-1260, ug/l	0
Total Polychlorinated Biphenyls, ug/l	2.2
Surrogate - TCX	28 %
Date Extracted	08.10.98
Date Analyzed	08.14.98
Dilution factor	1.0
Arsenic (6010)	
Arsenic, mg/l	<0.010
Preparation Date	08.10.98
Date Analyzed	08.11.98
Dilution factor	1.0
Batch ID	0810G

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84758-23	OWR-7D	08-05-98/1050

PARAMETER	84758-23
Barium (6010)	
Barium, mg/l	<0.010
Preparation Date	08.10.98
Date Analyzed	08.11.98
Dilution factor	1.0
Batch ID	0810G
Beryllium (6010)	
Beryllium, mg/l	<0.0040
Preparation Date	08.10.98
Date Analyzed	08.11.98
Dilution factor	1.0
Batch ID	0810G
Cadmium (6010)	
Cadmium, mg/l	<0.0050
Preparation Date	08.10.98
Date Analyzed	08.11.98
Dilution factor	1.0
Batch ID	0810G
Chromium (6010)	
Chromium, mg/l	0.031
Preparation Date	08.10.98
Date Analyzed	08.11.98
Dilution factor	1.0
Batch ID	0810G

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Code: 091380910

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84758-23	OWR-7D	08-05-98/1050

PARAMETER	84758-23
Cobalt (6010)	
Cobalt, mg/l	<0.010
Preparation Date	08.10.98
Date Analyzed	08.11.98
Dilution factor	1.0
Batch ID	0810G
Lead (7421)	
Lead, mg/l	<0.0050
Preparation Date	08.10.98
Date Analyzed	08.10.98
Dilution factor	1.0
Batch ID	0810H
Manganese (6010)	
Manganese, mg/l	<0.010
Preparation Date	08.10.98
Date Analyzed	08.11.98
Dilution factor	1.0
Batch ID	0810G
Mercury (7470)	
Mercury, mg/l	<0.00020
Preparation Date	08.11.98
Date Analyzed	08.12.98
Dilution factor	1.0
Batch ID	0811R

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84758-23	OWR-7D	08-05-98/1050

PARAMETER	84758-23
Nickel (6010)	
Nickel, mg/l	<0.0040
Preparation Date	08.10.98
Date Analysed	08.11.98
Dilution factor	1.0
Batch ID	0810G
Vanadium (6010)	
Vanadium, mg/l	0.010
Preparation Date	08.10.98
Date Analysed	08.11.98
Dilution factor	1.0
Batch ID	0810G
Organophosphorus Pesticides (8141)	
Methyl Parathion, ug/l	<0.50
Tetraethyl dithiopyrophosphate (Sulfotepp), ug/l	<0.50
Ethyl Parathion, ug/l	<1.0
Date Extracted	08.10.98
Date Analyzed	08.17.98

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LOG NO: S8-84758
Received: 07 AUG 98
Reported: 27 AUG 98
Revised 9/1/98
Client PO. No.: 8263-1-0006

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 091380910

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84758-24	OWR-9S	08-04-98/1210

PARAMETER	84758-24
Volatiles by GC/MS (8260)	
Methylene chloride (Dichloromethane), ug/l	<5.0
1,1,2,2-Tetrachloroethane, ug/l	<5.0
Chlorobenzene, ug/l	<5.0
Isopropylbenzene, ug/l	<5.0
Surrogate - Toluene-d8	100 %
Surrogate - 4-Bromofluorobenzene	92 %
Surrogate - Dibromofluoromethane	104 %
Date Analyzed	08.14.98
Dilution factor	1.0
Batch ID	100814

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CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 091380910

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84758-24	OWR-9S	08-04-98/1210

PARAMETER	84758-24
Acid & Base Neutral Extractables (8270)	
1,4-Dichlorobenzene, ug/l	<10
1,2-Dichlorobenzene, ug/l	<10
Phenol, ug/l	<10
2,4-Dichlorophenol, ug/l	<10
2,4,6-Trichlorophenol, ug/l	<10
Pentachlorophenol, ug/l	<1.0
4-Nitrophenol, ug/l	<50
2,4,5-Trichlorophenol, ug/l	<10
o,o,o-Triethyl phosphorothioate, ug/l	<10
Surrogate-2FP	91 %
Surrogate-PHL	97 %
Surrogate-NBZ	86 %
Surrogate-2FBP	82 %
Surrogate-TBP	82 %
Surrogate-TPH	98 %
Date Extracted	08.10.98
Date Analyzed	08.25.98
Dilution factor	1.0
Batch ID	0806B
Instrument ID	MSD5970

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CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 091380910

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84758-24	OWR-9S	08-04-98/1210

PARAMETER	84758-24
Organophosphorus Pesticides (8141)	
Methyl Parathion, ug/l	<0.50
Tetraethyl dithiopyrophosphate (Sulfotepp), ug/l	<0.50
Ethyl Parathion, ug/l	<1.0
Date Extracted	08.10.98
Date Analyzed	08.17.98

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LOG NO: S8-84758
Received: 07 AUG 98
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Revised 9/1/98
Client PO. No.: 8263-1-0006

Ms. Gayle Pittman
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3730 Chamblee Tucker Road
Atlanta, GA 30341

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 091380910

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84758-25	Method Blank	
84758-26	Lab Control Standard % Recovery	
84758-27	LCS Accuracy Control Limit (%R)	
84758-28	MS/MSD % Recovery	
84758-29	MS Accuracy Advisory Limit (%R)	

PARAMETER	84758-25	84758-26	84758-27	84758-28	84758-29
Volatiles by GC/MS (8260)					
Methylene chloride (Dichloromethane), ug/l	<5.0	---	---	---	---
1,1,2,2-Tetrachloroethane, ug/l	<5.0	---	---	---	---
Chlorobenzene, ug/l	<5.0	110 %	60-127 %	116/100 %	60-127 %
Isopropylbenzene, ug/l	<5.0	---	---	---	---
Surrogate - Toluene-d8	98 %	100 %	67-134 %	100/100 %	67-134 %
Surrogate - 4-Bromofluorobenzene	98 %	96 %	67-132 %	90/88 %	67-132 %
Surrogate - Dibromofluoromethane	98 %	98 %	64-142 %	100/100 %	64-142 %
Date Analyzed	08.12.98	08.12.98	---	08.14.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	100812	100812	---	100814	---

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LOG NO: S8-84758
Received: 07 AUG 98
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Client PO. No.: 8263-1-0006

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 091380910

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84758-25	Method Blank	
84758-26	Lab Control Standard % Recovery	
84758-27	LCS Accuracy Control Limit (%R)	
84758-28	MS/MSD % Recovery	
84758-29	MS Accuracy Advisory Limit (%R)	

PARAMETER	84758-25	84758-26	84758-27	84758-28	84758-29
Acid & Base Neutral Extractables (8270)					
1,4-Dichlorobenzene, ug/l	<10	60 %	10-124 %	68/65 %	10-124 %
1,2-Dichlorobenzene, ug/l	<10	---	---	---	---
n-Nitrosodi-n-propylamine, ug/l	<10	60 %	34-137 %	71/78 %	34-137 %
1,2,4-Trichlorobenzene, ug/l	<10	66 %	17-121 %	66/66 %	17-121 %
Acenaphthene, ug/l	<10	72 %	14-104 %	62/73 %	14-104 %
2,4-Dinitrotoluene, ug/l	<10	80 %	52-111 %	72/86 %	52-111 %
Pyrene, ug/l	<10	72 %	43-131 %	77/88 %	43-131 %
2-Chlorophenol, ug/l	<10	70 %	25-125 %	67/74 %	25-125 %
Phenol, ug/l	<10	61 %	32-110 %	65/70 %	32-110 %
2,4-Dichlorophenol, ug/l	<10	---	---	---	---
2,4,6-Trichlorophenol, ug/l	<10	---	---	---	---
4-Chloro-3-methylphenol, ug/l	<10	72 %	23-111 %	72/83 %	23-111 %
Pentachlorophenol, ug/l	<1.0	68 %	19-123 %	68/80 %	19-123 %
4-Nitrophenol, ug/l	<50	60 %	13-133 %	61/73 %	13-133 %
2,4,5-Trichlorophenol, ug/l	<10	---	---	---	---
O,O,O-Triethyl phosphorothioate, ug/l	<10	---	---	---	---
Surrogate-2FP	35 %	70 %	20-124 %	60/64 %	20-124 %

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Client PO. No.: 8263-1-0006

Ms. Gayle Pittman
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CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code. 091380910

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84758-25	Method Blank	
84758-26	Lab Control Standard % Recovery	
84758-27	LCS Accuracy Control Limit (%R)	
84758-28	MS/MSD % Recovery	
84758-29	MS Accuracy Advisory Limit (%R)	

PARAMETER	84758-25	84758-26	84758-27	84758-28	84758-29
Surrogate-PHL	41 %	68 %	16-139 %	62/66 %	16-139 %
Surrogate-NBZ	36 %	74 %	10-169 %	63/70 %	10-169 %
Surrogate-2FBP	36 %	72 %	23-130 %	60/69 %	23-130 %
Surrogate-TBP	41 %	75 %	24-135 %	73/86 %	24-135 %
Surrogate-TPH	60 %	72 %	27-147 %	76/77 %	27-147 %
Date Extracted	08.10.98	08.10.98	---	08.10.98	---
Date Analyzed	08.26.98	08.14.98	---	08.15.98	---
Dilution factor	1.0	---	---	---	---
Batch ID	0810D	0810D	---	0810D	---
Instrument ID	MSF5970	MSG5970	---	MSA2	---

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LOG NO: S8-84758
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CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code. 091380910

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84758-25	Method Blank	
84758-26	Lab Control Standard % Recovery	
84758-27	LCS Accuracy Control Limit (%R)	
84758-28	MS/MSD % Recovery	
84758-29	MS Accuracy Advisory Limit (%R)	

PARAMETER	84758-25	84758-26	84758-27	84758-28	84758-29
PCB's (8081/See Qualifier Z)					
PCB-1016, ug/l	0	64 %	43-139 %	*F82	*F82
PCB-1221, ug/l	0	---	---	---	---
PCB-1232, ug/l	0	---	---	---	---
PCB-1242, ug/l	0	---	---	---	---
PCB-1248, ug/l	0	---	---	---	---
PCB-1254, ug/l	0	---	---	---	---
PCB-1260, ug/l	0	72 %	31-152 %	*F82	*F82
Total Polychlorinated Biphenyls, ug/l	0	---	---	---	---
Surrogate - TCX	35 %	38 %	---	---	---
Date Extracted	08.10.98	08.10.98	---	---	---
Date Analyzed	08.14.98	08.14.98	---	---	---
Dilution factor	1.0	1.0	---	---	---
Arsenic (6010)					
Arsenic, mg/l	<0.010	101%	75-125 %	103/103 %	75-125 %
Preparation Date	08.10.98	08.10.98	---	08.10.98	---
Date Analyzed	08.11.98	08.11.98	---	08.11.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0810G	0810G	---	0810G	---

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REISSUED 10/15/02

LOG NO: S8-84758
Received: 07 AUG 98
Reported: 27 AUG 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

Contract No.: S7219
CC: Mr. Alan G. Faust Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 102921015

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84758-25	Method Blank	
84758-26	Lab Control Standard % Recovery	
84758-27	LCS Accuracy Control Limit (%R)	
84758-28	MS/MSD % Recovery	
84758-29	MS Accuracy Advisory Limit (%R)	

PARAMETER	84758-25	84758-26	84758-27	84758-28	84758-29
PCB's (8081/See Qualifier Z) (608)					
PCB-1016, ug/l	<1	64 %	43-139 %	*F82	*F82
PCB-1221, ug/l	<1	---	---	---	---
PCB-1232, ug/l	<1	---	---	---	---
PCB-1242, ug/l	<1	---	---	---	---
PCB-1248, ug/l	<1	---	---	---	---
PCB-1254, ug/l	<1	---	---	---	---
PCB-1260, ug/l	<1	72 %	31-152 %	*F82	*F82
Total Polychlorinated Biphenyls, ug/l	<1	---	---	---	---
Surrogate - TCX	35 %	38 %	---	---	---
Date Extracted	08.10.98	08.10.98	---	---	---
Date Analyzed	08.14.98	08.14.98	---	---	---
Dilution factor	1.0	1.0	---	---	---

Methods: EPA SW-846 and 40 CFR Part 136.

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Client PO. No.: 8263-1-0006

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Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 091380910

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84758-25	Method Blank	
84758-26	Lab Control Standard % Recovery	
84758-27	LCS Accuracy Control Limit (%R)	
84758-28	MS/MSD % Recovery	
84758-29	MS Accuracy Advisory Limit (%R)	

PARAMETER	84758-25	84758-26	84758-27	84758-28	84758-29
Barium (6010)					
Barium, mg/l	<0.010	105%	75-125 %	106/106 %	75-125 %
Preparation Date	08.10.98	08.10.98	---	08.10.98	---
Date Analyzed	08.11.98	08.11.98	---	08.11.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0810G	0810G	---	0810G	---
Beryllium (6010)					
Beryllium, mg/l	<0.0040	102%	75-125 %	103/104 %	75-125 %
Preparation Date	08.10.98	08.10.98	---	08.10.98	---
Date Analyzed	08.11.98	08.11.98	---	08.11.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0810G	0810G	---	0810G	---
Cadmium (6010)					
Cadmium, mg/l	<0.0050	104%	75-125 %	103/105 %	75-125 %
Preparation Date	08.10.98	08.10.98	---	08.10.98	---
Date Analyzed	08.11.98	08.11.98	---	08.11.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0810G	0810G	---	0810G	---

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Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 091380910

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84758-25	Method Blank	
84758-26	Lab Control Standard % Recovery	
84758-27	LCS Accuracy Control Limit (%R)	
84758-28	MS/MSD % Recovery	
84758-29	MS Accuracy Advisory Limit (%R)	

PARAMETER	84758-25	84758-26	84758-27	84758-28	84758-29
Chromium (6010)					
Chromium, mg/l	<0.010	105%	75-125 %	104/105 %	75-125 %
Preparation Date	08.10.98	08.10.98	---	08.10.98	---
Date Analyzed	08.11.98	08.11.98	---	08.11.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0810G	0810G	---	0810G	---
Cobalt (6010)					
Cobalt, mg/l	<0.010	102%	75-125 %	103/104 %	75-125 %
Preparation Date	08.10.98	08.10.98	---	08.10.98	---
Date Analyzed	08.11.98	08.11.98	---	08.11.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0810G	0810G	---	0810G	---
Lead (7421)					
Lead, mg/l	<0.0050	108 %	80-120 %	101/104 %	80-120 %
Preparation Date	08.10.98	08.10.98	---	08.10.98	---
Date Analyzed	08.10.98	08.10.98	---	08.10.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0810H	0810H	---	0810H	---

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Atlanta, GA 30341

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 091290910

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84758-25	Method Blank	
84758-26	Lab Control Standard % Recovery	
84758-27	LCS Accuracy Control Limit (%R)	
84758-28	MS/MSD % Recovery	
84758-29	MS Accuracy Advisory Limit (%R)	

PARAMETER	84758-25	84758-26	84758-27	84758-28	84758-29
Manganese (6010)					
Manganese, mg/l	<0.010	106%	75-125 %	109/112 %	75-125 %
Preparation Date	08.10.98	08.10.98	---	08.10.98	---
Date Analyzed	08.11.98	08.11.98	---	08.11.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0810G	0810G	---	0810G	---
Mercury (7470)					
Mercury, mg/l	<0.00020	101 %	80-120 %	99/98 %	80-120 %
Preparation Date	08.11.98	08.11.98	---	08.11.98	---
Date Analyzed	08.12.98	08.12.98	---	08.12.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0811R	0811R	---	0811R	---
Nickel (6010)					
Nickel, mg/l	<0.0040	104%	75-125 %	103/105 %	75-125 %
Preparation Date	08.10.98	08.10.98	---	08.10.98	---
Date Analyzed	08.11.98	08.11.98	---	08.11.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0810G	0810G	---	0810G	---

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CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 091300910

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84758-25	Method Blank	
84758-26	Lab Control Standard % Recovery	
84758-27	LCS Accuracy Control Limit (%R)	
84758-28	MS/MSD % Recovery	
84758-29	MS Accuracy Advisory Limit (%R)	

PARAMETER	84758-25	84758-26	84758-27	84758-28	84758-29
Vanadium (6010)					
Vanadium, mg/l	<0.010	101%	75-125 %	103/104 %	75-125 %
Preparation Date	08.10.98	08.10.98	---	08.10.98	---
Date Analyzed	08.11.98	08.11.98	---	08.11.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0810C	0810C		0810C	
Total Organic Carbon (9060)					
Total Organic Carbon, mg/l	<1.0	108 %	80-120 %	66/69 %	80-120 %
Preparation Date	08.12.98	08.12.98	---	08.12.98	---
Date Analyzed	08.12.98	08.12.98	---	08.12.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0812A	0812A		0812A	
Phosphorus, Total					
Total Phosphorus, mg/l	<0.044	110 %	60-140 %	103/93 %	60-140 %
Preparation Date	08.14.98	08.14.98	---	08.14.96	---
Date Analyzed	08.16.98	08.16.98	---	08.16.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0814B	0814B		0814B	

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Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 091390910

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84758-25	Method Blank	
84758-26	Lab Control Standard % Recovery	
84758-27	LCS Accuracy Control Limit (%R)	
84758-28	MS/MSD % Recovery	
84758-29	MS Accuracy Advisory Limit (%R)	

PARAMETER	84758-25	84758-26	84758-27	84758-28	84758-29
Total Kjeldahl Nitrogen (351.2)					
Total Kjeldahl Nitrogen-N, mg/l	<0.20	103 %	75-125 %	63/65 %	75-125 %
Preparation Date	08.11.98	08.11.98	---	08.11.98	---
Date Analyzed	08.13.98	08.13.98	---	08.13.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0811B	0811B	---	0811B	---
Total Organic Halogen (9020A)					
Total Organic Halogen , mg/l	<0.010	104 %	60-140 %	97/104 %	60-140 %
Preparation Date	08.17.98	08.17.98	---	08.17.98	---
Date Analyzed	08.17.98	08.17.98	---	08.17.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0817C	0817C	---	0817C	---
Sulfide (376.2)					
Sulfide , mg/l	<0.10	93 %	80-120 %	98/106 %	80-120 %
Preparation Date	08.10.98	08.10.98	---	08.10.98	---
Date Analyzed	08.10.98	08.10.98	---	08.10.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0810A	0810A	---	0810A	---

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

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LOG NO: S8-84758
Received: 07 AUG 98
Reported: 27 AUG 98
Revised 9/1/98
Client PO. No.: 8263-1-0006

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 091300910

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84758-25	Method Blank	
84758-26	Lab Control Standard % Recovery	
84758-27	LCS Accuracy Control Limit (%R)	
84758-28	MS/MSD % Recovery	
84758-29	MS Accuracy Advisory Limit (%R)	

PARAMETER	84758-25	84758-26	84758-27	84758-28	84758-29
Phenolics, Total Recoverable (9065)					
Phenolics, Total Recoverables, mg/l	<0.050	102 %	75-125 %	105/107 %	75-125 %
Preparation Date	08.07.98	08.07.98	---	08.07.98	---
Date Analyzed	08.07.98	08.07.98	---	08.07.98	---
Dilution factor	1.0	1.0		1.0	
Batch ID	0807A	0807A	---	0807A	---
Organophosphorus Pesticides (8141)					
Methyl Parathion, ug/l	<0.50	78 %	38-149 %	*F82	*F82
Tetraethyl dithiopyrophosphate (Sulfotepp), ug/l	<0.50	---	---	---	---
Ethyl Parathion, ug/l	<1.0	86 %	28-155 %	*F82	*F82
Date Extracted	08.10.98	08.10.98	---	---	---
Date Analyzed	08.17.98	08.17.98	---	---	---
Sulfate as SO4					
Sulfate as SO4, mg/l	<5.0	77 %	75-125 %	80/88 %	75-125 %
Preparation Date	08.13.98	08.13.98		08.13.98	
Date Analyzed	08.13.98	08.13.98	---	08.13.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0813A	0813A	---	0813A	---

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LOG NO: S8-84758
Received: 07 AUG 98
Reported: 27 AUG 98
Revised 9/1/98
Client PO. No.: 8263-1-0006

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 091300910

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84758-25	Method Blank	
84758-26	Lab Control Standard % Recovery	
84758-27	LCS Accuracy Control Limit (%R)	
84758-28	MS/MSD % Recovery	
84758-29	MS Accuracy Advisory Limit (%R)	

PARAMETER	84758-25	84758-26	84758-27	84758-28	84758-29
Nitrate-N (353.2)					
Nitrate-N, mg/l	<0.050	98 %	80-120 %	90/95 %	80-120 %
Preparation Date	08.07.98	08.07.98	---	---	---
Date Analyzed	08.07.98	08.07.98	---	---	---
Dilution factor	1.0	1.0	---	---	---
Batch ID	0819D	0819D			
Total Dissolved Solids (160.1)					
Total Dissolved Solids, mg/l	<5.0	98 %	80-120 %	*F82	*F82
Preparation Date	08.10.98	08.10.98	---	---	---
Date Analyzed	08.10.98	08.10.98	---	---	---
Dilution factor	1.0	1.0	---	---	---
Batch ID	0810A	0810A			
Suspended Solids (160.2)					
Suspended Solids, mg/l	<5.0	100 %	80-120 %	*F82	*F82
Preparation Date	08.11.98	08.11.98	---	---	---
Date Analyzed	08.12.98	08.12.98	---	---	---
Dilution factor	1.0	1.0	---	---	---
Batch ID	0811A	0811A			

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LOG NO: S8-84758
Received: 07 AUG 98
Reported: 27 AUG 98
Revised 9/1/98
Client PO. No.: 8263-1-0006

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 021300910

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84758-25	Method Blank	
84758-26	Lab Control Standard % Recovery	
84758-27	LCS Accuracy Control Limit (%R)	
84758-28	MS/MSD % Recovery	
84758-29	MS Accuracy Advisory Limit (%R)	

PARAMETER	84758-25	84758-26	84758-27	84758-28	84758-29
Alkalinity (to pH 4.5) as CaCO3 (310.1)					
Alkalinity (to pH 4.5) as CaCO3, mg/l	<1.0	115 %	80-120 %	*F82	*F82
Preparation Date	08.11.98	08.11.98	---	---	---
Date Analyzed	08.11.98	08.11.98	---	---	---
Dilution factor	1.0	1.0	---	---	---
Batch ID	0811A	0811A	---	---	---
Ferrous Iron (3500-Fe D)					
Iron, Ferrous (2+), mg/l	<0.050	93 %	80-120 %	95/100 %	80-120 %
Preparation Date	08.10.98	08.10.98	---	08.10.98	---
Date Analyzed	08.10.98	08.10.98	---	08.10.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0810Y	0810X	---	0810Y	---
Standard Plate Count					
Standard Plate Count, CFU/ml	<1.0	---	---	---	---
Preparation Date	08.07.98	---	---	---	---
Date Analyzed	08.07.98	---	---	---	---
Batch ID	0807A	---	---	---	---

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LOG NO: S8-84758
Received: 07 AUG 98
Reported: 27 AUG 98
Revised 9/1/98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 091380910

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84758-30	Analyst (First Initial, Last Name)	
84758-31	Method Blank	
84758-32	Lab Control Standard % Recovery	

PARAMETER	84758-30	84758-31	84758-32
Volatiles by GC/MS (8260)			
Methylene chloride (Dichloromethane), ug/l	J.MULLINS	---	---
1,1,2,2-Tetrachloroethane, ug/l	J.MULLINS	---	---
Chlorobenzene, ug/l	J.MULLINS	---	---
Isopropylbenzene, ug/l	J.MULLINS	---	---

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Atlanta, GA 30341

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code. 091380910

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84758-30	Analyst (First Initial, Last Name)	
84758-31	Method Blank	
84758-32	Lab Control Standard % Recovery	

PARAMETER		84758-30	84758-31	84758-32
Acid & Base Neutral Extractables (8270)				
1,4-Dichlorobenzene, ug/l	M.JAKUBSEN		<10	62 %
1,2-Dichlorobenzene, ug/l	M.JAKUBSEN		<10	---
n-Nitrosodi-n-propylamine, ug/l	M.JAKUBSEN		<10	68 %
1,2,4-Trichlorobenzene, ug/l	M.JAKUBSEN		<10	62 %
Acenaphthene, ug/l	M.JAKUBSEN		<10	78 %
2,4-Dinitrotoluene, ug/l	M.JAKUBSEN		<10	80 %
Pyrene, ug/l	M.JAKUBSEN		<10	92 %
2-Chlorophenol, ug/l	M.JAKUBSEN		<10	70 %
Phenol, ug/l	M.JAKUBSEN		<10	64 %
2,4-Dichlorophenol, ug/l	M.JAKUBSEN		<10	---
2,4,6-Trichlorophenol, ug/l	M.JAKUBSEN		<10	---
4-Chloro-3-methylphenol, ug/l	M.JAKUBSEN		<10	77 %
Pentachlorophenol, ug/l	M.JAKUBSEN		<1.0	57 %
4-Nitrophenol, ug/l	M.JAKUBSEN		<50	66 %
2,4,5-Trichlorophenol, ug/l	M.JAKUBSEN		<10	---
o,o,o-Triethyl phosphorothioate, ug/l	M.JAKUBSEN		<10	---
Surrogate-2FP		---	47 %	74 %

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Atlanta, GA 30341

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 091380910

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84758-30	Analyst (First Initial, Last Name)	
84758-31	Method Blank	
84758-32	Lab Control Standard % Recovery	

PARAMETER	84758-30	84758-31	84758-32
Surrogate-PHL	---	58 %	73 %
Surrogate-NBZ	---	40 %	60 %
Surrogate-2FBP	---	46 %	74 %
Surrogate-TBP	---	51 %	67 %
Surrogate-TPH	---	78 %	88 %
Date Extracted	---	08.14.98	08.14.98
Date Analyzed	---	08.26.98	08.19.98
Dilution factor	---	1.0	---
Batch ID	---	0814C	0814C
Instrument ID	---	MSF5970	MSG5970
PCB's (8081/See Qualifier Z)			
PCB-1016, ug/l	T.GALLAGH	---	---
PCB-1221, ug/l	T.GALLAGH	---	---
PCB-1232, ug/l	T.GALLAGH	---	---
PCB-1242, ug/l	T.GALLAGH	---	---
PCB-1248, ug/l	T.GALLAGH	---	---
PCB-1254, ug/l	T.GALLAGH	---	---
PCB-1260, ug/l	T.GALLAGH	---	---
Total Polychlorinated Biphenyls, ug/l	T.GALLAGH	---	---
Arsenic (6010)			
Arsenic, mg/l	E.MARTSOLF	---	---

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REISSUED 10/15/02

LOG NO: S8-84758
Received: 07 AUG 98
Reported: 27 AUG 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

Contract No.: S7219
CC: Mr. Alan G. Faust Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code. 102921015

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84758-30	Analyst (First Initial, Last Name)	
84758-31	Method Blank	
84758-32	Lab Control Standard % Recovery	

PARAMETER	84758-30	84758-31	84758-32
PCB's (8081/See Qualifier Z) (608)			
PCB-1016, ug/l	T.GALLAGH	---	---
PCB-1221, ug/l	T.GALLAGH	---	---
PCB-1232, ug/l	T.GALLAGH	---	---
PCB-1242, ug/l	T.GALLAGH	---	---
PCB-1248, ug/l	T.GALLAGH	---	---
PCB-1254, ug/l	T.GALLAGH	---	---
PCB-1260, ug/l	T.GALLAGH	---	---
Total Polychlorinated Diphenyls, ug/l	T.GALLAGH	---	---

Methods: EPA SW-846 and 40 CFR Part 136.

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LOG NO: S8-84758
Received: 07 AUG 98
Reported: 27 AUG 98
Revised 9/1/98
Client PO. No.: 0263-1-0006

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code. 051380910

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84758-30	Analyst (First Initial, Last Name)	
84758-31	Method Blank	
84758-32	Lab Control Standard % Recovery	

PARAMETER	84758-30	84758-31	84758-32
Barium (6010)			
Barium, mg/l	E.MARTSOLF	---	---
Beryllium (6010)			
Beryllium, mg/l	E.MARTSOLF	---	---
Cadmium (6010)			
Cadmium, mg/l	E.MARTSOLF	---	---
Chromium (6010)			
Chromium, mg/l	E.MARTSOLF	---	---
Cobalt (6010)			
Cobalt, mg/l	E.MARTSOLF	---	---
Lead (7421)			
Lead, mg/l	N.DAVIS	---	---
Manganese (6010)			
Manganese, mg/l	E.MARTSOLF	---	---
Mercury (7470)			
Mercury, mg/l	B.BRAYBO	---	---
Nickel (6010)			
Nickel, mg/l	E.MARTSOLF	---	---
Vanadium (6010)			
Vanadium, mg/l	E.MARTSOLF	---	---
Total Organic Carbon (9060)			
Total Organic Carbon, mg/l	L.Riley	---	---

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CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 091300910

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84758-30	Analyst (First Initial, Last Name)	
84758-31	Method Blank	
84758-32	Lab Control Standard % Recovery	

PARAMETER		84758-30	84758-31	84758-32
Phosphorus, Total				
Total Phosphorus, mg/l	L.RILEY	---	---	---
Total Kjeldahl Nitrogen (351.2)				
Total Kjeldahl Nitrogen-N, mg/l	L.RILEY	---	---	---
Total Organic Halogen (9020A)				
Total Organic Halogen , mg/l	R.DAVIS	---	---	---
Sulfide (376.2)				
Sulfide , mg/l	L.RILEY	---	---	---
Phenolics, Total Recoverable (9065)				
Phenolics, Total Recoverables, mg/l	K.BLACKSHE	---	---	---
Organophosphorus Pesticides (8141)				
Methyl Parathion, ug/l	K. Hoang	---	---	---
Tetraethyl dithiopyrophosphate (Sulfotepp), ug/l	K. Hoang	---	---	---
Ethyl Parathion, ug/l	K. Hoang	---	---	---
Sulfate as SO4				
Sulfate as SO4, mg/l	R.DAVIS	---	---	---
Nitrate-N (353.2)				
Nitrate-N, mg/l	L.RILEY	---	---	---
Total Dissolved Solids (160.1)				
Total Dissolved Solids, mg/l	R. DAVIS	---	---	---

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Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 091380910

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84758-30	Analyst (First Initial, Last Name)	
84758-31	Method Blank	
84758-32	Lab Control Standard % Recovery	

PARAMETER	84758-30	84758-31	84758-32
Suspended Solids (160.2)			
Suspended Solids, mg/l	R. DAVIS	---	---
Alkalinity (to pH 4.5) as CaCO3 (310.1)			
Alkalinity (to pH 4.5) as CaCO3, mg/l	R.DAVIS	---	---
Ferrous Iron (3500-Fe D)			
Iron, Ferrous (2+), mg/l	L.REEVES	---	---
Standard Plate Count			
Standard Plate Count, CFU/ml	R.DAVIS	---	---

Methods: EPA SW-846 and 40 CFR Part 136.

SL SAVANNAH LABORATORIES
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LOG NO: S8-84758
Received: 07 AUG 98
Reported: 27 AUG 98
Revised 9/1/98
Client PO. No.: 8263-1-0006

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 12578092

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84758-33	Quantitation Limit	

PARAMETER	84758-33
PCB's (8081/See Qualifier Z)	
PCB-1016, ug/l	1.0
PCB-1221, ug/l	1.0
PCB-1232, ug/l	1.0
PCB-1242, ug/l	1.0
PCB-1248, ug/l	1.0
PCB-1254, ug/l	1.0
PCB-1260, ug/l	1.0
Total Polychlorinated Biphenyls, ug/l	1.0

Methods: EPA SW-846 and 40 CFR Part 136.

Elizabeth F. Beauchamp, Project Manager

Final Page Of Report

SEVERN TRENT SERVICES
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REISSUED 10/15/02

LOG NO: S8-84758
Received: 07 AUG 98
Reported: 27 AUG 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

Contract No.: S7219
CC: Mr. Alan G. Faust
Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 102921015

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84758-33	Quantitation Limit	

PARAMETER	84758-33
PCB's (8081/See Qualifier Z) (608)	
PCB-1016, ug/l	1.0
PCB-1221, ug/l	1.0
PCB-1232, ug/l	1.0
PCB-1242, ug/l	1.0
PCB-1248, ug/l	1.0
PCB-1254, ug/l	1.0
PCB-1260, ug/l	1.0
Total Polychlorinated Biphenyls, ug/l	1.0

Methods: EPA SW-846 and 40 CFR Part 136.

for Elizabeth F. Beauchamp, Project Manager

Serial Number

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

X 5102 LaRoche Avenue, Savannah, GA 31404 — Phone: (912) 354-7858 — Fax: (912) 352-0165
☐ 2846 Industrial Plaza Drive, Tallahassee, FL 32301 — Phone: (904) 878-3994 — Fax: (904) 878-9604
☐ 414 SW 12th Avenue, Deerfield Beach, FL 33442 — Phone: (954) 421-7400 — Fax: (954) 421-2564
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☐ 6712 Benjamin Road, Suite 100, Tampa, FL 33634 — Phone: (813) 885-7427 — Fax: (813) 885-7049
☐ 190 Abba Drive, Suite 110, Destrehan, LA 70047 — Phone: (504) 764-1100 — Fax: (504) 725-1163

PROJECT REFERENCE: Solutia RFI/AL | PROJECT NO: 987-3223 | P.O. NUMBER:

PROJECT LOC (State): AL | SAMPLER(S) NAME: CDH, DCH, MAC, KBD, ECH | PHONE: 770-446-1843 | FAX: 770-934-9476

CLIENT NAME: Golder Associates | CLIENT PROJECT MANAGER: Jon Rathke

CLIENT ADDRESS (CITY, STATE, ZIP): 3730 Chamblee-Tucker Rd Atlanta, GA 30341

PAGE 1 OF 2

X STANDARD REPORT DELIVERY

☐ EXPEDITED REPORT DELIVERY surcharge

Date Due:

SAMPLE DATE	SAMPLE TIME	SL NO.	SAMPLE IDENTIFICATION	MATRIX TYPE: GROUNDWATER	SOIL	AIR	NONAQUEOUS LIQUID (specify)	VOC - 8260	SVOC - 8270	OP - 8141	PCB	Metals - 6010/7060/7421	Mercury - 7470	TOC - 9060	Total Phosphorus 365.2 & TKN 351.3	TOX - 9020	Sulfide - 376.1	REMARKS
								NUMBER OF CONTAINERS SUBMITTED										
								HCl	–	–	–	HNO_3	HNO_3	HCl	H_2SO_4	H_2SO_4	Zinc Acetate	
8-6-98	10:30		Rinsate	X				3	2	1	2	1	1	1	1	1	1	Please see Betsy Beachamp for quantitation limits and target analysis list.
8-6-98	11:10		Rinsate-F	X							2	1	1					
8-3-98	10:35		~~OWR-1~~ OWR-1D	X						2	2	1	1	1	1	1	1	
8-5-98	10:50		OWR-7D	X				3	1	2	2	1	1					
8-5-98	15:55		OWR-7D-F	X							2	1	1					
8-4-98	13:10		OWR-9S	X				3	1	2								

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
	8/7/98	6:20		8/6/98	13:00			
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SL LOG NO.	LABORATORY REMARKS
	8-7-98	9:45	☒ YES ☐ NO		84752	

Serial Number

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

☒ 5102 LaRoche Avenue, Savannah, GA 31404 — Phone: (912) 354-7858 — Fax: (912) 352-0165
☐ 2846 Industrial Plaza Drive, Tallahassee, FL 32301 — Phone: (904) 878-3994 — Fax: (904) 878-9504
☐ 414 SW 12th Avenue, Deerfield Beach, FL 33442 — Phone: (954) 421-7400 — Fax: (954) 421-2584
☐ 900 Lakeside Drive, Mobile, AL 36693 — Phone: (334) 666-6633 — Fax: (334) 666-6696
☐ 6712 Benjamin Road, Suite 100, Tampa, FL 33634 — Phone: (813) 885-7427 — Fax: (813) 885-7049
☐ 100 Alpha Drive, Suite 110, Destrehan, LA 70047 — Phone: (504) 764-1100 — Fax: (504) 725-1163

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

PROJECT REFERENCE: Solutia / RFI / AL
PROJECT NO: 983-3223
P.O. NUMBER:
PROJECT LOC. (State): AL
SAMPLER(s) NAME: CDH, DLH, MAC, KJD, EGP
PHONE: 770-446-1843
FAX: 770-934-9476
CLIENT NAME: Golder Associates
CLIENT PROJECT MANAGER: Jon Kaltke
CLIENT ADDRESS (CITY, STATE, ZIP): 3730 Chamblee-Tucker Rd, Atlanta, GA 30341

MATRIX TYPE: AQUEOUS (WATER) / SOLID OR SEMISOLID / AIR / NONAQUEOUS LIQUID (or solvent etc.)

REQUIRED ANALYSES — PAGE 2 OF 2

SAMPLE DATE	SAMPLE TIME	SL NO	SAMPLE IDENTIFICATION	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID	SO4, NO3, TDS, TSS, Alk, 375.4, 353.2, 160.1, 160.2, 310.1	Total Phenols	Ferrous Iron	HPC											REMARKS
								—	4.5	HCl	Sodium Thiosulfate											
8-6-98	10:30		Rinsate	X				1	1	1	1											Please see Betsy Beachamp for quantitation limits and target analysis list.
~~8-6-98~~	~~11:10~~		~~Rinsate-F~~	X																		
8-3-98	10:38		OWR-1D	X					1													

NUMBER OF CONTAINERS SUBMITTED

STANDARD REPORT DELIVERY ☒
EXPEDITED REPORT DELIVERY (surcharge) ☐
Date Due

RELINQUISHED BY (SIGNATURE)	DATE	TIME	RELINQUISHED BY (SIGNATURE)	DATE	TIME	RELINQUISHED BY (SIGNATURE)	DATE	TIME
[signature]	8-7-98	6:20	[signature]	8-6-98	23:00			
RECEIVED BY (SIGNATURE)	DATE	TIME	RECEIVED BY (SIGNATURE)	DATE	TIME	RECEIVED BY (SIGNATURE)	DATE	TIME
			[signature]	8-7-98	9:33			

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SL LOG NO.	LABORATORY REMARKS
Colleen Thomas	8-7-98	9:33	☒ YES ☐ NO		S8-84258	

Fed USA Airbill 801488135093 0200

1 From

Date

Sender's Name Phone ( )

Company

Address

Dept./Floor/Suite/Room

City State ZIP

2 Your Internal Billing Reference Information

3 To

Recipient's Name Phone ( )

Company

Address Check here if residence

Dept./Floor/Suite/Room

City State ZIP

For HOLD at FedEx Location check here
Hold Weekday Hold Saturday

For Saturday Delivery check here

4a Express Package Service Packages under 150 lbs.

FedEx Priority Overnight FedEx Standard Overnight FedEx 2Day* FedEx Express Saver*

FedEx First Overnight

*FedEx Letter Rate not available.

4b Express Freight Service Packages over 150 lbs.

FedEx 1Day Freight FedEx 2Day Freight FedEx Express Saver Freight

(Call for delivery schedules. See back for required descriptions of freight services.)

5 Packaging

FedEx Letter FedEx Pak FedEx Box FedEx Tube Other Pkg

6 Special Handling

Does this shipment contain dangerous goods?

Yes Yes

Dry Ice

CA Cargo Aircraft Only

7 Payment

Bill to: Sender Recipient Third Party Credit Card Cash/Check

Total Packages Total Weight Total Declared Value* Total Charges

$ .00 $

Credit Card Auth.

8 Release Signature

Questions?
Call 1-800-Go-FedEx (800)463-3339

287

801488135093

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-RFIS01
Received: 18 AUG 98
Reported: 15 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS01/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 171380915

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED	SDG#
RFIS01-1	Method Blank		RFIS01
RFIS01-2	Lab Control Standard % Recovery		RFIS01
RFIS01-3	LCS Accuracy Control Limit (%R)		RFIS01
RFIS01-4	MS/MSD % Recovery		RFIS01
RFIS01-5	MS Accuracy Advisory Limit (%R)		RFIS01

PARAMETER	RFIS01-1	RFIS01-2	RFIS01-3	RFIS01-4	RFIS01-5
Cation Exchange Capacity					
Cation Exchange Capacity, meq/100g	<0.0033	118 %	70-130 %	---	---
Preparation Date	08.25.98	08.25.98	---	---	---
Date Analyzed	08.27.98	08.27.98	---	---	---
Dilution factor	1.0	1.0	---	---	---
Batch ID	0825A	0825A	---	---	---
Organic Carbon (Walkley-Black)					
Organic Carbon (Walkley-Black), mg/kg dw	<100	92 %	60-140 %	---	---
Preparation Date	08.28.98	08.28.98	---	---	---
Date Analyzed	08.28.98	08.28.98	---	---	---
Dilution factor	1.0	1.0	---	---	---
Batch ID	0828X	0828X	---	---	---

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& ENVIRONMENTAL SERVICES, INC.

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LOG NO: S8-RFIS01
Received: 18 AUG 98
Reported: 15 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS01/983-3223.002/MONSANTO RFI-ANNISTON

Sampled By: Client
Code: 165780915

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED	SDG#
RFIS01-1	Method Blank		RFIS01
RFIS01-2	Lab Control Standard % Recovery		RFIS01
RFIS01-3	LCS Accuracy Control Limit (%R)		RFIS01
RFIS01-4	MS/MSD % Recovery		RFIS01
RFIS01-5	MS Accuracy Advisory Limit (%R)		RFIS01

PARAMETER	RFIS01-1	RFIS01-2	RFIS01-3	RFIS01-4	RFIS01-5
Organophosphorus Pesticides (8141)					
Ethyl Parathion, mg/kg dw	<0.033	---	---	---	---
Methyl Parathion, mg/kg dw	<0.017	71 %	36-149 %	56/50 %	36-149 %
Tetraethyl dithiopyrophosphate (Sulfotepp), mg/kg dw	<0.017	---	---	---	---
Surrogate - Triphenylphosphate	102 %	90 %	---	58/62 %	---
Date Extracted	08.20.98	08.20.98	---	08.20.98	---
Date Analyzed	08.27.98	08.27.98	---	08.27.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0820N	0820N	---	0820N	---
Instrument ID	SGONPD	SGONPD	---	SGONPD	---
Acid Volatile Sulfide					
Acid Volatile Sulfide, mg/kg dw	<1.0	95 %	50-150 %	129/126 %	50-150 %
Preparation Date	08.25.98	08.25.98	---	08.25.98	---
Date Analyzed	08.25.98	08.25.98	---	08.25.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0825A	0825A	---	0825A	---

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CC: Mr. Alan G. Faust Project: RFIS01/983-3223.002/MONSANTO RFI-ANNISTON

Sampled By: Client
Code. 165780915

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED	SDG#
RFIS01-1	Method Blank		RFIS01
RFIS01-2	Lab Control Standard % Recovery		RFIS01
RFIS01-3	LCS Accuracy Control Limit (%R)		RFIS01
RFIS01-4	MS/MSD % Recovery		RFIS01
RFIS01-5	MS Accuracy Advisory Limit (%R)		RFIS01

PARAMETER	RFIS01-1	RFIS01-2	RFIS01-3	RFIS01-4	RFIS01-5
Total Organic Carbon (9060)					
Total Organic Carbon, mg/kg dw	<100	99 %	60-140 %	113/94 %	60-140 %
Preparation Date	08.26.98	08.26.98	---	08.26.98	---
Date Analyzed	08.26.98	08.26.98	---	08.26.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0826X	0826X	---	0826X	---
Vanadium (6010)					
Vanadium, mg/kg dw	<1.0	102 %	75-125 %	105/98 %	75-125 %
Preparation Date	08.19.98	08.19.98	---	08.20.98	---
Date Analyzed	08.20.98	08.20.98	---	08.22.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0819A	0819A	---	0820A	---
Nickel (6010)					
Nickel, mg/kg dw	<4.0	105 %	75-125 %	99/94%	75-125 %
Preparation Date	08.19.98	08.19.98	---	08.20.98	---
Date Analyzed	08.20.98	08.20.98	---	08.22.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0819A	0819A	---	0820A	---

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& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-RFIS01
Received: 18 AUG 98
Reported: 15 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 9263-1-0006

CC: Mr. Alan G. Faust Project: RFIS01/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 165700915

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED	SDG#
RFIS01-1	Method Blank		RFIS01
RFIS01-2	Lab Control Standard % Recovery		RFIS01
RFIS01-3	LCS Accuracy Control Limit (%R)		RFIS01
RFIS01-4	MS/MSD % Recovery		RFIS01
RFIS01-5	MS Accuracy Advisory Limit (%R)		RFIS01

PARAMETER	RFIS01-1	RFIS01-2	RFIS01-3	RFIS01-4	RFIS01-5
Mercury (7471)					
Mercury, mg/kg dw	<0.030	108 %	75-125 %	98/90 %	75-125 %
Preparation Date	08.21.98	08.21.98	---	08.21.98	---
Date Analyzed	08.25.98	08.23.98	---	08.23.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0821B	0821B	---	0821B	---
Manganese (6010)					
Manganese, mg/kg dw	<1.0	104 %	75-125 %	*F61/*F61	75-125 %
Preparation Date	08.19.98	08.19.98	---	08.20.98	---
Date Analyzed	08.20.98	08.20.98	---	08.22.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0819A	0819A	---	0820A	---
Lead (7421)					
Lead, mg/kg dw	<0.50	103 %	80-120 %	57/60%*F73	80-120 %
Preparation Date	08.20.98	08.20.98	---	08.20.98	---
Date Analyzed	08.24.98	08.21.98	---	08.24.98	---
Dilution factor	1.0	1.0	---	10	---
Batch ID	0820B	0820B	---	0820B	---

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LOG NO: S8-RFIS01
Received: 18 AUG 98
Reported: 15 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 0263-1-0006

CC: Mr. Alan G. Faust Project: RFIS01/983-3223.002/MONSANTO RFI-ANNISTON

Sampled By: Client
Code. 165780915

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED	SDG#
RFIS01-1	Method Blank		RFIS01
RFIS01-2	Lab Control Standard % Recovery		RFIS01
RFIS01-3	LCS Accuracy Control Limit (%R)		RFIS01
RFIS01-4	MS/MSD % Recovery		RFIS01
RFIS01-5	MS Accuracy Advisory Limit (%R)		RFIS01

PARAMETER	RFIS01-1	RFIS01-2	RFIS01-3	RFIS01-4	RFIS01-5
Cobalt (6010)					
Cobalt, mg/kg dw	<1.0	105 %	75-125 %	102/97 %	75-125 %
Preparation Date	08.19.98	08.19.98	---	08.20.98	---
Date Analyzed	08.20.98	08.20.98	---	08.22.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0819A	0819A	---	0820A	---
Chromium (6010)					
Chromium, mg/kg dw	<1.0	105 %	75-125 %	169/107 %	75-125 %
Preparation Date	08.19.98	08.19.98	---	08.20.98	---
Date Analyzed	08.20.98	08.20.98	---	08.22.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0819A	0819A	---	0820A	---
Cadmium (6010)					
Cadmium, mg/kg dw	<0.50	106 %	75-125 %	98/98 %	75-125 %
Preparation Date	08.19.98	08.19.98	---	08.20.98	---
Date Analyzed	08.20.98	08.20.98	---	08.22.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0819A	0819A	---	0820A	---

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& ENVIRONMENTAL SERVICES, INC.

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Reported: 15 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS01/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 165780915

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED	SDG#
RFIS01-1	Method Blank		RFIS01
RFIS01-2	Lab Control Standard % Recovery		RFIS01
RFIS01-3	LCS Accuracy Control Limit (%R)		RFIS01
RFIS01-4	MS/MSD % Recovery		RFIS01
RFIS01-5	MS Accuracy Advisory Limit (%R)		RFIS01

PARAMETER	RFIS01-1	RFIS01-2	RFIS01-3	RFIS01-4	RFIS01-5
Beryllium (6010)					
Beryllium, mg/kg dw	<0.50	108 %	75-125 %	98/94 %	75-125 %
Preparation Date	08.19.98	08.19.98	---	08.20.98	---
Date Analyzed	08.20.98	08.20.98	---	08.22.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0819A	0819A	---	0820A	---
Barium (6010)					
Barium, mg/kg dw	<1.0	104 %	75-125 %	126/98 %	75-125 %
Preparation Date	08.19.98	08.19.98	---	08.20.98	---
Date Analyzed	08.20.98	08.20.98	---	08.22.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0819A	0819A	---	0820A	---
Arsenic (6010)					
Arsenic, mg/kg dw	<1.0	104 %	75-125 %	89/90 %	75-125 %
Preparation Date	08.19.98	08.19.98	---	08.20.98	---
Date Analyzed	08.20.98	08.20.98	---	08.22.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0819A	0819A	---	0820A	---

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

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LOG NO: S8-RFIS01
Received: 18 AUG 98
Reported: 15 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS01/983-3223.002/MONSANTO RFI-ANNISTON

Sampled By: Client
Code. 165700915

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED	SDG#
RFIS01-1	Method Blank		RFIS01
RFIS01-2	Lab Control Standard % Recovery		RFIS01
RFIS01-3	LCS Accuracy Control Limit (%R)		RFIS01
RFIS01-4	MS/MSD % Recovery		RFIS01
RFIS01-5	MS Accuracy Advisory Limit (%R)		RFIS01

PARAMETER	RFIS01-1	RFIS01-2	RFIS01-3	RFIS01-4	RFIS01-5
PCB's (8081/See Qualifier Z)					
PCB-1016, ug/kg dw	0	75 %	34-137 %	79/162 %	34-137 %
PCB-1221, ug/kg dw	0	---	---	---	---
PCB-1232, ug/kg dw	0	---	---	---	---
PCB-1242, ug/kg dw	0	---	---	---	---
PCB-1248, ug/kg dw	0	---	---	---	---
PCB-1254, ug/kg dw	0	---	---	---	---
PCB-1260, ug/kg dw	0	100 %	58-150 %	81/111 %	58-150 %
Total Polychlorinated Biphenyls, ug/kg dw	0	---	---	---	---
Surrogate - TCX	59 %	44 %	---	23/35 %	---
Date Extracted	08.20.98	08.20.98	---	08.20.98	---
Date Analyzed	08.25.98	08.25.98	---	08.25.98	---
Dilution factor	1.0	1.0	---	1.0	---

SEVERN TRENT SERVICES
STL Savannah
5102 LaRoche Avenue • Savannah, GA 31404 • Tel: 912 354 7858 • Fax: 912 352 0165 • www.stl-inc.com

REISSUED 10/15/02

LOG NO: S8-RFIS01
Received: 18 AUG 98
Reported: 15 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

Contract No.: S7219
CC: Mr. Alan G. Faust Project: RFIS01/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 114921014

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED	SDG#
RFIS01-1	Method Blank		RFIS01
RFIS01-2	Lab Control Standard % Recovery		RFIS01
RFIS01-3	LCS Accuracy Control Limit (%R)		RFIS01
RFIS01-4	MS/MSD % Recovery		RFIS01
RFIS01-5	MS Accuracy Advisory Limit (%R)		RFIS01

PARAMETER	RFIS01-1	RFIS01-2	RFIS01-3	RFIS01-4	RFIS01-5
PCB's (8081/See Qualifier Z) (608)					
PCB-1016, ug/kg dw	<33	75 %	34-137 %	79/162 %	34-137 %
PCB-1221, ug/kg dw	<33	---	---	---	---
PCB-1232, ug/kg dw	<33	---	---	---	---
PCB-1242, ug/kg dw	<33	---	---	---	---
PCB-1248, ug/kg dw	<33	---	---	---	---
PCB-1254, ug/kg dw	<33	---	---	---	---
PCB-1260, ug/kg dw	<33	100 %	58-150 %	81/111 %	58-150 %
Total Polychlorinated Biphenyls, ug/kg dw	<33	---	---	---	---
Surrogate - TCX	59 %	44 %	---	23/35 %	---
Date Extracted	08.20.98	08.20.98	---	08.20.98	---
Date Analyzed	08.25.98	08.25.98	---	08.25.98	---
Dilution factor	1.0	1.0	---	1.0	---

Methods: EPA SW-846, Update III.

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

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Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS01/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 165700915

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED	SDG#
RFIS01-1	Method Blank		RFIS01
RFIS01-2	Lab Control Standard % Recovery		RFIS01
RFIS01-3	LCS Accuracy Control Limit (%R)		RFIS01
RFIS01-4	MS/MSD % Recovery		RFIS01
RFIS01-5	MS Accuracy Advisory Limit (%R)		RFIS01

PARAMETER	RFIS01-1	RFIS01-2	RFIS01-3	RFIS01-4	RFIS01-5
Volatiles by GC/MS (8260)					
Methylene chloride (Dichloromethane), ug/kg dw	<5.0	---	---	---	---
1,1-Dichloroethene, ug/kg dw	<5.0	132 %	44-157 %	119/112 %	44-157 %
1,1,2,2-Tetrachloroethane, ug/kg dw	<5.0	---	---	---	---
Trichloroethene, ug/kg dw	<5.0	124 %	41-134 %	110/100 %	41-134 %
Benzene, ug/kg dw	<5.0	122 %	64-144 %	110/102 %	64-144 %
Toluene, ug/kg dw	<5.0	112 %	112 %	98/93 %	67-142 %
Chlorobenzene, ug/kg dw	<5.0	126 %	126 %	107/100 %	56-152 %
Isopropylbenzene, ug/kg dw	<5.0	---	---	---	---
Surrogate - Toluene-d8	90 %	92 %	---	90/90 %	---
Surrogate - 4-Bromofluorobenzene	96 %	96 %	---	105/100 %	---
Surrogate - Dibromofluoromethane	100 %	100 %	---	100/98 %	---
Date Analyzed	08.19.98	08.19.98	---	08.20.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	2H0819	2H0819	---	2H0819	---

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-RFIS01
Received: 18 AUG 98
Reported: 15 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS01/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 165700915

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED	SDG#
RFIS01-1	Method Blank		RFIS01
RFIS01-2	Lab Control Standard % Recovery		RFIS01
RFIS01-3	LCS Accuracy Control Limit (%R)		RFIS01
RFIS01-4	MS/MSD % Recovery		RFIS01
RFIS01-5	MS Accuracy Advisory Limit (%R)		RFIS01

PARAMETER	RFIS01-1	RFIS01-2	RFIS01-3	RFIS01-4	RFIS01-5
Acids and Base Neutrals (8270-APP9)					
Acenaphthene, ug/kg dw	<330	46 %	28-102 %	80/70 %	28-102 %
p-Dichlorobenzene, ug/kg dw	<330	41 %	10-125 %	60/55 %	10-125 %
o-Dichlorobenzene, ug/kg dw	<330	---	---	---	---
2,4-Dinitrotoluene, ug/kg dw	<330	54 %	26-107 %	70/60 %	26-107 %
n-Nitrosodi-n-propylamine, ug/kg dw	<330	40 %	11-117 %	100/80 %	11-117 %
Pyrene, ug/kg dw	<330	61 %	18-136 %	125/110 %	18-136 %
1,2,4-Trichlorobenzene, ug/kg dw	<330	45 %	17-105 %	60/50 %	17-105 %
2-Chlorophenol, ug/kg dw	<330	43 %	23-114 %	68/56 %	23-114 %
p-Nitrophenol, ug/kg dw	<1700	42 %	10-117 %	95/83 %	10-117 %
2,4-Dichlorophenol, ug/kg dw	<330	---	---	---	---
Pentachlorophenol, ug/kg dw	<1700	50 %	10-120 %	48/34 %	10-120 %
Phenol, ug/kg dw	<330	37 %	17-103 %	75/63 %	17-103 %
2,4,5-Trichlorophenol, ug/kg dw	<330	---	---	---	---
2,4,6-Trichlorophenol, ug/kg dw	<330	---	---	---	---
o,o,o-Triethyl phosphorothioate, ug/kg dw	<330	---	---	---	---
p-Chloro-m-cresol, ug/kg dw	<330	49 %	25-107 %	98/76 %	25-107 %

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& ENVIRONMENTAL SERVICES, INC.

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LOG NO: S8-RFIS01
Received: 18 AUG 98
Reported: 15 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS01/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 165790915

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED	SDG#
RFIS01-1	Method Blank		RFIS01
RFIS01-2	Lab Control Standard % Recovery		RFIS01
RFIS01-3	LCS Accuracy Control Limit (%R)		RFIS01
RFIS01-4	MS/MSD % Recovery		RFIS01
RFIS01-5	MS Accuracy Advisory Limit (%R)		RFIS01

PARAMETER	RFIS01-1	RFIS01-2	RFIS01-3	RFIS01-4	RFIS01-5
Surrogate - Phenol d5	61 %	45 %	10-142 %	82/68 %	10-142 %
Surrogate - 2-Fluorophenol	58 %	44 %	10-118 %	70/58 %	10-118 %
Surrogate - 2,4,6-Tribromophenol	58 %	47 %	14-121 %	65/56 %	14-121 %
Surrogate - Nitrobenzene - d5	52 %	40 %	12-125 %	70/60 %	12-125 %
Surrogate - 2-Fluorobiphenyl	58 %	47 %	24-118 %	70/60 %	24-118 %
Surrogate - Terphenyl - d14	76 %	60 %	18-153 %	90/90 %	18-153 %
Date Extracted	08.20.98	08.20.98	---	08.21.98	---
Date Analyzed	09.04.98	09.03.98	---	09.10.98	---
Dilution factor	1.0	---	---	---	---
Batch ID	0820A	0820A	---	0821A	---
Instrument ID	MSG5970	MSG5970	---	MSE5970	---

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LOG NO: S8-RFIS01
Received: 18 AUG 98
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Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS01/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 172080915

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED	SDG#
RFIS01-6	Analyst (First Initial, Last Name)		RFIS01
RFIS01-7	Method Blank		RFIS01
RFIS01-8	Lab Control Standard % Recovery		RFIS01
RFIS01-9	Method Blank		RFIS01
RFIS01-10	Lab Control Standard % Recovery		RFIS01

PARAMETER		RFIS01-6	RFIS01-7	RFIS01-8	RFIS01-9	RFIS01-10
Cation Exchange Capacity						
Cation Exchange Capacity	L.RILEY	---	---	---	---	
Organic Carbon (Walkley-Black)						
Organic Carbon (Walkley-Black)	A.WIEMERSK	---	---	---	---	
Organophosphorus Pesticides (8141)						
Ethyl Parathion,	S.GRAVES	---	---	---	---	
Methyl Parathion,	S.GRAVES	---	---	---	---	
Tetraethyl dithiopyrophosphate (Sulfotepp),	S.GRAVES	---	---	---	---	
Acid Volatile Sulfide						
Acid Volatile Sulfide	E. SOKOLIN	---	---	---	---	
Total Organic Carbon (9060)						
Total Organic Carbon	L.RILEY	---	---	---	---	
Vanadium (6010)						
Vanadium	E.MARTSOLF	---	---	---	---	
Nickel (6010)						
Nickel	E.MARTSOLF	---	---	---	---	
Mercury (7471)						
Mercury	B.BRAYBOY	---	---	---	---	

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Received: 18 AUG 98
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Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
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Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS01/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code. 165700915

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED	SDG#
RFIS01-6	Analyst (First Initial, Last Name)		RFIS01
RFIS01-7	Method Blank		RFIS01
RFIS01-8	Lab Control Standard % Recovery		RFIS01
RFIS01-9	Method Blank		RFIS01
RFIS01-10	Lab Control Standard % Recovery		RFIS01

PARAMETER	RFIS01-6	RFIS01-7	RFIS01-8	RFIS01-9	RFIS01-10
Manganese (6010)					
Manganese	E.MARTSOLF	---	---	---	---
Lead (7421)					
Lead	N.DAVIS	---	---	---	---
Cobalt (6010)					
Cobalt	E.MARTSOLF	---	---	---	---
Chromium (6010)					
Chromium	E.MARTSOLF	---	---	---	---
Cadmium (6010)					
Cadmium	E.MARTSOLF	---	---	---	---
Beryllium (6010)					
Beryllium	E.MARTSOLF	---	---	---	---
Barium (6010)					
Barium	E.MARTSOLF	---	---	---	---
Arsenic (6010)					
Arsenic	E.MARTSOLF	---	---	---	---

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Received: 18 AUG 98
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3730 Chamblee Tucker Road
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Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS01/983-3223.002/MONSANTO RFI-ANNISTON

Sampled By: Client
Code: 165780915

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED	SDG#
RFIS01-6	Analyst (First Initial, Last Name)		RFIS01
RFIS01-7	Method Blank		RFIS01
RFIS01-8	Lab Control Standard % Recovery		RFIS01
RFIS01-9	Method Blank		RFIS01
RFIS01-10	Lab Control Standard % Recovery		RFIS01

PARAMETER	RFIS01-6	RFIS01-7	RFIS01-8	RFIS01-9	RFIS01-10
PCB's (8081/See Qualifier Z)					
PCB-1016, ug/kg dw	T.GALLAGH	0	65 %	---	---
PCB-1221, ug/kg dw	T.GALLAGH	0	---	---	---
PCB-1232, ug/kg dw	T.GALLAGH	0	---	---	---
PCB-1242, ug/kg dw	T.GALLAGH	0	---	---	---
PCB-1248, ug/kg dw	T.GALLAGH	0	---	---	---
PCB-1254, ug/kg dw	T.GALLAGH	0	---	---	---
PCB-1260, ug/kg dw	T.GALLAGH	0	90 %	---	---
Total Polychlorinated Biphenyls, ug/kg dw	T.GALLAGH	0	---	---	---
Surrogate - TCX	---	52 %	40 %	---	---
Date Extracted	---	08.21.98	08.21.98	---	---
Date Analyzed	---	08.27.98	08.27.98	---	---
Dilution factor	---	1.0	1.0	---	---

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REISSUED 10/15/02

LOG NO: S8-RFIS01
Received: 18 AUG 98
Reported: 15 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

Contract No.: S7219
CC: Mr. Alan G. Faust Project: RFIS01/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 114921014

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED	SDG#
RFIS01-6	Analyst (First Initial, Last Name)		RFIS01
RFIS01-7	Method Blank		RFIS01
RFIS01-8	Lab Control Standard % Recovery		RFIS01
RFIS01-9	Method Blank		RFIS01
RFIS01-10	Lab Control Standard % Recovery		RFIS01

PARAMETER	RFIS01-6	RFIS01-7	RFIS01-8	RFIS01-9	RFIS01-10
PCB's (8081/See Qualifier Z) (608)					
PCB-1016, ug/kg dw	T.GALLAGH	<33	65 %	---	---
PCB-1221, ug/kg dw	T.GALLAGH	<33	---	---	---
PCB-1232, ug/kg dw	T.GALLAGH	<33	---	---	---
PCB-1242, ug/kg dw	T.GALLAGH	<33	---	---	---
PCB-1248, ug/kg dw	T.GALLAGH	<33	---	---	---
PCB-1254, ug/kg dw	T.GALLAGH	<33	---	---	---
PCB-1260, ug/kg dw	T.GALLAGH	<33	90 %	---	---
Total Polychlorinated Biphenyls, ug/kg dw	T.GALLAGH	<33	---	---	---
Surrogate - TCX	---	52 %	40 %	---	---
Date Extracted	---	08.21.98	08.21.98	---	---
Date Analyzed	---	08.27.98	08.27.98	---	---
Dilution factor	---	1.0	1.0	---	---

Methods: EPA SW-846, Update III.

SL SAVANNAH LABORATORIES
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LOG NO: S8-RFIS01
Received: 18 AUG 98
Reported: 15 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS01/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 165700915

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED	SDG#
RFIS01-6	Analyst (First Initial, Last Name)		RFIS01
RFIS01-7	Method Blank		RFIS01
RFIS01-8	Lab Control Standard % Recovery		RFIS01
RFIS01-9	Method Blank		RFIS01
RFIS01-10	Lab Control Standard % Recovery		RFIS01

PARAMETER	RFIS01-6	RFIS01-7	RFIS01-8	RFIS01-9	RFIS01-10
Volatiles by GC/MS (8260)					
Methylene chloride (Dichloromethane), ug/kg dw	K.AEGAN	<5.0	---	<5.0	---
1,1-Dichloroethene, ug/kg dw	K.AEGAN	<5.0	110 %	<5.0	110 %
1,1,2,2-Tetrachloroethane, ug/kg dw	K.AEGAN	<5.0	---	<5.0	---
Trichloroethene, ug/kg dw	K.AEGAN	<5.0	106 %	<5.0	96 %
Benzene, ug/kg dw	K.AEGAN	<5.0	104 %	<5.0	96 %
Toluene, ug/kg dw	K.AEGAN	<5.0	96 %	<5.0	86 %
Chlorobenzene, ug/kg dw	K.AEGAN	<5.0	110 %	<5.0	104 %
Surrogate - Toluene-d8	---	84 %	90 %	80 %	86 %
Surrogate - 4-Bromofluorobenzene	---	96 %	96 %	110 %	112 %
Surrogate - Dibromofluoromethane	---	98 %	100 %	98 %	100 %
Date Analyzed	---	08.20.98	08.20.98	08.21.98	08.21.98
Dilution factor	---	1.0	1.0	1.0	1.0
Batch ID	---	2H0820	2H0820	1H0821	1H0821

SL SAVANNAH LABORATORIES
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Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS01/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 165780915

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED	SDG#
RFIS01-6	Analyst (First Initial, Last Name)		RFIS01
RFIS01-7	Method Blank		RFIS01
RFIS01-8	Lab Control Standard % Recovery		RFIS01
RFIS01-9	Method Blank		RFIS01
RFIS01-10	Lab Control Standard % Recovery		RFIS01

PARAMETER	RFIS01-6	RFIS01-7	RFIS01-8	RFIS01-9	RFIS01-10
Acids and Base Neutrals (8270-APP9)					
Acenaphthene	M.JAKUBSEN	---	---	---	---
p-Dichlorobenzene	M.JAKUBSEN	---	---	---	---
2,4-Dinitrotoluene	M.JAKUBSEN	---	---	---	---
n-Nitrosodi-n-propylamine	M.JAKUBSEN	---	---	---	---
Pyrene	M.JAKUBSEN	---	---	---	---
1,2,4-Trichlorobenzene	M.JAKUBSEN	---	---	---	---
2-Chlorophenol	M.JAKUBSEN	---	---	---	---
p-Nitrophenol	M.JAKUBSEN	---	---	---	---
2,4-Dichlorophenol	M.JAKUBSEN	---	---	---	---
Pentachlorophenol	M.JAKUBSEN	---	---	---	---
Phenol	M.JAKUBSEN	---	---	---	---
2,4,5-Trichlorophenol	M.JAKUBSEN	---	---	---	---
2,4,6-Trichlorophenol	M.JAKUBSEN	---	---	---	---
o,o,o-Triethyl phosphorothioate	M.JAKUBSEN	---	---	---	---
p-Chloro-m-cresol	M.JAKUBSEN	---	---	---	---

Methods: EPA SW-846, Update III.

SL SAVANNAH LABORATORIES
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3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS01/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 165780915

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED	SDG#
RFIS01-11	Quantitation Limits		RFIS01

PARAMETER	RFIS01-11
PCB's (8081/See Qualifier Z)	
PCB-1016, ug/kg dw	33
PCB-1221, ug/kg dw	33
PCB-1232, ug/kg dw	33
PCB-1242, ug/kg dw	33
PCB-1248, ug/kg dw	33
PCB-1254, ug/kg dw	33
PCB-1260, ug/kg dw	33

*F61 = The recoveries of the matrix spikes are outside advisory limits due to the abundance of the target analyte in the sample.

*F73 = Matrix spike recoveries were outside advisory limits due to matrix interference present in the sample.

Elizabeth P. Beauchamp, Project Manager

Final Page Of Report

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REISSUED 10/15/02

LOG NO: S8-RFIS01
Received: 18 AUG 98
Reported: 15 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

Contract No.: S7219

CC: Mr. Alan G. Faust Project: RFIS01/983-3223.002/MONSANTO RFI-ANNISTON

Sampled By: Client
Code: 114921014

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED	SDG#
RFIS01-11	Quantitation Limits		RFIS01

PARAMETER	RFIS01-11
PCB's (8081/See Qualifier Z) (608)	
PCB-1016, ug/kg dw	33
PCB-1221, ug/kg dw	33
PCB-1232, ug/kg dw	33
PCB-1242, ug/kg dw	33
PCB-1248, ug/kg dw	33
PCB-1254, ug/kg dw	33
PCB-1260, ug/kg dw	33

F61 = The recoveries of the matrix spikes are outside advisory limits due to the abundance of the target analyte in the sample.

F73 = Matrix spike recoveries were outside advisory limits due to matrix interference present in the sample.

for R. Michelle Owens
Elizabeth F. Beauchamp, Project Manager

SL SAVANNAH LABORATORIES
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LOG NO: S8-RFIS02
Received: 21 AUG 98
Reported: 16 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS02/983-3223.002/MONSANTO RFI-ANNISTON

Sampled By: Client
Code: 134680916

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED	SDG#
RFIS02 1	Method Blank		RFIS02
RFIS02-7	Method Blank		RFIS02
RFIS02-2	Lab Control Standard % Recovery		RFIS02
RFIS02-8	Lab Control Standard % Recovery		RFIS02
RFIS02-3	LCS Accuracy Control Limit (%R)		RFIS02

PARAMETER	RFIS02-1	RFIS02-7	RFIS02-2	RFIS02-8	RFIS02-3
Organophosphorus Pesticides (8141)					
Ethyl Parathion, mg/kg dw	<0.033	---	88 %	---	24-151 %
Methyl Parathion, mg/kg dw	<0.017	---	94 %	---	36-149 %
Tetraethyl dithiopyrophosphate (Sulfotepp), mg/kg dw	<0.017	---	---	---	---
Surrogate - Triphenylphosphate	100 %	---	108 %	---	---
Date Extracted	08.27.98	---	08.27.98	---	---
Date Analyzed	09.08.98	---	09.11.98	---	---
Dilution factor	1.0	---	1.0	---	---
Batch ID	0827P	---	0827P	---	---
Instrument ID	SGONPD	---	SGONPD	---	---
Vanadium (6010)					
Vanadium, mg/kg dw	<1.0	---	104 %	---	75-125 %
Preparation Date	08.26.98	---	08.26.98	---	---
Date Analyzed	08.28.98	---	08.28.98	---	---
Dilution factor	1.0	---	1.0	---	---
Batch ID	0826A	---	0826A	---	---

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Golder Associates, Inc.
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Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS02/983-3223.002/MONSANTO RFI-ANNISTON

Sampled By: Client
Code: 134680916

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED	SDG#
RFIS02-1	Method Blank		RFIS02
RFIS02-7	Method Blank		RFIS02
RFIS02-2	Lab Control Standard % Recovery		RFIS02
RFIS02-8	Lab Control Standard % Recovery		RFIS02
RFIS02-3	LCS Accuracy Control Limit (%R)		RFIS02

PARAMETER	RFIS02-1	RFIS02-7	RFIS02-2	RFIS02-8	RFIS02-3
Nickel (6010)					
Nickel, mg/kg dw	<4.0	---	108 %	---	75-125 %
Preparation Date	08.26.98	---	08.26.98	---	---
Date Analyzed	08.28.98	---	08.28.98	---	---
Dilution factor	1.0	---	1.0	---	---
Batch ID	0826A	---	002GA	---	---
Mercury (7471)					
Mercury, mg/kg dw	<0.030	---	102 %	---	75-125 %
Preparation Date	08.26.98	---	08.26.98	---	---
Date Analyzed	08.28.98	---	08.28.98	---	---
Dilution factor	1.0	---	1.0	---	---
Batch ID	0826R	---	002GR	---	---
Manganese (6010)					
Manganese, mg/kg dw	<1.0	---	107 %	---	75-125 %
Preparation Date	08.26.98	---	08.26.98	---	---
Date Analyzed	08.28.98	---	08.28.98	---	---
Dilution factor	1.0	---	1.0	---	---
Batch ID	0826A	---	002GA	---	---

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LOG NO: S8-RFIS02
Received: 21 AUG 98
Reported: 16 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS02/983-3223.002/MONSANTO RFI-ANNISTON

Sampled By: Client
Code: 134600916

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED	SDG#
RFIS02-1	Method Blank		RFIS02
RFIS02-7	Method Blank		RFIS02
RFIS02-2	Lab Control Standard % Recovery		RFIS02
RFIS02-8	Lab Control Standard % Recovery		RFIS02
RFIS02-3	LCS Accuracy Control Limit (%R)		RFIS02

PARAMETER	RFIS02-1	RFIS02-7	RFIS02-2	RFIS02-8	RFIS02-3
Lead (7421)					
Lead, mg/kg dw	<0.50	---	99 %	---	80-120 %
Preparation Date	08.26.98	---	08.26.98	---	---
Date Analyzed	08.31.98	---	08.31.98	---	---
Dilution factor	1.0	---	1.0	---	---
Batch ID	0826B	---	0826B	---	---
Cobalt (6010)					
Cobalt, mg/kg dw	<1.0	---	109 %	---	75-125 %
Preparation Date	08.26.98	---	08.26.98	---	---
Date Analyzed	08.28.98	---	08.28.98	---	---
Dilution factor	1.0	---	1.0	---	---
Batch ID	0826A	---	0826A	---	---
Chromium (6010)					
Chromium, mg/kg dw	<1.0	---	108 %	---	75-125 %
Preparation Date	08.26.98	---	08.26.98	---	---
Date Analyzed	08.28.98	---	08.28.98	---	---
Dilution factor	1.0	---	1.0	---	---
Batch ID	0826A	---	0826A	---	---

SL SAVANNAH LABORATORIES
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LOG NO: S8-RFIS02
Received: 21 AUG 98
Reported: 16 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS02/983-3223.002/MONSANTO PFI-ANNISTON
Sampled By: Client
Code: 134690916

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED	SDG#
RFIS02-1	Method Blank		RFIS02
RFIS02-7	Method Blank		RFIS02
RFIS02-2	Lab Control Standard % Recovery		RFIS02
RFIS02-8	Lab Control Standard % Recovery		RFIS02
RFIS02-3	LCS Accuracy Control Limit (%R)		RFIS02

PARAMETER	RFIS02-1	RFIS02-7	RFIS02-2	RFIS02-8	RFIS02-3
Cadmium (6010)					
Cadmium, mg/kg dw	<0.50	---	110 %	---	75-125 %
Preparation Date	08.26.98	---	08.26.98	---	---
Date Analyzed	08.28.98	---	08.28.98	---	---
Dilution factor	1.0	---	1.0	---	---
Batch ID	0826A	---	0826A	---	---
Beryllium (6010)					
Beryllium, mg/kg dw	<0.50	---	111 %	---	75-125 %
Preparation Date	08.26.98	---	08.26.98	---	---
Date Analyzed	08.28.98	---	08.28.98	---	---
Dilution factor	1.0	---	1.0	---	---
Batch ID	0826A	---	0826A	---	---
Barium (6010)					
Barium, mg/kg dw	<1.0	---	105 %	---	75-125 %
Preparation Date	08.26.98	---	08.26.98	---	---
Date Analyzed	08.28.98	---	08.28.98	---	---
Dilution factor	1.0	---	1.0	---	---
Batch ID	0826A	---	0826A	---	---

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LOG NO: S8-RFIS02
Received: 21 AUG 98
Reported: 16 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS02/983-3223.002/MONSANTO RFI-ANNISTON

Sampled By: Client
Code: 134600916

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED	SDG#
RFIS02-1	Method Blank		RFIS02
RFIS02-7	Method Blank		RFIS02
RFIS02-2	Lab Control Standard % Recovery		RFIS02
RFIS02-8	Lab Control Standard % Recovery		RFIS02
RFIS02-3	LCS Accuracy Control Limit (%R)		RFIS02

PARAMETER	RFIS02-1	RFIS02-7	RFIS02-2	RFIS02-8	RFIS02-3
Arsenic (6010)					
Arsenic, mg/kg dw	<1.0	---	107 %	---	75-125 %
Preparation Date	08.26.98	---	08.26.98	---	---
Date Analyzed	08.28.98	---	08.28.98	---	---
Dilution factor	1.0	---	1.0	---	---
Batch ID	0826A	---	0826A	---	---
PCB's (8081/See Qualifier Z)					
PCB-1016, ug/kg dw	0	0	98 %	52 %	34-137 %
PCB-1221, ug/kg dw	0	0	---	---	---
PCB-1232, ug/kg dw	0	0	---	---	---
PCB-1242, ug/kg dw	0	0	---	---	---
PCB-1248, ug/kg dw	95	0	---	---	---
PCB-1254, ug/kg dw	0	0	---	---	---
PCB-1260, ug/kg dw	0	0	94 %	78 %	58-150 %
Total Polychlorinated Biphenyls, ug/kg dw	95	0	---	---	---
Surrogate - TCX	51 %	19 %	48 %	18 %	---
Date Extracted	08.27.98	09.10.98	08.27.98	09.10.98	---
Date Analyzed	09.03.98	09.10.98	09.03.98	09.10.98	---
Dilution factor	1.0	1.0	1.0	1.0	---

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REISSUED 10/15/02

LOG NO: S8-RFIS02
Received: 21 AUG 98
Reported: 23 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

Contract No.: S7219
CC: Mr. Alan G. Faust Project: RFIS02/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 103321015

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED	SDG#
RFIS02-1	Method Blank		RFIS02
RFIS02-7	Method Blank		RFIS02
RFIS02-2	Lab Control Standard % Recovery		RFIS02
RFIS02-8	Lab Control Standard % Recovery		RFIS02
RFIS02-3	LCS Accuracy Control Limit (%R)		RFIS02

PARAMETER	RFIS02-1	RFIS02-7	RFIS02-2	RFIS02-8	RFIS02-3
PCB's (8081/See Qualifier Z) (608)					
PCB-1016, ug/kg dw	<33	<33	98 %	52 %	34-137 %
PCB-1221, ug/kg dw	<33	<33	---	---	---
PCB-1232, ug/kg dw	<33	<33	---	---	---
PCB-1242, ug/kg dw	<33	<33	---	---	---
PCB-1248, ug/kg dw	95	<33	---	---	---
PCB-1254, ug/kg dw	<33	<33	---	---	---
PCB-1260, ug/kg dw	<33	<33	94 %	78 %	58-150 %
Total Polychlorinated Biphenyls, ug/kg dw	95	<33	---	---	---
Surrogate - TCX	51 %	19 %	48 %	18 %	---
Date Extracted	08.27.98	09.10.98	08.27.98	09.10.98	---
Date Analyzed	09.03.98	09.10.98	09.03.98	09.10.98	---
Dilution factor	1.0	1.0	1.0	1.0	---

Methods: EPA SW-846, Update III.

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LOG NO: S8-RFIS02
Received: 21 AUG 98
Reported: 16 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS02/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 134680910

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED	SDG#
RFIS02-1	Method Blank		RFIS02
RFIS02-7	Method Blank		RFIS02
RFIS02-2	Lab Control Standard % Recovery		RFIS02
RFIS02-8	Lab Control Standard % Recovery		RFIS02
RFIS02-3	LCS Accuracy Control Limit (%R)		RFIS02

PARAMETER	RFIS02-1	RFIS02-7	RFIS02-2	RFIS02-8	RFIS02-3
Volatiles by GC/MS (8260)					
Methylene chloride (Dichloromethane), ug/l	<5.0	---	---	---	---
1,1-Dichloroethene, ug/l	<5.0	---	110 %	---	44-157 %
1,1,2,2-Tetrachloroethane, ug/l	<5.0	---	---	---	---
Trichloroethene, ug/l	<5.0	---	98 %	---	41-134 %
Benzene, ug/l	<5.0	---	102 %	---	64-144 %
Toluene, ug/l	<5.0	---	88 %	---	67-142 %
Chlorobenzene, ug/l	<5.0	---	110 %	---	56-152 %
Isopropylbenzene, ug/l	<5.0	---	---	---	---
Surrogate - Toluene-d8	92 %	---	84 %	---	---
Surrogate - 4-Bromofluorobenzene	100 %	---	114 %	---	---
Surrogate - Dibromofluoromethane	94 %	---	100 %	---	---
Date Analyzed	08.27.98	---	08.27.98	---	---
Dilution factor	1.0	---	1.0	---	---
Batch ID	2H0827	---	2H0827	---	---
Clock ID	2H0827	---	2H0827	---	---

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LOG NO: S8-RFIS02
Received: 21 AUG 98
Reported: 16 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS02/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 134600916

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED	SDG#
RFIS02-1	Method Blank		RFIS02
RFIS02-7	Method Blank		RFIS02
RFIS02-2	Lab Control Standard % Recovery		RFIS02
RFIS02-8	Lab Control Standard % Recovery		RFIS02
RFIS02-3	LCS Accuracy Control Limit (%R)		RFIS02

PARAMETER	RFIS02-1	RFIS02-7	RFIS02-2	RFIS02-8	RFIS02-3
Acids and Base Neutrals (8270-APP9)					
Acenaphthene, ug/kg dw	<330	---	50 %	---	28-102 %
p-Dichlorobenzene, ug/kg dw	<330	---	45 %	---	10-125 %
o-Dichlorobenzene, ug/kg dw	<330	---	---	---	---
2,4-Dinitrotoluene, ug/kg dw	<330	---	55 %	---	26-107 %
n-Nitrosodi-n-propylamine, ug/kg dw	<330	---	29 %	---	11-117 %
Pyrene, ug/kg dw	<330	---	65 %	---	18-136 %
1,2,4-Trichlorobenzene, ug/kg dw	<330	---	50 %	---	17-105 %
2-Chlorophenol, ug/kg dw	<330	---	45 %	---	23-114 %
p-Nitrophenol, ug/kg dw	<1700	---	45 %	---	10-117 %
2,4-Dichlorophenol, ug/kg dw	<330	---	---	---	---
Pentachlorophenol, ug/kg dw	<1700	---	54 %	---	10-120 %
Phenol, ug/kg dw	<330	---	39 %	---	17-103 %
2,4,5-Trichlorophenol, ug/kg dw	<330	---	---	---	---
2,4,6-Trichlorophenol, ug/kg dw	<330	---	---	---	---
o,o,o-Triethyl phosphorothioate, ug/kg dw	<330	---	---	---	---
p-Chloro-m-cresol, ug/kg dw	<330	---	52 %	---	25-107 %

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Received: 21 AUG 98
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Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS02/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 134680916

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED	SDG#
RFIS02-1	Method Blank		RFIS02
RFIS02-7	Method Blank		RFIS02
RFIS02-2	Lab Control Standard % Recovery		RFIS02
RFIS02-8	Lab Control Standard % Recovery		RFIS02
RFIS02-3	LCS Accuracy Control Limit (%R)		RFIS02

PARAMETER	RFIS02-1	RFIS02-7	RFIS02-2	RFIS02-8	RFIS02-3
Surrogate - Phenol d5	48 %	---	43 %	---	10-142 %
Surrogate - 2-Fluorophenol	45 %	---	43 %	---	10-118 %
Surrogate - 2,4,6-Tribromophenol	48 %	---	54 %	---	14-121 %
Surrogate - Nitrobenzene - d5	45 %	---	39 %	---	12-125 %
Surrogate - 2-Fluorobiphenyl	58 %	---	51 %	---	24-118 %
Surrogate - Terphenyl - d14	76 %	---	69 %	---	18-153 %
Date Extracted	08.25.98	---	08.25.98	---	---
Date Analyzed	09.04.98	---	09.04.98	---	---
Dilution factor	1.0	---	---	---	---
Batch ID	0825A	---	0825A	---	---
Instrument ID	MSG5970	---	MSG5970	---	---
Petroleum Hydrocarbons (9073)					
Petroleum Hydrocarbons, mg/kg dw	<10	---	104 %	---	60-140 %
Preparation Date	08.26.98	---	08.26.98	---	---
Date Analyzed	08.26.98	---	08.26.98	---	---
Dilution factor	1.0	---	1.0	---	---
Batch ID	0826I	---	0826I	---	---

Methods: EPA SW-846, Update III.

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LOG NO: S8-RFIS02
Received: 21 AUG 98
Reported: 16 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS02/983-3223.002/MONSANTO RFI-ANNISTON

Sampled By: Client
Code. 134680916

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED	SDG#
RFIS02-4	MS/MSD % Recovery		RFIS02
RFIS02-9	MS/MSD % Recovery		RFIS02
RFIS02-5	MS Accuracy Advisory Limit (%R)		RFIS02
RFIS02-6	Analyst (First Initial, Last Name)		RFIS02

PARAMETER	RFIS02-4	RFIS02-9	RFIS02-5	RFIS02-6
Organophosphorus Pesticides (8141)				
Ethyl Parathion,	*F37	---	24-151 %	S.GRAVES
Methyl Parathion,	*F37	---	36-149 %	S.GRAVES
Surrogate - Triphenylphosphate	*F36	---	---	---
Date Extracted	08.27.98	---	---	---
Date Analyzed	09.11.98	---	---	---
Dilution factor	1.0	---	---	---
Batch ID	0827P	---	---	---
Instrument ID	SGONPD	---	---	---
Tetraethyl dithiopyrophosphate (Sulfotepp),	---	---	---	S.GRAVES
Vanadium (6010)				
Vanadium	104/97 %	---	75-125 %	A.BRAZELL
Preparation Date	08.26.98	---	---	---
Date Analyzed	08.31.98	---	---	---
Dilution factor	10.0	---	---	---
Batch ID	0826A	---	---	---
Nickel (6010)				
Nickel	114/118 %	---	75-125 %	A.BRAZELL
Preparation Date	08.26.98	---	---	---
Date Analyzed	08.31.98	---	---	---
Dilution factor	10.0	---	---	---
Batch ID	0826A	---	---	---

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LOG NO: S8-RFIS02
Received: 21 AUG 98
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Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS02/983-3223.002/MONSANTO RFI-ANNISTON

Sampled By: Client
Code. 134680916

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED	SDG#
RFIS02-4	MS/MSD % Recovery		RFIS02
RFIS02-9	MS/MSD % Recovery		RFIS02
RFIS02-5	MS Accuracy Advisory Limit (%R)		RFIS02
RFIS02-6	Analyst (First Initial, Last Name)		RFIS02

PARAMETER	RFIS02-4	RFIS02-9	RFIS02-5	RFIS02-6
Mercury (7471)				
Mercury	115 108 %	---	75-125 %	B.BRAYBOY
Preparation Date	08.26.98	---	---	---
Date Analyzed	08.28.98	---	---	---
Dilution factor	1.0	---	---	---
Batch ID	0826R	---	---	---
Manganese (6010)				
Manganese	*F61/*F61	---	75-125 %	A.BRAZELL
Preparation Date	08.26.98	---	---	---
Date Analyzed	08.31.98	---	---	---
Dilution factor	10.0	---	---	---
Batch ID	0826A	---	---	---
Lead (7421)				
Lead	*F61/*F61	---	80-120 %	N.DAVIS
Preparation Date	08.26.98	---	---	---
Date Analyzed	08.31.98	---	---	---
Dilution factor	1.0	---	---	---
Batch ID	0826B	---	---	---

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LOG NO: S8-RFIS02
Received: 21 AUG 98
Reported: 16 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS02/983-3223.002/MONSANTO RFI-ANNISTON

Sampled By: Client
Code: 134660916

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED	SDG#
RFIS02-4	MS/MSD % Recovery		RFIS02
RFIS02-9	MS/MSD % Recovery		RFIS02
RFIS02-5	MS Accuracy Advisory Limit (%R)		RFIS02
RFIS02-6	Analyst (First Initial, Last Name)		RFIS02

PARAMETER	RFIS02-4	RFIS02-9	RFIS02-5	RFIS02-6
Cobalt (6010)				
Cobalt	123/109 %	---	75-125 %	A.BRAZELL
Preparation Date	08.26.98	---	---	---
Date Analyzed	08.31.98	---	---	---
Dilution factor	10.0	---	---	---
Batch ID	0826A	---	---	---
Chromium (6010)				
Chromium	125/127 %	---	75-125 %	A.BRAZELL
Preparation Date	08.26.98	---	---	---
Date Analyzed	08.31.98	---	---	---
Dilution factor	10.0	---	---	---
Batch ID	0826A	---	---	---
Cadmium (6010)				
Cadmium	88/80 %	---	75-125 %	A.BRAZELL
Preparation Date	08.26.98	---	---	---
Date Analyzed	08.31.98	---	---	---
Dilution factor	10.0	---	---	---
Batch ID	0826A	---	---	---

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LOG NO: S8-RFIS02
Received: 21 AUG 98
Reported: 16 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS02/983-3223.002/MONSANTO RFI-ANNISTON

Sampled By: Client
Code: 134680916

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED	SDG#
RFIS02-4	MS/MSD % Recovery		RFIS02
RFIS02-9	MS/MSD % Recovery		RFIS02
RFIS02-5	MS Accuracy Advisory Limit (%R)		RFIS02
RFIS02-6	Analyst (First Initial, Last Name)		RFIS02

PARAMETER	RFIS02-4	RFIS02-9	RFIS02-5	RFIS02-6
Beryllium (6010)				
Beryllium	116/112 %	---	75-125 %	A.BRAZELL
Preparation Date	08.26.98	---	---	---
Date Analyzed	08.31.98	---	---	---
Dilution factor	10.0	---	---	---
Batch ID	0826A	---	---	---
Barium (6010)				
Barium	104/103 %	---	75-125 %	A.BRAZELL
Preparation Date	08.26.98	---	---	---
Date Analyzed	08.31.98	---	---	---
Dilution factor	10.0	---	---	---
Batch ID	0826A	---	---	---
Arsenic (6010)				
Arsenic	96/89 %	---	75-125 %	A.BRAZELL
Preparation Date	08.26.98	---	---	---
Date Analyzed	08.31.98	---	---	---
Dilution factor	10.0	---	---	---
Batch ID	0826A	---	---	---

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Sampled By: Client
Code: 134600916

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED	SDG#
RFIS02-4	MS/MSD % Recovery		RFIS02
RFIS02-9	MS/MSD % Recovery		RFIS02
RFIS02-5	MS Accuracy Advisory Limit (%R)		RFIS02
RFIS02-6	Analyst (First Initial, Last Name)		RFIS02

PARAMETER	RFIS02-4	RFIS02-9	RFIS02-5	RFIS02-6
PCB's (8081/See Qualifier Z)				
PCB-1016	173/154 %	74/82 %	34-137 %	T.GALLAGH
PCB-1260	100/78 %	82/91 %	58-150 %	T.GALLAGH
Surrogate - TCX	46/36 %	20/18 %	---	---
Date Extracted	08.27.98	09.10.98	---	---
Date Analyzed	09.03.98	09.10.98	---	---
Dilution factor	1.0	1.0	---	---

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REISSUED 10/15/02

LOG NO: S8-RFIS02
Received: 21 AUG 98
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Ms. Gayle Pittman
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3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

Contract No.: S7219
CC: Mr. Alan G. Faust Project: RFIS02/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 103321015

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED	SDG#
RFIS02-4	MS/MSD % Recovery		RFIS02
RFIS02-9	MS/MSD % Recovery		RFIS02
RFIS02-5	MS Accuracy Advisory Limit (%R)		RFIS02
RFIS02-6	Analyst (First Initial, Last Name)		RFIS02

PARAMETER	RFIS02-4	RFIS02-9	RFIS02-5	RFIS02-6
PCB's (8081/See Qualifier Z) (609)				
PCB-1016	173/154 %	74/82 %	34-137 %	T.GALLAGH
PCB-1260	100/78 %	82/91 %	58-150 %	T.GALLAGH
Surrogate - TCX	46/36 %	20/18 %	---	---
Date Extracted	08.27.98	09.10.98	---	---
Date Analyzed	09.03.98	09.10.98	---	---
Dilution factor	1.0	1.0	---	---

Methods: EPA SW-846, Update III.

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

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LOG NO: S8-RFIS02
Received: 21 AUG 98
Reported: 16 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS02/983-3223.002/MONSANTO RFI-ANNISTON

Sampled By: Client
Code: 131600916

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED	SDG#
RFIS02-4	MS/MSD % Recovery		RFIS02
RFIS02-9	MS/MSD % Recovery		RFIS02
RFIS02-5	MS Accuracy Advisory Limit (%R)		RFIS02
RFIS02-6	Analyst (First Initial, Last Name)		RFIS02

PARAMETER	RFIS02-4	RFIS02-9	RFIS02-5	RFIS02-6
Volatiles by GC/MS (8260)				
1,1-Dichloroethene	120/118 %	---	44-157 %	C.RIEGNER
Trichloroethene	120/118 %	---	41-134 %	C.RIEGNER
Benzene	120/119 %	---	64-144 %	C.RIEGNER
Toluene	118/116 %	---	67-142 %	C.RIEGNER
Chlorobenzene	120/119 %	---	56-152 %	C.RIEGNER
Surrogate - Toluene-d8	102/99 %	---	---	---
Surrogate - 4-Bromofluorobenzene	102/100 %	---	---	---
Surrogate - Dibromofluoromethane	95/95 %	---	---	---
Date Analyzed	08.27.98	---	---	---
Dilution factor	1.0	---	---	---
Batch ID	2H0827	---	---	---
Clock ID	2H0827	---	---	---
Chloromethane	---	---	---	C.RIEGNER
Bromomethane	---	---	---	C.RIEGNER
Vinyl chloride	---	---	---	C.RIEGNER
Chloroethane	---	---	---	C.RIEGNER
Methylene chloride (Dichloromethane)	---	---	---	C.RIEGNER
Acetone	---	---	---	C.RIEGNER
Carbon disulfide	---	---	---	C.RIEGNER

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LOG NO: S8-RFIS02
Received: 21 AUG 98
Reported: 16 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS02/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 134680916

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED	SDG#
RFIS02-4	MS/MSD % Recovery		RFIS02
RFIS02-9	MS/MSD % Recovery		RFIS02
RFIS02-5	MS Accuracy Advisory Limit (%R)		RFIS02
RFIS02-6	Analyst (First Initial, Last Name)		RFIS02

PARAMETER	RFIS02-4	RFIS02-9	RFIS02-5	RFIS02-6
1,1-Dichloroethane	---	---	---	C.RIEGNER
Cis/Trans-1,2-Dichloroethene	---	---	---	C.RIEGNER
Chloroform	---	---	---	C.RIEGNER
1,2-Dichloroethane (8310)	---	---	---	C.RIEGNER
2-Butanone (MEK)	---	---	---	C.RIEGNER
1,1,1-Trichloroethane	---	---	---	C.RIEGNER
Carbon tetrachloride	---	---	---	C.RIEGNER
Bromodichloromethane	---	---	---	C.RIEGNER
1,1,2,2-Tetrachloroethane	---	---	---	C.RIEGNER
1,2-Dichloropropane	---	---	---	C.RIEGNER
trans-1,3-Dichloropropene	---	---	---	C.RIEGNER
Dibromochloromethane	---	---	---	C.RIEGNER
1,1,2-Trichloroethane	---	---	---	C.RIEGNER
cis-1,3-Dichloropropene	---	---	---	C.RIEGNER
Bromoform	---	---	---	C.RIEGNER
2-Hexanone	---	---	---	C.RIEGNER
4-Methyl-2-pentanone (MIBK)	---	---	---	C.RIEGNER
Tetrachloroethene	---	---	---	C.RIEGNER
Ethylbenzene	---	---	---	C.RIEGNER
Styrene	---	---	---	C.RIEGNER
Xylenes	---	---	---	C.RIEGNER

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LOG NO: S8-RFIS02
Received: 21 AUG 98
Reported: 16 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS02/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code. 134680916

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED	SDG#
RFIS02-4	MS/MSD % Recovery		RFIS02
RFIS02-9	MS/MSD % Recovery		RFIS02
RFIS02-5	MS Accuracy Advisory Limit (%R)		RFIS02
RFIS02-6	Analyst (First Initial, Last Name)		RFIS02

PARAMETER	RFIS02-4	RFIS02-9	RFIS02-5	RFIS02-6
Acids and Base Neutrals (8270-APP9)				
Acenaphthene	50/43 %	---	28-102 %	M.JAKUBSEN
p-Dichlorobenzene	44/34 %	---	10-125 %	M.JAKUBSEN
2,4-Dinitrotoluene	54/50 %	---	26-107 %	M.JAKUBSEN
n-Nitrosodi-n-propylamine	41/34 %	---	11-117 %	M.JAKUBSEN
Pyrene	54/50 %	---	18-136 %	M.JAKUBSEN
1,2,4-Trichlorobenzene	50/40 %	---	17-105 %	M.JAKUBSEN
2-Chlorophenol	45/39 %	---	23-114 %	M.JAKUBSEN
p-Nitrophenol	45/41 %	---	10-117 %	M.JAKUBSEN
Pentachlorophenol	54/50 %	---	10-120 %	M.JAKUBSEN
Phenol	41/36 %	---	17-103 %	M.JAKUBSEN
p-Chloro-m-cresol	52/43 %	---	25-107 %	M.JAKUBSEN
Surrogate - Phenol d5	45/40 %	---	10-142 %	---
Surrogate - 2-Fluorophenol	43/36 %	---	10-118 %	---
Surrogate - 2,4,6-Tribromophenol	53/48 %	---	14-121 %	---
Surrogate - Nitrobenzene - d5	37/32 %	---	12-125 %	---
Surrogate - 2-Fluorobiphenyl	48/41 %	---	24-118 %	---
Surrogate - Terphenyl - d14	55/51 %	---	18-153 %	---
Date Extracted	08.25.98	---	---	---
Date Analyzed	09.04.98	---	---	---

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LOG NO: S8-RFIS02
Received: 21 AUG 98
Reported: 16 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: RFIS02/983-3223.002/MONSANTO RFI-ANNISTON

Sampled By: Client
Code. 134680916

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED	SDG#
RFIS02-4	MS/MSD % Recovery		RFIS02
RFIS02-9	MS/MSD % Recovery		RFIS02
RFIS02-5	MS Accuracy Advisory Limit (%R)		RFIS02
RFIS02-6	Analyst (First Initial, Last Name)		RFIS02

PARAMETER	RFIS02-4	RFIS02-9	RFIS02-5	RFIS02-6
Batch ID	0025A	---	---	---
Instrument ID	MSG5970	---	---	---
o-Dichlorobenzene	---	---	---	M.JAKUBSEN
2,4,5-Trichlorophenol	---	---	---	M.JAKUBSEN
2,4,6-Trichlorophenol	---	---	---	M.JAKUBSEN
o,o,o-Triethyl phosphorothioate	---	---	---	M.JAKUBSEN
Petroleum Hydrocarbons (9073)				
Petroleum Hydrocarbons	112/112 %	---	60-140 %	L.GRAYSON
Preparation Date	08.26.98	---	---	---
Date Analyzed	08.26.98	---	---	---
Dilution factor	1.0	---	---	---
Batch ID	0826I	---	---	---

Methods: EPA SW-846, Update III.

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LOG NO: S8-RFIS02
Received: 21 AUG 98
Reported: 16 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 9263-1-0006

CC: Mr. Alan G. Faust Project: RFIS02/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 134600916

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED	SDG#
RFIS02-10	Quantitation Limits		RFIS02

PARAMETER	RFIS02-10
PCB's (8081/See Qualifier Z)	
PCB-1016, ug/kg dw	33
PCB-1221, ug/kg dw	33
PCB-1232, ug/kg dw	33
PCB-1242, ug/kg dw	33
PCB-1248, ug/kg dw	33
PCB-1254, ug/kg dw	33
PCB-1260, ug/kg dw	33

*F36 = Surrogate recovery was outside established limits due to coeluting matrix interference in the sample.

*F37 = MS/MSD results are not reported due to a coeluting matrix interference in the sample.

*F61 = The recoveries of the matrix spikes are outside advisory limits due to the abundance of the target analyte in the sample.

Elizabeth F. Beauchamp

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REISSUED 10/15/02

LOG NO: S8-RFIS02
Received: 21 AUG 98
Reported: 23 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

Contract No.: S7219
CC: Mr. Alan G. Faust Project: RFIS02/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 103321015

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED	SDG#
RFIS02-10	Quantitation Limits		RFIS02

PARAMETER	RFIS02-10
PCB's (8081/See Qualifier Z) (608)	
PCB-1016, ug/kg dw	33
PCB-1221, ug/kg dw	33
PCB-1232, ug/kg dw	33
PCB-1242, ug/kg dw	33
PCB-1248, ug/kg dw	33
PCB-1254, ug/kg dw	33
PCB-1260, ug/kg dw	33

F36 = Surrogate recovery was outside established limits due to a coeluting matrix interference in the sample.

*F37 = MS/MSD results are not reported due to a coeluting matrix interference in the sample.

F61 = The recoveries of the matrix spikes are outside advisory limits due to the abundance of the target analyte in the sample.

Elizabeth F. Beauchamp, Project Manager

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LOG NO: S8-RFIS03
Received: 17 OCT 98
Reported: 10 NOV 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 4503051364

CC: Mr. Alan G. Faust Project: RFIS03/983-3223.002/MONSANTO RFI-ANNISTON

Sampled By: Client
Code: 175581110

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
RFIS03-1	Method Blank		RFIS03
RFIS03-2	Lab Control Standard % Recovery		RFIS03
RFIS03-3	LCS Accuracy Control Limit (%R)		RFIS03
RFIS03-4	MS/MSD % Recovery (WEL-4)		RFIS03
RFIS03-5	MS/MSD % Recovery (WEL-4-F)		RFIS03

PARAMETER	RFIS03-1	RFIS03-2	RFIS03-3	RFIS03-4	RFIS03-5
Organophosphorus Pesticides (8141)					
Ethyl Parathion, mg/l	<0.0010	40 %	28-155 %	36/38 %	---
Methyl Parathion, mg/l	<0.00050	106 %	38-149 %	114/120 %	---
Tetraethyl dithiopyrophosphate (Sulfotepp), mg/l	<0.00050	---	---	---	---
Surrogate - Triphenylphosphate	88 %	160 %	---	70/82 %	---
Date Extracted	10.22.98	10.22.98	---	10.22.98	---
Date Analyzed	10.30.98	10.30.98	---	10.30.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	10220	10220	---	10220	---
Instrument ID	SGONPD	SGONPD	---	SGONPD	---
Vanadium (6010)					
Vanadium, mg/l	<0.010	104 %	75-125 %	103/102 %	104/102 %
Preparation Date	10.23.98	10.23.98	---	10.23.98	10.23.98
Date Analyzed	10.28.98	10.28.98	---	10.28.98	10.28.98
Dilution factor	1.0	1.0	---	1.0	1.0
Batch ID	1023L	1023L	---	1023L	1023L

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LOG NO: S8-RFIS03
Received: 17 OCT 98
Reported: 10 NOV 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 4503051364

CC: Mr. Alan G. Faust Project: RFIS03/983-3223.002/MONSANTO RFI-ANNISTON

Sampled By: Client
Code. 175501110

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
RFIS03-1	Method Blank		RFIS03
RFIS03-2	Lab Control Standard % Recovery		RFIS03
RFIS03-3	LCS Accuracy Control Limit (%R)		RFIS03
RFIS03-4	MS/MSD % Recovery (WEL-4)		RFIS03
RFIS03-5	MS/MSD % Recovery (WEL-4-F)		RFIS03

PARAMETER	RFIS03-1	RFIS03-2	RFIS03-3	RFIS03-4	RFIS03-5
Nickel (6010)					
Nickel, mg/l	<0.0040	105 %	75-125 %	105/104 %	106/103 %
Preparation Date	10.23.98	10.23.98	---	10.23.98	10.23.98
Date Analyzed	10.28.98	10.28.98	---	10.28.98	10.28.98
Dilution factor	1.0	1.0	---	1.0	1.0
Batch ID	1023L	1023L	---	1023L	1023L
Mercury (7471)					
Mercury, mg/l	<0.00020	87 %	80-120 %	86/87 %	86/82 %
Preparation Date	10.26.98	10.26.98	---	10.26.98	10.26.98
Date Analyzed	10.26.98	10.26.98	---	10.26.98	10.26.98
Dilution factor	1.0	1.0	---	1.0	1.0
Batch ID	1026U	1026U	---	1026U	1026U
Manganese (6010)					
Manganese, mg/l	<0.010	108 %	75-125 %	107/105 %	108/106 %
Preparation Date	10.23.98	10.23.98	---	10.23.98	10.23.98
Date Analyzed	10.28.98	10.28.98	---	10.28.98	10.28.98
Dilution factor	1.0	1.0	---	1.0	1.0
Batch ID	1023L	1023L	---	1023L	1023L

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LOG NO: S8-RFIS03
Received: 17 OCT 98
Reported: 10 NOV 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 4503051364

CC: Mr. Alan G. Faust Project: RFIS03/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 175581110

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
RFIS03-1	Method Blank		RFIS03
RFIS03-2	Lab Control Standard % Recovery		RFIS03
RFIS03-3	LCS Accuracy Control Limit (%R)		RFIS03
RFIS03-4	MS/MSD % Recovery (WEL-4)		RFIS03
RFIS03-5	MS/MSD % Recovery (WEL-4-F)		RFIS03

PARAMETER	RFIS03-1	RFIS03-2	RFIS03-3	RFIS03-4	RFIS03-5
Lead (7421)					
Lead, mg/l	<0.0050	104 %	80-120 %	103/100 %	99/101 %
Preparation Date	10.27.98	10.27.98	---	10.27.98	10.27.98
Date Analyzed	10.29.98	10.29.98	---	10.29.98	10.29.98
Dilution factor	1.0	1.0	---	1.0	1.0
Batch ID	1027M	1027M	---	1027M	1027M
Cobalt (6010)					
Cobalt, mg/l	<0.010	104 %	75-125 %	104/103 %	105/102 %
Preparation Date	10.23.98	10.23.98	---	10.23.98	10.23.98
Date Analyzed	10.28.98	10.28.98	---	10.28.98	10.28.98
Dilution factor	1.0	1.0	---	1.0	1.0
Batch ID	1023L	1023L	---	1023L	1023L
Chromium (6010)					
Chromium, mg/l	<0.010	106 %	75-125 %	107/106 %	107/106 %
Preparation Date	10.23.98	10.23.98	---	10.23.98	10.23.98
Date Analyzed	10.28.98	10.28.98	---	10.28.98	10.28.98
Dilution factor	1.0	1.0	---	1.0	1.0
Batch ID	1023L	1023L	---	1023L	1023L

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LOG NO: S8-RFIS03
Received: 17 OCT 98
Reported: 10 NOV 98

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Client PO. No.: 4503051364

CC: Mr. Alan G. Faust Project: RFIS03/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 175581110

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
RFIS03-1	Method Blank		RFIS03
RFIS03-2	Lab Control Standard % Recovery		RFIS03
RFIS03-3	LCS Accuracy Control Limit (%R)		RFIS03
RFIS03-4	MS/MSD % Recovery (WEL-4)		RFIS03
RFIS03-5	MS/MSD % Recovery (WEL-4-F)		RFIS03

PARAMETER	RFIS03-1	RFIS03-2	RFIS03-3	RFIS03-4	RFIS03-5
Cadmium (6010)					
Cadmium, mg/l	<0.0050	105 %	75-125 %	106/105 %	107/104 %
Preparation Date	10.23.98	10.23.98	---	10.23.98	10.23.98
Date Analyzed	10.28.98	10.28.98	---	10.28.98	10.28.98
Dilution factor	1.0	1.0	---	1.0	1.0
Batch ID	1023L	1023L	---	1023L	1023L
Beryllium (6010)					
Beryllium, mg/l	<0.0040	104 %	75-125 %	105/104 %	105/102 %
Preparation Date	10.23.98	10.23.98	---	10.23.98	10.23.98
Date Analyzed	10.28.98	10.28.98	---	10.28.98	10.28.98
Dilution factor	1.0	1.0	---	1.0	1.0
Batch ID	1023L	1023L	---	1023L	1023L
Barium (6010)					
Barium, mg/l	<0.010	109 %	75-125 %	109/108 %	110/106 %
Preparation Date	10.23.98	10.23.98	---	10.23.98	10.23.98
Date Analyzed	10.28.98	10.28.98	---	10.28.98	10.28.98
Dilution factor	1.0	1.0	---	1.0	1.0
Batch ID	1023L	1023L	---	1023L	1023L

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LOG NO: S8-RFIS03
Received: 17 OCT 98
Reported: 10 NOV 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 4503051364

CC: Mr. Alan G. Faust Project: RFIS03/983-3223.002/MONSANTO RFI-ANNISTON

Sampled By: Client
Code: 175501110

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
RFIS03-1	Method Blank		RFIS03
RFIS03-2	Lab Control Standard % Recovery		RFIS03
RFIS03-3	LCS Accuracy Control Limit (%R)		RFIS03
RFIS03-4	MS/MSD % Recovery (WEL-4)		RFIS03
RFIS03-5	MS/MSD % Recovery (WEL-4-F)		RFIS03

PARAMETER	RFIS03-1	RFIS03-2	RFIS03-3	RFIS03-4	RFIS03-5
Arsenic (6010)					
Arsenic, mg/l	<0.010	101 %	75-125 %	101/100 %	102/100 %
Preparation Date	10.23.98	10.23.98	---	10.23.98	10.23.98
Date Analyzed	10.28.98	10.28.98	---	10.28.98	10.28.98
Dilution factor	1.0	1.0	---	1.0	1.0
Batch ID	1023L	1023L	---	1023L	1023L
PCB's (8081/See Qualifier Z)					
PCB-1016, ug/l	<1.0	72 %	43-139 %	56/52 %	68/68 %
PCB-1221, ug/l	<1.0	---	---	---	---
PCB-1232, ug/l	<1.0	---	---	---	---
PCB-1242, ug/l	<1.0	---	---	---	---
PCB-1248, ug/l	<1.0	---	---	---	---
PCB-1254, ug/l	<1.0	---	---	---	---
PCB-1260, ug/l	<1.0	100 %	31-152 %	84/84 %	88/80 %
Total Polychlorinated Biphenyls, ug/l	<1.0	---	---	---	---
Surrogate - TCX	38 %	34 %	---	37/38 %	36/42 %
Date Extracted	10.22.98	10.22.98	---	10.22.98	10.22.98
Date Analyzed	10.27.98	10.27.98	---	10.27.98	10.27.98
Dilution factor	1.0	1.0	---	1.0	1.0

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REISSUED 10/15/02

LOG NO: S8-RFIS03
Received: 17 OCT 98
Reported: 16 NOV 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 4503051364

Contract No.: S7219
CC: Mr. Alan G. Faust Project: RFIS03/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 144121015

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
RFIS03-1	Method Blank		RFIS03
RFIS03-2	Lab Control Standard % Recovery		RFIS03
RFIS03-3	LCS Accuracy Control Limit (%R)		RFIS03
RFIS03-4	MS/MSD % Recovery (WEL-4)		RFIS03
RFIS03-5	MS/MSD % Recovery (WEL-4-F)		RFIS03

PARAMETER	RFIS03-1	RFIS03-2	RFIS03-3	RFIS03-4	RFIS03-5
PCB's (8081/See Qualifier Z) (608)					
PCB-1016, ug/l	<1.0	72 %	43-139 %	56/52 %	68/68 %
PCB-1221, ug/l	<1.0	---	---	---	---
PCB-1232, ug/l	<1.0	---	---	---	---
PCB-1242, ug/l	<1.0	---	---	---	---
PCB-1248, ug/l	<1.0	---	---	---	---
PCB-1254, ug/l	<1.0	---	---	---	---
PCB-1260, ug/l	<1.0	100 %	31-152 %	84/84 %	88/80 %
Total Polychlorinated Biphenyls, ug/l	<1.0	---	---	---	---
Surrogate - TCX	38 %	34 %	---	37/38 %	36/42 %
Date Extracted	10.22.98	10.22.98	---	10.22.98	10.22.98
Date Analyzed	10.27.98	10.27.98	---	10.27.98	10.27.98
Dilution factor	1.0	1.0	---	1.0	1.0

* Qualifier Z does not apply to any PCB data.

Methods: EPA SW-846, Update III.

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LOG NO: S8-RFIS03
Received: 17 OCT 98
Reported: 10 NOV 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 4503051364

CC: Mr. Alan G. Faust Project: RFIS03/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code. 175501110

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
RFIS03-1	Method Blank		RFIS03
RFIS03-2	Lab Control Standard % Recovery		RFIS03
RFIS03-3	LCS Accuracy Control Limit (%R)		RFIS03
RFIS03-4	MS/MSD % Recovery (WEL-4)		RFIS03
RFIS03-5	MS/MSD % Recovery (WEL-4-F)		RFIS03

PARAMETER	RFIS03-1	RFIS03-2	RFIS03-3	RFIS03-4	RFIS03-5
Volatiles by GC/MS (8260)					
Methylene chloride (Dichloromethane), ug/l	<5.0	---	---	---	---
1,1-Dichloroethene, ug/l	<5.0	150 %	38-155 %	140/144 %	---
1,1,2,2-Tetrachloroethane, ug/l	<5.0	---	---	---	---
Trichloroethene, ug/l	<5.0	88 %	10-213 %	90/90 %	---
Benzene, ug/l	<5.0	90 %	52-143 %	92/94 %	---
Toluene, ug/l	<5.0	84 %	76-128 %	86/88 %	---
Chlorobenzene, ug/l	<5.0	90 %	60-127 %	92/92 %	---
Isopropylbenzene, ug/l	<5.0	---	---	---	---
Surrogate - Toluene-d8	96 %	96 %	67-134 %	96/96 %	---
Surrogate - 4-Bromofluorobenzene	99 %	100 %	67-132 %	98/96 %	---
Surrogate - Dibromofluoromethane	104 %	102 %	64-142 %	96/96 %	---
Date Analyzed	10.23.98	10.23.98	---	10.24.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	2L1023	2L1023	---	1L1024	---
Clock ID	2L1023	2L1023	---	1L1024	---

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Received: 17 OCT 98
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Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 4503051364

CC: Mr. Alan G. Faust Project: RFIS03/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code. 175581110

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
RFIS03-1	Method Blank		RFIS03
RFIS03-2	Lab Control Standard % Recovery		RFIS03
RFIS03-3	LCS Accuracy Control Limit (%R)		RFIS03
RFIS03-4	MS/MSD % Recovery (WEL-4)		RFIS03
RFIS03-5	MS/MSD % Recovery (WEL-4-F)		RFIS03

PARAMETER	RFIS03-1	RFIS03-2	RFIS03-3	RFIS03-4	RFIS03-5
Acids and Base Neutrals (8270-APP9)					
Acenaphthene, ug/l	<10	72 %	14-104 %	77/82 %	---
p-Dichlorobenzene, ug/l	<10	50 %	10-124 %	53/59 %	---
o-Dichlorobenzene, ug/l	<10	---	---	---	---
2,4-Dinitrotoluene, ug/l	<10	82 %	52-111 %	89/95 %	---
n-Nitrosodi-n-propylamine, ug/l	<10	66 %	34-137 %	70/74 %	---
Pyrene, ug/l	<10	76 %	43-131 %	79/83 %	---
1,2,4-Trichlorobenzene, ug/l	<10	60 %	17-121 %	67/68 %	---
2-Chlorophenol, ug/l	<10	71 %	25-125 %	63/65 %	---
p-Nitrophenol, ug/l	<50	90 %	13-133 %	84/91 %	---
2,4-Dichlorophenol, ug/l	<10	---	---	---	---
Pentachlorophenol, ug/l	<1.0	89 %	19-133 %	82/80 %	---
Phenol, ug/l	<10	75 %	32-110 %	67/71 %	---
2,4,5-Trichlorophenol, ug/l	<10	---	---	---	---
2,4,6-Trichlorophenol, ug/l	<10	---	---	---	---
o,o,o-Triethyl phosphorothioate, ug/l	<10	---	---	---	---
p-Chloro-m-cresol, ug/l	<10	83 %	23-111 %	74/80 %	---
Surrogate - Phenol d5	59 %	74 %	16-139 %	65/66 %	---

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LOG NO: S8-RFIS03
Received: 17 OCT 98
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Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 4503051364

CC: Mr. Alan G. Faust Project: RFIS03/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 175581110

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
RFIS03-1	Method Blank		RFIS03
RFIS03-2	Lab Control Standard % Recovery		RFIS03
RFIS03-3	LCS Accuracy Control Limit (%R)		RFIS03
RFIS03-4	MS/MSD % Recovery (WEL-4)		RFIS03
RFIS03-5	MS/MSD % Recovery (WEL-4-F)		RFIS03

PARAMETER	RFIS03-1	RFIS03-2	RFIS03-3	RFIS03-4	RFIS03-5
Surrogate - 2-Fluorophenol	55 %	71 %	20-124 %	63/62 %	---
Surrogate - 2,4,6-Tribromophenol	72 %	110 %	24-135 %	88/96 %	---
Surrogate - Nitrobenzene - d5	56 %	62 %	10-169 %	68/72 %	---
Surrogate - 2-Fluorobiphenyl	60 %	70 %	23-130 %	76/84 %	---
Surrogate - Terphenyl - d14	68 %	80 %	27-147 %	86/88 %	---
Date Extracted	10.22.98	10.22.98	---	10.22.98	---
Date Analyzed	11.06.98	11.02.98	---	11.02.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	1022A	1022A	---	1022A	---
Instrument ID	MSF5970	MSF5970	---	MSF5970	---

* Qualifier Z does not apply to any PCB data.

Methods: EPA SW-846, Update III.

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LOG NO: S8-RFIS03
Received: 17 OCT 98
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Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 4503051364

CC: Mr. Alan G. Faust Project: RFIS03/983-3223.002/MONSANTO RFI-ANNISTON

Sampled By: Client
Code. 175581110

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
RFIS03-6	MS Accuracy Advisory Limit (%R)		RFIS03
RFIS03-11	Analyst (First Initial, Last Name)		RFIS03
RFIS03-12	Method Blank		RFIS03
RFIS03-13	Lab Control Standard % Recovery		RFIS03

PARAMETER	RFIS03-6	RFIS03-11	RFIS03-12	RFIS03-13
Organophosphorus Pesticides (8141)				
Ethyl Parathion, ug/l	28-155 %	J.SCHUMACH	---	---
Methyl Parathion, mg/l	38-149 %	J.SCHUMACH	---	---
Tetraethyl dithiopyrophosphate (Sulfotepp), mg/l	---	J.SCHUMACH	---	---
Vanadium (6010)				
Vanadium, mg/l	75-125 %	E.MARTSOLF	---	---
Nickel (6010)				
Nickel, mg/l	75-125 %	E.MARTSOLF	---	---
Mercury (7471)				
Mercury, mg/l	80-120 %	L.REEVES	---	---
Manganese (6010)				
Manganese	75-125 %	E.MARTSOLF	---	---
Lead (7421)				
Lead	80-120 %	N.DAVIS	---	---
Cobalt (6010)				
Cobalt	75-125 %	E.MARTSOLF	---	---
Chromium (6010)				
Chromium	75-125 %	E.MARTSOLF	---	---
Cadmium (6010)				
Cadmium	75-125 %	E.MARTSOLF	---	---

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LOG NO: S8-RFIS03
Received: 17 OCT 98
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Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 4503051364

CC: Mr. Alan G. Faust Project: RFIS03/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 175581110

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
RFIS03-6	MS Accuracy Advisory Limit (%R)		RFIS03
RFIS03-11	Analyst (First Initial, Last Name)		RFIS03
RFIS03-12	Method Blank		RFIS03
RFIS03-13	Lab Control Standard % Recovery		RFIS03

PARAMETER	RFIS03-6	RFIS03-11	RFIS03-12	RFIS03-13
Beryllium, (6010)				
Beryllium	75-125 %	E.MARTSOLF	---	---
Barium (6010)				
Barium	75-125 %	E.MARTSOLF	---	---
Arsenic (6010)				
Arsenic	75-125 %	E.MARTSOLF	---	---
PCB's (8091/See Qualifier 2)				
PCB-1016	43-139 %	R.CUBBEDGE	---	---
PCB-1260	31-152 %		---	---
PCB-1221	---	R.CUBBEDGE	---	---

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REISSUED 10/15/02

LOG NO: S8-RFIS03
Received: 17 OCT 98
Reported: 16 NOV 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 4503051364

Contract No.: S7219
CC: Mr. Alan G. Faust Project: RFIS03/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 144121015

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
RFIS03-6	MS Accuracy Advisory Limit (%R)		RFIS03
RFIS03-11	Analyst (First Initial, Last Name)		RFIS03
RFIS03-12	Method Blank		RFIS03
RFIS03-13	Lab Control Standard % Recovery		RFIS03

PARAMETER	RFIS03-6	RFIS03-11	RFIS03-12	RFIS03-13
PCB's (8081/See Qualifier Z) (608)				
PCB-1016	43-139 %	R.CUBBEDGE	---	---
PCB-1260	31-152 %		---	---
PCB-1221	---	R.CUBBEDGE	---	---

* Qualifier Z does not apply to any PCB data.

Methods: EPA SW-846, Update III.

for Elizabeth F. Beauchamp, Project Manager

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LOG NO: S8-RFIS03
Received: 17 OCT 98
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Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 4503051364

CC: Mr. Alan G. Faust Project: RFIS03/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 175591110

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
RFIS03-6	MS Accuracy Advisory Limit (%R)		RFIS03
RFIS03-11	Analyst (First Initial, Last Name)		RFIS03
RFIS03-12	Method Blank		RFIS03
RFIS03-13	Lab Control Standard % Recovery		RFIS03

PARAMETER	RFIS03-6	RFIS03-11	RFIS03-12	RFIS03-13
Volatiles by GC/MS (8260)				
1,1-Dichloroethene, ug/l	38-155 %	M.HOLBROOK	<5.0	144 %
Trichloroethene, ug/l	10-213 %	M.HOLBROOK	<5.0	88 %
Benzene, ug/l	52-143 %	M.HOLBROOK	<5.0	92 %
Toluene, ug/l	76-128 %	M.HOLBROOK	<5.0	84 %
Chlorobenzene, ug/l	60-127 %	M.HOLBROOK	<5.0	90 %
Surrogate - Toluene-d8	67-134 %	M.HOLBROOK	96 %	96 %
Surrogate - 4-Bromofluorobenzene	67-132 %	M.HOLBROOK	96 %	98 %
Surrogate - Dibromofluoromethane	64-142 %	M.HOLBROOK	98 %	96 %
Methylene chloride (Dichloromethane), ug/l	---	M.HOLBROOK	<5.0	---
1,1,2,2-Tetrachloroethane, ug/l	---	M.HOLBROOK	<5.0	---
Date Analyzed	---	---	10.24.98	10.24.98
Dilution factor	---	---	1.0	1.0
Batch ID	---	---	1L1024	1L1024
Clock ID	---	---	1L1024	1L1024
Isopropylbenzene, ug/l	---	---	<5.0	---

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Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 4503051364

CC: Mr. Alan G. Faust Project: RFIS03/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 175581110

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
RFIS03-6	MS Accuracy Advisory Limit (%R)		RFIS03
RFIS03-11	Analyst (First Initial, Last Name)		RFIS03
RFIS03-12	Method Blank		RFIS03
RFIS03-13	Lab Control Standard % Recovery		RFIS03

PARAMETER	RFIS03-6	RFIS03-11	RFIS03-12	RFIS03-13
Acids and Base Neutrals (8270-APP9)				
Acenaphthene, ug/l	14-104 %	L.BUTFILOS	---	---
p-Dichlorobenzene, ug/l	10-124 %	L.BUTFILOS	---	---
2,4-Dinitrotoluene, ug/l	52-111 %	L.BUTFILOS	---	---
n-Nitrosodi-n-propylamine, mg/l	34-137 %	L.BUTFILOS	---	---
Pyrene, ug/l	43-131 %	L.BUTFILOS	---	---
1,2,4-Trichlorobenzene, ug/l	17-121 %	L.BUTFILOS	---	---
2-Chlorophenol, ug/l	25-125 %	L.BUTFILOS	---	---
p-Nitrophenol, ug/l	13-133 %	L.BUTFILOS	---	---
Pentachlorophenol, ug/l	19-123 %	L.BUTFILOS	---	---
Phenol, ug/l	32-110 %	L.BUTFILOS	---	---
p-Chloro-m-cresol, mg/l	23-111 %	L.BUTFILOS	---	---
Surrogate - Phenol d5	16-139 %	---	---	---
Surrogate - 2-Fluorophenol	20-124 %	---	---	---
Surrogate - 2,4,6-Tribromophenol	24-135 %	---	---	---
Surrogate - Nitrobenzene - d5	10-169 %	---	---	---
Surrogate - 2-Fluorobiphenyl	23-130 %	---	---	---
Surrogate - Terphenyl - d14	27-147 %	---	---	---
o-Dichlorobenzene, ug/l	---	L.BUTFILOS	---	---
2,4-Dichlorophenol, ug/l	---	L.BUTFILOS	---	---
2,4,5-Trichlorophenol, ug/l	---	L.BUTFILOS	---	---
2,4,6-Trichlorophenol, ug/l	---	L.BUTFILOS	---	---
o,o,o-Triethyl phosphorothioate, ug/l	---	L.BUTFILOS	---	---

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LOG NO: S8-RFIS03
Received: 17 OCT 98
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Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 4503051364

CC: Mr. Alan G. Faust Project: RFIS03/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 175501110

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
RFIS03-6	MS Accuracy Advisory Limit (%R)		RFIS03
RFIS03-11	Analyst (First Initial, Last Name)		RFIS03
RFIS03-12	Method Blank		RFIS03
RFIS03-13	Lab Control Standard % Recovery		RFIS03

PARAMETER	RFIS03-6	RFIS03-11	RFIS03-12	RFIS03-13

* Qualifier Z does not apply to any PCB data.

Methods: EPA SW-846, Update III.

Elizabeth F. Beauchamp

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Received: 22 OCT 98
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Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 4503051364

CC: Mr. Alan G. Faust Project: RFIS04/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 11298119

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
RFIS04-1	Method Blank		RFIS04
RFIS04-2	Lab Control Standard % Recovery		RFIS04
RFIS04-3	LCS Accuracy Control Limit (%R)		RFIS04
RFIS04-4	MS/MSD % Recovery		RFIS04
RFIS04-6	MS Accuracy Advisory Limit (%R)		RFIS04

PARAMETER	RFIS04-1	RFIS04-2	RFIS04-3	RFIS04-4	RFIS04-6
Total Organic Carbon (9060)					
Total Organic Carbon, mg/l	<1.0	103 %	80-120 %	*F73	80-120 %
Preparation Date	11.02.98	11.02.98	---	11.02.98	---
Date Analyzed	11.02.98	11.02.98	---	11.02.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	1102A	1102A	---	1102A	---
Phosphorous, Total (365.1)					
Phosphorus, Total, mg/l	<0.010	92 %	60-140 %	*F61	60-140 %
Date Analyzed	11.02.98	11.02.98	---	11.02.98	---
Prep or Extraction Date	10.27.98	10.27.98	---	10.27.98	---
Dilution factor	1.0	1.0	---	20	---
Batch ID	1027P	1027P	---	1027P	---
Total Kjeldahl Nitrogen (351.2)					
Total Kjeldahl Nitrogen-N, mg/l	<0.20	97 %	75-125 %	*F73	75-125 %
Preparation Date	11.04.98	11.04.98	---	11.04.98	---
Date Analyzed	11.05.98	11.05.98	---	11.05.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	1104A	1104A	---	1104A	---

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Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 4503051364

CC: Mr. Alan G. Faust Project: RFIS04/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 11299119

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
RFIS04-1	Method Blank		RFIS04
RFIS04-2	Lab Control Standard % Recovery		RFIS04
RFIS04-3	LCS Accuracy Control Limit (%R)		RFIS04
RFIS04-4	MS/MSD % Recovery		RFIS04
RFIS04-6	MS Accuracy Advisory Limit (%R)		RFIS04

PARAMETER	RFIS04-1	RFIS04-2	RFIS04-3	RFIS04-4	RFIS04-6
Total Organic Halogen (9020A)					
Total Organic Halogen , mg/l	<0.010	98 %	60-140 %	91/105 %	60-140 %
Preparation Date	10.29.98	10.29.98	---	10.29.98	---
Date Analyzed	10.29.98	10.29.98	---	10.29.98	---
Dilution factor	1.0	1.0	---	10	---
Batch ID	1029C	1029C	---	1029C	---
Sulfide (376.2)					
Sulfide , mg/l	<0.10	103 %	80-120 %	99/103 %	80-120 %
Preparation Date	10.28.98	10.28.98	---	10.28.98	---
Date Analyzed	10.28.98	10.28.98	---	10.28.98	---
Dilution factor	1.0	1.0	---	100	---
Batch ID	1028A	1028A	---	1028A	---
Phenolics, Total Recoverable (9065)					
Phenolics, Total Recoverable, mg/l	<0.050	104 %	75-125 %	96/95 %	75-125 %
Preparation Date	10.27.98	10.27.98	---	10.27.98	---
Date Analyzed	10.27.98	10.27.98	---	10.27.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	1027A	1027A	---	1027A	---

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LOG NO: S8-RFIS04
Received: 22 OCT 98
Reported: 09 NOV 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 4503051364

CC: Mr. Alan G. Faust Project: RFIS04/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 11298119

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
RFIS04-1	Method Blank		RFIS04
RFIS04-2	Lab Control Standard % Recovery		RFIS04
RFIS04-3	LCS Accuracy Control Limit (%R)		RFIS04
RFIS04-4	MS/MSD % Recovery		RFIS04
RFIS04-6	MS Accuracy Advisory Limit (%R)		RFIS04

PARAMETER	RFIS04-1	RFIS04-2	RFIS04-3	RFIS04-4	RFIS04-6
Sulfate as SO4 (375.4)					
Sulfate as SO4, mg/l	<5.0	105 %	75-125 %	124/122 %	75-125 %
Preparation Date	10.27.98	10.27.98	---	10.27.98	---
Date Analyzed	10.27.98	10.27.98	---	10.27.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	1027A	1027A	---	1027A	---
Nitrate-N (353.2)					
Nitrate-N, mg/l	<0.050	103 %	80-120 %	85/83 %	80-120 %
Preparation Date	10.22.98	10.22.98	---	10.22.98	---
Date Analyzed	10.22.98	10.22.98	---	10.22.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	1022B	1022B	---	1022B	---
Total Dissolved Solids (160.1)					
Total Dissolved Solids, mg/l	<5.0	105 %	80-120 %	---	---
Preparation Date	10.22.98	10.22.98	---	---	---
Date Analyzed	10.22.98	10.22.98	---	---	---
Dilution factor	1.0	1.0	---	---	---
Batch ID	1022A	1022A	---	---	---

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LOG NO: S8-RFIS04
Received: 22 OCT 98
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Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 4503051364

CC: Mr. Alan G. Faust Project: RFIS04/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 11298119

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
RFIS04-1	Method Blank		RFIS04
RFIS04-2	Lab Control Standard % Recovery		RFIS04
RFIS04-3	LCS Accuracy Control Limit (%R)		RFIS04
RFIS04-4	MS/MSD % Recovery		RFIS04
RFIS04-6	MS Accuracy Advisory Limit (%R)		RFIS04

PARAMETER	RFIS04-1	RFIS04-2	RFIS04-3	RFIS04-4	RFIS04-6
Suspended Solids (160.2)					
Suspended Solids, mg/l	<5.0	109 %	80-120 %	---	---
Preparation Date	10.23.98	10.23.98	---	---	---
Date Analyzed	10.26.98	10.26.98	---	---	---
Dilution factor	1.0	1.0	---	---	---
Batch ID	1023B	1023B	---	---	---
Alkalinity (to pH 4.5) as CaCO3 (310.1)					
Alkalinity (to pH 4.5) as CaCO3, mg/l	<1.0	100 %	80-120 %	---	---
Preparation Date	10.22.98	10.22.98	---	---	---
Date Analyzed	10.22.98	10.22.98	---	---	---
Dilution factor	1.0	1.0	---	---	---
Batch ID	1022A	1022A	---	---	---
Standard Plate Count					
Standard Plate Count, CFU/ml	<1	---	---	---	---
Preparation Date	10.22.98	---	---	---	---
Date Analyzed	10.22.98	---	---	---	---
Dilution factor	1.0	---	---	---	---
Batch ID	1022A	---	---	---	---

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Received: 22 OCT 98
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Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 4503051364

CC: Mr. Alan G. Faust Project: RFIS04/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 11290112

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
RFIS04-11	Analyst (First Initial, Last Name)		RFIS04

PARAMETER	RFIS04-11
Total Organic Carbon (9060)	
Total Organic Carbon	L.RILEY
Phosphorous, Total (365.1)	
Phosphorus, Total	E.BUCHANON
Total Kjeldahl Nitrogen (351.2)	
Total Kjeldahl Nitrogen-N	L.RILEY
Total Organic Halogen (9020A)	
Total Organic Halogen	R.DAVIS
Sulfide (376.2)	
Sulfide	K.HAMMOND
Phenolics, Total Recoverable (9065)	
Phenolics, Total Recoverable	K.BLACKSHE
Sulfate as SO4 (375.4)	
Sulfate as SO4	L.RILEY
Nitrate-N (353.2)	
Nitrate-N	L.RILEY
Total Dissolved Solids (160.1)	
Total Dissolved Solids	R.DAVIS
Suspended Solids (160.2)	
Suspended Solids	R.DAVIS
Alkalinity (to pH 4.5) as CaCO3 (310.1)	
Alkalinity (to pH 4.5) as CaCO3	R.DAVIS
Standard Plate Count	
Standard Plate Count	R.DAVIS

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3730 Chamblee Tucker Road
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Client PO. No.: 4503051364

CC: Mr. Alan G. Faust Project: RFIS04/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 11298119

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
PARAMETER			

Methods: EPA 40 CFR Part 136

*F61 = The recoveries of the matrix spikes are outside advisory limits due to the abundance of the target analyte in the sample.

*F73 = Matrix spike recoveries were outside advisory limits due to matrix interference present in the sample.

Elizabeth F. Beauchamp, Project Manager

Final Page Of Report

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LOG NO: S8-RFIS05
Received: 24 OCT 98
Reported: 11 NOV 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 4503051364

CC: Mr. Alan G. Faust Project: RFIS05/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 131681111

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
RFIS05-1	Method Blank		RFIS05
RFIS05-2	Lab Control Standard % Recovery		RFIS05
RFIS05-3	LCS Accuracy Control Limit (%R)		RFIS05
RFIS05-4	MS/MSD % Recovery		RFIS05
RFIS05-5	MS/MSD % Recovery (Filtered)		RFIS05

PARAMETER	RFIS05-1	RFIS05-2	RFIS05-3	RFIS05-4	RFIS05-5
Organophosphorus Pesticides (8141)					
Ethyl Parathion, mg/l	<0.0010	48 %	28-155 %	*	---
Methyl Parathion, mg/l	<0.00050	134 %	38-149 %	---	---
Tetraethyl dithiopyrophosphate (Sulfotepp), mg/l	<0.00050	---	---	---	---
Surrogate - Triphenylphosphate	95 %	98 %	---	---	---
Date Extracted	10.27.98	10.27.98	---	---	---
Date Analyzed	10.30.98	10.30.98	---	---	---
Dilution factor	1.0	1.0	---	---	---
Batch ID	1027N	1027N	---	---	---
Instrument ID	SGONPD	SGONPD	---	---	---
Vanadium (6010)					
Vanadium, mg/l	<0.010	102 %	75-125 %	100/100 %	105/103 %
Preparation Date	10.29.98	10.29.98	---	10.29.98	10.29.98
Date Analyzed	10.29.98	10.29.98	---	10.30.98	10.30.98
Dilution factor	1.0	1.0	---	1.0	1.0
Batch ID	1029I	1029I	---	1029I	1029I

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Received: 24 OCT 98
Reported: 11 NOV 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 4503051364

CC: Mr. Alan G. Faust Project: RFIS05/983-3223.002/MONSANTO RFI-ANNISTON

Sampled By: Client
Code. 131601111

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
RFIS05-1	Method Blank		RFIS05
RFIS05-2	Lab Control Standard % Recovery		RFIS05
RFIS05-3	LCS Accuracy Control Limit (%R)		RFIS05
RFIS05-4	MS/MSD % Recovery		RFIS05
RFIS05-5	MS/MSD % Recovery (Filtered)		RFIS05

PARAMETER	RFIS05-1	RFIS05-2	RFIS05-3	RFIS05-4	RFIS05-5
Nickel (6010)					
Nickel, mg/l	<0.040	106 %	75-125 %	103/102 %	109/107 %
Preparation Date	10.29.98	10.29.98	---	10.29.98	10.29.98
Date Analyzed	10.29.98	10.29.98	---	10.30.98	10.30.98
Dilution factor	1.0	1.0	---	1.0	1.0
Batch ID	1029I	1029I		1029I	1029I
Mercury (7470)					
Mercury, mg/l	<0.00020	85 %	80-120 %	86/88 %	83/83 %
Preparation Date	10.29.98	10.29.98	---	10.29.98	10.29.98
Date Analyzed	11.02.98	11.02.98	---	11.02.98	11.02.98
Dilution factor	1.0	1.0	---	1.0	1.0
Batch ID	1029T	1029T		1029T	1029T
Manganese (6010)					
Manganese, mg/l	<0.010	108 %	75-125 %	104/104 %	111/109 %
Preparation Date	10.29.98	10.29.98	---	10.29.98	10.29.98
Date Analyzed	10.29.98	10.29.98	---	10.30.98	10.30.98
Dilution factor	1.0	1.0	---	1.0	1.0
Batch ID	1029I	1029I		1029I	1029I

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3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 4503051364

CC: Mr. Alan G. Faust Project: RFIS05/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 131681111

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
RFIS05-1	Method Blank		RFIS05
RFIS05-2	Lab Control Standard % Recovery		RFIS05
RFIS05-3	LCS Accuracy Control Limit (%R)		RFIS05
RFIS05-4	MS/MSD % Recovery		RFIS05
RFIS05-5	MS/MSD % Recovery (Filtered)		RFIS05

PARAMETER	RFIS05-1	RFIS05-2	RFIS05-3	RFIS05-4	RFIS05-5
Lead (7421)					
Lead, mg/l	<0.0050	97 %	80-120 %	93/93 %	88/86 %
Preparation Date	11.03.98	10.30.98	---	10.30.98	10.30.98
Date Analyzed	11.05.98	11.05.98	---	11.05.98	11.05.98
Dilution factor	1.0	1.0	---	1.0	1.0
Batch ID	1030G	1030G	---	1030G	1030G
Cobalt (6010)					
Cobalt, mg/l	<0.010	105 %	75-125 %	101/101 %	108/106 %
Preparation Date	10.29.98	10.29.98	---	10.29.98	10.29.98
Date Analyzed	10.29.98	10.29.98	---	10.30.98	10.30.98
Dilution factor	1.0	1.0	---	1.0	1.0
Batch ID	1029I	1029I	---	1029I	1029I
Chromium (6010)					
Chromium, mg/l	<0.010	107 %	75-125 %	103/102 %	111/109 %
Preparation Date	10.29.98	10.29.98	---	10.29.98	10.29.98
Date Analyzed	10.29.98	10.29.98	---	10.30.98	10.30.98
Dilution factor	1.0	1.0	---	1.0	1.0
Batch ID	1029I	1029I	---	1029I	1029I

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3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 4503051364

CC: Mr. Alan G. Faust Project: RFIS05/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 131691111

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
RFIS05-1	Method Blank		RFIS05
RFIS05-2	Lab Control Standard % Recovery		RFIS05
RFIS05-3	LCS Accuracy Control Limit (%R)		RFIS05
RFIS05-4	MS/MSD % Recovery		RFIS05
RFIS05-5	MS/MSD % Recovery (Filtered)		RFIS05

PARAMETER	RFIS05-1	RFIS05-2	RFIS05-3	RFIS05-4	RFIS05-5
Cadmium (6010)					
Cadmium, mg/l	<0.0050	108 %	75-125 %	102/102 %	111/110 %
Preparation Date	10.29.98	10.29.98	---	10.29.98	10.29.98
Date Analyzed	10.29.98	10.29.98	---	10.30.98	10.30.98
Dilution factor	1.0	1.0	---	1.0	1.0
Batch ID	1029T	1029T	---	1029I	1029I
Beryllium (6010)					
Beryllium, mg/l	<0.0050	105 %	75-125 %	102/101 %	109/107 %
Preparation Date	10.29.98	10.29.98	---	10.29.98	10.29.98
Date Analyzed	10.29.98	10.29.98	---	10.30.98	10.30.98
Dilution factor	1.0	1.0	---	1.0	1.0
Batch ID	1029T	1029T	---	1029I	1029I
Barium (6010)					
Barium, mg/l	<0.010	103 %	75-125 %	105/105 %	107/104 %
Preparation Date	10.29.98	10.29.98	---	10.29.98	10.29.98
Date Analyzed	10.29.98	10.29.98	---	10.30.98	10.30.98
Dilution factor	1.0	1.0	---	1.0	1.0
Batch ID	1029T	1029T	---	1029I	1029I

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3730 Chamblee Tucker Road
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Client PO. No.: 4503051364

CC: Mr. Alan G. Faust Project: RFIS05/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 131691111

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
RFIS05-1	Method Blank		RFIS05
RFIS05-2	Lab Control Standard % Recovery		RFIS05
RFIS05-3	LCS Accuracy Control Limit (%R)		RFIS05
RFIS05-4	MS/MSD % Recovery		RFIS05
RFIS05-5	MS/MSD % Recovery (Filtered)		RFIS05

PARAMETER	RFIS05-1	RFIS05-2	RFIS05-3	RFIS05-4	RFIS05-5
Arsenic (6010)					
Arsenic, mg/l	<0.010	101 %	75-125 %	99/99 %	104/102 %
Preparation Date	10.29.98	10.29.98	---	10.29.98	10.29.98
Date Analyzed	10.29.98	10.29.98	---	10.30.98	10.30.98
Dilution factor	1.0	1.0	---	1.0	1.0
Batch ID	10291	10291	---	10291	10291
PCB's (8081/See Qualifier Z)					
PCB-1016, ug/l	<1.0	96 %	43-139 %	*	*
PCB-1221, ug/l	<1.0	---	---	---	---
PCB-1232, ug/l	<1.0	---	---	---	---
PCB-1242, ug/l	<1.0	---	---	---	---
PCB-1248, ug/l	<1.0	---	---	---	---
PCB-1254, ug/l	<1.0	---	---	---	---
PCB-1260, ug/l	<1.0	72 %	31-152 %	*	*
Total Polychlorinated Biphenyls, ug/l	<1.0	---	---	---	---
Surrogate - TCX	33 %	55 %	---	---	---
Date Extracted	10.27.98	10.27.98	---	---	---
Date Analyzed	10.30.98	10.30.98	---	---	---
Dilution factor	1.0	1.0	---	---	---

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LOG NO: S8-RFIS05
Received: 24 OCT 98
Reported: 19 NOV 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 4503051364

Contract No.: S7219
CC: Mr. Alan G. Faust Project: RFIS05/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 144321015

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
RFIS05-1	Method Blank		RFIS05
RFIS05-2	Lab Control Standard % Recovery		RFIS05
RFIS05-3	LCS Accuracy Control Limit (%R)		RFIS05
RFIS05-4	MS/MSD % Recovery		RFIS05
RFIS05-5	MS/MSD % Recovery (Filtered)		RFIS05

PARAMETER	RFIS05-1	RFIS05-2	RFIS05-3	RFIS05-4	RFIS05-5
PCB's (8081/See Qualifier Z) (608)					
PCB-1016, ug/l	<1.0	96 %	43-139 %	*	*
PCB-1221, ug/l	<1.0	---	---	---	---
PCB-1232, ug/l	<1.0	---	---	---	---
PCB-1242, ug/l	<1.0	---	---	---	---
PCB-1248, ug/l	<1.0	---	---	---	---
PCB-1254, ug/l	<1.0	---	---	---	---
PCB-1260, ug/l	<1.0	72 %	31-152 %	*	*
Total Polychlorinated Biphenyls, ug/l	<1.0	---	---	---	---
Surrogate - TCX	33 %	55 %	---	---	---
Date Extracted	10.27.98	10.27.98	---	---	---
Date Analyzed	10.30.98	10.30.98	---	---	---
Dilution factor	1.0	1.0	---	---	---

* Insufficient sample volume was available for MS/MSD analysis. Laboratory Control data has been provided for batch QC.

Methods: EPA SW-846, Update III.

SL SAVANNAH LABORATORIES
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3730 Chamblee Tucker Road
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Client PO. No.: 4503051364

CC: Mr. Alan G. Faust Project: RFIS05/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 131601111

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
RFIS05-1	Method Blank		RFIS05
RFIS05-2	Lab Control Standard % Recovery		RFIS05
RFIS05-3	LCS Accuracy Control Limit (%R)		RFIS05
RFIS05-4	MS/MSD % Recovery		RFIS05
RFIS05-5	MS/MSD % Recovery (Filtered)		RFIS05

PARAMETER	RFIS05-1	RFIS05-2	RFIS05-3	RFIS05-4	RFIS05-5
Volatiles by GC/MS (8260)					
Methylene chloride (Dichloromethane), ug/l	<5.0	---	---	---	---
1,1,2,2-Tetrachloroethane, ug/l	<5.0	---	---	---	---
Chlorobenzene, ug/l	<5.0	89 %	60-127 %	50 %	---
Surrogate - Toluene-d8	112 %	113 %	67-134 %	---	---
Surrogate - 4-Bromofluorobenzene	108 %	108 %	67-132 %	---	---
Surrogate - Dibromofluoromethane	106 %	108 %	64-142 %	---	---
Date Analyzed	11.02.98	11.02.98	11.02.98	11.03.98	---
Dilution factor	1.0	1.0	1.0	1.0	---
Batch ID	2L1102	2L1102	2L1102	2L1103	---
Clock ID	2L1102	2L1102	2L1102	2L1103	---
Isopropylbenzene, ug/l	<5.0	---	---	---	---
Chloromethane, ug/kg dw	---	---	---	---	---

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CC: Mr. Alan G. Faust Project: RFIS05/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 131601111

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
RFIS05-1	Method Blank		RFIS05
RFIS05-2	Lab Control Standard % Recovery		RFIS05
RFIS05-3	LCS Accuracy Control Limit (%R)		RFIS05
RFIS05-4	MS/MSD % Recovery		RFIS05
RFIS05-5	MS/MSD % Recovery (Filtered)		RFIS05

PARAMETER	RFIS05-1	RFIS05-2	RFIS05-3	RFIS05-4	RFIS05-5
Acids and Base Neutrals (8270-APP9)					
Acenaphthene, ug/l	<10	86 %	14-104 %	79/80 %	---
p-Dichlorobenzene, ug/l	<10	69 %	10-124 %	62/60 %	---
o-Dichlorobenzene, ug/l	<10	---	---	---	---
2,4-Dinitrotoluene, ug/l	<10	84 %	52-111 %	92/89 %	---
n-Nitrosodi-n-propylamine, ug/l	<10	79 %	34-137 %	72/73 %	---
Pyrene, ug/l	<10	84 %	43-131 %	86/89 %	---
1,2,4-Trichlorobenzene, ug/l	<10	74 %	17-121 %	64/66 %	---
2-Chlorophenol, ug/l	<10	72 %	25-125 %	52/53 %	---
p-Nitrophenol, ug/l	<50	66 %	13-133 %	74/74 %	---
2,4-Dichlorophenol, ug/l	<10	---	---	---	---
Pentachlorophenol, ug/l	<1.0	74 %	19-133 %	59/59 %	---
Phenol, ug/l	<10	71 %	32-110 %	49/49 %	---
2,4,5-Trichlorophenol, ug/l	<10	---	---	---	---
2,4,6-Trichlorophenol, ug/l	<10	---	---	---	---
o,o,o-Triethyl phosphorothioate, ug/l	<10	---	---	---	---
p-Chloro-m-cresol, ug/l	<10	84 %	33-111 %	60/61 %	---
Surrogate - Phenol d5	86 %	70 %	16-139 %	49/49 %	---

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LOG NO: S8-RFIS05
Received: 24 OCT 98
Reported: 11 NOV 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 4503051364

CC: Mr. Alan G. Faust Project: RFIS05/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 121691111

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
RFIS05-1	Method Blank		RFIS05
RFIS05-2	Lab Control Standard % Recovery		RFIS05
RFIS05-3	LCS Accuracy Control Limit (%R)		RFIS05
RFIS05-4	MS/MSD % Recovery		RFIS05
RFIS05-5	MS/MSD % Recovery (Filtered)		RFIS05

PARAMETER	RFIS05-1	RFIS05-2	RFIS05-3	RFIS05-4	RFIS05-5
Surrogate - 2-Fluorophenol	83 %	66 %	20-124 %	44/40 %	---
Surrogate - 2,4,6-Tribromophenol	65 %	84 %	24-135 %	51/49 %	---
Surrogate - Nitrobenzene - d5	54 %	74 %	10-169 %	68/72 %	---
Surrogate - 2-Fluorobiphenyl	55 %	86 %	23-130 %	78/78 %	---
Surrogate - Terphenyl - d14	63 %	83 %	27-147 %	72/78 %	---
Date Extracted	10.27.98	10.27.98	---	10.27.98	---
Date Analyzed	11.02.98	11.02.98	---	11.06.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	1027A	1027A	---	1027A	---
Instrument ID	MSG5970	MSG5970	---	MSG5970	---
Ferrous Iron (3500-Fe D)					
Iron, Ferrous (2+), mg/l	---	100 %	80-120 %	96/93 %	96/93 %
Preparation Date	---	10.27.98	---	10.27.98	10.27.98
Date Analyzed	---	10.27.98	---	10.27.98	10.27.98
Dilution factor	---	1.0	---	1.0	1.0
Batch ID	---	1027X	---	1027X	1027X

* Insufficient sample volume was available for MS/MSD analysis. Laboratory Control data has been provided for batch QC.

Methods: EPA SW-846, Update III.

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Received: 24 OCT 98
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Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 4503051364

CC: Mr. Alan G. Faust Project: RFIS05/983-3223.002/MONSANTO RFI-ANNISTON

Sampled By: Client
Code. 131681111

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
RFIS05-6	MS Accuracy Advisory Limit (%R)		RFIS05
RFIS05-11	Analyst (First Initial, Last Name)		RFIS05

PARAMETER	RFIS05-6	RFIS05-11	
Organophosphorus Pesticides (8141)			
Ethyl Parathion	28-155 %	J.SCHUMACH	
Methyl Parathion	30-142 %	J.SCHUMACH	
Tetraethyl dithiopyrophosphate (Sulfotepp)	---	J.SCHUMACH	
Vanadium (6010)			
Vanadium,	75-125 %	E.MARTSOLF	
Nickel (6010)			
Nickel,	75-125 %	E.MARTSOLF	
Mercury (7470)			
Mercury	80-120 %	L.REEVES	
Manganese (6010)			
Manganese,	75-125 %	E.MARTSOLF	
Lead (7421)			
Lead	80-120 %	N.DAVIS	
Cobalt (6010)			
Cobalt,	75-125 %	E.MARTSOLF	
Chromium (6010)			
Chromium,	75-125 %	E.MARTSOLF	
Cadmium (6010)			
Cadmium,	75-125 %	E.MARTSOLF	
Beryllium (6010)			
Beryllium,	75-125 %	E.MARTSOLF	
Barium (6010)			
Barium,	75-125 %	E.MARTSOLF	

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Received: 24 OCT 98
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Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 4503051364

CC: Mr. Alan G. Faust Project: RFIS05/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 144691111

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
RFIS05-6	MS Accuracy Advisory Limit (%R)		RFIS05
RFIS05-11	Analyst (First Initial, Last Name)		RFIS05

PARAMETER	RFIS05-6	RFIS05-11
Arsenic (6010)		
Arsenic,	75-125 %	E.MARTSOLF
PCB's (8081/See Qualifier Z)		
PCB-1016	43-139 %	A.MCNEELY
PCB-1260	31-152 %	A.MCNEELY
PCB-1221	---	A.MCNEELY
PCB-1232	---	A.MCNEELY
PCB-1242	---	A.MCNEELY
PCB-1248	---	A.MCNEELY
PCB-1254	---	A.MCNEELY
Total Polychlorinated Biphenyls	---	A.MCNEELY
Volatiles by GC/MS (8260)		
Chlorobenzene, %	60-127 %	W.HARN

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REISSUED 10/15/02

LOG NO: S8-RFIS05
Received: 24 OCT 98
Reported: 19 NOV 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 4503051364

Contract No.: S7219
CC: Mr. Alan G. Faust Project: RFIS05/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 144321015

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
RFIS05-6	MS Accuracy Advisory Limit (%R)		RFIS05
RFIS05-11	Analyst (First Initial, Last Name)		RFIS05

PARAMETER	RFIS05-6	RFIS05-11	
PCB's (8081/See Qualifier Z) (608)			
PCB-1016	43-139 %	A.MCNEELY	
PCB-1260	31-152 %	A.MCNEELY	
PCB-1221	---	A.MCNEELY	
PCB-1232	---	A.MCNEELY	
PCB-1242	---	A.MCNEELY	
PCB-1248	---	A.MCNEELY	
PCB-1254	---	A.MCNEELY	
Total Polychlorinated Biphenyls	---	A.MCNEELY	

* Insufficient sample volume was available for MS/MSD analysis. Laboratory Control data has been provided for batch QC.

Methods: EPA SW-846, Update III.

for Elizabeth F. Beauchamp, Project Manager

SL SAVANNAH LABORATORIES
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LOG NO: S8-RFIS05
Received: 24 OCT 98
Reported: 11 NOV 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 4503051364

CC: Mr. Alan G. Faust Project: RFIS05/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 131681111

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
RFIS05-6	MS Accuracy Advisory Limit (%R)		RFIS05
RFIS05-11	Analyst (First Initial, Last Name)		RFIS05

PARAMETER	RFIS05-6	RFIS05-11	
Acids and Base Neutrals (8270-APP9)			
Acenaphthene	14-104 %		M.JAKUBSEN
p-Dichlorobenzene	10-124 %		M.JAKUBSEN
2,4-Dinitrotoluene	52-111 %		M.JAKUBSEN
n-Nitrosodi-n-propylamine	34-137 %		M.JAKUBSEN
Pyrene	43-131 %		M.JAKUBSEN
1,2,4-Trichlorobenzene	17-121 %		M.JAKUBSEN
2-Chlorophenol	25-125 %		M.JAKUBSEN
p-Nitrophenol	13-133 %		M.JAKUBSEN
Pentachlorophenol	19-123 %		M.JAKUBSEN
Phenol	32-110 %		M.JAKUBSEN
p-Chloro-m-cresol	23-111 %		M.JAKUBSEN
o-Dichlorobenzene	---		M.JAKUBSEN
2,4-Dichlorophenol	---		M.JAKUBSEN
2,4,5-Trichlorophenol	---		M.JAKUBSEN
2,4,6-Trichlorophenol	---		M.JAKUBSEN
o,o,o-Triethyl phosphorothioate	---		M.JAKUBSEN
Surrogate - Phenol d5	16-139 %		M.JAKUBSEN
Surrogate - 2-Fluorophenol	20-124 %		M.JAKUBSEN
Surrogate - 2,4,6-Tribromophenol	24-135 %		M.JAKUBSEN
Surrogate - Nitrobenzene - d5	10-162 %		M.JAKUBSEN
Surrogate - 2-Fluorobiphenyl	23-130 %		M.JAKUBSEN
Surrogate - Terphenyl - d14	27-147 %		M.JAKUBSEN

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Client PO. No.: 4503051364

CC: Mr. Alan G. Faust Project: RFIS05/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 131681111

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
RFIS05-6	MS Accuracy Advisory Limit (%R)		RFIS05
RFIS05-11	Analyst (First Initial, Last Name)		RFIS05

PARAMETER		RFIS05-6	RFIS05-11	
Ferrous Iron (3500-Fe D)				
Iron, Ferrous (2+)		80-120 %	L.REEVES	

* Insufficient sample volume was available for MS/MSD analysis. Laboratory Control data has been provided for batch QC.

Methods: EPA SW-846, Update III.

Elizabeth F. Beauchamp

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LOG NO: S8-84581
Received: 31 JUL 98
Reported: 21 AUG 98
Revised 9/1/98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

Contract No.: S7219

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON

Sampled By:

Code: 172590113

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-1	MW-1B	07-28-98/1430

PARAMETER	84581-1
Volatiles by GC/MS (8260)	
Methylene chloride (Dichloromethane), ug/l	<5.0
1,1,2,2-Tetrachloroethane, ug/l	<5.0
Chlorobenzene, ug/l	<5.0
Isopropylbenzene, ug/l	<5.0
Surrogate - Toluene-d8	88 %
Surrogate - 4-Bromofluorobenzene	100 %
Surrogate - Dibromofluoromethane	92 %
Date Analyzed	08.05.98
Dilution factor	1.0
Batch ID	1A0805
Clock ID	1A0805

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Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

Contract No.: S7219

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON

Sampled By:

Code: 172590113

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-1	MW-1B	07-28-98/1430

PARAMETER	84581-1
Acid & Base Neutral Extractables (8270)	
1,4-Dichlorobenzene, ug/l	<10
1,2-Dichlorobenzene, ug/l	<10
Phenol, ug/l	<10
2,4-Dichlorophenol, ug/l	<10
2,4,6-Trichlorophenol, ug/l	<10
Pentachlorophenol, ug/l	<1.0
4-Nitrophenol, ug/l	<50
2,4,5-Trichlorophenol, ug/l	<10
O,O,O-Triethyl phosphorothioate, ug/l	<10
Surrogate-2FP	67 %
Surrogate-PHL	73 %
Surrogate-NBZ	74 %
Surrogate-2FBP	68 %
Surrogate-TBP	67 %
Surrogate-TPH	74 %
Date Extracted	08.03.98
Date Analyzed	08.16.98
Dilution factor	1.0
Batch ID	0803E
Instrument ID	MSG5970

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Client PO. No.: 8263-1-0006

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

CC: Mr. Alan G. Faust

Contract No.: S7219
Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By:
Code: 172590113

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-1	MW-1B	07-28-98/1430

PARAMETER	84581-1
Organophosphorus Pesticides (8141)	
Methyl Parathion, ug/l	<0.50
Tetraethyl dithiopyrophosphate (Sulfotepp), ug/l	<0.50
Ethyl Parathion, ug/l	<1.0
Date Extracted	08.03.98
Date Analyzed	08.17.98
PCB's (8081/See Qualifier Z)	
PCB-1016, ug/l	0
PCB-1221, ug/l	0
PCB-1232, ug/l	0
PCB-1242, ug/l	0
PCB-1248, ug/l	0
PCB-1254, ug/l	0
PCB-1260, ug/l	0
Total Polychlorinated Biphenyls, ug/l	0
Surrogate - TCX	55 %
Date Extracted	08.02.98
Date Analyzed	08.07.98
Dilution factor	1.0
Arsenic (6010)	
Arsenic, mg/l	<0.010
Preparation Date	08.03.98
Date Analyzed	08.04.98
Dilution factor	1.0
Batch ID	0803I

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Received: 31 JUL 98
Reported: 21 AUG 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

Contract No.: S7219

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 103121015

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-1	MW 1B	07-28-98/1430

PARAMETER	84581-1
PCB's (8081/See Qualifier Z) (608)	
PCB-1016, ug/l	<1
PCB-1221, ug/l	<1
PCB-1232, ug/l	<1
PCB-1242, ug/l	<1
PCB-1248, ug/l	<1
PCB-1254, ug/l	<1
PCB-1260, ug/l	<1
Total Polychlorinated Biphenyls, ug/l	<1
Surrogate - TCX	55 %
Date Extracted	08.02.98
Date Analyzed	08.07.98
Dilution factor	1.0

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LOG NO: S8-84581
Received: 31 JUL 98
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Client PO. No.: 8263-1-0006

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

CC: Mr. Alan G. Faust

Contract No.: S7219
Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By:
Code: 172590113

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-1	MW-1B	07-28-98/1430

PARAMETER	84581-1
Barium (6010)	
Barium, mg/l	<0.010
Preparation Date	08.03.98
Date Analysed	08.04.98
Dilution factor	1.0
Batch ID	0803I
Beryllium (6010)	
Beryllium, mg/l	<0.0040
Preparation Date	08.03.98
Date Analysed	08.04.98
Dilution factor	1.0
Batch ID	0803I
Cadmium (6010)	
Cadmium, mg/l	<0.0050
Preparation Date	08.03.98
Date Analysed	08.04.98
Dilution factor	1.0
Batch ID	0803I
Chromium (6010)	
Chromium, mg/l	<0.010
Preparation Date	08.03.98
Date Analysed	08.04.98
Dilution factor	1.0
Batch ID	0803I

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Received: 31 JUL 98
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Revised 9/1/98
Client PO. No.: 8263-1-0006

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

CC: Mr. Alan G. Faust

Contract No.: S7219
Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By:
Code. 172390113

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-1	MW-1B	07-28-98/1430

PARAMETER	84581-1
Cobalt (6010)	
Cobalt, mg/l	<0.010
Preparation Date	08.03.98
Date Analyzed	08.04.98
Dilution factor	1.0
Batch ID	0803I
Lead (7421)	
Lead, mg/l	<0.0050
Preparation Date	08.03.98
Date Analyzed	08.04.98
Dilution factor	1.0
Batch ID	0803J
Manganese (6010)	
Manganese, mg/l	<0.010
Preparation Date	08.03.98
Date Analyzed	08.04.98
Dilution factor	1.0
Batch ID	0803I
Mercury (7470)	
Mercury, mg/l	<0.00020
Preparation Date	08.04.98
Date Analyzed	08.05.98
Dilution factor	1.0
Batch ID	0804T

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Revised 9/1/98
Client PO. No.: 9263-1-0006

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Contract No.: S7219
CC: Mr. Alan G. Faust Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By:
Code: 172590113

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-1	MW-1B	07-28-98/1430

PARAMETER	84581-1
Nickel (6010)	
Nickel, mg/l	<0.0040
Preparation Date	08.03.98
Date Analyzed	08.04.98
Dilution factor	1.0
Batch ID	0803I
Vanadium (6010)	
Vanadium, mg/l	<0.010
Preparation Date	08.03.98
Date Analyzed	08.04.98
Dilution factor	1.0
Batch ID	0803I
Total Organic Carbon (9060)	
Total Organic Carbon, mg/l	<1.0
Preparation Date	08.06.98
Date Analyzed	08.06.98
Dilution factor	1.0
Batch ID	0806A
Phosphorus, Total (365.4)	
Total Phosphorus, mg/l	<0.044
Preparation Date	07.31.98
Date Analyzed	08.03.98
Dilution factor	1.0
Batch ID	0731A

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Received: 31 JUL 98
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Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 9263-1-0006

Contract No.: S7219

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON

Sampled By:

Code: 172590113

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-1	MW-1B	07-28-98/1430

PARAMETER	84581-1
Total Kjeldahl Nitrogen (351.2)	
Total Kjeldahl Nitrogen-N, mg/l	0.66
Preparation Date	07.31.98
Date Analyzed	08.10.98
Dilution factor	1.0
Batch ID	0731A
Total Organic Halogen (9020A)	
Total Organic Halogen , mg/l	<0.010
Preparation Date	08.04.98
Date Analyzed	08.04.98
Dilution factor	1.0
Batch ID	0804A
Sulfide (376.2)	
Sulfide , mg/l	<0.10
Preparation Date	08.03.98
Date Analyzed	08.03.98
Dilution factor	1.0
Batch ID	0803A
Sulfate as SO4 (375.4)	
Sulfate as SO4, mg/l	<5.0
Preparation Date	08.07.98
Date Analyzed	08.07.98
Dilution factor	1.0
Batch ID	0807A

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LOG NO: S8-84581
Received: 31 JUL 98
Reported: 21 AUG 98
Revised 9/1/98
Client PO. No.: 8263-1-0006

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

CC: Mr. Alan G. Faust

Contract No.: S7219
Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By:
Code: 172590113

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-1	MW-1B	07-28-98/1430

PARAMETER	84581-1
Nitrate-N (353.2)	
Nitrate-N, mg/l	<0.050
Preparation Date	07.31.98
Date Analyzed	07.31.98
Dilution factor	1.0
Batch ID	0803B
Total Dissolved Solids (160.1)	
Total Dissolved Solids, mg/l	16
Preparation Date	08.04.98
Date Analyzed	08.04.98
Dilution factor	1.0
Batch ID	0804A
Suspended Solids (160.2)	
Suspended Solids, mg/l	8.0
Preparation Date	08.04.98
Date Analyzed	08.04.98
Dilution factor	1.0
Batch ID	0804A
Alkalinity (to pH 4.5) as CaCO3 (310.1)	
Alkalinity (to pH 4.5) as CaCO3, mg/l	2.6
Preparation Date	08.06.98
Date Analyzed	08.06.98
Dilution factor	1.0
Batch ID	0806A

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Revised 9/1/98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

Contract No.: S7219

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON

Sampled By:

Code: 172590112

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-1	MW-1B	07-28-98/1430

PARAMETER	84581-1
Phenolics, Total Recoverable (9065)	
Phenolics, Total Recoverable, mg/l	<0.050
Preparation Date	08.05.98
Date Analyzed	08.05.98
Dilution factor	1.0
Batch ID	0805A

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Ms. Gayle Pittman
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3730 Chamblee Tucker Road
Atlanta, GA 30341

CC: Mr. Alan G. Faust

Contract No.: S7219
Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By:
Code: 172590113

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-2	OWR-6D	07-28-98/1130

PARAMETER	84581-2
Volatiles by GC/MS (8260)	
Methylene chloride (Dichloromethane), ug/l	<5.0
1,1,2,2-Tetrachloroethane, ug/l	<5.0
Chlorobenzene, ug/l	<5.0
Isopropylbenzene, ug/l	<5.0
Surrogate - Toluene-d8	90 %
Surrogate - 4-Bromofluorobenzene	100 %
Surrogate - Dibromofluoromethane	92 %
Date Analyzed	08.04.98
Dilution factor	1.0
Batch ID	1A0804
Clock ID	1A0804

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Contract No.: S7219

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON

Sampled By:

Code: 172590113

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-2	OWR-6D	07-28-98/1130

PARAMETER	84581-2
Acid & Base Neutral Extractables (8270)	
1,4-Dichlorobenzene, ug/l	<10
1,2-Dichlorobenzene, ug/l	<10
Phenol, ug/l	<10
2,4-Dichlorophenol, ug/l	<10
2,4,6-Trichlorophenol, ug/l	<10
Pentachlorophenol, ug/l	<1.0
4-Nitrophenol, ug/l	<50
2,4,5-Trichlorophenol, ug/l	<10
o,o,o-Triethyl phosphorothioate, ug/l	<10
Surrogate-2FP	65 %
Surrogate-PHL	67 %
Surrogate-NBZ	74 %
Surrogate-2FBP	72 %
Surrogate-TBP	69 %
Surrogate-TPH	80 %
Date Extracted	08.03.98
Date Analyzed	08.16.98
Dilution factor	1.0
Batch ID	0803E
Instrument ID	MSG5970

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Sampled By:
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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-2	OWR-6D	07-28-98/1130

PARAMETER	84581-2
Organophosphorus Pesticides (8141)	
Methyl Parathion, ug/l	<0.50
Tetraethyl dithiopyrophosphate (Sulfotepp), ug/l	<0.50
Ethyl Parathion, ug/l	<1.0
Date Extracted	08.03.98
Date Analyzed	08.17.98

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Sampled By:
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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-3	OW-9	07-28-98/1212

PARAMETER	84581-3				
Volatiles by GC/MS (8260)					
Methylene chloride (Dichloromethane), ug/l	<5.0				
1,1,2,2-Tetrachloroethane, ug/l	<5.0				
Chlorobenzene, ug/l	<5.0				
Isopropylbenzene, ug/l	<5.0				
Surrogate - Toluene-d8	90 %				
Surrogate - 4-Bromofluorobenzene	100 %				
Surrogate - Dibromofluoromethane	92 %				
Date Analyzed	08.04.98				
Dilution factor	1.0				
Batch ID	1A0804				
Clock ID	1A0804				

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Contract No.: S7219
Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By:
Code: 172590113

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-3	OW-9	07-28-98/1212

PARAMETER	84581-3
Acid & Base Neutral Extractables (8270)	
1,4-Dichlorobenzene, ug/l	<10
1,2-Dichlorobenzene, ug/l	<10
Phenol, ug/l	<10
2,4-Dichlorophenol, ug/l	<10
2,4,6-Trichlorophenol, ug/l	<10
Pentachlorophenol, ug/l	<1.0
4-Nitrophenol, ug/l	<50
2,4,5-Trichlorophenol, ug/l	<10
o,o,o-Triethyl phosphorothioate, ug/l	<10
Surrogate-2FP	59 %
Surrogate-PHL	63 %
Surrogate-NBZ	70 %
Surrogate-2FBP	64 %
Surrogate-TBP	61 %
Surrogate-TPH	72 %
Date Extracted	08.03.98
Date Analyzed	08.16.98
Dilution factor	1.0
Batch ID	0803E
Instrument ID	MSG5970

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3730 Chamblee Tucker Road
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Client PO. No.: 8263-1-0006

Contract No.: S7219

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON

Sampled By:

Code: 172590113

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-3	OW-9	07-28-98/1212

PARAMETER	84581-3
Organophosphorus Pesticides (8141)	
Methyl Parathion, ug/l	<0.50
Tetraethyl dithiopyrophosphate (Sulfotepp), ug/l	<0.50
Ethyl Parathion, ug/l	<1.0
Date Extracted	08.03.98
Date Analyzed	08.17.98
PCB's (8081/See Qualifier Z)	
PCB-1016, ug/l	0
PCB-1221, ug/l	0
PCB-1232, ug/l	0
PCB-1242, ug/l	0
PCB-1248, ug/l	0
PCB-1254, ug/l	0
PCB-1260, ug/l	0
Total Polychlorinated Biphenyls, ug/l	0
Surrogate - TCX	55 %
Date Extracted	08.02.98
Date Analyzed	08.07.98
Dilution factor	1.0

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Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

Contract No.: S7219
CC: Mr. Alan G. Faust Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code. 103121015

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-3	OW-9	07-28-98/1212

PARAMETER	84581-3
PCB's (8081/See Qualifier Z) (608)	
PCB-1016, ug/l	<1
PCB-1221, ug/l	<1
PCB-1232, ug/l	<1
PCB-1242, ug/l	<1
PCB-1248, ug/l	<1
PCB-1254, ug/l	<1
PCB-1260, ug/l	<1
Total Polychlorinated Biphenyls, ug/l	<1
Surrogate - TCX	55 %
Date Extracted	08.02.98
Date Analyzed	08.07.98
Dilution factor	1.0

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Client PO. No.: 8263-1-0006

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

CC: Mr. Alan G. Faust

Contract No.: S7219
Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By:
Code: 172590113

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-4	OW-9-F	07-28-98/1515

PARAMETER	84581-4
PCB's (8081/See Qualifier Z)	
PCB-1016, ug/l	0
PCB-1221, ug/l	0
PCB-1232, ug/l	0
PCB-1242, ug/l	0
PCB-1248, ug/l	0
PCB-1254, ug/l	0
PCB-1260, ug/l	0
Total Polychlorinated Biphenyls, ug/l	0
Surrogate - TCX	42 %
Date Extracted	08.02.98
Date Analyzed	08.07.98
Dilution factor	1.0

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CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON

Sampled By: Client

Code: 103121015

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-4	OW-9-F	07-28-98/1515

PARAMETER	84581-4
PCB's (8081/See Qualifier Z) (608)	
PCB-1016, ug/l	<1
PCB-1221, ug/l	<1
PCB-1232, ug/l	<1
PCB-1242, ug/l	<1
PCB-1248, ug/l	<1
PCB-1254, ug/l	<1
PCB-1260, ug/l	<1
Total Polychlorinated Biphenyls, ug/l	<1
Surrogate - TCX	43 %
Date Extracted	08.02.98
Date Analyzed	08.07.98
Dilution factor	1.0

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CC: Mr. Alan G. Faust

Contract No.: S7219
Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By:
Code: 173590113

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-5	OWR-3S	07-29-98/1417

PARAMETER	84581-5
Volatiles by GC/MS (8260)	
Methylene chloride (Dichloromethane), ug/l	<5.0
1,1,2,2-Tetrachloroethane, ug/l	<5.0
Chlorobenzene, ug/l	<5.0
Isopropylbenzene, ug/l	<5.0
Surrogate - Toluene-d8	90 %
Surrogate - 4-Bromofluorobenzene	98 %
Surrogate - Dibromofluoromethane	92 %
Date Analyzed	08.04.98
Dilution factor	1.0
Batch ID	1A0804
Clock ID	1A0804

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Sampled By:
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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-5	OWR-3S	07-29-98/1417

PARAMETER	84581-5				
Acid & Base Neutral Extractables (8270)					
1,4-Dichlorobenzene, ug/l	<10				
1,2-Dichlorobenzene, ug/l	<10				
Phenol, ug/l	<10				
2,4-Dichlorophenol, ug/l	<10				
2,4,6-Trichlorophenol, ug/l	<10				
Pentachlorophenol, ug/l	<1.0				
4-Nitrophenol, ug/l	<50				
2,4,5-Trichlorophenol, ug/l	<10				
o,o,o-Triethyl phosphorothioate, ug/l	<10				
Surrogate-2FP	61 %				
Surrogate-PHL	67 %				
Surrogate-NBZ	68 %				
Surrogate-2FBP	62 %				
Surrogate-TBP	64 %				
Surrogate-TPH	42 %				
Date Extracted	08.03.98				
Date Analyzed	08.16.98				
Dilution factor	1.0				
Batch ID	0803E				
Instrument ID	MSG5970				

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Sampled By:
Code: 172590113

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-5	OWR-3S	07-29-98/1417

PARAMETER	84581-5
Organophosphorus Pesticides (8141)	
Methyl Parathion, ug/l	<0.50
Tetraethyl dithiopyrophosphate (Sulfotepp), ug/l	<0.50
Ethyl Parathion, ug/l	<1.0
Date Extracted	08.03.98
Date Analyzed	08.17.98
PCB's (8081/See Qualifier Z)	
PCB-1016, ug/l	0
PCB-1221, ug/l	0
PCB-1232, ug/l	0
PCB-1242, ug/l	0
PCB-1248, ug/l	0
PCB-1254, ug/l	0
PCB-1260, ug/l	0
Total Polychlorinated Biphenyls, ug/l	0
Surrogate - TCX	65 %
Date Extracted	08.02.98
Date Analyzed	08.07.98
Dilution factor	1.0
Arsenic (6010)	
Arsenic, mg/l	<0.010
Preparation Date	08.03.98
Date Analyzed	08.04.98
Dilution factor	1.0
Batch ID	0803I

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Project: 983-3223.002/MONSANTO RFI-ANNISTON

Sampled By: Client

Code: 103121015

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-5	OWR-3S	07-29-98/1417

PARAMETER	84581-5
PCB's (8081/See Qualifier Z) (608)	
PCB-1016, ug/l	<1
PCB-1221, ug/l	<1
PCB-1232, ug/l	<1
PCB-1242, ug/l	<1
PCB-1248, ug/l	<1
PCB-1254, ug/l	<1
PCB-1260, ug/l	<1
Total Polychlorinated Biphenyls, ug/l	<1
Surrogate - TCX	65 %
Date Extracted	08.02.98
Date Analyzed	08.07.98
Dilution factor	1.0

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-5	OWR-3S	07-29-98/1417

PARAMETER	84581-5		
Barium (6010)			
Barium, mg/l	0.038		
Preparation Date	08.03.98		
Date Analyzed	08.04.98		
Dilution factor	1.0		
Batch ID	0803I		
Beryllium (6010)			
Beryllium, mg/l	<0.0040		
Preparation Date	08.03.98		
Date Analyzed	08.04.98		
Dilution factor	1.0		
Batch ID	0803I		
Cadmium (6010)			
Cadmium, mg/l	<0.0050		
Preparation Date	08.03.98		
Date Analyzed	08.04.98		
Dilution factor	1.0		
Batch ID	0803I		
Chromium (6010)			
Chromium, mg/l	<0.010		
Preparation Date	08.03.98		
Date Analyzed	08.04.98		
Dilution factor	1.0		
Batch ID	0803I		

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-5	OWR-3S	07-29-98/1417

PARAMETER	84581-5
Cobalt (6010)	
Cobalt, mg/l	<0.010
Preparation Date	08.03.98
Date Analyzed	08.04.98
Dilution factor	1.0
Batch ID	0803I
Lead (7421)	
Lead, mg/l	<0.0050
Preparation Date	08.03.98
Date Analyzed	08.04.98
Dilution factor	1.0
Batch ID	0803J
Manganese (6010)	
Manganese, mg/l	0.27
Preparation Date	08.03.98
Date Analyzed	08.04.98
Dilution factor	1.0
Batch ID	0803I
Mercury (7470)	
Mercury, mg/l	0.00025
Preparation Date	08.04.98
Date Analyzed	08.05.98
Dilution factor	1.0
Batch ID	0804T

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Revised 9/1/98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

Contract No.: S7219

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON

Sampled By:
Code: 172590113

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-5	OWR-3S	07-29-98/1417

PARAMETER	84581-5
Nickel (6010)	
Nickel, mg/l	<0.0040
Preparation Date	08.03.98
Date Analyzed	08.04.98
Dilution factor	1.0
Batch ID	0803I
Vanadium (6010)	
Vanadium, mg/l	<0.010
Preparation Date	08.03.98
Date Analyzed	08.04.98
Dilution factor	1.0
Batch ID	0803I

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LOG NO: S8-84581
Received: 31 JUL 98
Reported: 21 AUG 98
Revised 9/1/98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

Contract No.: S7219

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON

Sampled By:

Code: 172590113

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-6	OW-10	07-30-98/1310

PARAMETER	84581-6				
Volatiles by GC/MS (8260)					
Methylene chloride (Dichloromethane), ug/l	<5.0				
1,1,2,2-Tetrachloroethane, ug/l	<5.0				
Chlorobenzene, ug/l	<5.0				
Isopropylbenzene, ug/l	<5.0				
Surrogate - Toluene-d8	90 %				
Surrogate - 4-Bromofluorobenzene	98 %				
Surrogate - Dibromofluoromethane	96 %				
Date Analyzed	08.04.98				
Dilution factor	1.0				
Batch ID	1A0804				
Clock ID	1A0804				

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CC: Mr. Alan G. Faust

Contract No.: S7219
Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By:
Code: 172590113

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-6	OW-10	07-30-98/1310

PARAMETER	84581-6
Acid & Base Neutral Extractables (8270)	
1,4-Dichlorobenzene, ug/l	<10
1,2-Dichlorobenzene, ug/l	<10
Phenol, ug/l	<10
2,4-Dichlorophenol, ug/l	<10
2,4,6-Trichlorophenol, ug/l	<10
Pentachlorophenol, ug/l	<1.0
4-Nitrophenol, ug/l	<50
2,4,5-Trichlorophenol, ug/l	<10
o,o,o-Triethyl phosphorothioate, ug/l	<10
Surrogate-2FP	62 %
Surrogate-PHL	65 %
Surrogate-NBZ	74 %
Surrogate-2FBP	68 %
Surrogate-TBP	71 %
Surrogate-TPH	69 %
Date Extracted	08.03.98
Date Analyzed	08.16.98
Dilution factor	1.0
Batch ID	0803E
Instrument ID	MSG5970

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Revised 9/1/98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

Contract No.: S7219

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON

Sampled By:

Code: 172590112

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-6	OW-10	07-30-98/1310

PARAMETER	84581-6
Organophosphorus Pesticides (8141)	
Methyl Parathion, ug/l	<0.50
Tetraethyl dithiopyrophosphate (Sulfotepp), ug/l	<0.50
Ethyl Parathion, ug/l	<1.0
Date Extracted	08.03.98
Date Analyzed	08.17.98
PCB's (8081/See Qualifier Z)	
PCB-1016, ug/l	0
PCB-1221, ug/l	0
PCB-1232, ug/l	0
PCB-1242, ug/l	0
PCB-1248, ug/l	0
PCB-1254, ug/l	0
PCB-1260, ug/l	0
Total Polychlorinated Biphenyls, ug/l	0
Surrogate - TCX	55 %
Date Extracted	08.02.98
Date Analyzed	08.07.98
Dilution factor	1.0
Arsenic (6010)	
Arsenic, mg/l	<0.010
Preparation Date	08.03.98
Date Analyzed	08.05.98
Dilution factor	1.0
Batch ID	0803I

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LOG NO: S8-84581
Received: 31 JUL 98
Reported: 21 AUG 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

Contract No.: S7219
CC: Mr. Alan G. Faust Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 103121015

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-6	OW-10	07-30-98/1310

PARAMETER	84581-6
PCB's (8081/See Qualifier Z) (608)	
PCB-1016, ug/l	<1
PCB-1221, ug/l	<1
PCB-1232, ug/l	<1
PCB-1242, ug/l	<1
PCB-1248, ug/l	<1
PCB-1254, ug/l	<1
PCB-1260, ug/l	<1
Total Polychlorinated Biphenyls, ug/l	<1
Surrogate - TCX	55 %
Date Extracted	08.02.98
Date Analyzed	08.07.98
Dilution factor	1.0

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LOG NO: S8-84581
Received: 31 JUL 98
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Client PO. No.: 8263-1-0006

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

CC: Mr. Alan G. Faust

Contract No.: S7219
Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By:
Code: 172590113

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-6	OW-10	07-30-98/1310

PARAMETER	84581-6
Barium (6010)	
Barium, mg/l	1.0
Preparation Date	08.03.98
Date Analyzed	08.05.98
Dilution factor	1.0
Batch ID	0803I
Beryllium (6010)	
Beryllium, mg/l	0.0068
Preparation Date	08.03.98
Date Analyzed	08.05.98
Dilution factor	1.0
Batch ID	0803I
Cadmium (6010)	
Cadmium, mg/l	<0.0050
Preparation Date	08.03.98
Date Analyzed	08.05.98
Dilution factor	1.0
Batch ID	0803I
Chromium (6010)	
Chromium, mg/l	<0.010
Preparation Date	08.03.98
Date Analyzed	08.05.98
Dilution factor	1.0
Batch ID	0803I

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CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON

Sampled By:

Code: 172590113

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-6	OW-10	07-30-98/1310

PARAMETER	84581-6
Cobalt (6010)	
Cobalt, mg/l	0.052
Preparation Date	08.03.98
Date Analyzed	08.05.98
Dilution factor	1.0
Batch ID	0803I
Lead (7421)	
Lead, mg/l	<0.0050
Preparation Date	08.03.98
Date Analyzed	08.04.98
Dilution factor	1.0
Batch ID	0803J
Manganese (6010)	
Manganese, mg/l	1.5
Preparation Date	08.03.98
Date Analyzed	08.05.98
Dilution factor	1.0
Batch ID	0803I
Mercury (7470)	
Mercury, mg/l	0.050
Preparation Date	08.04.98
Date Analyzed	08.05.98
Dilution factor	10
Batch ID	0804T

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Sampled By:
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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-6	OW-10	07-30-98/1310

PARAMETER	84581-6
Nickel (6010)	
Nickel, mg/l	0.063
Preparation Date	08.03.98
Date Analyzed	08.05.98
Dilution factor	1.0
Batch ID	0803I
Vanadium (6010)	
Vanadium, mg/l	<0.010
Preparation Date	08.03.98
Date Analyzed	08.05.98
Dilution factor	1.0
Batch ID	0803I
Total Organic Carbon (9060)	
Total Organic Carbon, mg/l	<1.0
Preparation Date	08.04.98
Date Analyzed	08.04.98
Dilution factor	1.0
Batch ID	0804B
Total Organic Halogen (9020A)	
Total Organic Halogen , mg/l	0.13*F14
Preparation Date	08.04.98
Date Analyzed	08.04.98
Dilution factor	2.0
Batch ID	0804A

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-6	OW-10	07-30-98/1310

PARAMETER	84581-6				
Sulfide (376.2)					
Sulfide , mg/l	<0.10				
Preparation Date	08.03.98				
Date Analyzed	08.03.98				
Dilution factor	1.0				
Batch ID	0803A				
Phenolics, Total Recoverable (9065)					
Phenolics, Total Recoverable, mg/l	<0.050				
Preparation Date	08.05.98				
Date Analyzed	08.05.98				
Dilution factor	1.0				
Batch ID	0805A				

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CC: Mr. Alan G. Faust

Contract No.: S7219
Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By:
Code: 172590112

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-7	CB-8S	07-28-98
84581-8	OWR-2D	07-29-98/1300
84581-9	Dupe	

PARAMETER	84581-7	84581-8	84581-9
Volatiles by GC/MS (8260)			
Methylene chloride (Dichloromethane), ug/l	<5.0	<5.0	<5.0
1,1,2,2-Tetrachloroethane, ug/l	<5.0	<5.0	<5.0
Chlorobenzene, ug/l	<5.0	<5.0	<5.0
Isopropylbenzene, ug/l	<5.0	<5.0	<5.0
Surrogate - Toluene-d8	90 %	90 %	88 %
Surrogate - 4-Bromofluorobenzene	98 %	98 %	100 %
Surrogate - Dibromofluoromethane	92 %	92 %	90 %
Date Analyzed	08.04.98	08.05.98	08.05.98
Dilution factor	1.0	1.0	1.0
Batch ID	1A0804	1A0804	1A0805
Clock ID	1A0804	1A0804	1A0805

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Contract No.: S7219
Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By:
Code: 172590113

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-7	CB-8S	07-28-98
84581-8	OWR-2D	07-29-98/1300
84581-9	Dupe	

PARAMETER	84581-7	84581-8	84581-9
Acid & Base Neutral Extractables (8270)			
1,4-Dichlorobenzene, ug/l	<10	<10	<10
1,2-Dichlorobenzene, ug/l	<10	<10	<10
Phenol, ug/l	<10	<10	<10
2,4-Dichlorophenol, ug/l	<10	<10	<10
2,4,6-Trichlorophenol, ug/l	<10	<10	<10
Pentachlorophenol, ug/l	<1.0	<1.0	<1.0
4-Nitrophenol, ug/l	<50	<50	<50
2,4,5-Trichlorophenol, ug/l	<10	<10	<10
o,o,o-Triethyl phosphorothioate, ug/l	<10	<10	<10
Surrogate-2FP	62 %	62 %	45 %
Surrogate-PHL	66 %	62 %	50 %
Surrogate-NBZ	70 %	72 %	54 %
Surrogate-2FBP	64 %	68 %	52 %
Surrogate-TBP	66 %	66 %	49 %
Surrogate-TPH	68 %	72 %	56 %
Date Extracted	08.03.98	08.03.98	08.03.98
Date Analyzed	08.16.98	08.16.98	08.16.98
Dilution factor	1.0	1.0	1.0
Batch ID	0803E	0803E	0803E
Instrument ID	MSG5970	MSG5970	MSG5970

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Sampled By:
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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-7	CB-8S	07-28-98
84581-8	OWR-2D	07-29-98/1300
84581-9	Dupe	

PARAMETER	84581-7	84581-8	84581-9
Organophosphorus Pesticides (8141)			
Methyl Parathion, ug/l	<0.50	<0.50	<0.50
Tetraethyl dithiopyrophosphate (Sulfotepp), ug/l	<0.50	<0.50	<0.50
Ethyl Parathion, ug/l	<1.0	<1.0	<1.0
Date Extracted	08.03.98	08.03.98	08.03.98
Date Analyzed	08.17.98	08.17.98	08.17.98
PCB's (8081/See Qualifier Z)			
PCB-1016, ug/l	0	0	0
PCB-1221, ug/l	0	0	0
PCB-1232, ug/l	0	0	0
PCB-1242, ug/l	0	0	0
PCB-1248, ug/l	0	0	0
PCB-1254, ug/l	0	0	0
PCB-1260, ug/l	0	0	0
Total Polychlorinated Biphenyls, ug/l	0	0	0
Surrogate - TCX	47 %	37 %	44 %
Date Extracted	08.02.98	08.02.98	08.02.98
Date Analyzed	08.07.98	08.07.98	08.07.98
Dilution factor	1.0	1.0	1.0

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Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

Contract No.: S7219

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON

Sampled By: Client

Code: 103121015

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-7	CB-8S	07-28-98
84581-8	OWR-2D	07-29-98/1300
84581-9	Dupe	

PARAMETER	84581-7	84581-8	84581-9
PCB's (8081/See Qualifier Z) (608)			
PCB-1016, ug/l	<1	<1	<1
PCB-1221, ug/l	<1	<1	<1
PCB-1232, ug/l	<1	<1	<1
PCB-1242, ug/l	<1	<1	<1
PCB-1248, ug/l	<1	<1	<1
PCB-1254, ug/l	<1	<1	<1
PCB-1260, ug/l	<1	<1	<1
Total Polychlorinated Biphenyls, ug/l	<1	<1	<1
Surrogate - TCX	47 %	37 %	44 %
Date Extracted	08.02.98	08.02.98	08.02.98
Date Analyzed	08.07.98	08.07.98	08.07.98
Dilution factor	1.0	1.0	1.0

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Contract No.: S7219
Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By:
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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-7	CB-8S	07-28-98
84581-8	OWR-2D	07-29-98/1300
84581-9	Dupe	

PARAMETER	84581-7	84581-8	84581-9
Arsenic (6010)			
Arsenic, mg/l	<0.010	<0.010	<0.010
Preparation Date	08.03.98	08.03.98	08.03.98
Date Analyzed	08.05.98	08.05.98	08.05.98
Dilution factor	1.0	1.0	1.0
Batch ID	0803I	0803I	0803I
Barium (6010)			
Barium, mg/l	<0.010	0.029	0.034
Preparation Date	08.03.98	08.03.98	08.03.98
Date Analyzed	08.05.98	08.05.98	08.05.98
Dilution factor	1.0	1.0	1.0
Batch ID	0803I	0803I	0803I
Beryllium (6010)			
Beryllium, mg/l	<0.0040	<0.0040	<0.0040
Preparation Date	08.03.98	08.03.98	08.03.98
Date Analyzed	08.05.98	08.05.98	08.05.98
Dilution factor	1.0	1.0	1.0
Batch ID	0803I	0803I	0803I

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Contract No.: S7219
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Sampled By:
Code: 172590113

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-7	CB-8S	07-28-98
84581-8	OWR-2D	07-29-98/1300
84581-9	Dupe	

PARAMETER	84581-7	84581-8	84581-9
Cadmium (6010)			
Cadmium, mg/l	<0.0050	<0.0050	<0.0050
Preparation Date	08.03.98	08.03.98	08.03.98
Date Analyzed	08.05.98	08.05.98	08.05.98
Dilution factor	1.0	1.0	1.0
Batch ID	0803I	0803I	0803I
Chromium (6010)			
Chromium, mg/l	<0.010	<0.010	<0.010
Preparation Date	08.03.98	08.03.98	08.03.98
Date Analyzed	08.05.98	08.05.98	08.05.98
Dilution factor	1.0	1.0	1.0
Batch ID	0803I	0803I	0803I
Cobalt (6010)			
Cobalt, mg/l	<0.010	<0.010	<0.010
Preparation Date	08.03.98	08.03.98	08.03.98
Date Analyzed	08.05.98	08.05.98	08.05.98
Dilution factor	1.0	1.0	1.0
Batch ID	0803I	0803I	0803I

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CC: Mr. Alan G. Faust

Contract No.: S7219
Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By:
Code: 172590113

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-7	CB-8S	07-28-98
84581-8	OWR-2D	07 29 98/1300
84581-9	Dupe	

PARAMETER	84581-7	84581-8	84581-9
Lead (7421)			
Lead, mg/l	<0.0050	<0.0050	<0.0050
Preparation Date	08.03.98	08.03.98	08.03.98
Date Analyzed	08.04.98	08.04.98	08.04.98
Dilution factor	1.0	1.0	1.0
Batch ID	0803J	0803J	0803J
Manganese (6010)			
Manganese, mg/l	0.035	0.13	0.14
Preparation Date	08.03.98	08.03.98	08.03.98
Date Analyzed	08.05.98	08.05.98	08.05.98
Dilution factor	1.0	1.0	1.0
Batch ID	0803I	0803I	0803I
Mercury (7470)			
Mercury, mg/l	<0.00020	<0.00020	<0.00020
Preparation Date	08.04.98	08.04.98	08.04.98
Date Analyzed	08.05.98	08.05.98	08.05.98
Dilution factor	1.0	1.0	1.0
Batch ID	0804T	0804T	0804T

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354 7858 • Fax (912) 352-0165

LOG NO: S8-84581
Received: 31 JUL 98
Reported: 21 AUG 98
Revised 9/1/98
Client PO. No.: 8263-1-0006

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

CC: Mr. Alan G. Faust

Contract No.: S7219
Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By:
Code: 172590113

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-7	CB-8S	07-28-98
84581-8	OWR-2D	07-29-98/1300
84581-9	Dupe	

PARAMETER	84581-7	84581-8	84581-9
Nickel (6010)			
Nickel, mg/l	<0.0040	<0.0040	<0.0040
Preparation Date	08.03.98	08.03.98	08.03.98
Date Analyzed	08.05.98	08.05.98	08.05.98
Dilution factor	1.0	1.0	1.0
Batch ID	0803I	0803I	0803I
Vanadium (6010)			
Vanadium, mg/l	<0.010	<0.010	<0.010
Preparation Date	08.03.98	08.03.98	08.03.98
Date Analyzed	08.05.98	08.05.98	08.05.98
Dilution factor	1.0	1.0	1.0
Batch ID	0803I	0803I	0803I
Total Organic Carbon (9060)			
Total Organic Carbon, mg/l	<1.0	<1.0	<1.0
Preparation Date	08.04.98	08.04.98	08.04.98
Date Analyzed	08.04.98	08.04.98	08.04.98
Dilution factor	1.0	1.0	1.0
Batch ID	0804B	0804B	0804B

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Atlanta, GA 30341

Client PO. No.: 8263-1-0006

Contract No.: S7219

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON

Sampled By:

Code: 172590113

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-7	CB-8S	07-28-98
84581-8	OWR-2D	07-29-98/1300
84581-9	Dupe	

PARAMETER	84581-7	84581-8	84581-9
Phosphorus, Total (365.4)			
Total Phosphorus, mg/l	<0.044	<0.044	<0.044
Preparation Date	07.31.98	07.31.98	07.31.98
Date Analyzed	08.03.98	08.03.98	08.03.98
Dilution factor	1.0	1.0	1.0
Batch ID	0731A	0731A	0731A
Total Kjeldahl Nitrogen (351.2)			
Total Kjeldahl Nitrogen-N, mg/l	0.36	0.71	0.54
Preparation Date	07.31.98	07.31.98	07.31.98
Date Analyzed	08.10.98	08.10.98	08.10.98
Dilution factor	1.0	1.0	1.0
Batch ID	0731A	0731A	0731A
Total Organic Halogen (9020A)			
Total Organic Halogen , mg/l	<0.010	0.032	0.028*R14
Preparation Date	08.04.98	08.04.98	08.04.98
Date Analyzed	08.04.98	08.04.98	08.04.98
Dilution factor	1.0	2.0	2.0
Batch ID	0804A	0804A	0804A

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Sampled By:
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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-7	CB-8S	07-28-98
84581-8	OWR-2D	07-29-98/1300
84581-9	Dupe	

PARAMETER	84581-7	84581-8	84581-9
Sulfide (376.2)			
Sulfide , mg/l	<0.10	<0.10	<0.10
Preparation Date	08.03.98	08.03.98	08.03.98
Date Analyzed	08.03.98	08.03.98	08.03.98
Dilution factor	1.0	1.0	1.0
Batch ID	0803A	0803A	0803A
Phenolics, Total Recoverable (9065)			
Phenolics, Total Recoverable, mg/l	<0.050	<0.050	<0.050
Preparation Date	08.05.98	08.05.98	08.05.98
Date Analyzed	08.05.98	08.05.98	08.05.98
Dilution factor	1.0	1.0	1.0
Batch ID	0805A	0805A	0805A

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Contract No.: S7219
Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By:
Code: 172590113

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-10	MW-1B-F	07-29-98/1600
84581-11	CB-8S-F	07-29-98/1630
84581-12	OWR-3S-F	07-29-98/1205
84581-13	OWR-2D-F	07-29-98/1120
84581-14	Dupe-F	

PARAMETER	84581-10	84581-11	84581-12	84581-13	84581-14
PCB's (8081/See Qualifier Z)					
PCB-1016, ug/l	0	0	0	0	0
PCB-1221, ug/l	0	0	0	0	0
PCB-1232, ug/l	0	0	0	0	0
PCB-1242, ug/l	0	0	0	0	0
PCB-1248, ug/l	0	0	0	0	0
PCB-1254, ug/l	0	0	0	0	0
PCB-1260, ug/l	0	0	0	0	0
Total Polychlorinated Biphenyls, ug/l	0	0	0	0	0
Surrogate - TCX	65 %	70 %	70 %	55 %	60 %
Date Extracted	08.02.98	08.02.98	08.02.98	08.02.98	08.02.98
Date Analyzed	08.07.98	08.07.98	08.07.98	08.07.98	08.07.98
Dilution factor	1.0	1.0	1.0	1.0	1.0
Arsenic (6010)					
Arsenic, mg/l	<0.010	<0.010	<0.010	<0.010	<0.010
Preparation Date	08.03.98	08.03.98	08.03.98	08.03.98	08.03.98
Date Analyzed	08.05.98	08.05.98	08.05.98	08.05.98	08.05.98
Dilution factor	1.0	1.0	1.0	1.0	1.0
Batch ID	0803I	0803I	0803I	0803I	0803I

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LOG NO: S8-84581
Received: 31 JUL 98
Reported: 21 AUG 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

Contract No.: S7219
CC: Mr. Alan G. Faust Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 103121015

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-10	MW-1B-F	07-29-98/1600
84581-11	CB-8S-F	07-29-98/1630
84581-12	OWR-3S-F	07-29-98/1205
84581-13	OWR-2D-F	07-29-98/1120
84581-14	Dupe-F	

PARAMETER	84581-10	84581-11	84581-12	84581-13	84581-14
PCB's (8081/See Qualifier Z) (608)					
PCB-1016, ug/l	<1	<1	<1	<1	<1
PCB-1221, ug/l	<1	<1	<1	<1	<1
PCB-1232, ug/l	<1	<1	<1	<1	<1
PCB-1242, ug/l	<1	<1	<1	<1	<1
PCB-1248, ug/l	<1	<1	<1	<1	<1
PCB-1254, ug/l	<1	<1	<1	<1	<1
PCB-1260, ug/l	<1	<1	<1	<1	<1
Total Polychlorinated Biphenyls, ug/l	<1	<1	<1	<1	<1
Surrogate - TCX	65 %	70 %	70 %	55 %	60 %
Date Extracted	08.02.98	08.02.98	08.02.98	08.02.98	08.02.98
Date Analyzed	08.07.98	08.07.98	08.07.98	08.07.98	08.07.98
Dilution factor	1.0	1.0	1.0	1.0	1.0

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Contract No.: S7219
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Sampled By:
Code: 172590113

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-10	MW-1B-F	07-29-98/1600
84581-11	CB-9S-F	07-29-98/1630
84581-12	OWR-3S-F	07-29-98/1205
84581-13	OWR-2D-F	07-29-98/1120
84581-14	Dupe-F	

PARAMETER	84581-10	84581-11	84581-12	84581-13	84581-14
Barium (6010)					
Barium, mg/l	<0.010	<0.010	0.043	0.017	0.016
Preparation Date	08.03.98	08.03.98	08.03.98	08.03.98	08.03.98
Date Analyzed	08.05.98	08.05.98	08.05.98	08.05.98	08.05.98
Dilution factor	1.0	1.0	1.0	1.0	1.0
Batch ID	08031	08031	08031	08031	08031
Beryllium (6010)					
Beryllium, mg/l	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
Preparation Date	08.03.98	08.03.98	08.03.98	08.03.98	08.03.98
Date Analyzed	08.05.98	08.05.98	08.05.98	08.05.98	08.05.98
Dilution factor	1.0	1.0	1.0	1.0	1.0
Batch ID	08031	08031	08031	08031	08031
Cadmium (6010)					
Cadmium, mg/l	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Preparation Date	08.03.98	08.03.98	08.03.98	08.03.98	08.03.98
Date Analyzed	08.05.98	08.05.98	08.05.98	08.05.98	08.05.98
Dilution factor	1.0	1.0	1.0	1.0	1.0
Batch ID	08031	08031	08031	08031	08031

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-10	MW-1B-F	07-29-98/1600
84581-11	CB-8S-F	07-29-98/1630
84581-12	OWR-3S-F	07-29-98/1205
84581-13	OWR-2D-F	07-29-98/1120
84581-14	Dupe-F	

PARAMETER	84581-10	84581-11	84581-12	84581-13	84581-14
Chromium (6010)					
Chromium, mg/l	<0.010	<0.010	<0.010	<0.010	<0.010
Preparation Date	08.03.98	08.03.98	08.03.98	08.03.98	08.03.98
Date Analyzed	08.05.98	08.05.98	08.05.98	08.05.98	08.05.98
Dilution factor	1.0	1.0	1.0	1.0	1.0
Batch ID	0803I	0803I	0803I	0803I	0803I
Cobalt (6010)					
Cobalt, mg/l	<0.010	<0.010	<0.010	<0.010	<0.010
Preparation Date	08.03.98	08.03.98	08.03.98	08.03.98	08.03.98
Date Analyzed	08.05.98	08.05.98	08.05.98	08.05.98	08.05.98
Dilution factor	1.0	1.0	1.0	1.0	1.0
Batch ID	0803I	0803I	0803I	0803I	0803I
Lead (7421)					
Lead, mg/l	<0.0050	0.011	0.015	<0.0050	<0.0050
Preparation Date	08.03.98	08.03.98	08.03.98	08.03.98	08.03.98
Date Analyzed	08.04.98	08.04.98	08.04.98	08.04.98	08.04.98
Dilution factor	1.0	1.0	1.0	1.0	1.0
Batch ID	0803J	0803J	0803J	0803J	0803J

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-10	MW-1B-F	07-29-98/1600
84581-11	CD-03-F	07-29-98/1630
84581-12	OWR-3S-F	07-29-98/1205
84581-13	OWR-2D-F	07-29-98/1120
84581-14	Dupe-F	

PARAMETER	84581-10	84581-11	84581-12	84581-13	84581-14
Manganese (6010)					
Manganese, mg/l	0.025	0.017	0.27	0.013	0.012
Preparation Date	08.03.98	08.03.98	08.03.98	08.03.98	08.03.98
Date Analyzed	08.05.98	08.05.98	08.05.98	08.05.98	08.05.98
Dilution factor	1.0	1.0	1.0	1.0	1.0
Batch ID	0803I	0803I	0803I	0803I	0803I
Mercury (7470)					
Mercury, mg/l	<0.00020	<0.00020	0.00023	<0.00020	<0.00020
Preparation Date	08.04.98	08.04.98	08.04.98	08.04.98	08.04.98
Date Analyzed	08.05.98	08.05.98	08.05.98	08.05.98	08.05.98
Dilution factor	1.0	1.0	1.0	1.0	1.0
Batch ID	0804T	0804T	0804T	0804T	0804T
Nickel (6010)					
Nickel, mg/l	<0.0040	<0.0040	0.0046	<0.0040	<0.0040
Preparation Date	08.03.98	08.03.98	08.03.98	08.03.98	08.03.98
Date Analyzed	08.05.98	08.05.98	08.05.98	08.05.98	08.05.98
Dilution factor	1.0	1.0	1.0	1.0	1.0
Batch ID	0803I	0803I	0803I	0803I	0803I

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84581-12	OWR-3S-F	07-29-98/1205
84581-13	OWR-2D-F	07-29-98/1120
84581-14	Dupe-F	

PARAMETER	84581-10	84581-11	84581-12	84581-13	84581-14
Vanadium (6010)					
Vanadium, mg/l	<0.010	<0.010	<0.010	<0.010	<0.010
Preparation Date	08.03.98	08.03.98	08.03.98	08.03.98	08.03.98
Date Analyzed	08.05.98	08.05.98	08.05.98	08.05.98	08.05.98
Dilution factor	1.0	1.0	1.0	1.0	1.0
Batch ID	0803I	0803I	0803I	0803I	0803I

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-15	Trip Blank	

PARAMETER	84581-15
Volatiles by GC/MS (8260)	
Methylene chloride (Dichloromethane), ug/l	<5.0
1,1,2,2-Tetrachloroethane, ug/l	<5.0
Chlorobenzene, ug/l	<5.0
Isopropylbenzene, ug/l	<5.0
Surrogate - Toluene-d8	86 %
Surrogate - 4-Bromofluorobenzene	104 %
Surrogate - Dibromofluoromethane	96 %
Date Analyzed	08.04.98
Dilution factor	1.0
Batch ID	2A0803
Clock ID	2A0803

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Contract No.: S7219
Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By:
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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-16	Method Blank	
84581-17	Lab Control Standard % Recovery	
84581-18	LCS Accuracy Control Limit (%R)	
84581-19	MS/MSD % Recovery	
84581-20	MS Accuracy Advisory Limit (%R)	

PARAMETER	84581-16	84581-17	84581-18	84581-19	84581-20
Volatiles by GC/MS (8260)					
Methylene chloride (Dichloromethane), ug/l	<5.0	---	---	---	---
1,1,2,2-Tetrachloroethane, ug/l	<5.0	---	---	---	---
Chlorobenzene, ug/l	<5.0	96 %	60-127 %	99/100 %	60-127 %
Isopropylbenzene, ug/l	<5.0	---	---	---	---
Surrogate - Toluene-d8	88 %	90 %	67-134 %	88/88 %	67-134 %
Surrogate - 4-Bromofluorobenzene	100 %	100 %	67-132 %	99/100 %	67-132 %
Surrogate - Dibromofluoromethane	96 %	96 %	64-142 %	90/88 %	64-142 %
Date Analyzed	08.04.98	08.04.98	---	08.05.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	2A0803	2A0803	---	1A0805	---
Clock ID	2A0803	2A0803	---	1A0805	---
1,1-Dichloroethene, %	---	---	---	93/94 %	38-155 %
Trichloroethene, %	---	---	---	96/98 %	10-213 %
Benzene, %	---	---	---	100/102 %	52-143 %
Toluene, %	---	---	---	94/96 %	76-128 %

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LOG NO: S8-84581
Received: 31 JUL 98
Reported: 21 AUG 98
Revised 9/1/98
Client PO. No.: 8263-1-0006

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

CC: Mr. Alan G. Faust

Contract No.: S7219
Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By:
Code: 172590113

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-16	Method Blank	
84581-17	Lab Control Standard % Recovery	
84581-18	LCS Accuracy Control Limit (%R)	
84581-19	MS/MSD % Recovery	
84581-20	MS Accuracy Advisory Limit (%R)	

PARAMETER	84581-16	84581-17	84581-18	84581-19	84581-20
Acid & Base Neutral Extractables (8270)					
1,4-Dichlorobenzene, ug/l	<10	50 %	10-124 %	*F82	*F82
1,2-Dichlorobenzene, ug/l	<10	---	---	---	---
n-Nitrosodi-n-propylamine, ug/l	<10	52 %	34-137 %	---	---
1,2,4-Trichlorobenzene, ug/l	<10	50 %	17-121 %	---	---
Acenaphthene, ug/l	<10	60 %	14-104 %	---	---
2,4-Dinitrotoluene, ug/l	<10	60 %	52-111 %	---	---
Pyrene, ug/l	<10	60 %	43-131 %	---	---
2-Chlorophenol, ug/l	<10	56 %	25-125 %	---	---
Phenol, ug/l	<10	49 %	32-110 %	---	---
2,4-Dichlorophenol, ug/l	<10	---	---	---	---
2,4,6-Trichlorophenol, ug/l	<10	---	---	---	---
4-Chloro-3-methylphenol, ug/l	<10	52 %	23-111 %	---	---
Pentachlorophenol, ug/l	<1.0	50 %	19-123 %	---	---
4-Nitrophenol, ug/l	<50	38 %	13-133 %	---	---
2,4,5-Trichlorophenol, ug/l	<10	---	---	---	---
Surrogate-2FP	59 %	58 %	20-124 %	---	---
Surrogate-PHL	58 %	57 %	16-139 %	---	---
Surrogate-NBZ	64 %	62 %	10-169 %	---	---

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84581-20	MS Accuracy Advisory Limit (%R)	

PARAMETER	84581-16	84581-17	84581-18	84581-19	84581-20
Surrogate-2FBP	62 %	62 %	23-130 %	---	---
Surrogate-TBP	56 %	58 %	24-135 %	---	---
Surrogate-TPH	64 %	60 %	27-147 %	---	---
Date Extracted	08.03.98	08.03.98	---	---	---
Date Analyzed	08.17.98	08.16.98	---	---	---
Dilution Factor	1.0	---	---	---	---
Batch ID	0803E	0803E	---	---	---
Instrument ID	MSG5970	MSG5970	---	---	---
o,o,o-Triethyl phosphorothioate, ug/l	<10	---	---	---	---
Organophosphorus Pesticides (8141)					
Methyl Parathion, ug/l	<0.50	81 %	38-149 %	*F82	*F82
Date Extracted	08.03.98	08.03.98	---	---	---
Date Analyzed	08.17.98	08.17.98	---	---	---
Tetraethyl dithiopyrophosphate (Sulfotepp), ug/l	<0.50	---	---	---	---
Ethyl Parathion, ug/l	<1.0	93 %	28-155 %	---	---

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84581-19	MS/MSD % Recovery	
84581-20	MS Accuracy Advisory Limit (%R)	

PARAMETER	84581-16	84581-17	84581-18	84581-19	84581-20
PCB's (8081/See Qualifier Z)					
PCB-1016, ug/l	0	88 %	43-139 %	*F82	*F82
PCB-1221, ug/l	0	---	---	---	---
PCB-1232, ug/l	0	---	---	---	---
PCB-1242, ug/l	0	---	---	---	---
PCB-1248, ug/l	0	---	---	---	---
PCB-1254, ug/l	0	---	---	---	---
PCB-1260, ug/l	0	68 %	31-152 %	---	---
Total Polychlorinated Biphenyls, ug/l	0	---	---	---	---
Surrogate - TCX	60 %	60 %	---	---	---
Date Extracted	08.02.98	08.02.98	---	---	---
Date Analyzed	08.06.98	08.07.98	---	---	---
Dilution factor	1.0	1.0	---	---	---
Arsenic (6010)					
Arsenic, mg/l	<0.010	103%	75-125 %	102/100 %	75-125 %
Preparation Date	08.03.98	08.03.98	---	08.03.98	---
Date Analyzed	08.04.98	08.04.98	---	08.04.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0803I	0803I	---	0803I	---

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Contract No.: S7219
CC: Mr. Alan G. Faust Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 103121015

REPORT OF RESULTS

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84581-16	Method Blank	
84581-17	Lab Control Standard % Recovery	
84581-18	LCS Accuracy Control Limit (%R)	
84581-19	MS/MSD % Recovery	
84581-20	MS Accuracy Advisory Limit (%R)	

PARAMETER	84581-16	84581-17	84581-18	84581-19	84581-20
PCB's (8081/See Qualifier Z) (608)					
PCB-1016, ug/l	<1	88 %	43-139 %	*F82	*F82
PCB-1221, ug/l	<1	---	---	---	---
PCB-1232, ug/l	<1	---	---	---	---
PCB-1242, ug/l	<1	---	---	---	---
PCB-1248, ug/l	<1	---	---	---	---
PCB-1254, ug/l	<1	---	---	---	---
PCB-1260, ug/l	<1	68 %	31-152 %	---	---
Total Polychlorinated Biphenyls, ug/l	<1	---	---	---	---
Surrogate - TCX	60 %	60 %	---	---	---
Date Extracted	08.02.98	08.02.98	---	---	---
Date Analyzed	08.06.98	08.07.98	---	---	---
Dilution factor	1.0	1.0	---	---	---

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Sampled By:
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84581-17	Lab Control Standard % Recovery	
84581-18	LCS Accuracy Control Limit (%R)	
84581-19	MS/MSD % Recovery	
84581-20	MS Accuracy Advisory Limit (%R)	

PARAMETER	84581-16	84581-17	84581-18	84581-19	84581-20
Barium (6010)					
Barium, mg/l	<0.010	105%	75-125 %	105/104 %	75-125 %
Preparation Date	08.03.98	08.03.98	---	08.03.98	---
Date Analyzed	08.04.98	08.04.98	---	08.04.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	08031	08031	---	0803I	---
Beryllium (6010)					
Beryllium, mg/l	<0.0040	108%	75-125 %	106/104 %	75-125 %
Preparation Date	08.03.98	08.03.98	---	08.03.98	---
Date Analyzed	08.04.98	08.04.98	---	08.04.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	08031	08031	---	0803I	---
Cadmium (6010)					
Cadmium, mg/l	<0.0050	109%	75-125 %	106/105 %	75-125 %
Preparation Date	08.03.98	08.03.98	---	08.03.98	---
Date Analyzed	08.04.98	08.04.98	---	08.04.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	08031	0803I	---	0803I	---

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84581-19	MS/MSD % Recovery	
84581-20	MS Accuracy Advisory Limit (%R)	

PARAMETER	84581-16	84581-17	84581-18	84581-19	84581-20
Chromium (6010)					
Chromium, mg/l	<0.010	112%	75-125 %	112/110 %	75-125 %
Preparation Date	08.03.98	08.03.98	---	08.03.98	---
Date Analyzed	08.04.98	08.04.98	---	08.04.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0803I	0803I	---	0803I	---
Cobalt (6010)					
Cobalt, mg/l	<0.010	106%	75-125 %	106/104 %	75-125 %
Preparation Date	08.03.98	08.03.98	---	08.03.98	---
Date Analyzed	08.04.98	08.04.98	---	08.04.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0803I	0803I	---	0803I	---
Lead (7421)					
Lead, mg/l	<0.0050	83 %	80-120 %	95/86 %	75-125 %
Preparation Date	08.03.98	08.03.98	---	08.03.98	---
Date Analyzed	08.04.98	08.04.98	---	08.04.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0803J	0803J	---	0803J	---

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84581-19	MS/MSD % Recovery	
84581-20	MS Accuracy Advisory Limit (%R)	

PARAMETER	84581-16	84581-17	84581-18	84581-19	84581-20
Manganese (6010)					
Manganese, mg/l	<0.010	112%	75-125 %	111/109 %	75-125 %
Preparation Date	08.03.98	08.03.98	---	08.03.98	---
Date Analyzed	08.04.98	08.04.98	---	08.04.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	08031	08031	---	08031	---
Mercury (7470)					
Mercury, mg/l	<0.00020	101 %	80-120 %	71/67 %*F	80-120 %
Preparation Date	08.04.98	08.04.98	---	08.04.98	---
Date Analyzed	08.05.98	08.05.98	---	08.05.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	08041	08041	---	08041	---
Nickel (6010)					
Nickel, mg/l	<0.0040	106%	75-125 %	105/103 %	75-125 %
Preparation Date	08.03.98	08.03.98	---	08.03.98	---
Date Analyzed	08.04.98	08.04.98	---	08.04.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	08031	08031	---	08031	---

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84581-20	MS Accuracy Advisory Limit (%R)	

PARAMETER	84581-16	84581-17	84581-18	84581-19	84581-20
Vanadium (6010)					
Vanadium, mg/l	<0.010	106%	75-125 %	105/103 %	75-125 %
Preparation Date	08.03.98	08.03.98	---	08.03.98	---
Date Analyzed	08.04.98	08.04.98	---	08.04.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0803I	0803I	---	0803I	---
Total Organic Carbon (9060)					
Total Organic Carbon, mg/l	<1.0	99 %	80-120 %	78/72 %	80-120 %
Preparation Date	08.04.98	08.04.98	---	08.04.98	---
Date Analyzed	08.04.98	08.04.98	---	08.04.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0804B	0804B	---	0804B	---
Sulfide (376.2)					
Sulfide , mg/l	<0.10	90 %	80-120 %	102/94 %	80-120 %
Preparation Date	08.03.98	08.03.98	---	08.03.98	---
Date Analyzed	08.03.98	08.03.98	---	08.03.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0803A	0803A	---	0803A	---

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84581-19	MS/MSD % Recovery	
84581-20	MS Accuracy Advisory Limit (%R)	

PARAMETER	84581-16	84581-17	84581-18	84581-19	84581-20
Sulfate as SO4 (375.4)					
Sulfate as SO4, mg/l	<5.0	75 %	75-125 %	125/102 %	75-125 %
Preparation Date	08.07.98	08.07.98	---	08.07.92	---
Date Analyzed	08.07.98	08.07.98	---	08.07.92	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0807A	0807A	---	0807A	---
Nitrate-N (353.2)					
Nitrate-N, mg/l	<0.050	94 %	80-120 %	74/55 %	80-120 %
Preparation Date	07.31.98	07.31.98	---	07.31.98	---
Date Analyzed	07.31.98	07.31.98	---	07.31.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0803B	0803B	---	0803B	---
Total Dissolved Solids (160.1)					
Total Dissolved Solids, mg/l	<5.0	93 %	80-120 %	*F82	*F82
Preparation Date	08.04.98	08.04.98	---	---	---
Date Analyzed	08.04.98	08.04.98	---	---	---
Dilution factor	1.0	1.0	---	---	---
Batch ID	0804A	0804A	---	---	---

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84581-20	MS Accuracy Advisory Limit (%R)	

PARAMETER	84581-16	84581-17	84581-18	84581-19	84581-20
Suspended Solids (160.2)					
Suspended Solids, mg/l	<5.0	102 %	80-120 %	*F82	*F82
Preparation Date	08.04.98	08.04.98	---	---	---
Date Analyzed	08.04.98	08.04.98	---	---	---
Dilution factor	1.0	1.0	---	---	---
Batch ID	0804A	0804A	---	---	---
Alkalinity (to pH 4.5) as CaCO3 (310.1)					
Alkalinity (to pH 4.5) as CaCO3, mg/l	<1.0	105 %	80-120 %	*F82	*F82
Preparation Date	08.06.98	08.06.98	---	---	---
Date Analyzed	08.06.98	08.06.98	---	---	---
Dilution factor	1.0	1.0	---	---	---
Batch ID	0806A	0806A	---	---	---
Phenolics, Total Recoverable (9065)					
Phenolics, Total Recoverable, mg/l	<0.050	112 %	75-125 %	105/107 %	75-125 %
Preparation Date	08.05.98	08.05.98	---	08.05.98	---
Date Analyzed	08.05.98	08.05.98	---	08.05.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0805A	0805A	---	0805A	---

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PARAMETER	84581-16	84581-17	84581-18	84581-19	84581-20
Phosphorus, Total (365.4)					
Total Phosphorus, mg/l	<0.044	109 %	60-140 %	100/101 %	60-140 %
Preparation Date	07.31.98	07.31.98	---	07.31.98	---
Date Analyzed	08.03.98	08.03.98	---	08.03.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0731A	0731A	---	0731A	---
Total Kjeldahl Nitrogen (351.2)					
Total Kjeldahl Nitrogen-N, mg/l	<0.20	81 %	75-125 %	54/54 %	75-125 %
Preparation Date	07.31.98	07.31.98	---	07.31.98	---
Date Analyzed	08.10.98	08.10.98	---	08.10.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0731A	0731A	---	0731A	---
Total Organic Halogen (9020A)					
Total Organic Halogen , mg/l	<0.010	97 %	60-140 %	99/88 %	60-140 %
Preparation Date	08.04.98	08.04.98	---	08.04.98	---
Date Analyzed	08.04.98	08.04.98	---	08.04.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0804A	0804A	---	0804A	---

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& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-84581
Received: 31 JUL 98
Reported: 21 AUG 98
Revised 9/1/98
Client PO. No.: 8263-1-0006

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

CC: Mr. Alan G. Faust

Contract No.: S7219
Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By:
Code: 172590113

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-21	Analyst (First Initial, Last Name)	

PARAMETER	84581-21
Volatiles by GC/MS (8260)	
Methylene chloride (Dichloromethane)	R.AHMED
1,1-Dichloroethene	R.AHMED
1,1,2,2-Tetrachloroethane	R.AHMED
Trichloroethene	R.AHMED
Benzene	R.AHMED
Toluene	R.AHMED
Chlorobenzene	R.AHMED
Isopropylbenzene	R.AHMED
Surrogate - Toluene-d8	R.AHMED
Surrogate - 4-Bromofluorobenzene	R.AHMED
Surrogate - Dibromofluoromethane	R.AHMED

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

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Golder Associates, Inc.
3730 Chamblee Tucker Road
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CC: Mr. Alan G. Faust

Contract No.: S7219
Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By:
Code: 172590113

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-21	Analyst (First Initial, Last Name)	
PARAMETER	84581-21	
Acid & Base Neutral Extractables (8270)		
1,4-Dichlorobenzene	K.HUMPHREY	
1,2-Dichlorobenzene	K.HUMPHREY	
n-Nitrosodi-n-propylamine	K.HUMPHREY	
1,2,4-Trichlorobenzene	K.HUMPHREY	
Acenaphthene	K.HUMPHREY	
2,4-Dinitrotoluene	K.HUMPHREY	
Pyrene	K.HUMPHREY	
2-Chlorophenol	K.HUMPHREY	
Phenol	K.HUMPHREY	
2,4-Dichlorophenol	K.HUMPHREY	
2,4,6-Trichlorophenol	K.HUMPHREY	
4-Chloro-3-methylphenol	K.HUMPHREY	
Pentachlorophenol	K.HUMPHREY	
4-Nitrophenol	K.HUMPHREY	
2,4,5-Trichlorophenol	K.HUMPHREY	
o,o,o-Triethyl phosphorothioate	K.HUMPHREY	
Organophosphorus Pesticides (8141)		
Methyl Parathion	K.HOANG	
Tetraethyl dithiopyrophosphate (Sulfotepp)	K.HOANG	
Ethyl Parathion	K.HOANG	

SL SAVANNAH LABORATORIES
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LOG NO: S8-84581
Received: 31 JUL 98
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Revised 9/1/98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

Contract No.: S7219

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON

Sampled By:

Code: 172590113

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-21	Analyst (First Initial, Last Name)	
PARAMETER	84581-21	
PCB's (8081/See Qualifier Z)		
PCB-1016	J.SCHUMAC	
PCB-1221	J.SCHUMAC	
PCB-1232	J.SCHUMAC	
PCB-1242	J.SCHUMAC	
PCB-1248	J.SCHUMAC	
PCB-1254	J.SCHUMAC	
PCB-1260	J.SCHUMAC	
Total Polychlorinated Biphenyls	J.SCHUMAC	
Arsenic (6010)		
Arsenic	A.BRAZELL	
Barium (6010)		
Barium	A.BRAZELL	
Beryllium (6010)		
Beryllium	A.BRAZELL	
Cadmium (6010)		
Cadmium	A.BRAZELL	
Chromium (6010)		
Chromium	A.BRAZELL	
Cobalt (6010)		
Cobalt	A.BRAZELL	
Lead (7421)		
Lead	N.DAVIS	
Manganese (6010)		
Manganese	A.BRAZELL	

SEVERN TRENT SERVICES
STL Savannah
5102 LaRoche Avenue • Savannah, GA 31404 • Tel: 912 354 7858 • Fax: 912 352 0165 • www.stl-inc.com

REISSUED 10/15/02

LOG NO: S8-84581
Received: 31 JUL 98
Reported: 21 AUG 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

Contract No.: S7219
CC: Mr. Alan G. Faust Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 103121015

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-21	Analyst (First Initial, Last Name)	

PARAMETER	84581-21
PCB's (8081/See Qualifier Z) (608)	
PCB-1016	J.SCHUMAC
PCB-1221	J.SCHUMAC
PCB-1232	J.SCHUMAC
PCB-1242	J.SCHUMAC
PCB-1248	J.SCHUMAC
PCB-1254	J.SCHUMAC
PCB-1260	J.SCHUMAC
Total Polychlorinated Biphenyls	J.SCHUMAC

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-84581
Received: 31 JUL 98
Reported: 21 AUG 98
Revised 9/1/98
Client PO. No.: 8263-1-0006

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Contract No.: S7219
CC: Mr. Alan G. Faust Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By:
Code: 172590113

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-21	Analyst (First Initial, Last Name)	

PARAMETER	84581-21
Mercury (7470)	
Mercury	B.BRAYBOY
Nickel (6010)	
Nickel	A.BRAZELL
Vanadium (6010)	
Vanadium	A.BRAZELL
Total Organic Carbon (9060)	
Total Organic Carbon	L.RILEY
Sulfide (376.2)	
Sulfide	L.RILEY
Sulfate as SO4 (375.4)	
Sulfate as SO4	R.DAVIS
Nitrate-N (353.2)	
Nitrate-N	L.RILEY
Total Dissolved Solids (160.1)	
Total Dissolved Solids	R.DAVIS
Suspended Solids (160.2)	
Suspended Solids	R.DAVIS
Alkalinity (to pH 4.5) as CaCO3 (310.1)	
Alkalinity (to pH 4.5) as CaCO3	R.DAVIS
Phenolics, Total Recoverable (9065)	
Phenolics, Total Recoverable	K.BLACKSHE
Phosphorus, Total (365.4)	
Total Phosphorus, mg/l	L.RILEY

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& ENVIRONMENTAL SERVICES, INC.

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LOG NO: S8-84581
Received: 31 JUL 98
Reported: 21 AUG 98
Revised 9/1/98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

Contract No.: S7219

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON

Sampled By:

Code: 172590113

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-21	Analyst (First Initial, Last Name)	

PARAMETER	84581-21
Total Kjeldahl Nitrogen (351.2)	
Total Kjeldahl Nitrogen-N	L.RILEY
Total Organic Halogen (9020A)	
Total Organic Halogen	R.DAVIS

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& ENVIRONMENTAL SERVICES, INC.

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LOG NO: S8-84581
Received: 31 JUL 98
Reported: 21 AUG 98
Revised 9/1/98
Client PO. No.: 8263-1-0006

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

CC: Mr. Alan G. Faust

Contract No.: S7219
Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By:
Code. 172590113

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-22	Quantitation Limit	

PARAMETER	84581-22				
PCB's (8081/See Qualifier Z)					
PCB-1016, ug/l	1.0				
PCB-1221, ug/l	1.0				
PCB-1232, ug/l	1.0				
PCB-1242, ug/l	1.0				
PCB-1248, ug/l	1.0				
PCB-1254, ug/l	1.0				
PCB-1260, ug/l	1.0				

Methods: EPA SW-846 and 40 CFR Part 136.

*F14 = Repeated sample analysis demonstrates that the TOX amount on the secondary activated carbon column consistently exceeds 10 % of the two-column total TOX amount. This is apparently caused by weakly adsorbed organohalide components of the sample. Thus, the reported TOX concentration of this sample may be biased low.

*F82 = Insufficient sample volume was available to perform a batch-specific matrix spike. However, an LCS analyzed with the sample batch met control criteria.

Elizabeth F. Beauchamp, Project Manager

SEVERN TRENT SERVICES
STL Savannah
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REISSUED 10/15/02

LOG NO: S8-84581
Received: 31 JUL 98
Reported: 21 AUG 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

Contract No.: S7219
CC: Mr. Alan G. Faust Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 103121015

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84581-22	Quantitation Limit	

PARAMETER	84581-22
PCB's (8081/See Qualifier Z) (608)	
PCB-1016, ug/l	1.0
PCB-1221, ug/l	1.0
PCB-1232, ug/l	1.0
PCB-1242, ug/l	1.0
PCB-1248, ug/l	1.0
PCB-1254, ug/l	1.0
PCB-1260, ug/l	1.0

Methods: EPA SW-846 and 40 CFR Part 136.

*F14 = Repeated sample analysis demonstrates that the TOX amount on the secondary activated carbon column consistently exceeds 10 % of the two-column total TOX amount. This is apparently caused by weakly adsorbed organohalide components of the sample. Thus, the reported TOX concentration of this sample may be biased low.

*F82 = Insufficient sample volume was available to perform a batch-specific matrix spike. However, an LCS analyzed with the sample batch met control criteria.

for Elizabeth F. Beauchamp, Project Manager

Serial Number 47502

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

X 5102 LaRoche Avenue, Savannah, GA 31404 — Phone: (912) 354-7858 — Fax: (912) 352-0165
3946 Industrial Plaza Drive, Tallahassee, FL 32301 — Phone: (904) 878-3994 — Fax: (904) 878-9504
2414 SW 12th Avenue, Deerfield Beach, FL 33442 — Phone: (954) 421-7400 — Fax: (954) 421-2584
900 Lewallyn Drive, Mobile, AL 36693 — Phone: (334) 666-6633 — Fax: (334) 666-6696
9712 Benjamin Road, Suite 100, Tampa, FL 33634 — Phone: (813) 885-7427 — Fax: (813) 885-7049
100 Alpha Drive, Suite 110, Destrehan, LA 70047 — Phone: (504) 764-1100 — Fax: (504) 725-1183

PROJECT REFERENCE: Solutia/RFI/AL — PROJECT NO.: 483-3223 — P.O. NUMBER:

PROJECT LOC. (State): AL — SAMPLER(S) NAME: CDH, DLM, MAC, KSO + EGS — PHONE: 770-496-1393 — FAX: 770-934-9476

CLIENT NAME: Golder Associates — CLIENT PROJECT MANAGER: Jon Radtke

CLIENT ADDRESS (CITY, STATE, ZIP): 3730 Chamblee Tucker Rd, Atlanta, GA 30341

MATRIX TYPE — REQUIRED ANALYSES — PAGE 1 OF 4

VOC-8260 — SVOC-8270 — OP-8141 — PCB — Metals-6010, 7060, 7421 (Mercury-7470) — ICC-9060 — Total Phosphorus-365.2 — TOX-9020 — Sulfide-376.1 — TKN 351.3

HCl — — — — DLW / HNO3 / HCl / S. Hyp - 3 Room Acid / S. Hyp - 2 Room Acid

X STANDARD REPORT DELIVERY — ☐ EXPEDITED REPORT DELIVERY (surcharge) — Date Due:

SAMPLE DATE	SAMPLE TIME	SL NO.	SAMPLE IDENTIFICATION	MATRIX	NUMBER OF CONTAINERS SUBMITTED	REMARKS
7/29/98			MW-1B	X	3 2 2 2 1 1 1 1 2 1	
			DUP-6P	X	3 2 2	(*) Please see Data Deviation for qualification limits & target analyte list.
			~~CB-8S~~ DUP-6D-F	X		
			DW-9	X	3 2 2 2	
			~~DUP-6D-F~~ (1ST) DW9-F	X	1	
7/29/98			MW-1B-F	X	1 1 1	
7/29/98			CB-8S	X	3 2 2 2 1 1 1 1 1 1	
			CB-8S-F	X	2 1 1	
			DUP-3S	X	3 2 2 1 1 1	
			DUP-3S-F	X	2 1 1	(*) Use sample in glass container.
7/30/98			DUP-2D	X	3 2 2 2 1 1 1 1 1 1	
			DUP-2D-F	X	2 1 1	
7/30/98			DW-10	X	3 2 2 2 1 1 1 1 1	

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
			EGS	7/31/98	1426			
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME
			Jingen Cutler	7/31/98	9:38			

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SL LOG NO.	LABORATORY REMARKS:
	7/31/98	9:38	☐ YES ☐ NO		98-84581	

Serial Number 4[illegible]4

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

X 5102 LaRoche Avenue, Savannah, GA 31404 — Phone: (912) 354-7858 — Fax: (912) 352-0165
12940 Industrial Plaza Drive, Tallahassee, FL 32301 — Phone: (904) 878-3994 — Fax: (904) 878-9504
414 SW 12th Avenue, Deerfield Beach, FL 33442 — Phone: (954) 421-7400 — Fax: (954) 421-2564
900 Lakeside Drive, Mobile, AL 36693 — Phone: (334) 666-6633 — Fax: (334) 666-6696
6712 Benjamin Road, Suite 100, Tampa, FL 33634 — Phone: (813) 885-7427 — Fax: (813) 885-7049
150 Alpha Drive, Suite D, Durham, LA 70047 — Phone: (504) 764-1100 — Fax: (504) 725-1153

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

PROJECT REFERENCE: Sediment RFI/RI — PROJECT NO: 983-3223 — PO NUMBER:

PROJECT LOC (State): AL — SAMPLER(S): CJH, DLH, MHC, KSO+ — PHONE: 770-496-1553 — FAX: 770-934-9476

CLIENT NAME: Golder Associates — CLIENT PROJECT MANAGER: Jen Kadlke

CLIENT ADDRESS (CITY, STATE, ZIP): 3730 Chamblee-Tucker Rd, Atlanta, GA 30341

MATRIX TYPE: Sediment

REQUIRED ANALYSES: Sediment - CC's TDS, TSS, ANC, SO4, 375.4, 353.2, E611, 160.2, 310.1, TOT Phenols; Aq - 2 Aliquots

PAGE 2 OF 4

☒ STANDARD REPORT DELIVERY

☐ EXPEDITED REPORT DELIVERY (surcharge) — Date Due: _____

SAMPLE DATE	SAMPLE TIME	SL NO	SAMPLE IDENTIFICATION	MATRIX	NUMBER OF CONTAINERS SUBMITTED	REMARKS
			MW-1B	X	1 1	
			DWR-6D	X		
			DWR-6D-F	X		
			DW 9	X		
			DW-9F	X		
			MW-1B-F	X		
			CB-55	X	1	
			CB-55-F	X		
			DWR-35	X		
			DWR-35-F	X		
			DWR-2D	X	1	
			DWR-2D-F	X		
			DW-10	X	1	

Bottle #1 — Volatiles

RELINQUISHED BY (SIGNATURE)	DATE	TIME	RELINQUISHED BY (SIGNATURE)	DATE	TIME	RELINQUISHED BY (SIGNATURE)	DATE	TIME
				7/31/98	14:20			
RECEIVED BY (SIGNATURE)	DATE	TIME	RECEIVED BY (SIGNATURE)	DATE	TIME	RECEIVED BY (SIGNATURE)	DATE	TIME
			C. Dukes	7/31/98	9:05			

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SL LOG NO.	LABORATORY REMARKS
	7/31/98	9:25	☐ Yes ☐ No		98 S41581	

Serial Number 4 507

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

[X] 5102 LaRoche Avenue, Savannah, GA 31404 — Phone: (912) 354-7858 — Fax: (912) 352-0165
[ ] 2846 Industrial Plaza Drive, Tallahassee, FL 32301 — Phone: (904) 878-3994 — Fax: (904) 878-9504
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[ ] 900 Lakeside Drive, Mobile, AL 36693 — Phone: (334) 666-6633 — Fax: (334) 666-6696
[ ] 6712 Benjamin Road, Suite 100, Tampa, FL 33634 — Phone: (813) 885-7427 — Fax: (813) 885-7049
[ ] 100 Alpha Drive, Suite 110, Destrehan, LA 70047 — Phone: (504) 764-1100 — Fax: (504) 725-1163

PROJECT REFERENCE: Solutia/RFI/AL
PROJECT NO: 993-3223
P.O. NUMBER:
PROJECT LOC (State): AL
SAMPLER(S) NAME: CDH, DNH, MAS, KSP + EGP
PHONE: 770-496-1893
FAX: 770-934-9476
CLIENT NAME: Golder Associates
CLIENT PROJECT MANAGER: Jon Rodtke
CLIENT ADDRESS (CITY, STATE, ZIP): 3730 Chamblee-Tucker Rd, Atlanta, GA 30341

PAGE 3 OF 4

[X] STANDARD REPORT DELIVERY
[ ] EXPEDITED REPORT DELIVERY (surcharge)
Date Due:

REQUIRED ANALYSES

SAMPLE DATE	SAMPLE TIME	SL NO	SAMPLE IDENTIFICATION	ACCESS (WATER)	FOLD OR REM SOLID	PRESERVE QUE LIQUID (or solvent etc)	VOC-8260	SVOC-8270	OP-8141	PCB	Metals-6010, 7060, 7421	Mercury-7470	TOC-9060	Total Phosphorus 365.2	TRO-3213	TOX-9020	Sulfide-376.1	REMARKS
							HCl	–	–	–	HNO3	HNO3	HCl	Sulfuric Acid	Sulfuric Acid	Zinc Acetate		
			Dupe	X			3	2	2	2	1	1	1	1	1	1		
			Dupe-F	X						1	1	1						

NUMBER OF CONTAINERS SUBMITTED

RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED BY (SIGNATURE)	DATE	TIME	RELINQUISHED BY (SIGNATURE)	DATE	TIME
			[signature]	7/31/98	1426			
RECEIVED BY (SIGNATURE)	DATE	TIME	RECEIVED BY (SIGNATURE)	DATE	TIME	RECEIVED BY (SIGNATURE)	DATE	TIME
			G. Bishop	7/31/98	9:05			

LABORATORY USE ONLY

RECEIVED FOR LABORATORY (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEALING	SL LOG NO.	LABORATORY REMARKS
[signature]	7/31/98	9:28	[ ] YES [ ] NO		58 84581	

Serial Number 4[illegible]0

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

X 5102 LaRoche Avenue, Savannah, GA 31404 — Phone: (912) 354-7858 — Fax: (912) 352-0165
☐ 2846 Industrial Plaza Drive, Tallahassee, FL 32301 — Phone: (904) 878-3994 — Fax: (904) 878-9504
☐ 41A SW 12th Avenue, Deerfield Beach, FL 33442 — Phone: (954) 421-7400 — Fax: (954) 421-2564
☐ 880 Lakeside Drive, Mobile, AL 36693 — Phone: (334) 666-6633 — Fax: (334) 666-6696
☐ 5013 Benjamin Road, Suite 100, Tampa, FL 33634 — Phone: (813) 885-7427 — Fax: (813) 885-7049
☐ 100 Alpha Drive, Suite 10, Destrehan, LA 70047 — Phone: (504) 764-1100 — Fax: (504) 725-1169

PROJECT REFERENCE: Solutia/REI/AL | PROJECT NO.: 98 3-3223 | PO NUMBER:

PROJECT LOC. (State): AL | SAMPLER(S) NAME: CAH, DLH, MAL, KSP, + EGP | PHONE: 770-496-1553 | FAX: 770-934-9476

CLIENT NAME: Cabot Associates | CLIENT PROJECT MANAGER: Jon Hadlke

CLIENT ADDRESS (CITY, STATE, ZIP): 3736 Chamblee-Tucker Rd Atlanta, GA 30341

MATRIX TYPE | REQUIRED ANALYSES | PAGE 4 OF 4

Ethanol, Ethers, TSS, AHA, 3810, 3330, 1401, 8021, 8260, Total Phenols

1 Solute Acid

☒ STANDARD REPORT DELIVERY
☐ EXPEDITED REPORT DELIVERY (surcharge)

Date Due: _____

SAMPLE DATE	SAMPLE TIME	SL NO	SAMPLE IDENTIFICATION	MATRIX	NUMBER OF CONTAINERS SUBMITTED	REMARKS
			Dupe	A	1	
			Dupe-F	W	1	

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
			[signature]	7/30/98	1616			
RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME
			[signature]	7/31/98	9:30			

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEALING	SCLOG NO.	LABORATORY REMARKS:
[signature]	7/31/98	9:25	☐ YES ☐ NO		98-3531	

fed USA Airbill 801488135108 0200

1 From

Date

Sender's Name Phone ( ) 13

Company

Address

Dept./Floor/Suite/Room

City State ZIP

2 Your Internal Billing Reference Information

3 To

Recipient's Name Phone ( ) 28

Company

Address

Dept./Floor/Suite/Room

City State ZIP 1404

☐ Check here if residence (Extra charge applies for FedEx Express Saver)

For HOLD at FedEx Location check here

☐ Hold Weekday (Not available at all locations) (Not available for FedEx Priority Overnight and FedEx 2Day only)

☐ Hold Saturday (Not available at all locations) (Available for FedEx Priority Overnight and FedEx 2Day only)

For Saturday Delivery check here (Extra Charge, Not available to all locations) (Available for FedEx Priority Overnight and FedEx 2Day only)

4a Express Package Service *Packages under 150 lbs.* Delivery commitment may be later in some areas.

☐ FedEx Priority Overnight (Next business morning)

☐ FedEx Standard Overnight (Next business afternoon)

☐ FedEx 2Day* (Second business day)

☐ FedEx Express Saver* (Third business day)

☐ FedEx First Overnight (Earliest next business morning delivery to select locations)

* FedEx Letter Rate not available. Minimum charge: One pound rate.

4b Express Freight Service *Packages over 150 lbs.* Delivery commitment may be later in some areas.

☐ FedEx Overnight Freight (Next business day)

☐ FedEx 2Day Freight (Second business day)

☐ FedEx Express Saver Freight (Third business day)

(Call for delivery schedule. Can be other detailed descriptions of freight services.)

5 Packaging ☐ FedEx Letter ☐ FedEx Pak ☐ FedEx Box ☐ FedEx Tube ☐ Other Pkg

(Declared value limit $100)

6 Special Handling

Does this shipment contain dangerous goods? ☐ Yes (As per attached Shipper's Declaration) ☐ Yes (Shipper's Declaration not required)

☐ Dry Ice (Dry Ice, 9 UN 1845 ___ x ___ kg. Dry Ice) (Dangerous Goods, Shipper's Declaration not required)

CA ☐ Cargo Aircraft Only

7 Payment

Bill to: ☐ Recipient (Not available at all locations) ☐ Recipient ☐ Third Party ☐ Credit Card ☐ Cash/Check

(Enter FedEx account no. or Credit Card no. below)

Total Packages	Total Weight	Total Declared Value	Total Charges
		$ 00	$ 00

Credit Card Auth.

8 Release Signature

Your signature authorizes Federal Express to deliver this shipment without obtaining a signature and agrees to indemnify and hold Federal Express from any resulting claims.

Questions?
Call 1-800-Go-FedEx (800)463-3339

287

Rev. Date 5/97
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58-84581

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC

6102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-84521
Received: 29 JUL 98
Reported: 10 AUG 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-A
Sampled By: Client
Code: 143180826

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84521-1	MW-1B	07-29-98/1445
84521-2	CB-65	07-29-98/1415

PARAMETER	84521-1	84521-2
Standard Plate Count		
Standard Plate Count, CFU/ml	440	33
Preparation Date	07.29.98	07.29.98
Date Analyzed	07.29.98	07.29.98
Batch ID	0729A	0729A
Sulfate as SO4		
Sulfate as SO4, mg/l	5.9	<5.0
Preparation Date	08.03.98	08.03.98
Date Analyzed	08.03.98	08.03.98
Dilution factor	1.0	1.0
Batch ID	0803A	0803A
Nitrate-N (353.2)		
Nitrate-N, mg/l	0.15	1.2
Preparation Date	07.29.98	07.29.98
Date Analyzed	07.29.98	07.29.98
Dilution factor	1.0	1.0
Batch ID	0806A	0806A
Total Dissolved Solids (160.1)		
Total Dissolved Solids, mg/l	14	33
Preparation Date	07.31.98	07.31.98
Date Analyzed	08.03.98	08.03.98
Dilution factor	1.0	1.0
Batch ID	0731A	0731A

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LOG NO: S8-84521
Received: 29 JUL 98
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Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-A
Sampled By: Client
Code: 143180826

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84521-1	MW-1B	07-29-98/1445
84521-2	CB-85	07-29-98/1415

PARAMETER	84521-1	84521-2
Suspended Solids (160.2)		
Suspended Solids, mg/l	20	<5.0
Preparation Date	07.31.98	07.31.98
Date Analyzed	08.03.98	08.03.98
Dilution factor	1.0	1.0
Batch ID	0731B	0731B
Alkalinity (to pH 4.5) as CaCO3 (310.1)		
Alkalinity (to pH 4.5) as CaCO3, mg/l	4.2	<1.0
Preparation Date	07.31.98	07.31.98
Date Analyzed	07.31.98	07.31.98
Dilution factor	1.0	1.0
Batch ID	0731A	0731A
Ferrous Iron (3500-Fe D)		
Iron, Ferrous (2+), mg/l	<0.10	<0.10
Preparation Date	07.30.98	07.30.98
Date Analyzed	07.30.98	07.30.98
Dilution factor	1.0	1.0
Batch ID	0730X	0730X

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LOG NO: S8-84521
Received: 29 JUL 98
Reported: 10 AUG 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-A
Sampled By: Client
Code: 143180826

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84521-3	OWR-6D	07-29-98/1427
84521-9	OWR-6D-F	07-29-98/1427

PARAMETER	84521-3	84521-9
PCB's (8081/See Qualifier Z)		
PCB-1016, ug/l	0	0
PCB-1221, ug/l	0	0
PCB-1232, ug/l	0	0
PCB-1242, ug/l	0	0
PCB-1248, ug/l	0	0
PCB-1254, ug/l	0	0
PCB-1260, ug/l	0	0
Total Polychlorinated Biphenyls, ug/l	0	0
Surrogate - TCX	80 %	55 %
Date Extracted	07.30.98	07.30.98
Date Analyzed	08.04.98	08.04.98
Dilution factor	1.0	1.0
Arsenic (6010)		
Arsenic, mg/l	<0.010	<0.010
Preparation Date	07.30.98	07.30.98
Date Analyzed	08.02.98	08.02.98
Dilution factor	1.0	1.0
Batch ID	0730I	0730I

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REISSUED 10/15/02

LOG NO: S8-84521
Received: 29 JUL 98
Reported: 10 AUG 98
Revised:

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006
Contract No.: S7219
CC: Mr. Alan G. Fauer
Project: 983-3223.002/MONSANTO RFI A
Sampled By: Client
Code: 103121015

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84521-3	OWR-6D	07-29-98/1427
84521-9	OWR-6D-F	07-29-98/1427

PARAMETER	84521-3	84521-9			
PCB's (8081/See Qualifier Z) (608)					
PCB-1016, ug/l	<1	<1			
PCB-1221, ug/l	<1	<1			
PCB-1232, ug/l	<1	<1			
PCB-1242, ug/l	<1	<1			
PCB-1248, ug/l	<1	<1			
PCB-1254, ug/l	<1	<1			
PCB-1260, ug/l	<1	<1			
Total Polychlorinated Biphenyls, ug/l	<1	<1			
Surrogate - TCX	80 %	55 %			
Date Extracted	07.30.98	07.30.98			
Date Analyzed	08.04.98	08.04.98			
Dilution factor	1.0	1.0			

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Received: 29 JUL 98
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Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-A
Sampled By: Client
Code: 143180826

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84521-3	OWR-6D	07-29-98/1427
84521-9	OWR-6D-F	07-29-98/1427

PARAMETER	84521-3	84521-9
Barium (6010)		
Barium, mg/l	0.15	0.18
Preparation Date	07.30.98	07.30.98
Date Analyzed	08.02.98	08.02.98
Dilution factor	1.0	1.0
Batch ID	0730I	0730I
Beryllium (6010)		
Beryllium, mg/l	<0.0040	<0.0040
Preparation Date	07.30.98	07.30.98
Date Analyzed	08.02.98	08.02.98
Dilution factor	1.0	1.0
Batch ID	0730I	0730I
Cadmium (6010)		
Cadmium, mg/l	<0.0050	<0.0050
Preparation Date	07.30.98	07.30.98
Date Analyzed	08.02.98	08.02.98
Dilution factor	1.0	1.0
Batch ID	0730I	0730I
Chromium (6010)		
Chromium, mg/l	<0.010	<0.010
Preparation Date	07.30.98	07.30.98
Date Analyzed	08.02.98	08.02.98
Dilution factor	1.0	1.0
Batch ID	0730I	0730I

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Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-A
Sampled By: Client
Code: 143180826

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84521-3	OWR-6D	07-29-98/1427
84521-9	OWR-6D-F	07-29-98/1427

PARAMETER	84521-3	84521-9
Cobalt (6010)		
Cobalt, mg/l	<0.010	<0.010
Preparation Date	07.30.98	07.30.98
Date Analyzed	08.02.98	08.02.98
Dilution factor	1.0	1.0
Batch ID	0730I	0730I
Lead (7421)		
Lead, mg/l	<0.0050	<0.0050
Preparation Date	07.30.98	07.30.98
Date Analyzed	08.03.98	08.03.98
Dilution factor	1.0	1.0
Batch ID	0730H	0730H
Manganese (6010)		
Manganese, mg/l	0.47	0.66
Preparation Date	07.30.98	07.30.98
Date Analyzed	08.02.98	08.02.98
Dilution factor	1.0	1.0
Batch ID	0730I	0730I
Mercury (7470)		
Mercury, mg/l	0.0013	0.00027
Preparation Date	07.30.98	07.30.98
Date Analyzed	07.31.98	07.31.98
Dilution factor	1.0	1.0
Batch ID	0730R	0730R

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Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-A
Sampled By: Client
Code: 143180826

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84521-3	OWR-6D	07-29-98/1427
84521-9	OWR-6D-F	07-29-98/1427

PARAMETER	84521-3	84521-9
Nickel (6010)		
Nickel, mg/l	0.0095	0.011
Preparation Date	07.30.98	07.30.98
Date Analyzed	08.02.98	08.02.98
Dilution factor	1.0	1.0
Batch ID	0730I	0730I
Vanadium (6010)		
Vanadium, mg/l	<0.010	<0.010
Preparation Date	07.30.98	07.30.98
Date Analyzed	08.02.98	08.02.98
Dilution factor	1.0	1.0
Batch ID	0730I	0730I

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Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-A
Sampled By: Client
Code: 143180826

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84521-4	Method Blank	
84521-5	Lab Control Standard % Recovery	
84521-6	LCS Accuracy Control Limit (%R)	
84521-10	Analyst (First Initial, Last Name)	
84521-11	MS/MSD % Recovery	

PARAMETER	84521-4	84521-5	84521-6	84521-10	84521-11
Standard Plate Count					
Standard Plate Count, CFU/ml	<1	---	---	---	---
Preparation Date	07.29.98	---	---	---	---
Date Analyzed	07.29.98	---	---	---	---
Batch ID	0729A	---	---	---	---
Sulfate as SO4					
Sulfate as SO4, mg/l	<5.0	80 %	75-125 %	R.DAVIS	125/119 %
Preparation Date	08.03.98	---	---	---	---
Date Analyzed	08.03.98	---	---	---	---
Dilution factor	1.0	---	---	---	---
Batch ID	0803A	---	---	---	---
Nitrate-N (353.2)					
Nitrate-N, mg/l	<0.050	80 %	80-120 %	L.RILEY	80/84 %
Preparation Date	07.29.98	---	---	---	---
Date Analyzed	07.29.98	---	---	---	---
Dilution factor	1.0	---	---	---	---
Batch ID	0806A	---	---	---	---

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Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-A
Sampled By: Client
Code: 143180826

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84521-4	Method Blank	
84521-5	Lab Control Standard % Recovery	
84521-6	LCS Accuracy Control Limit (%R)	
84521-10	Analyst (First Initial, Last Name)	
84521-11	MS/MSD % Recovery	

PARAMETER	84521-4	84521-5	84521-6	84521-10	84521-11
Total Dissolved Solids (160.1)					
Total Dissolved Solids, mg/l	<5.0	94 %	80-120 %	R.DAVIS	*F82
Preparation Date	07.31.98	---	---	---	---
Date Analyzed	08.03.98	---	---	---	---
Dilution factor	1.0	---	---	---	---
Batch ID	0731A	---	---	---	---
Suspended Solids (160.2)					
Suspended Solids, mg/l	<5.0	103 %	80-120 %	R.DAVIS	*F82
Preparation Date	07.31.98	---	---	---	---
Date Analyzed	08.03.98	---	---	---	---
Dilution factor	1.0	---	---	---	---
Batch ID	0731B	---	---	---	---
Alkalinity (to pH 4.5) as CaCO3 (310.1)					
Alkalinity (to pH 4.5) as CaCO3, mg/l	<1.0	109 %	80-120%	R.DAVIS	*F82
Preparation Date	07.31.98	---	---	---	---
Date Analyzed	07.31.98	---	---	---	---
Dilution factor	1.0	---	---	---	---
Batch ID	0731A	---	---	---	---

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LOG NO: S8-84521
Received: 29 JUL 98
Reported: 10 AUG 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-A
Sampled By: Client
Code: 151880826

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84521-4	Method Blank	
84521-5	Lab Control Standard % Recovery	
84521-6	LCS Accuracy Control Limit (%R)	
84521-10	Analyst (First Initial, Last Name)	
84521-11	MS/MSD % Recovery	

PARAMETER	84521-4	84521-5	84521-6	84521-10	84521-11
Ferrous Iron (3500-Fe D)					
Iron, Ferrous (2+), mg/l	<0.10	110 %	80-120 %	S.NORWOOD	137/137 %
Preparation Date	07.30.98	07.30.98	---	---	07.30.98
Date Analyzed	07.30.98	07.30.98	---	---	07.30.98
Dilution factor	1.0	1.0	---	---	1.0
Batch ID	0730X	0730X	---	---	0730X
PCB's (8081/See Qualifier Z)					
PCB-1016, ug/l	0	104 %	43-139 %	T.GALLAGH	*F82
PCB-1221, ug/l	0	---	---	T.GALLAGH	---
PCB-1232, ug/l	0	---	---	T.GALLAGH	---
PCB-1242, ug/l	0	---	---	T.GALLAGH	---
PCB-1248, ug/l	0	---	---	T.GALLAGH	---
PCB-1254, ug/l	0	---	---	T.GALLAGH	---
PCB-1260, ug/l	0	88 %	31-152 %	T.GALLAGH	*F82
Total Polychlorinated Biphenyls, ug/l	0	---	---	T.GALLAGH	---
Surrogate - TCX	70 %	70 %	---	---	---
Date Extracted	07.30.98	07.30.98	---	---	---
Date Analyzed	08.03.98	08.03.98	---	---	---
Dilution factor	1.0	1.0	---	---	---

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REISSUED 10/15/02

LOG NO: S8-84521
Received: 29 JUL 98
Reported: 10 AUG 98
Revised:

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

Contract No.: S7219

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-A
Sampled By: Client
Code: 103121015

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84521-4	Method Blank	
84521-5	Lab Control Standard % Recovery	
84521-6	LCS Accuracy Control Limit (%R)	
84521-10	Analyst (First Initial, Last Name)	
84521-11	MS/MSD % Recovery	

PARAMETER	84521-4	84521-5	84521-6	84521-10	84521-11
PCB's (8081/See Qualifier Z) (608)					
PCB-1016, ug/l	<1	104 %	43-139 %	T.GALLAGH	*F82
PCB-1221, ug/l	<1	---	---	T.GALLAGH	---
PCB-1232, ug/l	<1	---	---	T.GALLAGH	---
PCB-1242, ug/l	<1	---	---	T.GALLAGH	---
PCB-1248, ug/l	<1	---	---	T.GALLAGH	---
PCB-1254, ug/l	<1	---	---	T.GALLAGH	---
PCB-1260, ug/l	<1	88 %	31-152 %	T.GALLAGH	*F82
Total Polychlorinated Biphenyls, ug/l	<1	---	---	T.GALLAGH	---
Surrogate - TCX	70 %	70 %	---	---	---
Date Extracted	07.30.98	07.30.98	---	---	---
Date Analyzed	08.03.98	08.03.98	---	---	---
Dilution factor	1.0	1.0	---	---	---

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Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-A
Sampled By: Client
Code: 143180826

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84521-4	Method Blank	
84521-5	Lab Control Standard % Recovery	
84521-6	LCS Accuracy Control Limit (%R)	
84521-10	Analyst (First Initial, Last Name)	
84521-11	MS/MSD % Recovery	

PARAMETER	84521-4	84521-5	84521-6	84521-10	84521-11
Arsenic (6010)					
Arsenic, mg/l	<0.010	105%	75-125 %	E.MARTSOLF	102/102 %
Preparation Date	07.30.98	07.30.98	---	---	07.30.98
Date Analyzed	08.02.98	08.02.98	---	---	08.02.98
Dilution factor	1.0	1.0	---	---	1.0
Batch ID	07301	07301	---	---	07301
Barium (6010)					
Barium, mg/l	<0.010	109%	75-125 %	E.MARTSOLF	104/104 %
Preparation Date	07.30.98	07.30.98	---	---	07.30.98
Date Analyzed	08.02.98	08.02.98	---	---	08.02.98
Dilution factor	1.0	1.0	---	---	1.0
Batch ID	07301	07301	---	---	07301
Beryllium (6010)					
Beryllium, mg/l	<0.0040	106%	75-125 %	E.MARTSOLF	101/101 %
Preparation Date	07.30.98	07.30.98	---	---	07.30.98
Date Analyzed	08.02.98	08.02.98	---	---	08.02.98
Dilution factor	1.0	1.0	---	---	1.0
Batch ID	07301	07301	---	---	07301

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Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-A
Sampled By: Client
Code. 143160826

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84521-4	Method Blank	
84521-5	Lab Control Standard % Recovery	
84521-6	LCS Accuracy Control Limit (%R)	
84521-10	Analyst (First Initial, Last Name)	
84521-11	MS/MSD % Recovery	

PARAMETER	84521-4	84521-5	84521-6	84521-10	84521-11
Cadmium (6010)					
Cadmium, mg/l	<0.0050	109%	75-125 %	E.MARTSOLF	102/104 %
Preparation Date	07.30.98	07.30.98	---	---	07.30.98
Date Analyzed	08.02.98	08.02.98	---	---	08.02.98
Dilution factor	1.0	1.0	---	---	1.0
Batch ID	0730I	0730I	---	---	0730I
Chromium (6010)					
Chromium, mg/l	<0.010	108%	75-125 %	E.MARTSOLF	102/103 %
Preparation Date	07.30.98	07.30.98	---	---	07.30.98
Date Analyzed	08.02.98	08.02.98	---	---	08.02.98
Dilution factor	1.0	1.0	---	---	1.0
Batch ID	0730I	0730I	---	---	0730I
Cobalt (6010)					
Cobalt, mg/l	<0.010	107%	75-125 %	E.MARTSOLF	101/101 %
Preparation Date	07.30.98	07.30.98	---	---	07.30.98
Date Analyzed	08.02.98	08.02.98	---	---	08.02.98
Dilution factor	1.0	1.0	---	---	1.0
Batch ID	0730I	0730I	---	---	0730I

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-84521
Received: 29 JUL 98
Reported: 10 AUG 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-A
Sampled By: Client
Code: 143180826

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84521-4	Method Blank	
84521-5	Lab Control Standard % Recovery	
84521-6	LCS Accuracy Control Limit (%R)	
84521-10	Analyst (First Initial, Last Name)	
84521-11	MS/MSD % Recovery	

PARAMETER	84521-4	84521-5	84521-6	84521-10	84521-11
Lead (7421)					
Lead, mg/l	<0.0050	88 %	80-120 %	N.DAVIS	94/96 %
Preparation Date	07.30.98	07.30.98	---	---	07.30.98
Date Analyzed	08.03.98	08.03.98	---	---	08.02.98
Dilution factor	1.0	1.0	---	---	1.0
Batch ID	0730M	0730H	---	---	0730H
Manganese (6010)					
Manganese, mg/l	<0.010	110%	75-125 %	E.MARTSOLF	103/104 %
Preparation Date	07.30.98	07.30.98	---	---	07.30.98
Date Analyzed	08.02.98	08.02.98	---	---	08.02.98
Dilution factor	1.0	1.0	---	---	1.0
Batch ID	0730I	0730I	---	---	0730I
Mercury (7470)					
Mercury, mg/l	<0.00020	94 %	80-120 %	B.BRAYBOY	84/90 %
Preparation Date	07.30.98	07.30.98	---	---	07.30.98
Date Analyzed	07.31.98	07.31.98	---	---	07.31.98
Dilution factor	1.0	1.0	---	---	1.0
Batch ID	0730R	0730R	---	---	0730R

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Received: 29 JUL 98
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3730 Chamblee Tucker Road
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Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-A
Sampled By: Client
Code: 143180826

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84521-4	Method Blank	
84521-5	Lab Control Standard % Recovery	
84521-6	LCS Accuracy Control Limit (%R)	
84521-10	Analyst (First Initial, Last Name)	
84521-11	MS/MSD % Recovery	

PARAMETER	84521-4	84521-5	84521-6	84521-10	84521-11
Nickel (6010)					
Nickel, mg/l	<0.0040	108%	75-125 %	E.MARTSOLF	101/102 %
Preparation Date	07.30.98	07.30.98	---	---	07.30.98
Date Analyzed	08.02.98	08.02.98	---	---	08.02.98
Dilution factor	1.0	1.0	---	---	1.0
Batch ID	0730I	0730I	---	---	0730I
Vanadium (6010)					
Vanadium, mg/l	<0.010	106%	75-125 %	E.MARTSOLF	101/101 %
Preparation Date	07.30.98	07.30.98	---	---	07.30.98
Date Analyzed	08.02.98	08.02.98	---	---	08.02.98
Dilution factor	1.0	1.0	---	---	1.0
Batch ID	0730I	0730I	---	---	0730I

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Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-A
Sampled By: Client
Code: 143180826

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84521-12	MS Accuracy Advisory Limit (%R)	

PARAMETER	84521-12				
Standard Plate Count					
Standard Plate Count, %	80-120 %				
Sulfate as SO4					
Sulfate as SO4, %	75-125 %				
Nitrate-N (353.2)					
Nitrate-N, %	80-120 %				
Total Dissolved Solids (160.1)					
Total Dissolved Solids, %	80-120 %				
Suspended Solids (160.2)					
Suspended Solids, %	80-120 %				
Alkalinity (to pH 4.5) as CaCO3 (310.1)					
Alkalinity (to pH 4.5) as CaCO3, %	80-120 %				
Ferrous Iron (3500-Fe D)					
Iron, Ferrous (2+), %	80-120 %				
PCB's (8081/See Qualifier Z)					
Arsenic (6010)					
Arsenic, %	75-125 %				
Barium (6010)					
Barium, %	75-125 %				
Beryllium (6010)					
Beryllium, %	75-125 %				
Cadmium (6010)					
Cadmium, %	75-125 %				
Chromium (6010)					
Chromium, %	75-125 %				

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Ms. Gayle Pittman
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3730 Chamblee Tucker Road
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Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-A
Sampled By: Client
Code: 143180826

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84521-12	MS Accuracy Advisory Limit (%R)	

PARAMETER	84521-12				
Cobalt (6010)					
Cobalt, %	75-125 %				
Lead (7421)					
Lead, %	80-120 %				
Manganese (6010)					
Manganese, %	75-125 %				
Mercury (7470)					
Mercury, %	80-120 %				
Nickel (6010)					
Nickel, %	75-125 %				
Vanadium (6010)					
Vanadium, %	75-125 %				

Methods: EPA SW-846 and 40 CFR Part 136.

Elizabeth F. Beauchamp, Project Manager

Final Page Of Report

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SEVERN TRENT SERVICES

STL Savannah

REISSUED 10/15/02

LOG NO: S8-84521
Received: 29 JUL 98
Reported: 10 AUG 98
Revised:

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

Contract No.: S7219

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-A
Sampled By: Client
Code: 103121015

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84521-13	Quantitation Limit	

PARAMETER	84521-13
PCB's (8081/See Qualifier Z) (608)	
PCB-1016, ug/l	1.0
PCB-1221, ug/l	1.0
PCB-1232, ug/l	1.0
PCB-1242, ug/l	1.0
PCB-1248, ug/l	1.0
PCB-1254, ug/l	1.0
PCB-1260, ug/l	1.0

Methods: EPA SW-846. Update III and 40 CFR Part 136.

*F82 = Insufficient sample volume was available to perform a° batch-specific matrix spike. However, an LCS analyzed with the° sample batch met control criteria.°

R. Mitchell Davis

Elizabeth F. Beauchamp, Project Manager

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STL Savannah

REISSUED 10/15/02

LOG NO: S8-84521
Received: 29 JUL 98
Reported: 10 AUG 98
Revised:

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

Contract No.: S7219

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-A
Sampled By: Client
Code: 103121015

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84521-14	MS Accuracy Advisory Limit (%R)	

PARAMETER	84521-14
PCB's (8081/See Qualifier Z) (608)	
PCB-1016, ug/l	43-139 %
PCB-1260, ug/l	31-152 %

Serial Number

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

X 5102 LaRoche Avenue, Savannah, GA 31404 — Phone: (912) 354-7858 — Fax: (912) 352-0165
2846 Industrial Plaza Drive Tallahassee, FL 32301 — Phone: (904) 878-3994 — Fax: (904) 878-9504
414 SW 12th Avenue, Deerfield Beach, FL 33442 — Phone: (954) 421-7400 — Fax: (954) 421-2584
900 Lakeside Drive, Mobile AL 36693 — Phone: (334) 666-6633 — Fax: (334) 666-6696
6712 Benjamin Road, Suite 100, Tampa, FL 33634 — Phone: (813) 885-7427 — Fax: (813) 885-7049
109 Apple Drive, Suite 110, Destrehan, LA 70047 — Phone: (504) 764-1100 — Fax: (504) 725-1163

PROJECT REFERENCE: Solutia/RFI/AL | PROJECT NO: 983-3223 | P.O. NUMBER:

PROJECT LOC (State): AL | SAMPLER(S) NAME: CDB, DLB, MAC, KDW, EGJ | PHONE: 770-496-1513 | FAX: 770-534-9172

CLIENT NAME: Golder Associates | CLIENT PROJECT MANAGER: Jon Roelfke

CLIENT ADDRESS (CITY, STATE, ZIP): 5730 Chamblee-Tucker Rd Atlanta, GA 30341

PAGE 1 OF 1

STANDARD REPORT DELIVERY

EXPEDITED REPORT DELIVERY (surcharge) — Date Due:

SAMPLE DATE	SAMPLE TIME	SL NO.	SAMPLE IDENTIFICATION	MATRIX TYPE: AQUEOUS/WATER	SOLID/SEMISOLID	AIR	NONAQUEOUS LIQUID (specify)	NUMBER OF CONTAINERS SUBMITTED	REMARKS
7/20/10	1445		MW-1B	✓				1 1 1	
7/21/10			OW-9	✓				1 1 1	
7/20/10	1427		OWR-6D	✓				D D 1 2 1 1	
7/21/10	1415		CB-85	✓				1 1 1	
7/21/10	1422		OW-9	✓				1	
7/21/10	1427		OWR-6D-FE	✓				2 1 1	

(*) Please see enclosed table for quantitation limits.

Please give a copy of the enclosed table to Betsy Beauchamp

* Hold OW9 + OWR-6D analysis for Ferrous Iron until contacted by Gayle Pittman

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
	7/21/10	1815		7/21	1815			
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME
	7/21/10	1815						

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SL LOG NO.	LABORATORY REMARKS
	7/21/10	9:20	☐ YES ☐ NO		23-54	* Do not analyze for 15+2 per GP 7/22 RA

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3

Phone

Dept./Floor/Suite/Room

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FedEx First Overnight

4b Express Freight Service *Packages over 150 lbs.*
FedEx Priority Freight FedEx 2Day Freight FedEx Express Saver Freight

5 Packaging
FedEx Letter FedEx Pak FedEx Box FedEx Tube Other Pkg

6 Special Handling
Does this shipment contain dangerous goods? Yes Yes
One box CA Cargo Aircraft Only

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Bill to: Sender Recipient Third Party Credit Card Cash/Check

Total Packages Total Weight Total Declared Value Total Charges
.00 $

Credit Card Auth.

8 Release Signature

Questions?
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5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-84549
Received: 30 JUL 98
Reported: 14 AUG 98

Mr. Jon Radtke
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 141280818

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84549-1	Dup	07-29-98
84549-2	OWR-2D	07-29-98/1200

PARAMETER	84549-1	84549-2
Standard Plate Count		
Standard Plate Count, CFU/ml	520	720
Preparation Date	07.30.98	07.30.98
Date Analyzed	07.30.98	07.30.98
Batch ID	0730A	0730A
Sulfate as SO4		
Sulfate as SO4, mg/l	<5.0	<5.0
Preparation Date	08.07.98	08.07.98
Date Analyzed	08.07.98	08.07.98
Dilution factor	1.0	1.0
Batch ID	0807A	0807A
Nitrate-N (353.2)		
Nitrate-N, mg/l	1.8	1.7
Preparation Date	07.30.98	07.30.98
Date Analyzed	07.30.98	07.30.98
Dilution factor	1.0	1.0
Batch ID	0803C	0803C
Total Dissolved Solids (160.1)		
Total Dissolved Solids, mg/l	170	180
Preparation Date	07.31.98	07.31.98
Date Analyzed	08.03.98	08.03.98
Dilution factor	1.0	1.0
Batch ID	0731A	0731A

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84549-1	Dup	07-29-98
84549-2	OWR-2D	07-29-98/1200

PARAMETER	84549-1	84549-2
Suspended Solids (160.2)		
Suspended Solids, mg/l	9.0	6.0
Preparation Date	07.31.98	07.31.98
Date Analyzed	08.03.98	08.03.98
Dilution factor	1.0	1.0
Batch ID	0731B	0731B
Alkalinity (to pH 4.5) as CaCO3 (310.1)		
Alkalinity (to pH 4.5) as CaCO3, mg/l	120	120
Preparation Date	07.31.98	07.31.98
Date Analyzed	07.31.98	07.31.98
Dilution factor	1.0	1.0
Batch ID	0731A	0731A
Ferrous Iron (3500-Fe D)		
Iron, Ferrous (2+), mg/l	<0.10	<0.10
Preparation Date	07.30.98	07.30.98
Date Analyzed	07.30.98	07.30.98
Dilution factor	1.0	1.0
Batch ID	0730X	0830X

SL SAVANNAH LABORATORIES
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CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 141280818

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84549-3	OW-9-F	07-28-98/1515
84549-9	OW-9	07-28-98/1115

PARAMETER	84549-3	84549-9
Arsenic (6010)		
Arsenic, mg/l	<0.010	<0.010
Preparation Date	07.31.98	07.31.98
Date Analyzed	08.03.98	08.03.98
Dilution factor	1.0	1.0
Batch ID	0731G	0731G
Barium (6010)		
Barium, mg/l	0.19	0.19
Preparation Date	07.31.98	07.31.98
Date Analyzed	08.03.98	08.03.98
Dilution factor	1.0	1.0
Batch ID	0731G	0731G
Beryllium (6010)		
Beryllium, mg/l	<0.0040	<0.0040
Preparation Date	07.31.98	07.31.98
Date Analyzed	08.03.98	08.03.98
Dilution factor	1.0	1.0
Batch ID	0731G	0731G
Cadmium (6010)		
Cadmium, mg/l	<0.0050	<0.0050
Preparation Date	07.31.98	07.31.98
Date Analyzed	08.03.98	08.03.98
Dilution factor	1.0	1.0
Batch ID	0731G	0731G

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Code: 141280818

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84549-3	OW-9-F	07-28-98/1515
84549-9	OW-9	07-28-98/1115

PARAMETER	84549-3	84549-9
Chromium (6010)		
Chromium, mg/l	<0.010	<0.010
Preparation Date	07.31.98	07.31.98
Date Analyzed	08.03.98	08.03.98
Dilution factor	1.0	1.0
Batch ID	0731G	0731G
Cobalt (6010)		
Cobalt, mg/l	0.010	<0.010
Preparation Date	07.31.98	07.31.98
Date Analyzed	08.03.98	08.03.98
Dilution factor	1.0	1.0
Batch ID	0731G	0731G
Lead (7421)		
Lead, mg/l	0.018	<0.0050
Preparation Date	08.03.98	08.03.98
Date Analyzed	08.04.98	08.04.98
Dilution factor	1.0	1.0
Batch ID	0803J	0803J
Manganese (6010)		
Manganese, mg/l	0.33	0.31
Preparation Date	07.31.98	07.31.98
Date Analyzed	08.03.98	08.03.98
Dilution factor	1.0	1.0
Batch ID	0731G	0731G

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Sampled By: Client
Code. 141280818

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84549-3	OW-9-F	07-28-98/1515
84549-9	OW-9	07-28-98/1115

PARAMETER	84549-3	84549-9
Mercury (7470)		
Mercury, mg/l	0.00093	0.00068
Preparation Date	08.04.98	08.04.98
Date Analyzed	08.05.98	08.05.98
Dilution factor	1.0	1.0
Batch ID	0804S	0804S
Nickel (6010)		
Nickel, mg/l	0.0092	0.0087
Preparation Date	07.31.98	07.31.98
Date Analyzed	08.03.98	08.03.98
Dilution factor	1.0	1.0
Batch ID	0731G	0731G
Vanadium (6010)		
Vanadium, mg/l	<0.010	<0.010
Preparation Date	07.31.98	07.31.98
Date Analyzed	08.03.98	08.03.98
Dilution factor	1.0	1.0
Batch ID	0731G	0731G

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Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 141280818

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84549-10	OW-10	07-29-98/1450

PARAMETER	84549-10
Phosphorus, Total	
Total Phosphorus, mg/l	<0.10
Preparation Date	07.30.98
Date Analysed	08.03.98
Dilution factor	1.0
Batch ID	0730A
Total Kjeldahl Nitrogen (351.2)	
Total Kjeldahl Nitrogen-N, mg/l	3100
Preparation Date	07.30.98
Date Analysed	08.03.98
Dilution factor	4000
Batch ID	0730A
Ferrous Iron (3500-Fe D)	
Iron, Ferrous (2+), mg/l	<0.50
Preparation Date	07.30.98
Date Analysed	07.30.98
Dilution factor	5.0
Batch ID	0730X
Standard Plate Count	
Standard Plate Count, CFU/ml	730
Preparation Date	07.30.98
Date Analysed	07.30.98
Batch ID	0730A

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Received: 30 JUL 98
Reported: 14 AUG 98

Mr. Jon Radtke
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 141280818

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84549-10	OW-10	07-29-98/1450

PARAMETER	84549-10
Sulfate as SO4	
Sulfate as SO4, mg/l	<5.0
Preparation Date	08.07.98
Date Analysed	08.07.98
Dilution factor	1.0
Batch ID	0807A
Nitrate-N (353.2)	
Nitrate-N, mg/l	1.4
Preparation Date	07.30.98
Date Analysed	07.30.98
Dilution factor	1.0
Batch ID	0803C
Total Dissolved Solids (160.1)	
Total Dissolved Solids, mg/l	1300
Preparation Date	07.31.98
Date Analysed	08.03.98
Dilution factor	1.0
Batch ID	0731A
Suspended Solids (160.2)	
Suspended Solids, mg/l	10
Preparation Date	07.31.98
Date Analysed	08.03.98
Dilution factor	1.0
Batch ID	0731B

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-84549
Received: 30 JUL 98
Reported: 14 AUG 98

Mr. Jon Radtke
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 141280818

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84549-10	OW-10	07-29-98/1450

PARAMETER	84549-10		
Alkalinity (to pH 4.5) as CaCO3 (310.1)			
Alkalinity (to pH 4.5) as CaCO3, mg/l	20		
Preparation Date	07.31.98		
Date Analysed	07.31.98		
Dilution factor	1.0		
Batch ID	0731A		

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Sampled By: Client
Code: 141280818

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84549-11	Method Blank	
84549-12	Lab Control Standard % Recovery	
84549-13	LCS Accuracy Control Limit (%R)	
84549-14	Analyst (First Initial, Last Name)	
84549-15	MS/MSD % Recovery	

PARAMETER	84549-11	84549-12	84549-13	84549-14	84549-15
Standard Plate Count					
Standard Plate Count, CFU/ml	<1	---	---	R.DAVIS	---
Preparation Date	07.30.98	---	---	---	---
Date Analyzed	07.30.98	---	---	---	---
Batch ID	0730A	---	---	---	---
Sulfate as SO4					
Sulfate as SO4, mg/l	<5.0	75 %	75-125 %	R.DAVIS	125/102 %
Preparation Date	08.07.98	08.07.98	---	---	---
Date Analyzed	08.07.98	08.07.98	---	---	---
Dilution factor	1.0	1.0	---	---	---
Batch ID	0807A	0807A	---	---	---
Nitrate N (353.2)					
Nitrate-N, mg/l	<0.050	89 %	80-120 %	L.RILEY	56/62 %
Preparation Date	07.30.98	07.30.98	---	---	---
Date Analyzed	07.30.98	07.30.98	---	---	---
Dilution factor	1.0	1.0	---	---	---
Batch ID	0803C	0803C	---	---	---

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Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 141280818

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84549-11	Method Blank	
84549-12	Lab Control Standard % Recovery	
84549-13	LCS Accuracy Control Limit (%R)	
84549-14	Analyst (First Initial, Last Name)	
84549-15	MS/MSD % Recovery	

PARAMETER	84549-11	84549-12	84549-13	84549-14	84549-15
Total Dissolved Solids (160.1)					
Total Dissolved Solids, mg/l	<5.0	94 %	80-120 %	R.DAVIS	---
Preparation Date	07.31.98	07.31.98	---	---	---
Date Analyzed	08.03.98	08.03.98	---	---	---
Dilution factor	1.0	1.0	---	---	---
Batch ID	0731A	0731A	---	---	---
Suspended Solids (160.2)					
Suspended Solids, mg/l	<5.0	105 %	80-120 %	R.DAVIS	---
Preparation Date	07.31.98	07.31.98	---	---	---
Date Analyzed	08.03.98	08.03.98	---	---	---
Dilution factor	1.0	1.0	---	---	---
Batch ID	0731B	0731B	---	---	---
Alkalinity (to pH 4.5) as CaCO3 (310.1)					
Alkalinity (to pH 4.5) as CaCO3, mg/l	<1.0	109 %	80-120 %	R.DAVIS	---
Preparation Date	07.31.98	07.31.98	---	---	---
Date Analyzed	07.31.98	07.31.98	---	---	---
Dilution factor	1.0	1.0	---	---	---
Batch ID	0731A	0731A	---	---	---

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Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 141280818

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84549-11	Method Blank	
84549-12	Lab Control Standard % Recovery	
84549-13	LCS Accuracy Control Limit (%R)	
84549-14	Analyst (First Initial, Last Name)	
84549-15	MS/MSD % Recovery	

PARAMETER	84549-11	84549-12	84549-13	84549-14	84549-15
Ferrous Iron (3500-Fe D)					
Iron, Ferrous (2+), mg/l	<0.10	110 %	80-120 %	S.NORWOOD	137/137 %
Preparation Date	07.30.98	07.30.98	---	---	07.30.98
Date Analyzed	07.30.98	07.30.98	---	---	07.30.98
Dilution factor	1.0	1.0	---	---	1.0
Batch ID	0730X	0730X	---	---	0730X
Arsenic (6010)					
Arsenic, mg/l	<0.010	100%	75-125 %	E.MARTSOLF	98/98 %
Preparation Date	07.31.98	07.31.98	---	---	07.31.98
Date Analyzed	08.03.98	08.03.98	---	---	08.03.98
Dilution factor	1.0	1.0	---	---	1.0
Batch ID	0731G	0731G	---	---	0731G
Barium (6010)					
Barium, mg/l	<0.010	104%	75-125 %	E.MARTSOLF	103/104 %
Preparation Date	07.31.98	07.31.98	---	---	07.31.98
Date Analyzed	08.03.98	08.03.98	---	---	08.03.98
Dilution factor	1.0	1.0	---	---	1.0
Batch ID	0731G	0731G	---	---	0731G

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Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 141280818

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84549-11	Method Blank	
84549-12	Lab Control Standard % Recovery	
84549-13	LCS Accuracy Control Limit (%R)	
84549-14	Analyst (First Initial, Last Name)	
84549-15	MS/MSD % Recovery	

PARAMETER	84549-11	84549-12	84549-13	84549-14	84549-15
Beryllium (6010)					
Beryllium, mg/l	<0.0040	103%	75-125 %	E.MARTSOLF	103/103 %
Preparation Date	07.31.98	07.31.98	---	---	07.31.98
Date Analyzed	08.03.98	08.03.98	---	---	08.03.98
Dilution factor	1.0	1.0	---	---	1.0
Batch ID	0731G	0731G	---	---	0731G
Cadmium (6010)					
Cadmium, mg/l	<0.0050	105%	75-125 %	E.MARTSOLF	103/103 %
Preparation Date	07.31.98	07.31.98	---	---	07.31.98
Date Analyzed	08.03.98	08.03.98	---	---	08.03.98
Dilution factor	1.0	1.0	---	---	1.0
Batch ID	0731G	0731G	---	---	0731G
Chromium (6010)					
Chromium, mg/l	<0.010	105%	75-125 %	E.MARTSOLF	109/109 %
Preparation Date	07.31.98	07.31.98	---	---	07.31.98
Date Analyzed	08.03.98	08.03.98	---	---	08.03.98
Dilution factor	1.0	1.0	---	---	1.0
Batch ID	0731G	0731G	---	---	0731G

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84549-11	Method Blank	
84549-12	Lab Control Standard % Recovery	
84549-13	LCS Accuracy Control Limit (%R)	
84549-14	Analyst (First Initial, Last Name)	
84549-15	MS/MSD % Recovery	

PARAMETER	84549-11	84549-12	84549-13	84549-14	84549-15
Cobalt (6010)					
Cobalt, mg/l	<0.010	103%	75-125 %	E.MARTSOLF	102/102 %
Preparation Date	07.31.98	07.31.98	---	---	07.31.98
Date Analyzed	08.03.98	08.03.98	---	---	08.03.98
Dilution factor	1.0	1.0	---	---	1.0
Batch ID	0731G	0731G	---	---	0731G
Lead (7421)					
Lead, mg/l	<0.0050	83 %	80-120 %	N.DAVIS	95/86 %
Preparation Date	08.03.98	08.03.98	---	---	08.03.98
Date Analyzed	08.04.98	08.04.98	---	---	08.04.98
Dilution factor	1.0	1.0	---	---	1.0
Batch ID	0803J	0803J	---	---	0803J
Manganese (6010)					
Manganese, mg/l	<0.010	107%	75-125 %	E.MARTSOLF	106/107 %
Preparation Date	07.31.98	07.31.98	---	---	07.31.98
Date Analyzed	08.03.98	08.03.98	---	---	08.03.98
Dilution factor	1.0	1.0	---	---	1.0
Batch ID	0731G	0731G	---	---	0731G

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84549-11	Method Blank	
84549-12	Lab Control Standard % Recovery	
84549-13	LCS Accuracy Control Limit (%R)	
84549-14	Analyst (First Initial, Last Name)	
84549-15	MS/MSD % Recovery	

PARAMETER	84549-11	84549-12	84549-13	84549-14	84549-15
Mercury (7470)					
Mercury, mg/l	<0.00020	100 %	80-120 %	B.BRAYBOY	99/102 %
Preparation Date	08.04.98	08.04.98	---	---	08.04.98
Date Analyzed	08.05.98	08.05.98	---	---	08.05.98
Dilution factor	1.0	1.0	---	---	1.0
Batch ID	08045	08045	---	---	08045
Nickel (6010)					
Nickel, mg/l	<0.0040	104%	75-125 %	E.MARTSOLF	103/104 %
Preparation Date	07.31.98	07.31.98	---	---	07.31.98
Date Analyzed	08.03.98	08.03.98	---	---	08.03.98
Dilution factor	1.0	1.0	---	---	1.0
Batch ID	0731G	0731G	---	---	0731G
Vanadium (6010)					
Vanadium, mg/l	<0.010	102%	75-125 %	E.MARTSOLF	102/103 %
Preparation Date	07.31.98	07.31.98	---	---	07.31.98
Date Analyzed	08.03.98	08.03.98	---	---	08.03.98
Dilution factor	1.0	1.0	---	---	1.0
Batch ID	0731G	0731G	---	---	0731G

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84549-11	Method Blank	
84549-12	Lab Control Standard % Recovery	
84549-13	LCS Accuracy Control Limit (%R)	
84549-14	Analyst (First Initial, Last Name)	
84549-15	MS/MSD % Recovery	

PARAMETER	84549-11	84549-12	84549-13	84549-14	84549-15
Phosphorus, Total					
Total Phosphorus, mg/l	<0.10	126 %	60-140 %	L.RILEY	136/142 %
Preparation Date	07.30.98	---	---	---	---
Date Analyzed	08.03.98	---	---	---	---
Dilution factor	1.0	---	---	---	---
Batch ID	0730A	---	---	---	---
Total Kjeldahl Nitrogen (351.2)					
Total Kjeldahl Nitrogen-N, mg/l	<0.20	81 %	75-125 %	L.RILEY	0/217 %
Preparation Date	07.30.98	---	---	---	---
Date Analyzed	08.03.98	---	---	---	---
Dilution factor	1.0	---	---	---	---
Batch ID	0730A	---	---	---	---

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84549-16	MS Accuracy Advisory Limit (%R)	

PARAMETER	84549-16		
Standard Plate Count			
Standard Plate Count	---		
Sulfate as SO4			
Sulfate as SO4	75-125 %		
Nitrate-N (353.2)			
Nitrate-N	80-120 %		
Total Dissolved Solids (160.1)			
Total Dissolved Solids	80-120 %		
Suspended Solids (160.2)			
Suspended Solids	80-120 %		
Alkalinity (to pH 4.5) as CaCO3 (310.1)			
Alkalinity (to pH 4.5) as CaCO3	80-120 %		
Ferrous Iron (3500-Fe D)			
Iron, Ferrous (2+)	63-158 %		
Arsenic (6010)			
Arsenic	75-125 %		
Barium (6010)			
Barium	75-125 %		
Beryllium (6010)			
Beryllium	75-125 %		
Cadmium (6010)			
Cadmium	75-125 %		
Chromium (6010)			
Chromium	75-125 %		

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84549-16	MS Accuracy Advisory Limit (%R)	

PARAMETER	84549-16				
Cobalt (6010)					
Cobalt	75-125 %				
Lead (7421)					
Lead	75-125 %				
Manganese (6010)					
Manganese	75-125 %				
Mercury (7470)					
Mercury	80-120 %				
Nickel (6010)					
Nickel	75-125 %				
Vanadium (6010)					
Vanadium	75-125 %				
Phosphorus, Total					
Total Phosphorus	60-140 %				
Total Kjeldahl Nitrogen (351.2)					
Total Kjeldahl Nitrogen N	75-125 %				

Methods: EPA SW-846 and 40 CFR Part 136.

Elizabeth F. Beauchamp, Project Manager

Final Page Of Report

Serial Number 1 7808

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

5102 LaRoche Avenue, Savannah, GA 31404 — Phone: (912) 354-7858 — Fax: (912) 352-0165
2846 Industrial Plaza Drive Tallahassee, FL 32301 — Phone: (904) 878-3994 — Fax: (904) 878-9504
414 SW 12th Avenue, Deerfield Beach, FL 33442 — Phone: (954) 421-7400 — Fax: (954) 421-2584
900 Lakeside Drive, Mobile AL 36693 — Phone: (334) 666-6633 — Fax: (334) 666-6696
6712 Benjamin Road, Suite 100, Tampa, FL 33634 — Phone: (813) 885-7427 — Fax: (813) 885-7049
100 Alpha Drive, Suite 110, Destrehan, LA 70047 — Phone: (504) 764-1100 — Fax: (504) 725-1163

PROJECT REFERENCE: Solutia/KEJ | PROJECT NO.: 983223 | P.O. NUMBER:

PROJECT LOC. (State): AL | SAMPLER(S) NAME: CDH, DE#, MAC, KSD - EGC | PHONE: 770-451-1833 | FAX: 770-734-9476

CLIENT NAME: Calder Associates | CLIENT PROJECT MANAGER: Jan Rathke

CLIENT ADDRESS (CITY, STATE, ZIP): 3750 Chamblee-Tucker Rd Atlanta, GA 30341

MATRIX TYPE: AQUEOUS (WATER) / SOLID OR SEMI-SOLID / AIR / NONAQUEOUS LIQUID (OTHER THAN WATER)

REQUIRED ANALYSES: Ferrous Iron | HPC | TPHs (DRO) & TRO | Cyanide | VOCs (TCL + 10 TICs) | Metals (Ca, Fe, Mg, Mn) | Metals (Cr, Pb) | Alkalinity

PAGE 1 OF 1

STANDARD REPORT DELIVERY: X

EXPEDITED REPORT DELIVERY (surcharge): ☐

Date Due:

SAMPLE DATE	SAMPLE TIME	SL NO.	SAMPLE IDENTIFICATION	AQUEOUS	SOLID OR SEMI-SOLID	AIR	NONAQUEOUS LIQUID	NUMBER OF CONTAINERS SUBMITTED	REMARKS
7/23/98			Dup	X				1 1 1 1	* Please use Betty Deardorff for quantitation limits & target analyte list.
	1430		OW-10	X				1 1 1 1	
	1200		OW-2D	X				1 1 1 1	
7/23	1515		OW-9-F	X				1 1	
7/23	1105		OW-9					1 1	

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
	7/24			7/24/98	1533			
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME
	7/24	10:57		7/24/98	8:27			

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SL LOG NO.	LABORATORY REMARKS
M. Duncan	7/30/98	9:27	☑ YES ☐ NO		55-5145	

FedEx *USA Airbill* FedEx Tracking Number 801488135141 0200 Form I.D. No. Recipient's Copy

1 From

Date [illegible] [redacted]

Sender's Name [illegible] Phone ( ) [illegible]

Company [illegible]

Address [illegible] Dept./Floor/Suite/Room

City [illegible] State [illegible] ZIP [illegible]

2 Your Internal Billing Reference Information [illegible]

3 To

Recipient's Name [illegible] Phone ( ) [illegible]

Company [illegible]

Address [illegible] Dept./Floor/Suite/Room

☐ Check here if residence (Extra charges apply for FedEx Express Saver)

(If "HOLD" at FedEx location, print FedEx address here)

City [illegible] State [illegible] ZIP [illegible]

For HOLD at FedEx Location check here

☐ Hold Weekday (Not available with FedEx Ground Service)

☐ Hold Saturday (Not available at all locations) (Available for FedEx Priority Overnight and FedEx 2Day only)

For Saturday Delivery check here

☑ (Extra Charge. Not available at all locations) (Available for FedEx Priority Overnight and FedEx 2Day only)

8 0 1 4 8 8 1 3 5 1 4 1

4a Express Package Service *Packages under 150 lbs.* Delivery commitment may be later in some areas.

☒ FedEx Priority Overnight (Next business morning)

☐ FedEx Standard Overnight (Next business afternoon)

☐ FedEx 2Day* (Second business day)

☐ FedEx Express Saver* (Third business day)

☐ FedEx First Overnight (Earliest next business morning delivery to select locations)

* FedEx Letter Rate not available. Minimum charge One pound rate.

4b Express Freight Service *Packages over 150 lbs.* Delivery commitment may be later in some areas.

☐ FedEx Overnight Freight (Next business day)

☐ FedEx 2Day Freight (Second business day)

☐ FedEx Express Saver Freight (Up to 3 business days)

(Can by delivery schedule. See back for detailed descriptions of freight services.)

5 Packaging

☐ FedEx Letter ☐ FedEx Pak (Declared value limit $100) ☐ FedEx Box ☐ FedEx Tube ☒ Other Pkg.

6 Special Handling

Does this shipment contain dangerous goods? ☐ Yes (Proper shipping Dangerous Goods) ☐ Yes (Shipper's Declaration not required)

☐ Dry Ice (Dry Ice, 5 lb/kg) ☐ Yes (Shipper's Declaration not required)

CA ☐ Cargo Aircraft Only

7 Payment

Bill to: ☒ Sender (Recipient or Third Party Prohibited) ☐ Recipient ☐ Third Party ☐ Credit Card ☐ Cash/Check

(Enter FedEx account no. or Credit Card no. below)

[redacted]

Total Packages	Total Weight	Total Declared Value*	Total Charges
[illegible]	[illegible]	$ [illegible].00	$

* When declaring a value higher than $100 per shipment, you pay a fee/additional charge. See SERVICE COMMITMENT, DECLARED VALUE, AND LIMIT OF LIABILITY rates for further information.

Credit Card Auth.

8 Release Signature

58-83672

Your signature authorizes Federal Express to deliver this payment without obtaining a signature and agrees to indemnify and hold harmless Federal Express from any resulting claims.

287

Questions?

Call 1-800-Go-FedEx (800)463-3339

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SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-84641
Received: 04 AUG 98
Reported: 19 AUG 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 112480820

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84641-1	OWR-2S	08-03-98/0920
84641-2	OWR-1D	08-03-98/0950

PARAMETER	84641-1	84641-2
Standard Plate Count		
Standard Plate Count, CFU/ml	740	5000
Preparation Date	08.04.98	08.04.98
Date Analyzed	08.04.98	08.04.98
Batch ID	0804A	0804A
Sulfate as SO4		
Sulfate as SO4, mg/l	<5.0	<5.0
Preparation Date	8.13.98	08.13.98
Date Analyzed	08.13.98	08.13.98
Dilution factor	1.0	1.0
Batch ID	0813A	0813A
Nitrate-N (353.2)		
Nitrate-N, mg/l	2.2	<0.050
Preparation Date	08.04.98	08.04.98
Date Analyzed	08.04.98	08.04.98
Dilution factor	2.0	1.0
Batch ID	0806D	0806D
Total Dissolved Solids (160.1)		
Total Dissolved Solids, mg/l	240	300
Preparation Date	08.04.98	08.04.98
Date Analyzed	08.04.98	08.04.98
Dilution factor	1.0	1.0
Batch ID	0804A	0804A

SL SAVANNAH LABORATORIES
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Sampled By: Client
Code: 112480820

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84641-1	OWR-2S	08-03-98/0920
84641-2	OWR-1D	08-03-98/0950

PARAMETER	84641-1	84641-2
Suspended Solids (160.2)		
Suspended Solids, mg/l	<5.0	7.0
Preparation Date	08.04.98	08.04.98
Date Analyzed	08.04.98	08.04.98
Dilution factor	1.0	1.0
Batch ID	0804B	0804B
Alkalinity (to pH 4.5) as CaCO3 (310.1)		
Alkalinity (to pH 4.5) as CaCO3, mg/l	23	210
Preparation Date	08.06.98	08.06.98
Date Analyzed	08.06.98	08.06.98
Dilution factor	1.0	1.0
Batch ID	0806A	0806A
Ferrous Iron (3500-Fe D)		
Iron, Ferrous (2+), mg/l	<0.10	<0.10
Preparation Date	08.04.98	08.04.98
Date Analyzed	08.04.98	08.04.98
Dilution factor	1.0	1.0
Batch ID	0804X	0804X

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Received: 04 AUG 98
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Client PO. No.: 0263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code. 112480820

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84641-1	OWR-2S	08-03-98/0920
84641-2	OWR-1D	08-03-98/0950

PARAMETER	84641-1	84641-2	
Volatiles by GC/MS (8260)			
Methylene chloride (Dichloromethane), ug/l	<5.0	<5.0	
1,1,2,2-Tetrachloroethane, ug/l	<5.0	<5.0	
Chlorobenzene, ug/l	<5.0	<5.0	
Isopropylbenzene, ug/l	<5.0	<5.0	
Surrogate - Toluene-d8	100 %	98 %	
Surrogate - 4-Bromofluorobenzene	100 %	102 %	
Surrogate - Dibromofluoromethane	98 %	98 %	
Date Analyzed	08.06.98	08.06.98	
Dilution factor	1.0	1.0	
Batch ID	100806	100806	

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CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 112480820

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84641-3	OW-10-F	07-31-98/1000

PARAMETER	84641-3
Arsenic (6010)	
Arsenic, mg/l	<0.010
Preparation Date	08.05.98
Date Analysed	08.07.98
Dilution factor	1.0
Batch ID	0805G
Barium (6010)	
Barium, mg/l	1.0
Preparation Date	08.05.98
Date Analysed	08.07.98
Dilution factor	1.0
Batch ID	0805G
Beryllium (6010)	
Beryllium, mg/l	0.0043
Preparation Date	08.05.98
Date Analysed	08.07.98
Dilution factor	1.0
Batch ID	0805G
Cadmium (6010)	
Cadmium, mg/l	<0.0050
Preparation Date	08.05.98
Date Analysed	08.07.98
Dilution factor	1.0
Batch ID	0805G

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Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 112480820

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84641-3	OW-10-F	07-31-98/1000

PARAMETER	84641-3				
Chromium (6010)					
Chromium, mg/l	<0.010				
Preparation Date	08.05.98				
Date Analysed	08.07.98				
Dilution factor	1.0				
Batch ID	0805G				
Cobalt (6010)					
Cobalt, mg/l	0.049				
Preparation Date	08.05.98				
Date Analysed	08.07.98				
Dilution factor	1.0				
Batch ID	0805G				
Lead (7421)					
Lead, mg/l	0.014				
Preparation Date	08.05.98				
Date Analysed	08.07.98				
Dilution factor	1.0				
Batch ID	0805H				
Manganese (6010)					
Manganese, mg/l	1.4				
Preparation Date	08.05.98				
Date Analysed	08.07.98				
Dilution factor	1.0				
Batch ID	0805G				

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Received: 04 AUG 98
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Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code. 112480820

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84641-3	OW-10-F	07-31-98/1000

PARAMETER	84641-3
Mercury (7470)	
Mercury, mg/l	<0.00020
Preparation Date	08.07.98
Date Analyzed	08.07.98
Dilution factor	1.0
Batch ID	0807S
Nickel (6010)	
Nickel, mg/l	0.061
Preparation Date	08.05.98
Date Analyzed	08.07.98
Dilution factor	1.0
Batch ID	0805G
Vanadium (6010)	
Vanadium, mg/l	<0.010
Preparation Date	08.05.98
Date Analyzed	08.07.98
Dilution factor	1.0
Batch ID	0805G

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LOG NO: S8-84641
Received: 04 AUG 98
Reported: 19 AUG 98

Ms. Gayle Pittman
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3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 112480820

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84641-3	OW-10-F	07-31-98/1000

PARAMETER	84641-3
PCB's (8081/See Qualifier Z)	
PCB-1016, ug/l	0
PCB-1221, ug/l	0
PCB-1232, ug/l	0
PCB-1242, ug/l	0
PCB-1248, ug/l	0
PCB-1254, ug/l	0
PCB-1260, ug/l	0
Total Polychlorinated Biphenyls, ug/l	0
Surrogate - TCX	70 %
Date Extracted	08.05.98
Date Analyzed	08.08.98
Dilution factor	1.0

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REISSUED 10/15/02

LOG NO: S8-84641
Received: 04 AUG 98
Reported: 19 AUG 98
Revised:

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

Contract No.: S7219

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 102921015

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84641-3	OW-10-F	07-31-98/1000

PARAMETER	84641-3
PCB's (8081/See Qualifier Z) (608)	
PCB-1016, ug/l	<1
PCB-1221, ug/l	<1
PCB-1232, ug/l	<1
PCB-1242, ug/l	<1
PCB-1248, ug/l	<1
PCB-1254, ug/l	<1
PCB-1260, ug/l	<1
Total Polychlorinated Biphenyls, ug/l	<1
Surrogate - TCX	70 %
Date Extracted	08.05.98
Date Analyzed	08.08.98
Dilution factor	1.0

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LOG NO: S8-84641
Received: 04 AUG 98
Reported: 19 AUG 98

Ms. Gayle Pittman
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Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 113280820

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84641-11	Method Blank	
84641-12	Lab Control Standard % Recovery	
84641-13	LCS Accuracy Control Limit (%R)	
84641-14	Analyst (First Initial, Last Name)	

PARAMETER	84641-11	84641-12	84641-13	84641-14
Standard Plate Count				
Standard Plate Count, CFU/ml	<1.0	---	---	R.DAVIS
Preparation Date	08.04.98	---	---	---
Date Analyzed	08.04.98	---	---	---
Batch ID	0804A	---	---	---
Sulfate as SO4				
Sulfate as SO4, mg/l	<5.0	77 %	75-125 %	R.DAVIS
Preparation Date	08.13.98	08.13.98	---	---
Date Analyzed	08.13.98	08.13.98	---	---
Dilution factor	1.0	1.0	---	---
Batch ID	0813A	0813A	---	---
Nitrate-N (353.2)				
Nitrate-N, mg/l	<0.050	88 %	80-120 %	L.RILEY
Preparation Date	08.04.98	08.04.98	---	---
Date Analyzed	08.04.98	08.04.98	---	---
Dilution factor	1.0	1.0	---	---
Batch ID	0806D	0806D	---	---

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Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 112480820

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84641-11	Method Blank	
84641-12	Lab Control Standard % Recovery	
84641-13	LCS Accuracy Control Limit (%R)	
84641-14	Analyst (First Initial, Last Name)	

PARAMETER	84641-11	84641-12	84641-13	84641-14
Standard Plate Count				
Standard Plate Count, CFU/ml	<1.0	---	---	R.DAVIS
Preparation Date	08.04.98	---	---	---
Date Analyzed	08.04.98	---	---	---
Batch ID	0804A	---	---	---
Sulfate as SO4				
Sulfate as SO4, mg/l	<5.0	77 %	75-125 %	R.DAVIS
Preparation Date	08.13.98	---	---	---
Date Analyzed	08.13.98	---	---	---
Dilution factor	1.0	---	---	---
Batch ID	0813A	---	---	---
Nitrate-N (353.2)				
Nitrate N, mg/l	<0.050	88 %	80-120 %	L.RILEY
Preparation Date	08.04.98	08.13.98	---	---
Date Analyzed	08.04.98	08.13.98	---	---
Dilution factor	1.0	1.0	---	---
Batch ID	0806D	0813A	---	---

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84641-11	Method Blank	
84641-12	Lab Control Standard % Recovery	
84641-13	LCS Accuracy Control Limit (%R)	
84641-14	Analyst (First Initial, Last Name)	

PARAMETER	84641-11	84641-12	84641-13	84641-14
Total Dissolved Solids (160.1)				
Total Dissolved Solids, mg/l	<5.0	93 %	80-120 %	R. DAVIS
Preparation Date	08.04.98	08.04.98	---	---
Date Analyzed	08.04.98	08.04.98	---	---
Dilution factor	1.0	1.0	---	---
Batch ID	0804A	0804A	---	---
Suspended Solids (160.2)				
Suspended Solids, mg/l	<5.0	103 %	80-120 %	R.DAVIS
Preparation Date	08.04.98	08.04.98	---	---
Date Analyzed	08.04.98	08.04.98	---	---
Dilution factor	1.0	1.0	---	---
Batch ID	0804B	0804B	---	---
Alkalinity (to pH 4.5) as CaCO3 (310.1)				
Alkalinity (to pH 4.5) as CaCO3, mg/l	<1.0	105 %	80-120 %	R.DAVIS
Preparation Date	08.06.98	08.06.98	---	---
Date Analyzed	08.06.98	08.06.98	---	---
Dilution factor	1.0	1.0	---	---
Batch ID	0806A	0806A	---	---

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84641-11	Method Blank	
84641-12	Lab Control Standard % Recovery	
84641-13	LCS Accuracy Control Limit (%R)	
84641-14	Analyst (First Initial, Last Name)	

PARAMETER	84641-11	84641-12	84641-13	84641-14
Ferrous Iron (3500 Fe D)				
Iron, Ferrous (2+), mg/l	<0.10	94 %	80-120 %	L.REEVES
Preparation Date	08.04.98	08.04.98	---	---
Date Analyzed	08.04.98	08.04.98	---	---
Dilution factor	1.0	1.0	---	---
Batch ID	0804X	0804X	---	---
Arsenic (6010)				
Arsenic, mg/l	<0.010	101%	75-125 %	A.BRAZELL
Preparation Date	08.05.98	08.05.98	---	---
Date Analyzed	08.07.98	08.07.98	---	---
Dilution factor	1.0	1.0	---	---
Batch ID	0805G	0805G	---	---
Barium (6010)				
Barium, mg/l	<0.010	106%	75-125 %	A.BRAZELL
Preparation Date	08.05.98	08.05.98	---	---
Date Analyzed	08.07.98	08.07.98	---	---
Dilution factor	1.0	1.0	---	---
Batch ID	0805G	0805G	---	---

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84641-11	Method Blank	
84641-12	Lab Control Standard % Recovery	
84641-13	LCS Accuracy Control Limit (%R)	
84641-14	Analyst (First Initial, Last Name)	

PARAMETER	84641-11	84641-12	84641-13	84641-14
Beryllium (6010)				
Beryllium, mg/l	<0.0040	103%	75-125 %	A.BRAZELL
Preparation Date	08.05.98	08.05.98	---	---
Date Analyzed	08.07.98	08.07.98	---	---
Dilution factor	1.0	1.0	---	---
Batch ID	0805G	0805G	---	---
Cadmium (6010)				
Cadmium, mg/l	<0.0050	105%	75-125 %	A.BRAZELL
Preparation Date	08.05.98	08.05.98	---	---
Date Analyzed	08.07.98	08.07.98	---	---
Dilution factor	1.0	1.0	---	---
Batch ID	0805G	0805G	---	---
Chromium (6010)				
Chromium, mg/l	<0.010	106%	75-125 %	A.BRAZELL
Preparation Date	08.05.98	08.05.98	---	---
Date Analyzed	08.07.98	08.07.98	---	---
Dilution factor	1.0	1.0	---	---
Batch ID	0805G	0805G	---	---

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84641-11	Method Blank	
84641-12	Lab Control Standard % Recovery	
84641-13	LCS Accuracy Control Limit (%R)	
84641-14	Analyst (First Initial, Last Name)	

PARAMETER	84641-11	84641-12	84641-13	84641-14
Cobalt (6010)				
Cobalt, mg/l	<0.010	103%	75-125 %	A.BRAZELL
Preparation Date	08.05.98	08.05.98	---	---
Date Analyzed	08.07.98	08.07.98	---	---
Dilution factor	1.0	1.0	---	---
Batch ID	0805G	0805G	---	---
Lead (7421)				
Lead, mg/l	<0.0050	94 %	80-120 %	N.DAVIS
Preparation Date	08.05.98	08.05.98	---	---
Date Analyzed	08.07.98	08.07.98	---	---
Dilution factor	1.0	1.0	---	---
Batch ID	0805H	0805H	---	---
Manganese (6010)				
Manganese, mg/l	<0.010	108%	75-125 %	A.BRAZELL
Preparation Date	08.05.98	08.05.98	---	---
Date Analyzed	08.07.98	08.07.98	---	---
Dilution factor	1.0	1.0	---	---
Batch ID	0805G	0805G	---	---

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3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 112480820

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84641-11	Method Blank	
84641-12	Lab Control Standard % Recovery	
84641-13	LCS Accuracy Control Limit (%R)	
84641-14	Analyst (First Initial, Last Name)	

PARAMETER	84641-11	84641-12	84641-13	84641-14
Mercury (7470)				
Mercury, mg/l	<0.00020	105 %	80-120 %	B.BRAYBOY
Preparation Date	08.07.98	08.07.98	---	---
Date Analyzed	08.07.98	08.07.98	---	---
Dilution factor	1.0	1.0	---	---
Batch ID	0807S	0807S	---	---
Nickel (6010)				
Nickel, mg/l	<0.0040	104%	75-125 %	A.BRAZELL
Preparation Date	08.05.98	08.05.98	---	---
Date Analyzed	08.07.98	08.07.98	---	---
Dilution factor	1.0	1.0	---	---
Batch ID	0805G	0805G	---	---
Vanadium (6010)				
Vanadium, mg/l	<0.010	103%	75-125 %	A.BRAZELL
Preparation Date	08.05.98	08.05.98	---	---
Date Analyzed	08.07.98	08.07.98	---	---
Dilution factor	1.0	1.0	---	---
Batch ID	0805G	0805G	---	---

SL SAVANNAH LABORATORIES
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LOG NO: S8-84641
Received: 04 AUG 98
Reported: 19 AUG 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 112480820

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84641-11	Method Blank	
84641-12	Lab Control Standard % Recovery	
84641-13	LCS Accuracy Control Limit (%R)	
84641-14	Analyst (First Initial, Last Name)	

PARAMETER	84641-11	84641-12	84641-13	84641-14
PCB's (8081/See Qualifier Z)				
PCB-1016, ug/l	0	96 %	43-139 %	T.GALLAGH
PCB-1221, ug/l	0	---	---	T.GALLAGH
PCB-1232, ug/l	0	---	---	T.GALLAGH
PCB-1242, ug/l	0	---	---	T.GALLAGH
PCB-1248, ug/l	0	---	---	T.GALLAGH
PCB-1254, ug/l	0	---	---	T.GALLAGH
PCB-1260, ug/l	0	84 %	31-152 %	T.GALLAGH
Total Polychlorinated Biphenyls, ug/l	0	---	---	T.GALLAGH
Surrogate - TCX	55 %	70 %	---	---
Date Extracted	08.05.98	08.05.98	---	---
Date Analyzed	08.08.98	08.08.98	---	---
Dilution Factor	1.0	1.0	---	---

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STL Savannah
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REISSUED 10/15/02

LOG NO: S8-84641
Received: 04 AUG 98
Reported: 19 AUG 98
Revised:

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006
Contract No.: S7219
CC: Mr. Alan G. Faust
Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 102921015

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84641-11	Method Blank	
84641-12	Lab Control Standard % Recovery	
84641-13	LCS Accuracy Control Limit (%R)	
84641-14	Analyst (First Initial, Last Name)	

PARAMETER	84641-11	84641-12	84641-13	84641-14
PCB's (8081/See Qualifier Z) (608)				
PCB-1016, ug/l	<1	96 %	43-139 %	T.GALLAGH
PCB-1221, ug/l	<1	---	---	T.GALLAGH
PCB-1232, ug/l	<1	---	---	T.GALLAGH
PCB-1242, ug/l	<1	---	---	T.GALLAGH
PCB-1248, ug/l	<1	---	---	T.GALLAGH
PCB-1254, ug/l	<1	---	---	T.GALLAGH
PCB-1260, ug/l	<1	84 %	31-152 %	T.GALLAGH
Total Polychlorinated Biphenyls, ug/l	<1	---	---	T.GALLAGH
Surrogate - TCX	55 %	70 %	---	---
Date Extracted	08.05.98	08.05.98	---	---
Date Analyzed	08.08.98	08.08.98	---	---
Dilution factor	1.0	1.0	---	---

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LOG NO: S8-84641
Received: 04 AUG 98
Reported: 19 AUG 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 112480820

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84641-11	Method Blank	
84641-12	Lab Control Standard % Recovery	
84641-13	LCS Accuracy Control Limit (%R)	
84641-14	Analyst (First Initial, Last Name)	

PARAMETER	84641-11	84641-12	84641-13	84641-14
Volatiles by GC/MS (8260)				
Methylene chloride (Dichloromethane), ug/l	<5.0	---	---	J.MULLINS
1,1,2,2-Tetrachloroethane, ug/l	<5.0	---	---	J.MULLINS
Chlorobenzene, ug/l	<5.0	92 %	60-127 %	J.MULLINS
Isopropylbenzene, ug/l	<5.0	---	---	J.MULLINS
Surrogate - Toluene-d8	98 %	98 %	67-134 %	---
Surrogate - 4 Bromofluorobenzene	98 %	98 %	67-132 %	---
Surrogate - Dibromofluoromethane	100 %	100 %	64-142 %	---
Date Analyzed	08.06.98	08.06.98	---	---
Dilution factor	1.0	1.0	---	---
Batch ID	100806	100806	---	---

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LOG NO: S8-84641
Received: 04 AUG 98
Reported: 19 AUG 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 112480820

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED		
84641-15	MS/MSD % Recovery			
84641-16	MS Accuracy Advisory Limit (%R)			
PARAMETER		84641-15	84641-16	
Standard Plate Count				
	Standard Plate Count, /%	---	---	
Sulfate as SO4				
	Sulfate as SO4, %	80/88 %	75-125 %	
Nitrate-N (353.2)				
	Nitrate-N, %	*F73/*F73	80-120 %	
Total Dissolved Solids (160.1)				
	Total Dissolved Solids, %	---	---	
Suspended Solids (160.2)				
	Suspended Solids, %	---	---	
Alkalinity (to pH 4.5) as CaCO3 (310.1)				
	Alkalinity (to pH 4.5) as CaCO3, %	---	---	
Ferrous Iron (3500-Fe D)				
	Iron, Ferrous (2+), %	104/101 %	80-120 %	
	Preparation Date	08.04.98	---	
	Date Analyzed	08.04.98	---	
	Dilution factor	1.0	---	
	Batch ID	0804X	---	

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LOG NO: S8-84641
Received: 04 AUG 98
Reported: 19 AUG 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 112480820

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED	
84641-15	MS/MSD % Recovery		
84641-16	MS Accuracy Advisory Limit (%R)		
PARAMETER		84641-15	84641-16
Volatiles by GC/MS (8260)			
	Chlorobenzene, %	100/108 %	60-127 %
	Surrogate - Toluene-d8	98/100 %	67-134 %
	Surrogate - 4-Bromofluorobenzene	102/104 %	67-132 %
	Surrogate - Dibromofluoromethane	98/100 %	64-142 %
	Date Analyzed	08.06.98	---
	Dilution factor	1.0	---
	Batch ID	100806	---
	Clock ID	100806	---
PCB's (8081/See Qualifier Z)			
	PCB-1016, %	*F82	*F82
Arsenic (6010)			
	Arsenic, %	105/109 %	75-125 %
	Preparation Date	08.05.98	---
	Date Analyzed	08.07.98	---
	Dilution factor	1.0	---
	Batch ID	0805G	---
Barium (6010)			
	Barium, %	101/105 %	75-125 %
	Preparation Date	08.05.98	---
	Date Analyzed	08.07.98	---
	Dilution factor	1.0	---
	Batch ID	0805G	---

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LOG NO: S8-84641
Received: 04 AUG 98
Reported: 19 AUG 98
Revised:

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

Contract No.: S7219

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 102921015

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84641-15	MS/MSD % Recovery	
84641-16	MS Accuracy Advisory Limit (%R)	

PARAMETER	84641-15	84641-16
PCB's (8081/See Qualifier Z) (608)		
PCB-1016, %	*F82	*F82

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LOG NO: S8-84641
Received: 04 AUG 98
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Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 112480820

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED		
84641-15	MS/MSD % Recovery			
84641-16	MS Accuracy Advisory Limit (%R)			
PARAMETER		84641-15	84641-16	
Beryllium (6010)				
	Beryllium, %	101/105 %	75-125 %	
	Preparation Date	08.05.98	---	
	Date Analyzed	08.07.98	---	
	Dilution factor	1.0	---	
	Batch ID	0805G	---	
Cadmium (6010)				
	Cadmium, %	101/104 %	75-125 %	
	Preparation Date	08.05.98	---	
	Date Analyzed	08.07.98	---	
	Dilution factor	1.0	---	
	Batch ID	0805G	---	
Chromium (6010)				
	Chromium, %	104/108 %	75-125 %	
	Preparation Date	08.05.98	---	
	Date Analyzed	08.07.98	---	
	Dilution factor	1.0	---	
	Batch ID	0805G	---	
Cobalt (6010)				
	Cobalt, %	103/106 %	75-125 %	
	Preparation Date	08.05.98	---	
	Date Analyzed	08.07.98	---	
	Dilution factor	1.0	---	
	Batch ID	0805G	---	

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Ms. Gayle Pittman
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3730 Chamblee Tucker Road
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Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 112480820

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED	
84641-15	MS/MSD % Recovery		
84641-16	MS Accuracy Advisory Limit (%R)		
PARAMETER		84641-15	84641-16
Lead (7421)			
Lead, %		93 %	95 %
Preparation Date		08.05.98	---
Date Analyzed		08.07.98	---
Dilution factor		1.0	---
Batch ID		0805H	---
Manganese (6010)			
Manganese, %		102/106 %	75-125 %
Preparation Date		08.05.98	---
Date Analyzed		08.07.98	---
Dilution factor		1.0	---
Batch ID		0805G	---
Mercury (7470)			
Mercury, %		106/103 %	80-120 %
Preparation Date		08.06.98	---
Date Analyzed		08.07.98	---
Dilution factor		1.0	---
Batch ID		0806V	---
Nickel (6010)			
Nickel, %		103/106 %	75-125 %
Preparation Date		08.05.98	---
Date Analyzed		08.07.98	---
Dilution factor		1.0	---
Batch ID		0805G	---

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3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 112480820

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED	
84641-15	MS/MSD % Recovery		
84641-16	MS Accuracy Advisory Limit (%R)		
PARAMETER		84641-15	84641-16
Vanadium (6010)			
Vanadium, %		102/105 %	75-125 %
Preparation Date		08.05.98	---
Date Analyzed		08.07.98	---
Dilution factor		1.0	---
Batch ID		0805G	---

Methods: EPA SW-846 and 40 CFR Part 136.

Elizabeth F. Beauchamp, Project Manager

Final Page Of Report

SEVERN TRENT SERVICES

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STL Savannah

REISSUED 10/15/02

LOG NO: S8-84641
Received: 04 AUG 98
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Revised:

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

Contract No.: S7219

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 102921015

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84641-17	Quantitation Limit	

PARAMETER	84641-17
PCB's (8081/See Qualifier Z) (608)	
PCB-1016, ug/l	1.0
PCB-1221, ug/l	1.0
PCB-1232, ug/l	1.0
PCB-1242, ug/l	1.0
PCB-1248, ug/l	1.0
PCB-1254, ug/l	1.0
PCB-1260, ug/l	1.0

SW-846, Test Methods for Evaluating Solid Waste, Third Edition,

Elizabeth F. Beauchamp, Project Manager

Serial Number 4309

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

- [X] 5102 LaRoche Avenue, Savannah, GA 31404 — Phone: (912) 354-7858 — Fax: (912) 352-0165
- [ ] 2846 Industrial Plaza Drive, Tallahassee, FL 32301 — Phone: (904) 878-3994 — Fax: (904) 878-9504
- [ ] 41-5 SW 12th Avenue, Deerfield Beach, FL 33442 — Phone: (954) 421-7400 — Fax: (954) 421-2584
- [ ] 900 Lakeside Drive, Mobile, AL 36693 — Phone: (334) 666-6633 — Fax: (334) 666-8696
- [ ] 6712 Benjamin Road, Suite 100, Tampa, FL 33634 — Phone: (813) 885-7427 — Fax: (813) 885-7049
- [ ] 100 Alpha Drive, Suite 110, Destrehan, LA 70047 — Phone: (504) 764-1100 — Fax: (504) 725-1163

PROJECT REFERENCE: Solutia IBET/AL | PROJECT NO: 983-3223 | PO NUMBER:

PROJECT LOC. (State): AL | SAMPLER(S) NAME: Cox, Dean; Mac, Kid | PHONE: 770-938-1823 | FAX: 770-931-4476

CLIENT NAME: Cabot Associates | CLIENT PROJECT MANAGER: Jim Rathke

CLIENT ADDRESS (CITY, STATE, ZIP): 2170 Clearlake - Tucker, GA 30084

MATRIX TYPE: [X] GROUNDWATER [ ] SOIL [ ] SEDIMENT [ ] OIL [ ] SOLID [ ] LIQUID [ ] GAS

REQUIRED ANALYSES: HPC; Fecal Coliform; Sulfide; TSS; TDS; RCB; Metals - 6010/7060/7421; Mercury - 7470; VOC - 8260

Preservative: Ice — / — / HNO3 / H2SO4 / HCl

PAGE 1 OF 1

[X] STANDARD REPORT DELIVERY

[ ] EXPEDITED REPORT DELIVERY (surcharge)

Date Due: _____

SAMPLE DATE	SAMPLE TIME	SL NO	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS SUBMITTED	REMARKS
7-31-98	10:00		CCO-IC-F	2 1 1	
8-3-98	09:20		CWK-2S	3 3 3 6	* Use CWK-2S for MS/MSD analysis.
8-3-98	09:50		CWK-1D	1 1 1 3	* Please see Betsy Buckner for quantitation limits + target analytes

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
			Robert a. Cox	8-3-98	13:30			
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	ON ICE?	CUSTODY SEAL NO.	SL LOG NO.	LABORATORY REMARKS:
	8/4/98	9:03	[X] YES [ ] NO		SB-8464[illegible], SB-8464[illegible]	

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USA Airbill

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0200 Form I.D. No.

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1 From

Date: [redacted]

Sender's Name _____ Phone ( ) [illegible]

Company _____ S8 84640

Address _____ S8 8461

Dept./Floor/Suite/Room

City _____ State _____ ZIP _____

2 Your Internal Billing Reference Information _____

3 To

Recipient's Name _____ Phone ( )

Company _____

Address _____ ☐ Check here if residence (Extra charge delivery for FedEx Express Saver)

Dept./Floor/Suite/Room

City _____ State _____ ZIP _____

For HOLD at FedEx Location check here

☐ Hold Weekday (Not available only with Fed Overnight)

☐ Hold Saturday (Not available at all locations. Available for FedEx Priority Overnight and FedEx 2Day only)

For Saturday Delivery check here

(Extra Charge. Not available to all locations. Available for FedEx Priority Overnight and FedEx 2Day only)

801488135119

4a Express Package Service *Packages under 150 lbs.* Delivery commitment may be later in some areas.

☐ FedEx Priority Overnight (Next business morning)

☐ FedEx Standard Overnight (Next business afternoon)

☐ FedEx 2Day* (Second business day)

☐ FedEx Express Saver* (Third business day)

☐ FedEx First Overnight (Next business morning delivery to select locations)

* FedEx Letter Rate not available. Minimum charge: One pound rate.

4b Express Freight Service *Packages over 150 lbs.* Delivery commitment may be later in some areas.

☐ FedEx Overnight Freight (Next business day)

☐ FedEx Day Freight (Second business day)

☐ FedEx Express Saver Freight (Up to 3 business days)

(Call for delivery schedule. See back for detailed descriptions of freight services.)

5 Packaging

☐ FedEx Letter ☐ FedEx Tab ☐ FedEx Box ☐ FedEx Tube ☐ Other Pkg.

(Declared value limit $50)

6 Special Handling

Does this shipment contain dangerous goods?

☐ Yes (No not attached Shipper's Declaration) ☐ Yes (Shipper's Declaration not required)

☐ Dry Ice Dry Ice, 9, UNIDENTIFIED _____ * _____ kg. 904 (Dangerous Goods Shipper's Declaration not required)

CA ☐ Cargo Aircraft Only

7 Payment

Bill to: ☐ Sender (Account no. or Sector Card no. below) ☐ Recipient ☐ Third Party ☐ Credit Card ☐ Cash/Check

(Enter FedEx account no. or Credit Card no. below)

[redacted]

Total Packages	Total Weight	Total Declared Value*	Total Charges
		$ .00	$

* When declared value is over $100 per shipment, pay any additional charge. See SERVICE CONDITIONS, DECLARED VALUE, AND LIMIT OF LIABILITY section for further information.

Credit Card Auth.

8 Release Signature

Your signature authorizes Federal Express to deliver this shipment without obtaining signature and agrees to indemnify and hold harmless Federal Express from any resulting claims.

Questions?

Call 1-800-Go-FedEx (800)463-3339

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Part #12/1365
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LOG NO: S8-84686
Received: 05 AUG 98
Reported: 27 AUG 98
Revised 9/1/98
Client PO. No.: 8263-1-0006

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 16518099

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84686-1	OWR-2S	08-03-98/1455

PARAMETER	84686-1
Acid & Base Neutral Extractables (8270)	
1,4-Dichlorobenzene, ug/l	<10
1,2-Dichlorobenzene, ug/l	<10
Phenol, ug/l	<10
2,4-Dichlorophenol, ug/l	<10
2,4,6-Trichlorophenol, ug/l	<10
Pentachlorophenol, ug/l	1.2
4-Nitrophenol, ug/l	<50
2,4,5-Trichlorophenol, ug/l	<10
o,o,o-Triethyl phosphorothioate, ug/l	<10
Surrogate-2FP	84 %
Surrogate-PHL	90 %
Surrogate-NBZ	86 %
Surrogate-2FBP	86 %
Surrogate-TBP	94 %
Surrogate-TPH	96 %
Date Extracted	08.06.98
Date Analyzed	08.25.98
Dilution factor	1.0
Batch ID	0806B
Instrument ID	MSF5970

SL SAVANNAH LABORATORIES
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LOG NO: S8-84686
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Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 16518099

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84686-1	OWR-2S	08-03-98/1455

PARAMETER	84686-1
Organophosphorus Pesticides (8141)	
Methyl Parathion, ug/l	<0.50
Date Extracted	08.06.98
Date Analyzed	08.17.98
Tetraethyl dithiopyrophosphate (Sulfotepp), ug/l	<0.50
Ethyl Parathion, ug/l	<1.0
PCB's (8081/See Qualifier Z)	
PCB-1016, ug/l	0
PCB-1221, ug/l	0
PCB-1232, ug/l	0
PCB-1242, ug/l	0
PCB-1248, ug/l	0
PCB-1254, ug/l	0
PCB-1260, ug/l	0
Total Polychlorinated Biphenyls, ug/l	0
Surrogate - TCX	55 %
Date Extracted	08.06.98
Date Analyzed	08.12.98
Dilution factor	1.0
Arsenic (6010)	
Arsenic, mg/l	<0.010
Preparation Date	08.06.98
Date Analyzed	08.08.98
Dilution factor	1.0
Batch ID	0806H

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LOG NO: S8-84686
Received: 05 AUG 98
Reported: 27 AUG 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

Contract No.: S7219
CC: Mr. Alan G. Faust
Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 103021015

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84686-1	OWR-2S	08 03 98/1455

PARAMETER	84686-1
PCB's (8081/See Qualifier Z) (608)	
PCB-1016, ug/l	<1
PCB-1221, ug/l	<1
PCB-1232, ug/l	<1
PCB-1242, ug/l	<1
PCB-1248, ug/l	<1
PCB-1254, ug/l	<1
PCB-1260, ug/l	<1
Total Polychlorinated Biphenyls, ug/l	<1
Surrogate - TCX	55 %
Date Extracted	08.06.98
Date Analyzed	08.12.98
Dilution factor	1.0

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LOG NO: S8-84686
Received: 05 AUG 98
Reported: 27 AUG 98
Revised 9/1/98
Client PO. No.: 8263-1-0006

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 16518099

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84686-1	OWR-2S	08-03-98/1455

PARAMETER	84686-1
Barium (6010)	
Barium, mg/l	0.093
Preparation Date	08.06.98
Date Analyzed	08.08.98
Dilution factor	1.0
Batch ID	0806H
Beryllium (6010)	
Beryllium, mg/l	<0.0040
Preparation Date	08.06.98
Date Analyzed	08.08.98
Dilution factor	1.0
Batch ID	0806H
Cadmium (6010)	
Cadmium, mg/l	<0.0050
Preparation Date	08.06.98
Date Analyzed	08.08.98
Dilution factor	1.0
Batch ID	0806H
Chromium (6010)	
Chromium, mg/l	<0.010
Preparation Date	08.06.98
Date Analyzed	08.08.98
Dilution factor	1.0
Batch ID	0806H

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Client PO. No.: 8263-1-0006

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Atlanta, GA 30341

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 16518099

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84686-1	OWR-2S	08-03-98/1455

PARAMETER	84686-1
Cobalt (6010)	
Cobalt, mg/l	0.029
Preparation Date	08.06.98
Date Analyzed	08.08.98
Dilution factor	1.0
Batch ID	0806H
Lead (7421)	
Lead, mg/l	<0.0050
Preparation Date	08.06.98
Date Analyzed	08.07.98
Dilution factor	1.0
Batch ID	0806I
Manganese (6010)	
Manganese, mg/l	4.5
Preparation Date	08.06.98
Date Analyzed	08.08.98
Dilution factor	1.0
Batch ID	0806H
Mercury (7470)	
Mercury, mg/l	<0.00020
Preparation Date	08.06.98
Date Analyzed	08.07.98
Dilution factor	1.0
Batch ID	0806V

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Ms. Gayle Pittman
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CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 16518099

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84686-1	OWR-2S	08-03-98/1455

PARAMETER	84686-1
Nickel (6010)	
Nickel, mg/l	<0.0040
Preparation Date	08.06.98
Date Analyzed	08.08.98
Dilution factor	1.0
Batch ID	0806H
Vanadium (6010)	
Vanadium, mg/l	<0.010
Preparation Date	08.06.98
Date Analyzed	08.08.98
Dilution factor	1.0
Batch ID	0806H
Total Organic Carbon (9060)	
Total Organic Carbon, mg/l	3.0
Preparation Date	08.06.98
Date Analyzed	08.05.98
Dilution factor	1.0
Batch ID	0806A
Phosphorus, Total	
Total Phosphorus, mg/l	<0.044
Preparation Date	08.14.98
Date Analyzed	08.16.98
Dilution factor	1.0
Batch ID	0814A

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Sampled By: Client
Code: 16518099

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84686-1	OWR-2S	08-03-98/1455

PARAMETER	84686-1
Total Kjeldahl Nitrogen (351.2)	
Total Kjeldahl Nitrogen-N, mg/l	<0.20
Preparation Date	08.11.98
Date Analyzed	08.13.98
Dilution factor	1.0
Batch ID	0811A
Total Organic Halogen (9020A)	
Total Organic Halogen , mg/l	0.040
Preparation Date	08.11.98
Date Analyzed	08.11.98
Dilution factor	2.0
Batch ID	0811A
Sulfide (376.2)	
Sulfide , mg/l	<0.10
Preparation Date	08.06.98
Date Analyzed	08.06.98
Dilution factor	1.0
Batch ID	0806A
Phenolics, Total Recoverable (9065)	
Phenolics, Total Recoverables, mg/l	<0.050
Preparation Date	08.06.98
Date Analyzed	08.06.98
Dilution factor	1.0
Batch ID	0806A

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84686-5	OWR-2SF	08-03-98/1610
84686-19	OWR-4D-F	07-31-98/1441
84686-20	OWR-8S-F	08-03-98/1315
84686-21	Dupe 2-F	08-03-98/1315

PARAMETER	84686-5	84686-19	84686-20	84686-21
PCB's (8081/See Qualifier Z)				
PCB-1016, ug/l	0	0*F65	0*F65	0*F65
PCB-1221, ug/l	0	0	0	0
PCB-1232, ug/l	0	0	0	0
PCB-1242, ug/l	0	0	0	0
PCB-1248, ug/l	0	0	0	0
PCB-1254, ug/l	0	0	0	0
PCB-1260, ug/l	0	0	0	0
Total Polychlorinated Biphenyls, ug/l	0	0	0	0
Surrogate - TCX	48 %	*F33	*F33	*F33
Date Extracted	08.06.98	08.06.98	08.06.98	08.06.98
Date Analyzed	08.12.98	08.12.98	08.12.98	08.12.98
Dilution factor	1.0	10.0	10.0	10.0
Arsenic (6010)				
Arsenic, mg/l	<0.010	<0.010	<0.010	<0.010
Preparation Date	08.06.98	08.06.98	08.06.98	08.06.98
Date Analyzed	08.08.98	08.08.98	08.08.98	08.08.98
Dilution factor	1.0	1.0	1.0	1.0
Batch ID	0806H	0806H	0806H	0806H

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LOG NO: S8-84686
Received: 05 AUG 98
Reported: 27 AUG 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

Contract No.: S7219
CC: Mr. Alan G. Faust
Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 103021015

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84686-5	OWR-2SF	08-03-98/1610
84686-19	OWR-4D-F	07-31-98/1441
84686-20	OWR-8S-F	08-03-98/1315
84686-21	Dupe 2-F	08-03-98/1315

PARAMETER	84686-5	84686-19	84686-20	84686-21
PCB's (8081/See Qualifier Z) (608)				
PCB-1016, ug/l	<1	<10*F65	<10*F65	<10*F65
PCB-1221, ug/l	<1	<10	<10	<10
PCB-1232, ug/l	<1	<10	<10	<10
PCB-1242, ug/l	<1	<10	<10	<10
PCB-1248, ug/l	<1	<10	<10	<10
PCB-1254, ug/l	<1	<10	<10	<10
PCB-1260, ug/l	<1	<10	<10	<10
Total Polychlorinated Biphenyls, ug/l	<1	<10	<10	<10
Surrogate - TCX	48 %	*F33	*F33	*F33
Date Extracted	08.06.98	08.06.98	08.06.98	08.06.98
Date Analyzed	08.12.98	08.12.98	08.12.98	08.12.98
Dilution factor	1.0	10.0	10.0	10.0

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CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 16518099

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84686-5	OWR-2SF	08-03-98/1610
84686-19	OWR-4D-F	07-31-98/1441
84686-20	OWR-8S-F	08-03-98/1315
84686-21	Dupe 2-F	08-03-98/1315

PARAMETER	84686-5	84686-19	84686-20	84686-21
Barium (6010)				
Barium, mg/l	0.092	0.025	0.19	0.23
Preparation Date	08.06.98	08.06.98	08.06.98	08.06.98
Date Analyzed	08.08.98	08.08.98	08.08.98	08.08.98
Dilution factor	1.0	1.0	1.0	1.0
Batch ID	0806H	0806H	0806H	0806H
Beryllium (6010)				
Beryllium, mg/l	<0.0040	<0.0040	<0.0040	<0.0040
Preparation Date	08.06.98	08.06.98	08.06.98	08.06.98
Date Analyzed	08.08.98	08.08.98	08.08.98	08.08.98
Dilution factor	1.0	1.0	1.0	1.0
Batch ID	0806H	0806H	0806H	0806H
Cadmium (6010)				
Cadmium, mg/l	<0.0050	<0.0050	<0.0050	<0.0050
Preparation Date	08.06.98	08.06.98	08.06.98	08.06.98
Date Analyzed	08.08.98	08.08.98	08.08.98	08.08.98
Dilution factor	1.0	1.0	1.0	1.0
Batch ID	0806H	0806H	0806H	0806H

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LOG NO: S8-84686
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3730 Chamblee Tucker Road
Atlanta, GA 30341

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 16518099

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84686-5	OWR-2SF	08-03-98/1610
84686-19	OWR-4D-F	07-31-98/1441
84686-20	OWR-8S-F	08-03-98/1315
84686-21	Dupe 2-F	08-03-98/1315

PARAMETER	84686-5	84686-19	84686-20	84686-21
Chromium (6010)				
Chromium, mg/l	<0.010	<0.010	<0.010	<0.010
Preparation Date	08.06.98	08.06.98	08.06.98	08.06.98
Date Analyzed	08.08.98	08.08.98	08.08.98	08.08.98
Dilution factor	1.0	1.0	1.0	1.0
Batch ID	0806H	0806H	0806H	0806H
Cobalt (6010)				
Cobalt, mg/l	0.033	<0.010	0.024	0.028
Preparation Date	08.06.98	08.06.98	08.06.98	08.06.98
Date Analyzed	08.08.98	08.08.98	08.08.98	08.08.98
Dilution factor	1.0	1.0	1.0	1.0
Batch ID	0806H	0806H	0806H	0806H
Lead (7421)				
Lead, mg/l	<0.0050	<0.0050	0.027	0.045
Preparation Date	08.10.98	08.06.98	08.06.98	08.06.98
Date Analyzed	08.10.98	08.07.98	08.07.98	08.07.98
Dilution factor	1.0	1.0	1.0	1.0
Batch ID	0810K	0806I	0806I	0806I

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84686-5	OWR-2SF	08-03-98/1610
84686-19	OWR-4D-F	07-31-98/1441
84686-20	OWR-8S-F	08-03-98/1315
84686-21	Dupe 2-F	08-03-98/1315

PARAMETER	84686-5	84686-19	84686-20	84686-21
Manganese (6010)				
Manganese, mg/l	4.5	<0.010	1.1	1.4
Preparation Date	08.06.98	08.06.98	08.06.98	08.06.98
Date Analyzed	08.08.98	08.08.98	08.08.98	08.08.98
Dilution factor	1.0	1.0	1.0	1.0
Batch ID	0806H	0806H	0806H	0806H
Mercury (7470)				
Mercury, mg/l	<0.00020	<0.00020	<0.00020	<0.00020
Preparation Date	08.06.98	08.06.98	08.06.98	08.06.98
Date Analyzed	08.07.98	08.07.98	08.07.98	08.07.98
Dilution factor	1.0	1.0	1.0	1.0
Batch ID	0806V	0806V	0806V	0806V
Nickel (6010)				
Nickel, mg/l	<0.0040	<0.0040	0.0091	0.010
Preparation Date	08.06.98	08.06.98	08.06.98	08.06.98
Date Analyzed	08.08.98	08.08.98	08.08.98	08.08.98
Dilution factor	1.0	1.0	1.0	1.0
Batch ID	0806H	0806H	0806H	0806H

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84686-5	OWR-2SF	08-03-98/1610
84686-19	OWR-4D-F	07-31-98/1441
84686-20	OWR-8S-F	08-03-98/1315
84686-21	Dupe 2-F	08-03-98/1315

PARAMETER	84686-5	84686-19	84686-20	84686-21
Vanadium (6010)				
Vanadium, mg/l	<0.010	<0.010	<0.010	<0.010
Preparation Date	08.06.98	08.06.98	08.06.98	08.06.98
Date Analyzed	08.08.98	08.08.98	08.08.98	08.08.98
Dilution factor	1.0	1.0	1.0	1.0
Batch ID	0806H	0806H	0806H	0806H

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84686-10	OWR-4D	07-31-98/1047
84686-11	OWR-8S	08-03-98/1214
84686-12	Dupe 2	08-03-98/1245

PARAMETER	84686-10	84686-11	84686-12
PCB's (8081/See Qualifier Z)			
PCB-1016, ug/l	0	0*F65	0*F65
PCB-1221, ug/l	0	0	0
PCB-1232, ug/l	0	0	0
PCB-1242, ug/l	0	0	0
PCB-1248, ug/l	0	0	0
PCB-1254, ug/l	0	0	0
PCB-1260, ug/l	0	0	0
Total Polychlorinated Biphenyls, ug/l	0	0	0
Surrogate - TCX	48 %	*F33	*F33
Date Extracted	08.06.98	08.06.98	08.06.98
Date Analyzed	08.12.98	08.12.98	08.12.98
Dilution factor	1.0	10.0	10.0
Organophosphorus Pesticides (8141)			
Methyl Parathion, ug/l	<0.50	9.6	9.7
Date Extracted	08.06.98	08.06.98	08.06.98
Date Analyzed	08.17.98	08.17.98	08.17.98
Tetraethyl dithiopyrophosphate (Sulfotepp), ug/l	<0.50	1.8	1.9
Ethyl Parathion, ug/l	<1.0	560	730

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Sampled By: Client
Code: 103021015

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84686-10	OWR-4D	07-31-98/1047
84686-11	OWR-8S	08-03-98/1214
84686-12	Dupe 2	08-03-98/1245

PARAMETER	84686-10	84686-11	84686-12
PCB's (8081/See Qualifier Z) (608)			
PCB-1016, ug/l	<1	<10*F6S	<10*F6S
PCB-1221, ug/l	<1	<10	<10
PCB-1232, ug/l	<1	<10	<10
PCB-1242, ug/l	<1	<10	<10
PCB-1248, ug/l	<1	<10	<10
PCB-1254, ug/l	<1	<10	<10
PCB-1260, ug/l	<1	<10	<10
Total Polychlorinated Biphenyls, ug/l	<1	<10	<10
Surrogate - TCX	48 %	*F33	*F33
Date Extracted	08.06.98	08.06.98	08.06.98
Date Analyzed	08.12.98	08.12.98	08.12.98
Dilution factor	1.0	10.0	10.0

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-84686
Received: 05 AUG 98
Reported: 27 AUG 98
Revised 9/1/98
Client PO. No.: 8263-1-0006

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 16518099

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84686-10	OWR-4D	07-31-98/1047
84686-11	OWR-8S	08-03-98/1214
84686-12	Dupe 2	08-03-98/1245

PARAMETER	84686-10	84686-11	84686-12
Acid & Base Neutral Extractables (8270)			
1,4-Dichlorobenzene, ug/l	<10	<40	<40
1,2-Dichlorobenzene, ug/l	<10	<40	<40
Phenol, ug/l	<10	<40	<40
2,4-Dichlorophenol, ug/l	<10	<40	<40
2,4,6-Trichlorophenol, ug/l	<10	<40	<40
Pentachlorophenol, ug/l	<1.0	1.2	<1.0
4-Nitrophenol, ug/l	<50	390	340
2,4,5-Trichlorophenol, ug/l	<10	<40	<40
o,o,o-Triethyl phosphorothioate, ug/l	<10	330	330
Surrogate-2FP	87 %	86 %	98 %
Surrogate-PHL	92 %	88 %	100 %
Surrogate-NBZ	82 %	*F33	84 %
Surrogate-2FBP	74 %	*F33	*F33
Surrogate-TBP	88 %	85 %	79 %
Surrogate-TPH	94 %	112 %	112 %
Date Extracted	08.06.98	08.06.98	08.06.98
Date Analyzed	08.25.98	08.26.98	08.26.98
Dilution factor	1.0	4.0	4.0
Batch ID	0806D	0806D	0806D
Instrument ID	MSF5970	MSF5970	MSF5970

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Revised 9/1/98
Client PO. No.: 8263-1-0006

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3730 Chamblee Tucker Road
Atlanta, GA 30341

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code. 16510099

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84686-10	OWR-4D	07-31-98/1047
84686-11	OWR-9S	08-03-98/1214
84686-12	Dupe 2	08-03-98/1245

PARAMETER	84686-10	84686-11	84686-12
Volatiles by GC/MS (8260)			
Methylene chloride (Dichloromethane), ug/l	<5.0	36	36
1,1,2,2-Tetrachloroethane, ug/l	<5.0	<5.0	<5.0
Chlorobenzene, ug/l	<5.0	<5.0	<5.0
Isopropylbenzene, ug/l	<5.0	<5.0	<5.0
Surrogate - Toluene-d8	96 %	100 %	100 %
Surrogate - 4-Bromofluorobenzene	104 %	100 %	102 %
Surrogate - Dibromofluoromethane	100 %	100 %	100 %
Date Analyzed	08.09.98	08.09.98	08.09.98
Dilution factor	1.0	1.0	1.0
Batch ID	100809	100809	100809
Clock ID	100809A	100809A	100809A
Arsenic (6010)			
Arsenic, mg/l	<0.010	<0.010	<0.010
Preparation Date	08.06.98	08.06.98	08.06.98
Date Analyzed	08.08.98	08.08.98	08.08.98
Dilution factor	1.0	1.0	1.0
Batch ID	0806H	0806H	0806H

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3730 Chamblee Tucker Road
Atlanta, GA 30341

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 16518099

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84686-10	OWR-4D	07-31-98/1047
84686-11	OWR-03	08-03-98/1214
84686-12	Dupe 2	08-03-98/1245

PARAMETER	84686-10	84686-11	84686-12
Barium (6010)			
Barium, mg/l	0.022	0.24	0.24
Preparation Date	08.06.98	08.06.98	08.06.98
Date Analyzed	08.08.98	08.08.98	08.08.98
Dilution factor	1.0	1.0	1.0
Batch ID	0806H	0806H	0806H
Beryllium (6010)			
Beryllium, mg/l	<0.0040	<0.0040	<0.0040
Preparation Date	08.06.98	08.06.98	08.06.98
Date Analyzed	08.08.98	08.08.98	08.08.98
Dilution factor	1.0	1.0	1.0
Batch ID	0806H	0806H	0806H
Cadmium (6010)			
Cadmium, mg/l	<0.0050	<0.0050	<0.0050
Preparation Date	08.06.98	08.06.98	08.06.98
Date Analyzed	08.08.98	08.08.98	08.08.98
Dilution factor	1.0	1.0	1.0
Batch ID	0806H	0806H	0806H

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84686-10	OWR-4D	07-31-98/1047
84686-11	OWR-8S	08-03-98/1214
84686-12	Dupe 2	08-03-98/1245

PARAMETER	84686-10	84686-11	84686-12
Chromium (6010)			
Chromium, mg/l	<0.010	<0.010	<0.010
Preparation Date	08.06.98	08.06.98	08.06.98
Date Analyzed	08.08.98	08.08.98	08.08.98
Dilution factor	1.0	1.0	1.0
Batch ID	0806H	0806H	0806H
Cobalt (6010)			
Cobalt, mg/l	<0.010	0.029	0.030
Preparation Date	08.06.98	08.06.98	08.06.98
Date Analyzed	08.08.98	08.08.98	08.08.98
Dilution factor	1.0	1.0	1.0
Batch ID	0806H	0806H	0806H
Lead (7421)			
Lead, mg/l	<0.0050	<0.0050	0.0060
Preparation Date	08.06.98	08.06.98	08.06.98
Date Analyzed	08.07.98	08.07.98	08.07.98
Dilution factor	1.0	1.0	1.0
Batch ID	0806I	0806I	0806I

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Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 16518099

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84686-10	OWR-4D	07-31-98/1047
84686-11	OWR-8S	08-03-98/1214
84686-12	Dupe 2	08-03-98/1245

PARAMETER	84686-10	84686-11	84686-12
Manganese (6010)			
Manganese, mg/l	<0.010	1.4	1.5
Preparation Date	08.06.98	08.06.98	08.06.98
Date Analyzed	08.08.98	08.08.98	08.08.98
Dilution factor	1.0	1.0	1.0
Batch ID	0806H	0806H	0806H
Mercury (7470)			
Mercury, mg/l	<0.00020	<0.00020	0.00033
Preparation Date	08.06.98	08.06.98	08.06.98
Date Analyzed	08.07.98	08.07.98	08.07.98
Dilution factor	1.0	1.0	1.0
Batch ID	0806V	0806V	0806V
Nickel (6010)			
Nickel, mg/l	<0.0040	0.010	0.011
Preparation Date	08.06.98	08.06.98	08.06.98
Date Analyzed	08.08.98	08.08.98	08.08.98
Dilution factor	1.0	1.0	1.0
Batch ID	0806H	0806H	0806H

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REPORT OF RESULTS

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84686-10	OWR-4D	07-31-98/1047
84686-11	OWR-8S	08-03-98/1214
84686-12	Dupe 2	08-03-98/1245

PARAMETER	84686-10	84686-11	84686-12
Vanadium (6010)			
Vanadium, mg/l	<0.010	<0.010	<0.010
Preparation Date	08.06.98	08.06.98	08.06.98
Date Analyzed	08.08.98	08.08.98	08.08.98
Dilution factor	1.0	1.0	1.0
Batch ID	0806H	0806H	0806H

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84686-22	Trip Blank	

PARAMETER	84686-22				
Volatiles by GC/MS (8260)					
Methylene chloride (Dichloromethane), ug/l	<5.0				
1,1,2,2-Tetrachloroethane, ug/l	<5.0				
Chlorobenzene, ug/l	<5.0				
Isopropylbenzene, ug/l	<5.0				
Surrogate - Toluene-d8	96 %				
Surrogate - 4-Bromofluorobenzene	106 %				
Surrogate - Dibromofluoromethane	102 %				
Date Analyzed	08.09.98				
Dilution factor	1.0				
Batch ID	100809				
Clock ID	100809A				

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84686-23	Method Blank	
84686-24	Lab Control Standard % Recovery	
84686-25	LCS Accuracy Control Limit (%R)	
84686-26	MS/MSD % Recovery	
84686-27	MS Accuracy Advisory Limit (%R)	

PARAMETER	84686-23	84686-24	84686-25	84686-26	84686-27
Volatiles by GC/MS (8260)					
Methylene chloride (Dichloromethane), ug/l	<5.0	---	---	---	---
1,1,2,2-Tetrachloroethane, ug/l	<5.0	---	---	---	---
Chlorobenzene, ug/l	<5.0	94 %	60-127 %	112/110 %	60-127 %
Isopropylbenzene, ug/l	<5.0	---	---	---	---
Surrogate - Toluene-d8	96 %	96 %	67-134 %	96/96 %	67-134 %
Surrogate - 4-Bromofluorobenzene	100 %	102 %	67-132 %	108/108 %	67-132 %
Surrogate - Dibromofluoromethane	102 %	100 %	64-142 %	98/98 %	64-142 %
Date Analyzed	08.09.98	08.09.98	---	08.05.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	100809	100809	---	100805	---
Clock ID	100809A	100809	---	100805	---

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84686-23	Method Blank	
84686-24	Lab Control Standard % Recovery	
84686-25	LCS Accuracy Control Limit (%R)	
84686-26	MS/MSD % Recovery	
84686-27	MS Accuracy Advisory Limit (%R)	

PARAMETER	84686-23	84686-24	84686-25	84686-26	84686-27
Acid & Base Neutral Extractables (8270)					
1,4-Dichlorobenzene, ug/l	<10	70 %	10-124 %	68/62 %	10-124 %
1,2-Dichlorobenzene, ug/l	<10	---	---	---	---
n-Nitrosodi-n-propylamine, ug/l	<10	94 %	34-137 %	88/90 %	34-137 %
1,2,4-Trichlorobenzene, ug/l	<10	64 %	17-121 %	68/58 %	17-121 %
Acenaphthene, ug/l	<10	76 %	14-104 %	80/70 %	14-104 %
2,4-Dinitrotoluene, ug/l	<10	80 %	52-111 %	80/82 %	52-111 %
Pyrene, ug/l	<10	80 %	43-131 %	90/86 %	43-131 %
2-Chlorophenol, ug/l	<10	83 %	25-125 %	86/73 %	25-125 %
Phenol, ug/l	<10	78 %	32-110 %	81/73 %	32-110 %
2,4-Dichlorophenol, ug/l	<10	---	---	---	---
2,4,6-Trichlorophenol, ug/l	<10	---	---	---	---
Pentachlorophenol, ug/l	<1.0	75 %	19-123 %	89/80 %	19-123 %
4-Nitrophenol, ug/l	<50	73 %	13-133 %	79/79 %	13-133 %
2,4,5-Trichlorophenol, ug/l	<10	---	---	---	---
o,o,o-Triethyl phosphorothioate, ug/l	<10	---	---	---	---
4-Chloro-3-methylphenol, ug/l	<10	92 %	23-111 %	94/85 %	23-111 %
Surrogate-2FP	73 %	90 %	20-124 %	85/79 %	20-124 %

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84686-23	Method Blank	
84686-24	Lab Control Standard % Recovery	
84686-25	LCS Accuracy Control Limit (%R)	
84686-26	MS/MSD % Recovery	
84686-27	MS Accuracy Advisory Limit (%R)	

PARAMETER	84686-23	84686-24	84686-25	84686-26	84686-27
Surrogate-PHL	83 %	90 %	16-139 %	93/82 %	16-139 %
Surrogate-NBZ	76 %	82 %	10-169 %	86/74 %	10-169 %
Surrogate-2FBP	68 %	74 %	23-130 %	76/76 %	23-130 %
Surrogate-TBP	70 %	88 %	24-135 %	80/87 %	24-135 %
Surrogate-TPH	92 %	92 %	27-147 %	90/82 %	27-147 %
Date Extracted	08.06.98	08.06.98	---	08.06.98	---
Date Analyzed	08.25.98	08.25.98	---	08.25.98	---
Dilution factor	1.0	---	---	---	---
Batch ID	0806B	0806B	---	0806B	---
Instrument ID	MSF5970	MSF5970	---	MSF5970	---
Organophosphorus Pesticides (8141)					
Methyl Parathion, ug/l	<0.50	91 %	38-149 %	108 %	---
Tetraethyl dithiopyrophosphate (Sulfotepp), ug/l	<0.50	---	---	---	---
Ethyl Parathion, ug/l	<1.0	99 %	28-155 %	120 %	28-155 %
Date Extracted	08.06.98	08.06.98	08.06.98	---	---
Date Analyzed	08.17.98	08.17.98	08.17.98	---	---

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Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 16518099

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84686-23	Method Blank	
84686-24	Lab Control Standard % Recovery	
84686-25	LCS Accuracy Control Limit (%R)	
84686-26	MS/MSD % Recovery	
84686-27	MS Accuracy Advisory Limit (%R)	

PARAMETER	84686-23	84686-24	84686-25	84686-26	84686-27
PCB's (8081/See Qualifier Z)					
PCB-1016, ug/l	0	96 %	43-139 %	88/88 %	43-139 %
PCB-1221, ug/l	0	---	---	---	---
PCB-1232, ug/l	0	---	---	---	---
PCB-1242, ug/l	0	---	---	---	---
PCB-1248, ug/l	0	---	---	---	---
PCB-1254, ug/l	0	---	---	---	---
PCB-1260, ug/l	0	84 %	31-152 %	76/68 %	31-152 %
Total Polychlorinated Biphenyls, ug/l	0	---	---	---	---
Surrogate - TCX	55 %	60 %	---	60/60 %	---
Date Extracted	08.06.98	08.06.98	---	08.06.98	---
Date Analysed	08.12.98	08.12.98	---	08.13.98	---
Dilution factor	1.0	1.0	---	1.0	---
Arsenic (6010)					
Arsenic, mg/l	<0.010	105%	75-125 %	104/104 %	75-125 %
Preparation Date	08.06.98	08.06.98	---	08.06.98	---
Date Analyzed	08.08.98	08.08.98	---	08.08.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0806H	0806H	---	0806H	---

SEVERN TRENT SERVICES

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STL Savannah

REISSUED 10/15/02

LOG NO: S8-84686
Received: 05 AUG 98
Reported: 27 AUG 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

Contract No.: S7219

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 103021015

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84686-23	Method Blank	
84686-24	Lab Control Standard % Recovery	
84686-25	LCS Accuracy Control Limit (%R)	
84686-26	MS/MSD % Recovery	
84686-27	MS Accuracy Advisory Limit (%R)	

PARAMETER	84686-23	84686-24	84686-25	84686-26	84686-27
PCB's (8081/See Qualifier Z) (608)					
PCB-1016, ug/l	<1	96 %	43-139 %	88/88 %	43-139 %
PCB-1221, ug/l	<1	---	---	---	---
PCB-1232, ug/l	<1	---	---	---	---
PCB-1242, ug/l	<1	---	---	---	---
PCB-1248, ug/l	<1	---	---	---	---
PCB-1254, ug/l	<1	---	---	---	---
PCB-1260, ug/l	<1	84 %	31-152 %	76/68 %	31-152 %
Total Polychlorinated Biphenyls, ug/l	<1	---	---	---	---
Surrogate - TCX	55 %	60 %	---	60/60 %	---
Date Extracted	08.06.98	08.06.98	---	08.06.98	---
Date Analyzed	08.12.98	08.12.98	---	08.13.98	---
Dilution factor	1.0	1.0	---	1.0	---

*F61 = The recoveries of the matrix spikes are outside advisory limits due to the abundance of the target analyte in the sample.

*F73 = Matrix spike recoveries were outside advisory limits due to matrix interference present in the sample.

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Sampled By: Client
Code: 16518099

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84686-23	Method Blank	
84686-24	Lab Control Standard % Recovery	
84686-25	LCS Accuracy Control Limit (%R)	
84686-26	MS/MSD % Recovery	
84686-27	MS Accuracy Advisory Limit (%R)	

PARAMETER	84686-23	84686-24	84686-25	84686-26	84686-27
Barium (6010)					
Barium, mg/l	<0.010	107%	75-125 %	106/106 %	75-125 %
Preparation Date	08.06.98	08.06.98	---	08.06.98	---
Date Analyzed	08.08.98	08.08.98	---	08.08.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0806H	0806H	---	0806H	---
Beryllium (6010)					
Beryllium, mg/l	<0.0040	107%	75-125 %	105/105 %	75-125 %
Preparation Date	08.06.98	08.06.98	---	08.06.98	---
Date Analyzed	08.08.98	08.08.98	---	08.08.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0806H	0806H	---	0806H	---
Cadmium (6010)					
Cadmium, mg/l	<0.0050	109%	75-125 %	106/107 %	75-125 %
Preparation Date	08.06.98	08.06.98	---	08.06.98	---
Date Analyzed	08.08.98	08.08.98	---	08.08.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0806H	0806H	---	0806H	---

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

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LOG NO: S8-84686
Received: 05 AUG 98
Reported: 27 AUG 98
Revised 9/1/98
Client PO. No.: 8263-1-0006

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code. 16518099

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84686-23	Method Blank	
84686-24	Lab Control Standard % Recovery	
84686-25	LCS Accuracy Control Limit (%R)	
84686-26	MS/MSD % Recovery	
84686-27	MS Accuracy Advisory Limit (%R)	

PARAMETER	84686-23	84686-24	84686-25	84686-26	84686-27
Chromium (6010)					
Chromium, mg/l	<0.010	108%	75-125 %	106/106 %	75-125 %
Preparation Date	08.06.98	08.06.98	---	08.06.98	---
Date Analyzed	08.08.98	08.08.98	---	08.08.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0806H	0806H	---	0806H	---
Cobalt (6010)					
Cobalt, mg/l	<0.010	107%	75-125 %	104/104 %	75-125 %
Preparation Date	08.06.98	08.06.98	---	08.06.98	---
Date Analyzed	08.08.98	08.08.98	---	08.08.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0806H	0806H	---	0806H	---
Lead (7421)					
Lead, mg/l	<0.0050	88 %	80-120 %	108/104 %	80-120 %
Preparation Date	08.06.98	08.06.98	---	08.10.98	---
Date Analyzed	08.07.98	08.07.98	---	08.10.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0806I	0806I	---	0810K	---

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Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 16518099

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84686-23	Method Blank	
84686-24	Lab Control Standard % Recovery	
84686-25	LCS Accuracy Control Limit (%R)	
84686-26	MS/MSD % Recovery	
84686-27	MS Accuracy Advisory Limit (%R)	

PARAMETER	84686-23	84686-24	84686-25	84686-26	84686-27
Manganese (6010)					
Manganese, mg/l	<0.010	110%	75-125 %	63/63%*F61	75-125 %
Preparation Date	08.06.98	08.06.98	---	08.06.98	---
Date Analyzed	08.08.98	08.08.98	---	08.08.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0806H	0806H	---	0806M	---
Mercury (7470)					
Mercury, mg/l	<0.00020	102 %	80-120 %	99/98 %	1.0 %
Preparation Date	08.06.98	08.06.98	---	08.11.98	---
Date Analyzed	08.07.98	08.07.98	---	08.12.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0806V	0806V	---	0811R	---
Nickel (6010)					
Nickel, mg/l	<0.0040	108%	75-125 %	105/105 %	75-125 %
Preparation Date	08.06.98	08.06.98	---	08.06.98	---
Date Analyzed	08.08.98	08.08.98	---	08.08.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0806H	0806H	---	0806M	---

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Atlanta, GA 30341

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 16518099

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84686-23	Method Blank	
84686-24	Lab Control Standard % Recovery	
84686-25	LCS Accuracy Control Limit (%R)	
84686-26	MS/MSD % Recovery	
84686-27	MS Accuracy Advisory Limit (%R)	

PARAMETER	84686-23	84686-24	84686-25	84686-26	84686-27
Vanadium (6010)					
Vanadium, mg/l	<0.010	106%	75-125 %	103/103 %	75-125 %
Preparation Date	08.06.98	08.06.98	---	08.06.98	---
Date Analyzed	08.08.98	08.08.98	---	08.08.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0806H	0806H	---	0806M	---
Total Organic Carbon (9060)					
Total Organic Carbon, mg/l	<1.0	98 %	80-120 %	78/72 %	80-120 %
Preparation Date	08.06.98	08.06.98	---	08.06.98	---
Date Analyzed	08.06.98	08.06.98	---	08.06.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0806A	0806A	---	0806A	---
Phosphorus, Total					
Total Phosphorus, mg/l	<0.044	113 %	60-140 %	90-104 %	60-140 %
Preparation Date	08.14.98	08.14.98	---	08.14.98	---
Date Analyzed	08.16.98	08.16.98	---	08.16.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0814A	0814A	---	0814A	---

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Received: 05 AUG 98
Reported: 27 AUG 98
Revised 9/1/98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 16510092

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84686-23	Method Blank	
84686-24	Lab Control Standard % Recovery	
84686-25	LCS Accuracy Control Limit (%R)	
84686-26	MS/MSD % Recovery	
84686-27	MS Accuracy Advisory Limit (%R)	

PARAMETER	84686-23	84686-24	84686-25	84686-26	84686-27
Total Kjeldahl Nitrogen (351.2)					
Total Kjeldahl Nitrogen-N, mg/l	<0.20	76 %	75-125 %	43/39%*F7J	75-125 %
Preparation Date	08.11.98	08.11.98	---	08.11.98	---
Date Analyzed	08.13.98	08.13.98	---	08.13.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0811A	0811A		0811A	
Total Organic Halogen (9020A)					
Total Organic Halogen , mg/l	<0.010	85 %	60-140 %	85/88 %	60-140 %
Preparation Date	08.11.98	08.11.98	---	08.11.98	---
Date Analyzed	08.11.98	08.11.98	---	08.11.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0811A	0811A		0811A	
Sulfide (376.2)					
Sulfide , mg/l	<0.10	105 %	80-120 %	109/119 %	80-120 %
Preparation Date	08.06.98	08.06.98	---	08.06.98	---
Date Analyzed	08.06.98	08.06.98	---	08.06.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0806A	0806A		0806A	

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Revised 9/1/98
Client PO. No.: 8263-1-0006

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 16518099

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84686-23	Method Blank	
84686-24	Lab Control Standard % Recovery	
84686-25	LCS Accuracy Control Limit (%R)	
84686-26	MS/MSD % Recovery	
84686-27	MS Accuracy Advisory Limit (%R)	

PARAMETER	84686-23	84686-24	84686-25	84686-26	84686-27
Phenolics, Total Recoverable (9065)					
Phenolics, Total Recoverables, mg/l	<0.050	107 %	75-125 %	105/107 %	<30 %
Preparation Date	08.06.98	08.06.98	---	08.06.98	---
Date Analyzed	08.06.98	08.06.98	---	08.06.98	---
Dilution Factor	1.0	1.0	---	1.0	---
Batch ID	0806A	0806A	---	0806A	---

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Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 090980910

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84686-28	Analyst (First Initial, Last Name)	
PARAMETER	84686-28	
Volatiles by GC/MS (8260)		
Methylene chloride (Dichloromethane)	J.MULLINS	
1,1,2,2-Tetrachloroethane	J.MULLINS	
Chlorobenzene	J.MULLINS	
Isopropylbenzene	J.MULLINS	
Acid & Base Neutral Extractables (8270)		
1,4-Dichlorobenzene	M.JAKUBSEN	
1,2-Dichlorobenzene	M.JAKUBSEN	
n-Nitrosodi-n-propylamine	M.JAKUBSEN	
1,2,4-Trichlorobenzene	M.JAKUBSEN	
Acenaphthene	M.JAKUBSEN	
2,4-Dinitrotoluene	M.JAKUBSEN	
Pyrene	M.JAKUBSEN	
2-Chlorophenol	M.JAKUBSEN	
Phenol	M.JAKUBSEN	
2,4-Dichlorophenol	M.JAKUBSEN	
2,4,6-Trichlorophenol	M.JAKUBSEN	
4-Chloro-3-methylphenol	M.JAKUBSEN	
Pentachlorophenol	M.JAKUBSEN	
4-Nitrophenol	M.JAKUBSEN	
2,4,5-Trichlorophenol	M.JAKUBSEN	
o,o,o-Triethyl phosphorothioate	M.JAKUBSEN	

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Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By. Client
Code: 090980910

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84686-28	Analyst (First Initial, Last Name)	
PARAMETER	84686-28	
Organophosphorus Pesticides (8141)		
Methyl Parathion	K.HOANG	
Tetraethyl dithiopyrophosphate (Sulfotepp)	K.HOANG	
Ethyl Parathion	K.HOANG	
PCB's (8081/See Qualifier Z)		
PCB-1016	A.MCNEELY	
PCB-1221	A.MCNEELY	
PCB-1232	A.MCNEELY	
PCB-1242	A.MCNEELY	
PCB-1248	A.MCNEELY	
PCB-1254	A.MCNEELY	
PCB-1260	A.MCNEELY	
Arsenic (6010)		
Arsenic	A.BRAZELL	
Barium (6010)		
Barium	A.BRAZELL	
Beryllium (6010)		
Beryllium	A.BRAZELL	
Cadmium (6010)		
Cadmium	A.BRAZELL	
Chromium (6010)		
Chromium	A.BRAZELL	
Cobalt (6010)		
Cobalt	A.BRAZELL	

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REISSUED 10/15/02

LOG NO: S8-84686
Received: 05 AUG 98
Reported: 27 AUG 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

Contract No.: S7219
CC: Mr. Alan G. Faust Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 103021015

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84686-28	Analyst (First Initial, Last Name)	

PARAMETER	84686-28
PCB's (8081/See Qualifier Z) (608)	
PCB-1016	A.MCNEELY
PCB-1221	A.MCNEELY
PCB-1232	A.MCNEELY
PCB-1242	A.MCNEELY
PCB-1248	A.MCNEELY
PCB-1254	A.MCNEELY
PCB-1260	A.MCNEELY

*F61 = The recoveries of the matrix spikes are outside advisory limits due to the abundance of the target analyte in the sample.

*F73 = Matrix spike recoveries were outside advisory limits due to matrix interference present in the sample.

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Client PO. No.: 8263-1-0006

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 091880910

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84686-28	Analyst (First Initial, Last Name)	
PARAMETER	84686-28	
Lead (7421)		
Lead	N.DAVIS	
Manganese (6010)		
Manganese	A.BRAZELL	
Mercury (7470)		
Mercury	B.BRAYBOY	
Nickel (6010)		
Nickel	A.BRAZELL	
Vanadium (6010)		
Vanadium	A.BRAZELL	
Total Organic Carbon (9060)		
Total Organic Carbon	L.RILEY	
Phosphorus, Total		
Total Phosphorus,	L.RILEY	
Total Kjeldahl Nitrogen (351.2)		
Total Kjeldahl Nitrogen-N	L.RILEY	
Total Organic Halogen (9020A)		
Total Organic Halogen	R.DAVIS	
Sulfide (376.2)		
Sulfide	L.RILEY	
Phenolics, Total Recoverable (9065)		
Phenolics, Total Recoverables	K.BLACKSHE	

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Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 091880910

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84686-28	Analyst (First Initial, Last Name)	

PARAMETER	84686-28				

*F61 = The recoveries of the matrix spikes are outside advisory limits due to the abundance of the target analyte in the sample.

*F73 = Matrix spike recoveries were outside advisory limits due to matrix interference present in the sample.

SL SAVANNAH LABORATORIES
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CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 091880910

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84686-29	Quantitation Limit	

PARAMETER	84686-29
PCB's (8081/See Qualifier Z)	
PCB-1016, ug/l	1.0
PCB-1221, ug/l	1.0
PCB-1232, ug/l	1.0
PCB-1242, ug/l	1.0
PCB-1248, ug/l	1.0
PCB-1254, ug/l	1.0
PCB-1260, ug/l	1.0
Total Polychlorinated Diphenyls, ug/l	1.0

Methods: EPA SW-846 and 40 CFR Part 136.

*F33 = Because the sample was diluted prior to analysis, surrogate recoveries are not reported.

*F65 = Elevated detection limits were reported due to sample matrix interference which required sample or extract dilution.

Elizabeth F. Beauchamp, Project Manager

Final Page Of Report

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REISSUED 10/15/02

LOG NO: S8-84686
Received: 05 AUG 98
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Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

Contract No.: S7219
CC: Mr. Alan G. Faust Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 103021015

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84686-29	Quantitation Limit	

PARAMETER	84686-29
PCB's (8081/See Qualifier Z) (608)	
PCB-1016, ug/l	1.0
PCB-1221, ug/l	1.0
PCB-1232, ug/l	1.0
PCB-1242, ug/l	1.0
PCB-1248, ug/l	1.0
PCB-1254, ug/l	1.0
PCB-1260, ug/l	1.0
Total Polychlorinated Biphenyls, ug/l	1.0

Methods: EPA SW-846 and 40 CFR Part 136.

*F33 = Control limits are established only for surrogate concentration levels specified by EPA methods. Because the sample was diluted prior to analysis, surrogate recoveries are not reported.

F65 - Elevated detection limits were reported due to sample matrix interference which required sample or extract dilution.

for Elizabeth F. Beauchamp, Project Manager

Serial Number 47312

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

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100 Alpha Drive, Suite 110, Destrehan, LA 70047 — Phone: (504) 764-1100 — Fax: (504) 725-1163

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

PROJECT REFERENCE: Solutia/RFI/RL
PROJECT NO.: 983-3223
P.O. NUMBER:
PROJECT LOC (State): AL
SAMPLER(S) NAME: CBH, ECP, MAL, BLH, KJD
PHONE: 770-496-1893
FAX: 770-934-9476
CLIENT NAME: Golder Associates
CLIENT PROJECT MANAGER: Jon Rawlins / Gayle Pittman
CLIENT ADDRESS (CITY, STATE, ZIP): 3730 Chamblee Tucker Rd Atlanta GA 30341

PAGE 1 OF 2

MATRIX TYPE

REQUIRED ANALYSES

- PCB
- 8141 OP
- 8270 SVOCs
- 8260 VOC
- Metals (ICP, 7060, 7421, 7470/7471)
- 9056 TOC
- Total Phos 365.4
- RSK-175 CH4, C2H6, C2H4
- TOX 9020
- Total Phenols 9065
- HCl
- HNO3
- HNO3
- HCl/H2O2
- H2SO4
- H2SO4

STANDARD REPORT DELIVERY (X)
EXPEDITED REPORT DELIVERY (surcharge) ( )
Date Due:

SAMPLE DATE	SAMPLE TIME	SL NO.	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS SUBMITTED	REMARKS
8-3			OWR-25	X 4 4 3 2 2 3 1 3 3	Please see
8-3			OWR-25F	X 4 2 2	Betsy Benninger
7-31			OWR-40	X 2 2 2 3 1 1	for quantitation
7-31			OWR-40-F	X 2 1 1	limits and target
8-3			OWR-33	X 2 2 1 3 1 1	analyte list. Use
8-3			OWR-83-F	X 2 1 1	OWR-25 for MS/MSD
8-3			~~Dupe~~ Dupe 2	X 2 2 1 3 1 1	analyses - note: small
8-3			Dupe 2-F	X 2 1 1	sample amount for
					T. Phos & TKN for
					OWR-25.

Please see attached for analytes

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
			[signature]	8-4	12:40			
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME
			[signature]	8/5/98	9:14			

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SL LOG NO.	LABORATORY REMARKS
M Bishop	8/5/98	9:14	☑ YES ☐ NO		58-84686	

Serial Number 313

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

- [X] 5102 LaRoche Avenue, Savannah, GA 31404 — Phone: (912) 354-7858 — Fax: (912) 352-0165
- [ ] 2846 Industrial Plaza Drive, Tallahassee, FL 32301 — Phone: (904) 878-3994 — Fax: (904) 878-9504
- [ ] 414 SW 12th Avenue, Deerfield Beach, FL 33442 — Phone: (954) 421-7400 — Fax: (954) 421-2584
- [ ] 900 Lakeside Drive, Mobile, AL 36693 — Phone: (334) 666-6633 — Fax: (334) 666-6696
- [ ] 6712 Benjamin Road, Suite 100, Tampa, FL 33634 — Phone: (813) 885-7427 — Fax: (813) 885-7049
- [ ] 100 Alpha Drive, Suite 110, Destrehan, LA 70047 — Phone: (504) 764-1100 — Fax: (504) 725-1163

PROJECT REFERENCE	PROJECT NO.	PO NUMBER
Solutia/RFI/AL	983-3223	

PROJECT LOC (State)	SAMPLER(s) NAME	PHONE	FAX
AL	cdh, EGF, mth, DLH, KSB	770 496-1893	770 434 9476

CLIENT NAME	CLIENT PROJECT MANAGER
Golder Associates	Jon Reddle / Gayle Pittman

CLIENT ADDRESS (CITY, STATE, ZIP): 3730 Chamblee Tucker Rd Atlanta GA 30341

MATRIX TYPE: AQUEOUS WATER / SOLID OR SEMISOLID / AIR / NONAQUEOUS LIQUID (all capacity ...)

REQUIRED ANALYSES: Sulfide; Zn Acetate

PAGE 2 OF 2

[X] STANDARD REPORT DELIVERY

[ ] EXPEDITED REPORT DELIVERY (surcharge)

Date Due:

SAMPLE DATE	SAMPLE TIME	SL NO.	SAMPLE IDENTIFICATION	AQUEOUS WATER	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID	NUMBER OF CONTAINERS SUBMITTED	REMARKS
8-3			OWR-25	X				3	

Please see sample bottles for times

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
			CA	8-4	12:40			
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME
			C. Vasquez	8/5/98	9:14			

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SL LOG NO.	LABORATORY REMARKS:
D. Bishop	8/5/98	9:14	[ ] YES [ ] NO		58-84686	

Fed USA Airbill FedEx Tracking Number 800450349280 0200

1 From

Date 2-4-98

Sender's Name CHRIS HEMMES Phone (770) 496-1893

Company [illegible]

Address 3733 CHAMBLEE TUCKER RD

Dept/Floor/Suite/Room

City ATLANTA State GA ZIP 30341

2 Your Internal Billing Reference Information 182-3333.002

3 To

Recipient's Name Betty Cruthirds Phone (912) 554-7858

Company [illegible]

Address 2202 E 49th Ave

Check here if residence

Dept/Floor/Suite/Room

City [illegible] State GA ZIP 31404

For HOLD at FedEx Location check here

Hold Weekday Hold Saturday

For Saturday Delivery check here

800450349280

4a Express Package Service *Packages under 150 lbs.*

Delivery commitments may be later in some areas

- [x] FedEx Priority Overnight (Next business morning)
- [ ] FedEx Standard Overnight (Next business afternoon)
- [ ] FedEx 2Day* (Second business day)
- [ ] FedEx Express Saver* (Third business day)
- [ ] FedEx First Overnight (Earliest next business morning delivery to select locations)

* FedEx Letter Rate not available. Minimum charge One pound rate.

4b Express Freight Service *Packages over 150 lbs.*

Delivery commitments may be later in some areas

- [ ] FedEx Overnight Freight (First business day)
- [ ] FedEx 2Day Freight (Second business day)
- [ ] FedEx Express Saver Freight (Up to 3 business days)

(Call for delivery schedule. See back for detailed descriptions of freight services.)

5 Packaging

- [ ] FedEx Letter
- [ ] FedEx Pak — Declared value limit $500
- [ ] FedEx Box
- [ ] FedEx Tube
- [x] Other Pkg.

6 Special Handling

Does this shipment contain dangerous goods?

- [ ] Yes (As per attached Shipper's Declaration)
- [ ] Yes (Shipper's Declaration not required)
- [ ] Dry Ice — Dry Ice, 9, UN 1845, ____ x ____ kg (Shipper's Declaration not required)
- [ ] CAO Cargo Aircraft Only

7 Payment

Bill to:

- [x] Sender (As per this Airbill to account listed in Section 1 of this Airbill)
- [ ] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check

(Enter FedEx account no. or Credit Card no. below)

Total Packages	Total Weight	Total Declared Value*	Total Charges
6	180	$ 10,000.00	$ 10.00

Credit Card Auth.

*When declaring a value higher than $100 per shipment, you pay an additional charge. See SERVICE CONDITIONS, DECLARED VALUE, AND LIMIT OF LIABILITY section for further information.

8 Release Signature SS-846 86

Your signature authorizes Federal Express to deliver this shipment without obtaining a signature and agrees to indemnify and hold harmless Fed Ex Express from any resulting claims.

287

Questions? Call 1-800-Go-FedEx (800)463-3339

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SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-84812
Received: 11 AUG 98
Reported: 27 AUG 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 101380828

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84812-1	OWR-1S	08-10-98/1115

PARAMETER	84812-1
Volatiles by GC/MS (8260)	
Methylene chloride (Dichloromethane), ug/l	<5.0
1,1,2,2-Tetrachloroethane, ug/l	<5.0
Chlorobenzene, ug/l	<5.0
Isopropylbenzene, ug/l	<5.0
Surrogate - Toluene-d8	92 %
Surrogate - 4-Bromofluorobenzene	76 %
Surrogate - Dibromofluoromethane	90 %
Date Analyzed	08.13.98
Dilution factor	1.0
Batch ID	210812
Sulfate as SO4	
Sulfate as SO4, mg/l	35
Preparation Date	08.13.98
Date Analyzed	08.13.98
Dilution factor	1.0
Batch ID	0813A
Nitrate-N (353.2)	
Nitrate-N, mg/l	1.6
Preparation Date	08.11.98
Date Analyzed	08.11.98
Dilution factor	1.0
Batch ID	0812B

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

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LOG NO: S8-84812
Received: 11 AUG 98
Reported: 27 AUG 98
Revised 9/1/98
Client PO. No.: 8263-1-0006

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 12408092

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84812-1	GWR-1S	08-10-98/1115

PARAMETER	84812-1
Total Dissolved Solids (160.1)	
Total Dissolved Solids, mg/l	100
Preparation Date	08.13.98
Date Analyzed	08.14.98
Dilution factor	1.0
Batch ID	0813A
Suspended Solids (160.2)	
Suspended Solids, mg/l	<5.0
Preparation Date	08.14.98
Date Analyzed	08.17.98
Dilution factor	1.0
Batch ID	0814A
Alkalinity (to pH 4.5) as CaCO3 (310.1)	
Alkalinity (to pH 4.5) as CaCO3, mg/l	9.8
Preparation Date	08.17.98
Date Analyzed	08.17.98
Dilution factor	1.0
Batch ID	0817A
Ferrous Iron (3500-Fe D)	
Iron, Ferrous (2+), mg/l	<0.050
Preparation Date	08.11.98
Date Analyzed	08.11.98
Dilution factor	1.0
Batch ID	0811X

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LOG NO: S8-84812
Received: 11 AUG 98
Reported: 27 AUG 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 101380828

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84812-1	OWR-1S	08-10-98/1115

PARAMETER	84812-1
Standard Plate Count	
Standard Plate Count, CFU/ml	1000
Preparation Date	08.11.98
Date Analyzed	08.11.98
Batch ID	0811A

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LOG NO: S8-84812
Received: 11 AUG 98
Reported: 27 AUG 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 101380828

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84812-5	OWR-9S	08-07-98/0800
84812-19	OWR-9S-F	08-07-98/0800
84812-20	OWR-1D-F	08-07-98/0800

PARAMETER	84812-5	84812-19	84812-20
PCB's (8081/See Qualifier Z)			
PCB-1016, ug/l	0	0	0
PCB-1221, ug/l	0	0	0
PCB-1232, ug/l	0	0	0
PCB-1242, ug/l	0	0	0
PCB-1248, ug/l	0	0	0
PCB-1254, ug/l	0	0	0
PCB-1260, ug/l	0	0	0
Total Polychlorinated Biphenyls, ug/l	0	0	0
Surrogate - TCX	55 %	55 %	42 %
Date Extracted	08.12.98	08.12.98	08.12.98
Date Analyzed	08.15.98	08.15.98	08.15.98
Dilution factor	1.0	1.0	1.0
Arsenic (6010)			
Arsenic, mg/l	<0.010	<0.010	<0.010
Preparation Date	08.12.98	08.12.98	08.12.98
Date Analyzed	08.13.98	08.13.98	08.13.98
Dilution factor	1.0	1.0	1.0
Batch ID	0812G	0812G	0812G

SEVERN TRENT SERVICES
STL Savannah
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REISSUED 10/15/02

LOG NO: S8-84812
Received: 11 AUG 98
Reported: 27 AUG 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

Contract No.: S7219
CC: Mr. Alan G. Faust
Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 103021015

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84812-5	OWR-9S	08-07-98/0800
84812-19	OWR-9S-F	08-07-98/0800
84812-20	OWR-1D-F	08-07-98/0800

PARAMETER	84812-5	84812-19	84812-20
PCB's (8081/See Qualifier Z) (608)			
PCB-1016, ug/l	<1	<1	<1
PCB-1221, ug/l	<1	<1	<1
PCB-1232, ug/l	<1	<1	<1
PCB-1242, ug/l	<1	<1	<1
PCB-1248, ug/l	<1	<1	<1
PCB-1254, ug/l	<1	<1	<1
PCB-1260, ug/l	<1	<1	<1
Total Polychlorinated Biphenyls, ug/l	<1	<1	<1
Surrogate - TCX	55 %	55 %	42 %
Date Extracted	08.12.98	08.12.98	08.12.98
Date Analyzed	08.15.98	08.15.98	08.15.98
Dilution factor	1.0	1.0	1.0

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LOG NO: S8-84812
Received: 11 AUG 98
Reported: 27 AUG 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 101380828

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84812-5	OWR-9S	08-07-98/0800
84812-19	OWR-9S-F	08-07-98/0800
84812-20	OWR-1D-F	08-07-98/0800

PARAMETER	84812-5	84812-19	84812-20
Barium (6010)			
Barium, mg/l	0.044	0.015	0.13
Preparation Date	08.12.98	08.12.98	08.12.98
Date Analyzed	08.13.98	08.13.98	08.13.98
Dilution factor	1.0	1.0	1.0
Batch ID	0812G	0812G	0812G
Beryllium (6010)			
Beryllium, mg/l	<0.0040	<0.0040	<0.0040
Preparation Date	08.12.98	08.12.98	08.12.98
Date Analyzed	08.13.98	08.13.98	08.13.98
Dilution factor	1.0	1.0	1.0
Batch ID	0812G	0812G	0812G
Cadmium (6010)			
Cadmium, mg/l	<0.0050	<0.0050	<0.0050
Preparation Date	08.12.98	08.12.98	08.12.98
Date Analyzed	08.13.98	08.13.98	08.13.98
Dilution factor	1.0	1.0	1.0
Batch ID	0812G	0812G	0812G

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LOG NO: S8-84812
Received: 11 AUG 98
Reported: 27 AUG 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 101380828

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84812-5	OWR-9S	08-07-98/0800
84812-19	OWR-9S-F	08-07-98/0800
84812-20	OWR-1D-F	08-07-98/0800

PARAMETER	84812-5	84812-19	84812-20
Chromium (6010)			
Chromium, mg/l	<0.010	<0.010	<0.010
Preparation Date	08.12.98	08.12.98	08.12.98
Date Analyzed	08.13.98	08.13.98	08.13.98
Dilution factor	1.0	1.0	1.0
Batch ID	0812G	0812G	0812G
Cobalt (6010)			
Cobalt, mg/l	<0.010	<0.010	<0.010
Preparation Date	08.12.98	08.12.98	08.12.98
Date Analyzed	08.13.98	08.13.98	08.13.98
Dilution factor	1.0	1.0	1.0
Batch ID	0812G	0812G	0812G
Lead (7421)			
Lead, mg/l	0.0091	<0.0050	0.0068
Preparation Date	08.12.98	08.12.98	08.12.98
Date Analyzed	08.15.98	08.15.98	08.15.98
Dilution factor	1.0	1.0	1.0
Batch ID	0812I	0812I	0812I

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LOG NO: S8-84812
Received: 11 AUG 98
Reported: 27 AUG 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 101380828

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84812-5	OWR-9S	08-07-98/0800
84812-19	OWR-9S-F	08-07-98/0800
84812-20	OWR-1D-F	08-07-98/0800

PARAMETER	84812-5	84812-19	84812-20
Manganese (6010)			
Manganese, mg/l	0.51	0.082	0.83
Preparation Date	08.12.98	08.12.98	08.12.98
Date Analyzed	08.13.98	08.13.98	08.13.98
Dilution factor	1.0	1.0	1.0
Batch ID	0812G	0812G	0812G
Mercury (7470)			
Mercury, mg/l	<0.00020	<0.00020	<0.00020
Preparation Date	08.17.98	08.17.98	08.17.98
Date Analyzed	08.18.98	08.18.98	08.18.98
Dilution factor	1.0	1.0	1.0
Batch ID	0817R	0817R	0817R
Nickel (6010)			
Nickel, mg/l	0.016	<0.0040	<0.0040
Preparation Date	08.12.98	08.12.98	08.12.98
Date Analyzed	08.13.98	08.13.98	08.13.98
Dilution factor	1.0	1.0	1.0
Batch ID	0812G	0812G	0812G

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-84812
Received: 11 AUG 98
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Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 101380828

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84812-5	OWR-9S	08-07-98/0800
84812-19	OWR-9S-F	08-07-98/0800
84812-20	OWR-1D-F	08-07-98/0800

PARAMETER	84812-5	84812-19	84812-20
Vanadium (6010)			
Vanadium, mg/l	0.018	<0.010	<0.010
Preparation Date	08.12.98	08.12.98	08.12.98
Date Analyzed	08.13.98	08.13.98	08.13.98
Dilution factor	1.0	1.0	1.0
Batch ID	0812G	0812G	0812G

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

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LOG NO: S8-84812
Received: 11 AUG 98
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Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 101380828

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84812-10	OWR-1D - F	08-07-98/0800

PARAMETER	84812-10		
Acid & Base Neutral Extractables (8270)			
1,4-Dichlorobenzene, ug/l	<10		
1,2-Dichlorobenzene, ug/l	<10		
Phenol, ug/l	<10		
2,4-Dichlorophenol, ug/l	<10		
2,4,6-Trichlorophenol, ug/l	<10		
Pentachlorophenol, ug/l	<1.0		
4-Nitrophenol, ug/l	<50		
2,4,5-Trichlorophenol, ug/l	<10		
o,o,o Triethyl phosphorothioate, ug/l	<10		
Surrogate-2FP	66 %		
Surrogate-PHL	66 %		
Surrogate-NBZ	64 %		
Surrogate-2FBP	64 %		
Surrogate-TBP	62 %		
Surrogate-TPH	88 %		
Date Extracted	08.12.98		
Date Analyzed	08.27.98		
Dilution factor	1.0		
Batch ID	0812D		
Instrument ID	MSF5970		

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-84812
Received: 11 AUG 98
Reported: 27 AUG 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 101380828

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84812-22	Trip Blank	

PARAMETER	84812-22
Volatiles by GC/MS (8260)	
Methylene chloride (Dichloromethane), ug/l	<5.0
1,1,2,2-Tetrachloroethane, ug/l	<5.0
Chlorobenzene, ug/l	<5.0
Isopropylbenzene, ug/l	<5.0
Surrogate - Toluene-d8	90 %
Surrogate - 4-Bromofluorobenzene	78 %
Surrogate - Dibromofluoromethane	86 %
Date Analyzed	08.13.98
Dilution factor	1.0
Batch ID	210812

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-84812
Received: 11 AUG 98
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Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 101380828

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84812-23	Method Blank	
84812-24	Lab Control Standard % Recovery	
84812-25	LCS Accuracy Control Limit (%R)	
84812-26	MS/MSD % Recovery	
84812-27	MS Accuracy Advisory Limit (%R)	

PARAMETER	84812-23	84812-24	84812-25	84812-26	84812-27
Volatiles by GC/MS (8260)					
Methylene chloride (Dichloromethane), ug/l	<5.0	---	---	---	---
1,1,2,2-Tetrachloroethane, ug/l	<5.0	---	---	---	---
1,1-Dichloroethene, ug/l	<5.0	94 %	38-155 %	73 %	38-155 %
Trichloroethene, ug/l	<5.0	102 %	10-213 %	91 %	10-213 %
Benzene, ug/l	<5.0	92 %	52-143 %	82 %	52-143 %
Toluene, ug/l	<5.0	100 %	76-128 %	88 %	76-128 %
Chlorobenzene, ug/l	<5.0	114 %	60-127 %	105 %	60-127 %
Isopropylbenzene, ug/l	<5.0	---	---	---	---
Surrogate - Toluene-d8	92 %	92 %	67-134 %	91 %	67-134 %
Surrogate - 4-Bromofluorobenzene	80 %	80 %	67-132 %	78 %	67-132 %
Surrogate - Dibromofluoromethane	92 %	94 %	64-142 %	90 %	64-142 %
Date Analyzed	08.12.98	---	---	---	---
Dilution factor	1.0	---	---	---	---
Batch ID	210812	---	---	---	---

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

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LOG NO: S8-84812
Received: 11 AUG 98
Reported: 27 AUG 98
Revised 9/1/98
Client PO. No.: 8263-1-0006

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 15538092

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84812-23	Method Blank	
84812-24	Lab Control Standard % Recovery	
84812-25	LCS Accuracy Control Limit (%R)	
84812-26	MS/MSD % Recovery	
84812-27	MS Accuracy Advisory Limit (%R)	

PARAMETER	84812-23	84812-24	84812-25	84812-26	84812-27
Acid & Base Neutral Extractables (8270)					
1,4-Dichlorobenzene, ug/l	<10	60 %	10-124 %	*F82	10-124 %
1,2-Dichlorobenzene, ug/l	<10	---	---	---	---
n-Nitrosodi-n-propylamine, ug/l	<10	74 %	34-137 %	*F82	34-137 %
1,2,4-Trichlorobenzene, ug/l	<10	58 %	17-121 %	*F82	17-121 %
Acenaphthene, ug/l	<10	70 %	14-104 %	*F82	14-104 %
2,4-Dinitrotoluene, ug/l	<10	74 %	52-111 %	*F82	52-111 %
Pyrene, ug/l	<10	86 %	43-131 %	*F82	43-131 %
2-Chlorophenol, ug/l	<10	70 %	25-125 %	*F82	25-125 %
Phenol, ug/l	<10	65 %	32-110 %	*F82	32-110 %
2,4-Dichlorophenol, ug/l	<10	---	---	---	---
2,4,6-Trichlorophenol, ug/l	<10	---	---	---	---
4-Chloro-3-methylphenol, ug/l	<10	80 %	23-111 %	*F82	23-111 %
Pentachlorophenol, ug/l	<1.0	83 %	19-123 %	*F82	19-123 %
4-Nitrophenol, ug/l	<50	67 %	13-133 %	*F82	13-133 %
2,4,5-Trichlorophenol, ug/l	<10	---	---	---	---
O,O,O-Triethyl phosphorothioate, ug/l	<10	---	---	---	---
Surrogate-2FP	60 %	68 %	20-124 %	*F82	20-124 %

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Received: 11 AUG 98
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Revised 9/1/98
Client PO. No.: 8263-1-0006

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 15538092

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84812-23	Method Blank	
84812-24	Lab Control Standard % Recovery	
84812-25	LCS Accuracy Control Limit (%R)	
84812-26	MS/MSD % Recovery	
84812-27	MS Accuracy Advisory Limit (%R)	

PARAMETER	84812-23	84812-24	84812-25	84812-26	84812-27
Surrogate-PHL	63 %	65 %	16-139 %	*F82	16-139 %
Surrogate-NBZ	60 %	66 %	10-169 %	*F82	10-169 %
Surrogate-2FBP	46 %	68 %	23-130 %	*F82	23-130 %
Surrogate-TBP	51 %	83 %	24-135 %	*F82	24-135 %
Surrogate-TPH	76 %	84 %	27-147 %	*F82	27-147 %
Date Extracted	08.12.98	08.12.98	---	---	---
Date Analyzed	08.27.98	08.21.98	---	---	---
Dilution factor	1.0	---	---	---	---
Batch ID	0812D	0812D	---	---	---
Instrument ID	MSF5970	MSN5973	---	---	---

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LOG NO: S8-84812
Received: 11 AUG 98
Reported: 27 AUG 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 101380628

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84812-23	Method Blank	
84812-24	Lab Control Standard % Recovery	
84812-25	LCS Accuracy Control Limit (%R)	
84812-26	MS/MSD % Recovery	
84812-27	MS Accuracy Advisory Limit (%R)	

PARAMETER	84812-23	84812-24	84812-25	84812-26	84812-27
PCB's (8081/See Qualifier Z)					
PCB-1016, ug/l	0	80 %	43-139 %	*F82	*F82
PCB-1221, ug/l	0	---	---	---	---
PCB-1232, ug/l	0	---	---	---	---
PCB-1242, ug/l	0	---	---	---	---
PCB-1248, ug/l	0	---	---	---	---
PCB-1254, ug/l	0	---	---	---	---
PCB-1260, ug/l	0	64 %	31-152 %	*F82	*F82
Total Polychlorinated Biphenyls, ug/l	0	---	---	---	---
Surrogate - TCX	40 %	42 %	---	---	---
Date Extracted	08.12.98	08.12.98	---	---	---
Date Analysed	08.15.98	08.15.98	---	---	---
Dilution factor	1.0	1.0	---	---	---
Arsenic (6010)					
Arsenic, mg/l	<0.010	100%	75-125 %	97/100 %	75-125 %
Preparation Date	08.12.98	08.12.98	---	08.12.98	---
Date Analyzed	08.13.98	08.13.98	---	08.13.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0812G	0812G	---	0812G	---

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LOG NO: S8-84812
Received: 11 AUG 98
Reported: 27 AUG 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

Contract No.: S7219
CC: Mr. Alan G. Faust Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 103021015

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84812-23	Method Blank	
84812-24	Lab Control Standard % Recovery	
84812-25	LCS Accuracy Control Limit (%R)	
84812-26	MS/MSD % Recovery	
84812-27	MS Accuracy Advisory Limit (%R)	

PARAMETER	84812-23	84812-24	84812-25	84812-26	84812-27
PCB's (8081/See Qualifier Z) (608)					
PCB-1016, ug/l	<1	80 %	43-139 %	*F82	*F82
PCB-1221, ug/l	<1	---	---	---	---
PCB-1232, ug/l	<1	---	---	---	---
PCB-1242, ug/l	<1	---	---	---	---
PCB-1248, ug/l	<1	---	---	---	---
PCB-1254, ug/l	<1	---	---	---	---
PCB-1260, ug/l	<1	64 %	31-152 %	*F82	*F82
Total Polychlorinated Biphenyls, ug/l	<1	---	---	---	---
Surrogate - TCX	40 %	42 %	---	---	---
Date Extracted	08.12.98	08.12.98	---	---	---
Date Analyzed	08.15.98	08.15.98	---	---	---
Dilution factor	1.0	1.0	---	---	---

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LOG NO: S8-84812
Received: 11 AUG 98
Reported: 27 AUG 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 101380828

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84812-23	Method Blank	
84812-24	Lab Control Standard % Recovery	
84812-25	LCS Accuracy Control Limit (%R)	
84812-26	MS/MSD % Recovery	
84812-27	MS Accuracy Advisory Limit (%R)	

PARAMETER	84812-23	84812-24	84812-25	84812-26	84812-27
Barium (6010)					
Barium, mg/l	<0.010	106%	75-125 %	101/107 %	75-125 %
Preparation Date	08.12.98	08.12.98	---	08.12.98	---
Date Analyzed	08.13.98	08.13.98	---	08.13.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0812G	0812G	---	0812G	---
Beryllium (6010)					
Beryllium, mg/l	<0.0040	101%	75-125 %	98/102 %	75-125 %
Preparation Date	08.12.98	08.12.98	---	08.12.98	---
Date Analyzed	08.13.98	08.13.98	---	08.13.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0812G	0812G	---	0812G	---
Cadmium (6010)					
Cadmium, mg/l	<0.0050	103%	75-125 %	101/103 %	75-125 %
Preparation Date	08.12.98	08.12.98	---	08.12.98	---
Date Analyzed	08.13.98	08.13.98	---	08.13.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0812G	0812G	---	0812G	---

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LOG NO: S8-84812
Received: 11 AUG 98
Reported: 27 AUG 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 101380828

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84812-23	Method Blank	
84812-24	Lab Control Standard % Recovery	
84812-25	LCS Accuracy Control Limit (%R)	
84812-26	MS/MSD % Recovery	
84812-27	MS Accuracy Advisory Limit (%R)	

PARAMETER	84812-23	84812-24	84812-25	84812-26	84812-27
Chromium (6010)					
Chromium, mg/l	<0.010	105%	75-125 %	102/105 %	75-125 %
Preparation Date	08.12.98	08.12.98	---	08.12.98	---
Date Analyzed	08.13.98	08.13.98	---	08.13.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0812G	0812G	---	0812G	---
Cobalt (6010)					
Cobalt, mg/l	<0.010	102%	75-125 %	98/101 %	75-125 %
Preparation Date	08.12.98	08.12.98	---	08.12.98	---
Date Analyzed	08.13.98	08.13.98	---	08.13.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0812G	0812G	---	0812G	---
Lead (7421)					
Lead, mg/l	<0.0050	96 %	80-120 %	106/102 %	80-120 %
Preparation Date	08.12.98	08.12.98	---	08.12.98	---
Date Analyzed	08.15.98	08.13.98	---	08.13.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0812I	0812I	---	0812I	---

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LOG NO: S8-84812
Received: 11 AUG 98
Reported: 27 AUG 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 101360828

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84812-23	Method Blank	
84812-24	Lab Control Standard % Recovery	
84812-25	LCS Accuracy Control Limit (%R)	
84812-26	MS/MSD % Recovery	
84812-27	MS Accuracy Advisory Limit (%R)	

PARAMETER	84812-23	84812-24	84812-25	84812-26	84812-27
Manganese (6010)					
Manganese, mg/l	<0.010	106%	75-125 %	103/107 %	75-125 %
Preparation Date	08.12.98	08.12.98	---	08.12.98	---
Date Analyzed	08.13.98	08.13.98	---	08.13.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0812G	0812G	---	0812G	---
Mercury (7470)					
Mercury, mg/l	<0.00020	92 %	80-120 %	92/96 %	80-120 %
Preparation Date	08.17.98	08.17.98	---	08.17.98	---
Date Analyzed	08.18.98	08.18.98	---	08.18.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0817R	0817R	---	0817R	---
Nickel (6010)					
Nickel, mg/l	<0.0040	102%	75-125 %	98/102 %	75-125 %
Preparation Date	08.12.98	08.12.98	---	08.12.98	---
Date Analyzed	08.13.98	08.13.98	---	08.13.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0812G	0812G	---	0812G	---

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Client PO. No.: 8263-1-0006

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 12408092

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84812-23	Method Blank	
84812-24	Lab Control Standard % Recovery	
84812-25	LCS Accuracy Control Limit (%R)	
84812-26	MS/MSD % Recovery	
84812-27	MS Accuracy Advisory Limit (%R)	

PARAMETER	84812-23	84812-24	84812-25	84812-26	84812-27
Vanadium (6010)					
Vanadium, mg/l	<0.010	101%	75-125 %	98/101 %	75-125 %
Preparation Date	08.12.98	08.12.98	---	08.12.98	---
Date Analyzed	08.13.98	08.13.98	---	08.13.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0812G	0812G	---	0812G	---
Standard Plate Count					
Standard Plate Count, CFU/ml	<1	---	---	---	---
Preparation Date	08.11.98	---	---	---	---
Date Analyzed	08.11.98	---	---	---	---
Batch ID	0811A	---	---	---	---
Ferrous Iron (3500-Fe D)					
Iron, Ferrous (2+), mg/l	<0.050	104 %	80-120 %	94/92 %	80-120 %
Preparation Date	08.11.98	08.11.98	---	08.11.98	---
Date Analyzed	08.11.98	08.11.98	---	08.11.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0811X	0811X	---	0811X	---

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Received: 11 AUG 98
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Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 101380828

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84812-23	Method Blank	
84812-24	Lab Control Standard % Recovery	
84812-25	LCS Accuracy Control Limit (%R)	
84812-26	MS/MSD % Recovery	
84812-27	MS Accuracy Advisory Limit (%R)	

PARAMETER	84812-23	84812-24	84812-25	84812-26	84812-27
Alkalinity (to pH 4.5) as CaCO3 (310.1)					
Alkalinity (to pH 4.5) as CaCO3, mg/l	<1.0	106 %	80-120 %	*F82	*F82
Preparation Date	08.17.98	08.17.98	---	---	---
Date Analyzed	08.17.98	08.17.98	---	---	---
Dilution factor	1.0	1.0	---	---	---
Batch ID	0817A	0817A	---	---	---
Suspended Solids (160.2)					
Suspended Solids, mg/l	<5.0	88 %	80-120 %	*F82	*F82
Preparation Date	08.14.98	08.14.98	---	---	---
Date Analyzed	08.17.98	08.17.98	---	---	---
Dilution factor	1.0	1.0	---	---	---
Batch ID	0814A	0814A	---	---	---
Total Dissolved Solids (160.1)					
Total Dissolved Solids, mg/l	<5.0	94 %	80-120 %	*F82	*F82
Preparation Date	08.13.98	08.13.98	---	---	---
Date Analyzed	08.14.98	08.14.98	---	---	---
Dilution factor	1.0	1.0	---	---	---
Batch ID	0813A	0813A	---	---	---

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Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 101380828

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84812-23	Method Blank	
84812-24	Lab Control Standard % Recovery	
84812-25	LCS Accuracy Control Limit (%R)	
84812-26	MS/MSD % Recovery	
84812-27	MS Accuracy Advisory Limit (%R)	

PARAMETER	84812-23	84812-24	84812-25	84812-26	84812-27
Nitrate-N (353.2)					
Nitrate-N, mg/l	<0.050	91 %	80-120 %	80/79 %	80-120 %
Preparation Date	08.11.98	08.11.98	---	08.11.98	---
Date Analyzed	08.11.98	08.11.98	---	08.11.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0812B	0812B	---	0812B	---
Sulfate as SO4					
Sulfate as SO4, mg/l	<5.0	77 %	75-125 %	80/88 %	75-125 %
Preparation Date	08.13.98	08.13.98	---	08.13.98	---
Date Analyzed	08.13.98	08.13.98	---	08.13.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0813A	0813A	---	0813A	---

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Received: 11 AUG 98
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Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 101380828

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84812-28	Analyst (First Initial, Last Name)	

PARAMETER	84812-28		
Volatiles by GC/MS (8260)			
Chloromethane,	R.AHMED		
Bromomethane,	R.AHMED		
Vinyl chloride,	R.AHMED		
Chloroethane,	R.AHMED		
Methylene chloride (Dichloromethane)	R.AHMED		
Acetone,	R.AHMED		
Carbon disulfide,	R.AHMED		
1,1-Dichloroethene	R.AHMED		
1,1-Dichloroethane,	R.AHMED		
Cis/Trans-1,2-Dichloroethene,	R.AHMED		
Chloroform,	R.AHMED		
1,2-Dichloroethane,	R.AHMED		
2-Butanone (MEK),	R.AHMED		
1,1,1-Trichloroethane,	R.AHMED		
Carbon tetrachloride,	R.AHMED		
Bromodichloromethane,	R.AHMED		
1,1,2,2-Tetrachloroethane	R.AHMED		
1,2-Dichloropropane,	R.AHMED		
trans-1,3-Dichloropropene,	R.AHMED		
Trichloroethene	R.AHMED		
Dibromochloromethane,	R.AHMED		
1,1,2-Trichloroethane,	R.AHMED		

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Received: 11 AUG 98
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Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 101380828

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84812-28	Analyst (First Initial, Last Name)	

PARAMETER	84812-28				
Benzene	R.AHMED				
cis-1,3-Dichloropropene,	R.AHMED				
Bromoform,	R.AHMED				
2-Hexanone,	R.AHMED				
4-Methyl-2-pentanone (MIBK),	R.AHMED				
Tetrachloroethene,	R.AHMED				
Toluene	R.AHMED				
Chlorobenzene	R.AHMED				
Ethylbenzene,	R.AHMED				
Styrene,	R.AHMED				
Xylenes,	R.AHMED				
Surrogate - Toluene-d8	R.AHMED				
Surrogate - 4-Bromofluorobenzene	R.AHMED				
Surrogate - Dibromofluoromethane	R.AHMED				

SL SAVANNAH LABORATORIES
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LOG NO: S8-84812
Received: 11 AUG 98
Reported: 27 AUG 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 101380828

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84812-28	Analyst (First Initial, Last Name)	

PARAMETER	84812-28			
Acid & Base Neutral Extractables (8270)				
1,4-Dichlorobenzene	M.JAKUBSEN			
1,2-Dichlorobenzene	M.JAKUBSEN			
n-Nitrosodi-n-propylamine	M.JAKUBSEN			
1,2,4-Trichlorobenzene	M.JAKUBSEN			
Acenaphthene	M.JAKUBSEN			
2,4-Dinitrotoluene	M.JAKUBSEN			
Pyrene	M.JAKUBSEN			
2-Chlorophenol	M.JAKUBSEN			
Phenol	M.JAKUBSEN			
2,4-Dichlorophenol	M.JAKUBSEN			
2,4,6-Trichlorophenol	M.JAKUBSEN			
4-Chloro-3-methylphenol	M.JAKUBSEN			
Pentachlorophenol	M.JAKUBSEN			
4-Nitrophenol	M.JAKUBSEN			
2,4,5 Trichlorophenol	M.JAKUBSEN			
o,o,o-Triethyl phosphorothioate	M.JAKUBSEN			

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LOG NO: S8-84812
Received: 11 AUG 98
Reported: 27 AUG 98
Revised 9/1/98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 12408092

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84812-28	Analyst (First Initial, Last Name)	
PARAMETER	84812-28	
PCB's (8081/See Qualifier Z)		
PCB-1016	T.GALLAGH	
PCB-1221	T.GALLAGH	
PCB-1232	T.GALLAGH	
PCB-1242	T.GALLAGH	
PCB-1248	T.GALLAGH	
PCB-1254	T.GALLAGH	
PCB-1260	T.GALLAGH	
Total Polychlorinated Biphenyls	T.GALLAGH	
Arsenic (6010)		
Arsenic	E.MARTSOLF	
Barium (6010)		
Barium	E.MARTSOLF	
Beryllium (6010)		
Beryllium	E.MARTSOLF	
Cadmium (6010)		
Cadmium	E.MARTSOLF	
Chromium (6010)		
Chromium	E.MARTSOLF	
Cobalt (6010)		
Cobalt	E.MARTSOLF	
Lead (7421)		
Lead	N.DAVIS	
Manganese (6010)		
Manganese	E.MARTSOLF	

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REISSUED 10/15/02

LOG NO: S8-84812
Received: 11 AUG 98
Reported: 27 AUG 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

Contract No.: S7219

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON

Sampled By: Client
Code: 103021015

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84812-28	Analyst (First Initial, Last Name)	

PARAMETER	84812-28
PCB's (8081/See Qualifier Z) (608)	
PCB-1016	T.GALLAGH
PCB-1221	T.GALLAGH
PCB-1232	T.GALLAGH
PCB-1242	T.GALLAGH
PCB-1248	T.GALLAGH
PCB-1254	T.GALLAGH
PCB-1260	T.GALLAGH
Total Polychlorinated Biphenyls	T.GALLAGH

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LOG NO: S8-84812
Received: 11 AUG 98
Reported: 27 AUG 98
Revised 9/1/98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 12408092

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84812-28	Analyst (First Initial, Last Name)	
PARAMETER	84812-28	
Mercury (7470)		
Mercury	B.BRAYBO	
Nickel (6010)		
Nickel	E.MARTSOLF	
Vanadium (6010)		
Vanadium	E.MARTSOLF	
Standard Plate Count		
Standard Plate Count	R.DAVIS	
Ferrous Iron (3500-Fe D)		
Iron, Ferrous (2+), mg/l	L.REEVES	
Alkalinity (to pH 4.5) as CaCO3 (310.1)		
Alkalinity (to pH 4.5) as CaCO3	R.DAVIS	
Suspended Solids (160.2)		
Suspended Solids	R.DAVIS	
Total Dissolved Solids (160.1)		
Total Dissolved Solids	R.DAVIS	
Nitrate-N (353.2)		
Nitrate-N	L.RILEY	
Sulfate as SO4		
Sulfate as SO4	R.DAVIS	

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LOG NO: S8-84812
Received: 11 AUG 98
Reported: 27 AUG 98
Revised 9/1/98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 12408092

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84812 39	Quantitation Limit	

PARAMETER	84812-29
PCB's (8081/See Qualifier Z)	
PCB-1016, ug/l	1.0
PCB-1221, ug/l	1.0
PCB-1232, ug/l	1.0
PCB-1242, ug/l	1.0
PCB-1248, ug/l	1.0
PCB-1254, ug/l	1.0
PCB-1260, ug/l	1.0

Methods: EPA SW-846 and 40 CFR Part 136.

Elizabeth F. Beauchamp, Project Manager

Final Page Of Report

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REISSUED 10/15/02

LOG NO: S8-84812
Received: 11 AUG 98
Reported: 27 AUG 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

Contract No.: S7219
CC: Mr. Alan G. Faust Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 103021015

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84812-29	Quantitation Limit	

PARAMETER	84812-29
PCB's (8081/See Qualifier Z) (608)	
PCB-1016, ug/l	1.0
PCB-1221, ug/l	1.0
PCB-1232, ug/l	1.0
PCB-1242, ug/l	1.0
PCB-1248, ug/l	1.0
PCB-1254, ug/l	1.0
PCB-1260, ug/l	1.0

Methods: EPA SW-846 and 40 CFR Part 136.

for Elizabeth F. Beauchamp, Project Manager

Fed USA Airbill FedEx Tracking Number 801488135060 0200 Form ID No.

1 From

Date

Sender's Name Phone ( )

58-84812

Company

Address

Dept./Floor/Suite/Room

City State ZIP

2 Your Internal Billing Reference Information

3 To

Recipient's Name Phone

Company

Address

Check box if residential

Dept./Floor/Suite/Room

City State ZIP

For HOLD at FedEx Location check here

HoldWeekday

Hold Saturday

For Saturday Delivery check here

4a Express Package Service Packages under 150 lbs.

Delivery commitment may be later in some areas

FedEx Priority Overnight

FedEx Standard Overnight

FedEx 2Day*

FedEx Express Saver*

FedEx First Overnight

* FedEx Letter Rate not available. Minimum charge: One pound rate.

4b Express Freight Service Packages over 150 lbs.

Delivery commitment may be later in some areas

FedEx Overnight Freight

FedEx 2Day Freight

FedEx Express Saver Freight

(Call for delivery schedule. See back for detailed descriptions of freight services.)

5 Packaging

FedEx Letter

FedEx Pak

FedEx Box

FedEx Tube

Other Pkg.

6 Special Handling

Does this shipment contain dangerous goods?

Yes

Yes

Dry Ice

CA Cargo Aircraft Only

7 Payment

Bill to:

Sender

Recipient

Third Party

Credit Card

Cash/ Check

Total Packages Total Weight Total Declared Value* $ .00 Total Charges $

Credit Card Auth.

8 Release Signature

Questions?

Call 1-800-Go-FedEx (800)463-3339

287

801488135060

Serial Number [illegible]864

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

☒ 5102 LaRoche Avenue, Savannah, GA 31404 — Phone: (912) 354-7858 — Fax: (912) 352-0165
☐ 2846 Industrial Plaza Drive, Tallahassee, FL 32301 — Phone: (904) 878-3994 — Fax: (904) 878-9504
☐ 414 SW 12th Avenue, Deerfield Beach, FL 33442 — Phone: (954) 421-7400 — Fax: (954) 421-2584
☐ 900 Lakeside Drive, Mobile, AL 36693 — Phone: (334) 666-6633 — Fax: (334) 666-6696
☐ 6712 Benjamin Road, Suite 100, Tampa, FL 33634 — Phone: (813) 885-7427 — Fax: (813) 885-7049
☐ 100 Alpha Drive, Suite 110, Destrehan, LA 70047 — Phone: (504) 764-1100 — Fax: (504) 725-1163

PROJECT REFERENCE: Solutia/RFI/AL
PROJECT NO: 983-3223
P.O. NUMBER:
PROJECT LOC. (State): AL
SAMPLER(s) NAME: DLH, MAC, CDH
PHONE: 770-496-1893
FAX: 770-934-9476
CLIENT NAME: Golder Assoc
CLIENT PROJECT MANAGER: Jon Radtke
CLIENT ADDRESS (CITY, STATE, ZIP): 3730 Chamblee Tucker Rd, Atlanta, Ga. 30341

PAGE 1 OF 1

MATRIX TYPE: AQUEOUS (WATER) / SOLID OR SEMISOLID / AIR / NONAQUEOUS LIQUID (Specify)

REQUIRED ANALYSES: VOC-8260 (HCl); SVOC-8270 (—); T[illegible] (—); Metals-(200, 7060, 7421) (HNO3); Mercury-7470 (HNO3); Total Phosphorus + TKN 351.3, 365.2, SO4, NO3, TDS, TSS, Alk 375.4, 353.2, 160.1, 160.2, 310.1 (—); Ferrous Iron (HCl); HPC (Na thiosulfate)

☒ STANDARD REPORT DELIVERY
☐ EXPEDITED REPORT DELIVERY (surcharge)
Date Due:

NUMBER OF CONTAINERS SUBMITTED

SAMPLE DATE	SAMPLE TIME	SL NO	SAMPLE IDENTIFICATION	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID	VOC-8260	SVOC-8270	T[illegible]	Metals-(200, 7060, 7421)	Mercury-7470	Total Phosphorus + TKN 351.3, 365.2, SO4, NO3, TDS, TSS, Alk 375.4, 353.2, 160.1, 160.2, 310.1	Ferrous Iron	HPC	REMARKS
8/10	11:15		OWR-1S	X			DLH 3						1	1	1	Pls. see
8/7	8:00*		OWR-9S	X					2	1	1					Betsy Beachamp
8/7	8:00*		OWR-9S-F	X					2	1	1					for quantitation
8/7	8:00*		OWR-1D	X				1								limits + target
8/7	8:00*		OWR-1D-F	X				DLH 2	2	1	1					analysis list

* See bottle labels

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[illegible]	[illegible]	9:00	Daniel L. Acosta	8/10	12:10			
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SL LOG NO.	LABORATORY REMARKS
C. Vasquez	[illegible]	9:45	☑ YES ☐ NO		58-84812	

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LOG NO: S8-84838
Received: 12 AUG 98
Reported: 02 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 16448099

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84838-1	OWR-1S	08-10-98/1315

PARAMETER	84838-1
Acid & Base Neutral Extractables (8270)	
1,4-Dichlorobenzene, ug/l	<10
1,2-Dichlorobenzene, ug/l	<10
Phenol, ug/l	<10
2,4-Dichlorophenol, ug/l	<10
2,4,6-Trichlorophenol, ug/l	<10
Pentachlorophenol, ug/l	<1.0
4-Nitrophenol, ug/l	<50
2,4,5-Trichlorophenol, ug/l	<10
o,o,o-Triethyl phosphorothioate, ug/l	<10
Surrogate-2FP	110 %
Surrogate-PHL	110 %
Surrogate-NBZ	106 %
Surrogate-2FBP	84 %
Surrogate-TBP	99 %
Surrogate-TPH	128 %
Date Extracted	08.13.98
Date Analyzed	08.27.98
Dilution factor	1.0
Batch ID	0813B

SL SAVANNAH LABORATORIES
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LOG NO: S8-84838
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Ms. Gayle Pittman
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Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 16448099

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84838-1	OWR-1S	08-10-98/1315

PARAMETER	84838-1
Organophosphorus Pesticides (8141)	
Methyl Parathion, mg/l	<0.50
Tetraethyl dithiopyrophosphate (Sulfotepp), mg/l	<0.50
Ethyl Parathion, mg/l	<1.0
Date Extracted	08.13.98
Date Analyzed	08.17.98
PCB's (8081/See Qualifier Z)	
PCB-1016, ug/l	0
PCB-1221, ug/l	0
PCB-1232, ug/l	0
PCB-1242, ug/l	0
PCB-1248, ug/l	0
PCB-1254, ug/l	0
PCB-1260, ug/l	0
Total Polychlorinated Biphenyls, ug/l	0
Surrogate TCX	60 %
Date Extracted	08.13.98
Date Analyzed	08.18.98
Dilution factor	1.0
Arsenic (6010)	
Arsenic, mg/l	<0.010
Preparation Date	08.13.98
Date Analyzed	08.14.98
Dilution factor	1.0
Batch ID	0813J

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REISSUED 10/15/02

LOG NO: S8-84838
Received: 12 AUG 98
Reported: 02 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

Contract No.: S7219

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 103121015

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84838-1	OWR-1S	08-10-98/1315

PARAMETER	84838-1
PCB's (8081/See Qualifier Z) (608)	
PCB-1016, ug/l	<1
PCB-1221, ug/l	<1
PCB-1232, ug/l	<1
PCB-1242, ug/l	<1
PCB-1248, ug/l	<1
PCB-1254, ug/l	<1
PCB-1260, ug/l	<1
Total Polychlorinated Biphenyls, ug/l	<1
Surrogate - TCX	60 %
Date Extracted	08.13.98
Date Analyzed	08.18.98
Dilution factor	1.0

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LOG NO: S8-84838
Received: 12 AUG 98
Reported: 02 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 16448099

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84838-1	OWR-1S	08-10-98/1315

PARAMETER	84838-1
Barium (6010)	
Barium, mg/l	0.040
Preparation Date	08.13.98
Date Analyzed	08.14.98
Dilution factor	1.0
Batch ID	0813J
Beryllium (6010)	
Beryllium, mg/l	<0.0040
Preparation Date	08.13.98
Date Analyzed	08.14.98
Dilution factor	1.0
Batch ID	0813J
Cadmium (6010)	
Cadmium, mg/l	<0.0050
Preparation Date	08.13.98
Date Analyzed	08.14.98
Dilution factor	1.0
Batch ID	0813J
Chromium (6010)	
Chromium, mg/l	<0.010
Preparation Date	08.13.98
Date Analyzed	08.14.98
Dilution factor	1.0
Batch ID	0813J

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LOG NO: S8-84838
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Reported: 02 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 16448099

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84838-1	OWR-1S	08-10-98/1315

PARAMETER	84838-1
Cobalt (6010)	
Cobalt, mg/l	<0.010
Preparation Date	08.13.98
Date Analyzed	08.14.98
Dilution factor	1.0
Batch ID	0813J
Lead (7421)	
Lead, mg/l	<0.0050
Preparation Date	08.14.98
Date Analyzed	08.17.98
Dilution factor	1.0
Batch ID	0814H
Manganese (6010)	
Manganese, mg/l	0.25
Preparation Date	08.13.98
Date Analyzed	08.14.98
Dilution factor	1.0
Batch ID	0813J
Mercury (7470)	
Mercury, mg/l	<0.00020
Preparation Date	08.17.98
Date Analyzed	08.18.98
Dilution factor	1.0
Batch ID	0817R

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LOG NO: S8-84838
Received: 12 AUG 98
Reported: 02 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 16448099

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84838-1	OWR-1S	08-10-98/1315

PARAMETER	84838-1
Nickel (6010)	
Nickel, mg/l	<0.0040
Preparation Date	08.13.98
Date Analyzed	08.14.98
Dilution factor	1.0
Batch ID	0813J
Vanadium (6010)	
Vanadium, mg/l	<0.010
Preparation Date	08.13.98
Date Analyzed	08.14.98
Dilution factor	1.0
Batch ID	0813J
Total Organic Carbon (9060)	
Total Organic Carbon, mg/l	<1.0
Preparation Date	08.14.98
Date Analyzed	08.14.98
Dilution factor	1.0
Batch ID	0814A
Phosphorus, Total	
Total Phosphorus, mg/l	<0.044
Preparation Date	08.17.98
Date Analyzed	08.18.98
Dilution factor	1.0
Batch ID	0817A

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Received: 12 AUG 98
Reported: 02 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 16448099

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84838-1	OWR-1S	08-10-98/1315

PARAMETER	84838-1
Total Kjeldahl Nitrogen (351.2)	
Total Kjeldahl Nitrogen-N, mg/l	<0.20
Preparation Date	08.17.98
Date Analysed	08.18.98
Dilution factor	1.0
Batch ID	0817A
Total Organic Halogen (9020A)	
Total Organic Halogen , mg/l	<0.010
Preparation Date	08.17.98
Date Analysed	08.17.98
Dilution factor	1.0
Batch ID	0817C
Sulfide (376.2)	
Sulfide , mg/l	<0.10
Preparation Date	08.13.98
Date Analysed	08.13.98
Dilution factor	1.0
Batch ID	0813A
Phenolics, Total Recoverable (9065)	
Phenolics, Total Recoverables, mg/l	<0.050
Preparation Date	08.20.98
Date Analysed	08.20.98
Dilution factor	1.0
Batch ID	0820A

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LOG NO: S8-84838
Received: 12 AUG 98
Reported: 02 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 16448099

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84838-5	OWR-1S-F	08-10-98/1357
84838-19	OWR-5D-F	08-10-98/1403

PARAMETER	84838-5	84838-19
PCB's (8081/See Qualifier Z)		
PCB-1016, ug/l	0	0*F65
PCB-1221, ug/l	0	0
PCB-1232, ug/l	0	0
PCB-1242, ug/l	0	0
PCB-1248, ug/l	0	0
PCB-1254, ug/l	0	0
PCB-1260, ug/l	0	0
Total Polychlorinated Biphenyls, ug/l	0	0
Surrogate - TCX	60 %	*F33
Date Extracted	08.13.98	08.13.98
Date Analyzed	08.18.98	08.21.98
Dilution factor	1.0	20
Arsenic (6010)		
Arsenic, mg/l	<0.010	<0.010
Preparation Date	08.13.98	08.13.98
Date Analyzed	08.14.98	08.14.98
Dilution factor	1.0	1.0
Batch ID	0813J	0813J

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REISSUED 10/15/02

LOG NO: S8-84838
Received: 12 AUG 98
Reported: 02 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

Contract No.: S7219
CC: Mr. Alan G. Faust Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 103121015

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84838-5	OWR-1S-F	08-10-98/1357
84838-19	OWR-5D-F	08-10-98/1403

PARAMETER	84838-5	84838-19
PCB's (8081/See Qualifier Z) (608)		
PCB-1016, ug/l	<1	<20*F65
PCB-1221, ug/l	<1	<20
PCB-1232, ug/l	<1	<20
PCB-1242, ug/l	<1	<20
PCB-1248, ug/l	<1	<20
PCB-1254, ug/l	<1	<20
PCB-1260, ug/l	<1	<20
Total Polychlorinated Biphenyls, ug/l	<1	<20
Surrogate - TCX	60 %	*F33
Date Extracted	08.13.98	08.13.98
Date Analyzed	08.18.98	08.21.98
Dilution factor	1.0	20

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LOG NO: S8-84838
Received: 12 AUG 98
Reported: 02 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 16448099

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84838-5	OWR-1S-F	08-10-98/1357
84838-19	OWR-5D-F	08-10-98/1403

PARAMETER	84838-5	84838-19
Barium (6010)		
Barium, mg/l	0.041	1.3
Preparation Date	08.13.98	08.13.98
Date Analyzed	08.14.98	08.14.98
Dilution factor	1.0	1.0
Batch ID	0813J	0813J
Beryllium (6010)		
Beryllium, mg/l	<0.0040	<0.0040
Preparation Date	08.13.98	08.13.98
Date Analyzed	08.14.98	08.14.98
Dilution factor	1.0	1.0
Batch ID	0813J	0813J
Cadmium (6010)		
Cadmium, mg/l	<0.0050	<0.0050
Preparation Date	08.13.98	08.13.98
Date Analyzed	08.14.98	08.14.98
Dilution factor	1.0	1.0
Batch ID	0813J	0813J
Chromium (6010)		
Chromium, mg/l	<0.010	<0.010
Preparation Date	08.13.98	08.13.98
Date Analyzed	08.14.98	08.14.98
Dilution factor	1.0	1.0
Batch ID	0813J	0813J

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LOG NO: S8-84838
Received: 12 AUG 98
Reported: 02 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 15448093

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84838-5	OWR-1S-F	08-10-98/1357
84838-19	OWR-5D-F	08-10-98/1403

PARAMETER	84838-5	84838-19
Cobalt (6010)		
Cobalt, mg/l	<0.010	0.081
Preparation Date	08.13.98	08.13.98
Date Analyzed	08.14.98	08.14.98
Dilution factor	1.0	1.0
Batch ID	0813J	0813J
Lead (7421)		
Lead, mg/l	<0.0050	0.021
Preparation Date	08.14.98	08.14.98
Date Analyzed	08.17.98	08.17.98
Dilution factor	1.0	1.0
Batch ID	0814H	0814H
Manganese (6010)		
Manganese, mg/l	0.25	1.3
Preparation Date	08.13.98	08.13.98
Date Analyzed	08.14.98	08.14.98
Dilution factor	1.0	1.0
Batch ID	0813J	0813J
Mercury (7470)		
Mercury, mg/l	<0.00020	<0.00020
Preparation Date	08.17.98	08.17.98
Date Analyzed	08.18.98	08.18.98
Dilution factor	1.0	1.0
Batch ID	0817R	0817R

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LOG NO: S8-84838
Received: 12 AUG 98
Reported: 02 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 16448099

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84838-5	OWR-1S-F	08-10-98/1357
84838-19	OWR-3D-F	08-10-98/1403

PARAMETER	84838-5	84838-19
Nickel (6010)		
Nickel, mg/l	<0.0040	0.056
Preparation Date	08.13.98	08.13.98
Date Analyzed	08.14.98	08.14.98
Dilution factor	1.0	1.0
Batch ID	0813J	0813J
Vanadium (6010)		
Vanadium, mg/l	<0.010	<0.010
Preparation Date	08.13.98	08.13.98
Date Analyzed	08.14.98	08.14.98
Dilution factor	1.0	1.0
Batch ID	0813J	0813J

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LOG NO: S8-84838
Received: 12 AUG 98
Reported: 02 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By. Client
Code: 090780910

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84838-10	OWR-5D	08-10-98/1340

PARAMETER	84838-10		
Acid & Base Neutral Extractables (8270)			
1,4-Dichlorobenzene, ug/l	<10	*F35	
1,2-Dichlorobenzene, ug/l	<10		
Phenol, ug/l	<10		
2,4-Dichlorophenol, ug/l	<10		
Pentachlorophenol, ug/l	1.2		
2,4,6-Trichlorophenol, ug/l	<10		
4-Nitrophenol, ug/l	2300		
2,4,5-Trichlorophenol, ug/l	<10		
o,o,o-Triethyl phosphorothioate, ug/l	<10		
Surrogate-2FP	51 %		
Surrogate-PHL	60 %		
Surrogate-NBZ	62 %		
Surrogate-2FBP	50 %		
Surrogate-TBP	57 %		
Surrogate-TPH	20 %		
Date Extracted	08.13.98		
Date Analyzed	8.27-31.98		
Dilution factor	1.0/20.0		
Batch ID	0813B		

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LOG NO: S8-84838
Received: 12 AUG 98
Reported: 02 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 090780910

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84838-10	OWN SD	08-10-98/1340

PARAMETER	84838-10
Volatiles by GC/MS (8260)	
Methylene chloride (Dichloromethane), ug/l	<5.0
1,1,2,2-Tetrachloroethane, ug/l	<5.0
Chlorobenzene, ug/l	46
Isopropylbenzene, ug/l	<5.0
Surrogate - Toluene-d8	92 %
Surrogate - 4-Bromofluorobenzene	76 %
Surrogate - Dibromofluoromethane	88 %
Date Analyzed	08.14.98
Dilution factor	1.0
Batch ID	1L0814
Clock ID	1L0814
PCB's (8081/See Qualifier Z)	
PCB-1016, ug/l	0
PCB-1221, ug/l	210
PCB-1232, ug/l	0
PCB-1242, ug/l	0
PCB-1248, ug/l	0
PCB-1254, ug/l	0
PCB-1260, ug/l	0
Total Polychlorinated Diphenyls, ug/l	210
Surrogate - TCX	*F33
Date Extracted	08.13.98
Date Analyzed	08.21.98
Dilution factor	20

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LOG NO: S8-84838
Received: 12 AUG 98
Reported: 02 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

Contract No.: S7219

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON

Sampled By: Client
Code: 103121015

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84838-10	OWR-5D	08-10-98/1340

PARAMETER	84838-10
PCB's (8081/See Qualifier Z) (608)	
PCB-1016, ug/l	<20
PCB-1221, ug/l	210
PCB-1232, ug/l	<20
PCB-1242, ug/l	<20
PCB-1248, ug/l	<20
PCB-1254, ug/l	<20
PCB-1260, ug/l	<20
Total Polychlorinated Biphenyls, ug/l	210
Surrogate - TCX	*F33
Date Extracted	08.13.98
Date Analyzed	08.21.98
Dilution factor	20.0

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LOG NO: S8-84838
Received: 12 AUG 98
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Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 16448099

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84838-10	OWR-5D	08-10-98/1340

PARAMETER	84838-10		
Arsenic (6010)			
Arsenic, mg/l	<0.010		
Preparation Date	08.13.98		
Date Analyzed	08.14.98		
Dilution factor	1.0		
Batch ID	0813J		
Barium (6010)			
Barium, mg/l	1.2		
Preparation Date	08.13.98		
Date Analyzed	08.14.98		
Dilution factor	1.0		
Batch ID	0813J		
Beryllium (6010)			
Beryllium, mg/l	<0.0040		
Preparation Date	08.13.98		
Date Analyzed	08.14.98		
Dilution factor	1.0		
Batch ID	0813J		
Cadmium (6010)			
Cadmium, mg/l	<0.0050		
Preparation Date	08.13.98		
Date Analyzed	08.14.98		
Dilution factor	1.0		
Batch ID	0813J		

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LOG NO: S8-84838
Received: 12 AUG 98
Reported: 02 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 16448033

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84838-10	OWR-5D	08-10-98/1340

PARAMETER	84838-10
Chromium (6010)	
Chromium, mg/l	<0.010
Preparation Date	08.13.98
Date Analyzed	08.14.98
Dilution factor	1.0
Batch ID	0813J
Cobalt (6010)	
Cobalt, mg/l	0.079
Preparation Date	08.13.98
Date Analyzed	08.14.98
Dilution factor	1.0
Batch ID	0813J
Lead (7421)	
Lead, mg/l	<0.0050
Preparation Date	08.14.98
Date Analyzed	08.17.98
Dilution factor	1.0
Batch ID	0814H
Manganese (6010)	
Manganese, mg/l	1.3
Preparation Date	08.13.98
Date Analyzed	08.14.98
Dilution factor	1.0
Batch ID	0813J

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LOG NO: S8-84838
Received: 12 AUG 98
Reported: 02 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 16448099

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84838-10	OWR-5D	08-10-98/1340

PARAMETER	84838-10
Mercury (7470)	
Mercury, mg/l	0.00057
Preparation Date	08.17.98
Date Analyzed	08.18.98
Dilution factor	1.0
Batch ID	0817R
Nickel (6010)	
Nickel, mg/l	0.055
Preparation Date	08.13.98
Date Analyzed	08.14.98
Dilution factor	1.0
Batch ID	0813J
Vanadium (6010)	
Vanadium, mg/l	<0.010
Preparation Date	08.13.98
Date Analyzed	08.14.98
Dilution factor	1.0
Batch ID	0813J
Organophosphorus Pesticides (8141)	
Methyl Parathion, ug/l	5.5
Tetraethyl dithiopyrophosphate (Sulfotepp), ug/l	<0.50
Ethyl Parathion, ug/l	28
Date Extracted	08.13.98
Date Analyzed	08.17.98

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LOG NO: S8-84838
Received: 12 AUG 98
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Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code. 16448099

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
84838-22	Trip Blank	

PARAMETER	84838-22
Volatiles by GC/MS (8260)	
Methylene chloride (Dichloromethane), ug/l	<5.0
1,1,2,2-Tetrachloroethane, ug/l	<5.0
Chlorobenzene, ug/l	<5.0
Isopropylbenzene, ug/l	<5.0
Surrogate - Toluene-d8	92 %
Surrogate - 4-Bromofluorobenzene	76 %
Surrogate - Dibromofluoromethane	86 %
Date Analyzed	08.14.98
Dilution factor	1.0
Batch ID	1L0814

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LOG NO: S8-84838
Received: 12 AUG 98
Reported: 02 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 16448099

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84838-23	Method Blank	
84838-24	Lab Control Standard % Recovery	
84838-25	LCS Accuracy Control Limit (%R)	
84838-26	MS/MSD % Recovery	
84838-27	MS Accuracy Advisory Limit (%R)	

PARAMETER	84838-23	84838-24	84838-25	84838-26	84838-27
Volatiles by GC/MS (8260)					
Methylene chloride (Dichloromethane), ug/l	<5.0	---	---	---	---
1,1,2,2-Tetrachloroethane, ug/l	<5.0	---	---	---	---
Chlorobenzene, ug/l	<5.0	96 %	60-127 %	102/100 %	60-127 %
Isopropylbenzene, ug/l	<5.0	---	---	---	---
Surrogate - Toluene-d8	92 %	92 %	67-134 %	92/92 %	67-134 %
Surrogate - 4-Bromofluorobenzene	78 %	78 %	67-132 %	76/74 %	67-132 %
Surrogate - Dibromofluoromethane	90 %	88 %	64-142 %	88/86 %	64-142 %
Date Analyzed	08.14.98	08.14.98	---	08.14.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	1L0814	1L0814	---	1L0814	---

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LOG NO: S8-84838
Received: 12 AUG 98
Reported: 02 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 16440099

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84838-23	Method Blank	
84838-24	Lab Control Standard % Recovery	
84838-25	LCS Accuracy Control Limit (%R)	
84838-26	MS/MSD % Recovery	
84838-27	MS Accuracy Advisory Limit (%R)	

PARAMETER	84838-23	84838-24	84838-25	84838-26	84838-27
Acid & Base Neutral Extractables (8270)					
1,4-Dichlorobenzene, ug/l	<10	54 %	10-124 %	*F82	10-124 %
1,2-Dichlorobenzene, ug/l	<10	---	---	---	---
n-Nitrosodi-n-propylamine, ug/l	<10	68 %	34-137 %	---	34-137 %
1,2,4-Trichlorobenzene, ug/l	<10	56 %	17-121 %	---	17-121 %
Acenaphthene, ug/l	<10	68 %	14-104 %	---	14-104 %
2,4-Dinitrotoluene, ug/l	<10	90 %	52-111 %	---	52-111 %
Pyrene, ug/l	<10	92 %	43-131 %	---	43-131 %
2-Chlorophenol, ug/l	<10	66 %	25-125 %	---	25-125 %
Phenol, ug/l	<10	60 %	32-110 %	---	32-110 %
2,4-Dichlorophenol, ug/l	<10	---	---	---	---
2,4,6-Trichlorophenol, ug/l	<10	---	---	---	---
Pentachlorophenol, ug/l	<1.0	59 %	19-123 %	---	19-123 %
4-Nitrophenol, ug/l	<50	73 %	13-133 %	---	13-133 %
2,4,5-Trichlorophenol, ug/l	<10	---	---	---	---
o,o,o-Triethyl phosphorothioate, ug/l	<10	---	---	---	---
Surrogate-2FP	110 %	65 %	20-124 %	---	20-124 %
Surrogate-PHL	110 %	72 %	16-139 %	---	16-139 %

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LOG NO: S8-84838
Received: 12 AUG 98
Reported: 02 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 16448099

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84838-23	Method Blank	
84838-24	Lab Control Standard % Recovery	
84838-25	LCS Accuracy Control Limit (%R)	
84838-26	MS/MSD % Recovery	
84838-27	MS Accuracy Advisory Limit (%R)	

PARAMETER	84838-23	84838-24	84838-25	84838-26	84838-27
Surrogate-NBZ	106 %	76 %	10-169 %	---	10-169 %
Surrogate-2FBP	108 %	72 %	23-130 %	---	23-130 %
Surrogate-TBP	110 %	84 %	24-135 %	---	24-135 %
Surrogate-TPH	144 %	94 %	27-147 %	---	27-147 %
Date Extracted	08.13.98	08.13.98	---	---	---
Date Analyzed	08.27.98	08.19.98	---	---	---
Dilution factor	1.0	---	---	---	---
Batch ID	0813B	0813B	---	---	---
Organophosphorus Pesticides (8141)					
Methyl Parathion, ug/l	<0.50	76 %	38-149 %	---	---
Tetraethyl dithiopyrophosphate (Sulfotepp), ug/l	<0.50	---	40-157 %	---	---
Ethyl Parathion, ug/l	<1.0	81 %	28-155 %	---	---
Date Extracted	08.13.98	08.13.98	---	---	---
Date Analyzed	08.17.98	08.17.98	---	---	---

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

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LOG NO: S8-84838
Received: 12 AUG 98
Reported: 02 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 16448099

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84838-23	Method Blank	
84838-24	Lab Control Standard % Recovery	
84838-25	LCS Accuracy Control Limit (%R)	
84838-26	MS/MSD % Recovery	
84838-27	MS Accuracy Advisory Limit (%R)	

PARAMETER	84838-23	84838-24	84838-25	84838-26	84838-27
PCB's (8081/See Qualifier Z)					
PCB-1016, ug/l	0	112 %	43-139 %	*F82	*F82
PCB-1221, ug/l	0	---	---	---	---
PCB-1232, ug/l	0	---	---	---	---
PCB-1242, ug/l	0	---	---	---	---
PCB-1248, ug/l	0	---	---	---	---
PCB-1254, ug/l	0	---	---	---	---
PCB-1260, ug/l	0	104 %	31-152 %	*F82	*F82
Total Polychlorinated Biphenyls, ug/l	0	---	---	---	---
Surrogate - TCX	60 %	75 %	---	---	---
Date Extracted	08.13.98	08.13.98	---	---	---
Date Analyzed	08.18.98	08.18.98	---	---	---
Dilution factor	1.0	1.0	---	---	---
Arsenic (6010)					
Arsenic, mg/l	<0.010	102%	75-125 %	103/104 %	75-125 %
Preparation Date	08.13.98	08.13.98	---	08.13.98	---
Date Analyzed	08.14.98	08.14.98	---	08.18.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0813J	0813J	---	0813J	---

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LOG NO: S8-84838
Received: 12 AUG 98
Reported: 02 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

Contract No.: S7219
CC: Mr. Alan G. Faust Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 103121015

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84838-23	Method Blank	
84838-24	Lab Control Standard % Recovery	
84838-25	LCS Accuracy Control Limit (%R)	
84838-26	MS/MSD % Recovery	
84838-27	MS Accuracy Advisory Limit (%R)	

PARAMETER	84838-23	84838-24	84838-25	84838-26	84838-27
PCB's (8081/See Qualifier Z) (608)					
PCB-1016, ug/l	<33	112 %	43-139 %	*F82	*F82
PCB-1221, ug/l	<33	---	---	---	---
PCB-1232, ug/l	<33	---	---	---	---
PCB-1242, ug/l	<33	---	---	---	---
PCB-1248, ug/l	<33	---	---	---	---
PCB-1254, ug/l	<33	---	---	---	---
PCB-1260, ug/l	<33	104 %	31-152 %	*F82	*F82
Total Polychlorinated Biphenyls, ug/l	<33	---	---	---	---
Surrogate - TCX	60 %	75 %	---	---	---
Date Extracted	08.13.98	08.13.98	---	---	---
Date Analyzed	08.18.98	08.18.98	---	---	---
Dilution factor	1.0	1.0	---	---	---

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& ENVIRONMENTAL SERVICES, INC.

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LOG NO: S8-84838
Received: 12 AUG 98
Reported: 02 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 16448099

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84838-23	Method Blank	
84838-24	Lab Control Standard % Recovery	
84838-25	LCS Accuracy Control Limit (%R)	
84838-26	MS/MSD % Recovery	
84838-27	MS Accuracy Advisory Limit (%R)	

PARAMETER	84838-23	84838-24	84838-25	84838-26	84838-27
Barium (6010)					
Barium, mg/l	<0.010	106%	75-125 %	106/107 %	75-125 %
Preparation Date	08.13.98	08.13.98	---	08.13.98	---
Date Analyzed	08.14.98	08.14.98	---	08.18.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0813J	0813J	---	0813J	---
Beryllium (6010)					
Beryllium, mg/l	<0.0040	103%	75-125 %	104/105 %	75-125 %
Preparation Date	08.13.98	08.13.98	---	08.13.98	---
Date Analyzed	08.14.98	08.14.98	---	08.18.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0813J	0813J	---	0813J	---
Cadmium (6010)					
Cadmium, mg/l	<0.0050	106%	75-125 %	106/107 %	75-125 %
Preparation Date	08.13.98	08.13.98	---	08.13.98	---
Date Analyzed	08.14.98	08.14.98	---	08.18.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0813J	0813J	---	0813J	---

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LOG NO: S8-84838
Received: 12 AUG 98
Reported: 02 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 16410099

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84838-23	Method Blank	
84838-24	Lab Control Standard % Recovery	
84838-25	LCS Accuracy Control Limit (%R)	
84838-26	MS/MSD % Recovery	
84838-27	MS Accuracy Advisory Limit (%R)	

PARAMETER	84838-23	84838-24	84838-25	84838-26	84838-27
Chromium (6010)					
Chromium, mg/l	<0.010	106%	75-125 %	106/107 %	75-125 %
Preparation Date	08.13.98	08.13.98	---	08.13.98	---
Date Analyzed	08.14.98	08.14.98	---	08.18.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0813J	0813J	---	0813J	---
Cobalt (6010)					
Cobalt, mg/l	<0.010	104%	75-125 %	104/105 %	75-125 %
Preparation Date	08.13.98	08.13.98	---	08.13.98	---
Date Analyzed	08.14.98	08.14.98	---	08.18.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0813J	0813J	---	0813J	---
Lead (7421)					
Lead, mg/l	<0.0050	108 %	80-120 %	106/102 %	80-120 %
Preparation Date	08.14.98	08.14.98	---	08.14.98	---
Date Analyzed	08.17.98	08.17.98	---	08.17.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0814H	0814H	---	0814H	---

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LOG NO: S8-84838
Received: 12 AUG 98
Reported: 02 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code. 16440099

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84838-23	Method Blank	
84838-24	Lab Control Standard % Recovery	
84838-25	LCS Accuracy Control Limit (%R)	
84838-26	MS/MSD % Recovery	
84838-27	MS Accuracy Advisory Limit (%R)	

PARAMETER	84838-23	84838-24	84838-25	84838-26	84838-27
Manganese (6010)					
Manganese, mg/l	<0.010	107%	75-125 %	107/109 %	75-125 %
Preparation Date	08.13.98	08.13.98	---	08.13.98	---
Date Analyzed	08.14.98	08.14.98	---	08.18.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0813J	0813J		0813J	
Mercury (7470)					
Mercury, mg/l	<0.00020	92 %	80-120 %	92/96 %	80-120 %
Preparation Date	08.17.98	08.17.98	---	08.17.98	---
Date Analyzed	08.18.98	08.18.98	---	08.18.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0817R	0817R		0817R	
Nickel (6010)					
Nickel, mg/l	<0.0040	104%	75-125 %	105/106 %	75-125 %
Preparation Date	08.13.98	08.13.98	---	08.13.98	---
Date Analyzed	08.14.98	08.14.98	---	08.18.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0813J	0813J		0813J	

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LOG NO: S8-84838
Received: 12 AUG 98
Reported: 02 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 16448099

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84838-23	Method Blank	
84838-24	Lab Control Standard % Recovery	
84838-25	LCS Accuracy Control Limit (%R)	
84838-26	MS/MSD % Recovery	
84838-27	MS Accuracy Advisory Limit (%R)	

PARAMETER	84838-23	84838-24	84838-25	84838-26	84838-27
Vanadium (6010)					
Vanadium, mg/l	<0.010	102%	75-125 %	103/104 %	75-125 %
Preparation Date	08.13.98	08.13.98	---	08.13.98	---
Date Analyzed	08.14.98	08.14.98	---	08.18.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0813J	0813J	---	0813J	---
Total Organic Carbon (9060)					
Total Organic Carbon, mg/l	<1.0	100 %	80-120 %	90/91 %	80-120 %
Preparation Date	08.14.98	08.14.98	---	08.14.98	---
Date Analyzed	08.14.98	08.14.98	---	08.14.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0814A	0814A	---	0814A	---
Phosphorus, Total					
Total Phosphorus, mg/l	<0.044	92 %	60-140 %	89/85 %	60-140 %
Preparation Date	08.17.98	08.17.98	---	08.17.98	---
Date Analyzed	08.18.98	08.18.98	---	08.18.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0817A	0817A	---	0817A	---

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LOG NO: S8-84838
Received: 12 AUG 98
Reported: 02 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 1G440099

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84838-23	Method Blank	
84838-24	Lab Control Standard % Recovery	
84838-25	LCS Accuracy Control Limit (%R)	
84838-26	MS/MSD % Recovery	
84838-27	MS Accuracy Advisory Limit (%R)	

PARAMETER	84838-23	84838-24	84838-25	84838-26	84838-27
Total Kjeldahl Nitrogen (351.2)					
Total Kjeldahl Nitrogen-N, mg/l	<0.20	104 %	75-125 %	57/61 %	75-125 %
Preparation Date	08.17.98	08.17.98	---	08.17.98	---
Date Analyzed	08.18.98	08.18.98	---	08.18.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0817A	0817A		0817A	
Total Organic Halogen (9020A)					
Total Organic Halogen , mg/l	<0.010	104 %	60-140 %	97/104 %	60-140 %
Preparation Date	08.17.98	08.17.98	---	08.17.98	---
Date Analyzed	08.17.98	08.17.98	---	08.17.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0817C	0817C		0817C	
Sulfide (376.2)					
Sulfide , mg/l	<0.10	90 %	80-120 %	103/97 %	80-120 %
Preparation Date	08.13.98	08.13.98	---	08.13.98	---
Date Analyzed	08.13.98	08.13.98	---	08.13.98	---
Dilution factor	1.0	1.0	---	1.0	---
Batch ID	0813A	0813A		0813A	

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LOG NO: S8-84838
Received: 12 AUG 98
Reported: 02 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code. 16440099

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84838-23	Method Blank	
84838-24	Lab Control Standard % Recovery	
84838-25	LCS Accuracy Control Limit (%R)	
84838-26	MS/MSD % Recovery	
84838-27	MS Accuracy Advisory Limit (%R)	

PARAMETER	84838-23	84838-24	84838-25	84838-26	84838-27
Phenolics, Total Recoverable (9065)					
Phenolics, Total Recoverables, mg/l	<0.050	81 %	75-125 %	100/98 %	75-125 %
Preparation Date	08.20.98	08.20.98	---	08.20.98	---
Date Analyzed	08.20.98	08.20.98	---	08.20.98	---
Dilution factor	1.0	1.0		1.0	
Batch ID	0820A	0820A	---	0820A	---

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LOG NO: S8-84838
Received: 12 AUG 98
Reported: 02 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 090780910

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84838-28	Analyst (First Initial, Last Name)	
PARAMETER	84838-28	
Volatiles by GC/MS (8260)		
Methylene chloride (Dichloromethane)	J.MULLINS	
1,1,2,2-Tetrachloroethane	J.MULLINS	
Chlorobenzene	J.MULLINS	
Isopropylbenzene	J.MULLINS	
Acid & Base Neutral Extractables (8270)		
1,4-Dichlorobenzene	M.JAKUBSEN	
1,2-Dichlorobenzene	M.JAKUBSEN	
n-Nitrosodi-n-propylamine	M.JAKUBSEN	
1,2,4-Trichlorobenzene	M.JAKUBSEN	
Acenaphthene	M.JAKUBSEN	
2,4-Dinitrotoluene	M.JAKUBSEN	
Pyrene	M.JAKUBSEN	
2-Chlorophenol	M.JAKUBSEN	
Phenol	M.JAKUBSEN	
2,4-Dichlorophenol	M.JAKUBSEN	
2,4,6-Trichlorophenol	M.JAKUBSEN	
4-Chloro-3-methylphenol	M.JAKUBSEN	
Pentachlorophenol	M.JAKUBSEN	
4-Nitrophenol	M.JAKUBSEN	
2,4,5-Trichlorophenol	M.JAKUBSEN	
O,O,O-Triethyl phosphorothioate	M.JAKUBSEN	

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LOG NO: S8-84838
Received: 12 AUG 98
Reported: 02 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 16448099

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84838-28	Analyst (First Initial, Last Name)	
PARAMETER	84838-28	
PCB's (8081/See Qualifier Z)		
PCB-1016	A.MCNEELY	
PCB-1221	A.MCNEELY	
PCB-1232	A.MCNEELY	
PCB-1242	A.MCNEELY	
PCB-1248	A.MCNEELY	
PCB-1254	A.MCNEELY	
PCB-1260	A.MCNEELY	
Arsenic (6010)		
Arsenic	E.MARTSOLF	
Barium (6010)		
Barium	E.MARTSOLF	
Beryllium (6010)		
Beryllium	E.MARTSOLF	
Cadmium (6010)		
Cadmium	E.MARTSOLF	
Chromium (6010)		
Chromium	E.MARTSOLF	
Cobalt (6010)		
Cobalt	E.MARTSOLF	
Lead (7421)		
Lead	N.DAVIS	
Manganese (6010)		
Manganese	E.MARTSOLF	

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REISSUED 10/15/02

LOG NO: S8-84838
Received: 12 AUG 98
Reported: 02 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

Contract No.: S7219

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON

Sampled By: Client
Code: 103121015

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84838-28	Analyst (First Initial, Last Name)	

PARAMETER	84838-28
PCB's (8081/See Qualifier Z) (608)	
PCB-1016	A.MCNEELY
PCB-1221	A.MCNEELY
PCB-1232	A.MCNEELY
PCB-1242	A.MCNEELY
PCB-1248	A.MCNEELY
PCB-1254	A.MCNEELY
PCB-1260	A.MCNEELY

for Elizabeth F. Beauchamp, Project Manager

SL SAVANNAH LABORATORIES
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LOG NO: S8-84838
Received: 12 AUG 98
Reported: 02 SEP 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 8263-1-0006

CC: Mr. Alan G. Faust

Project: 983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 16418099

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
84838-28	Analyst (First Initial, Last Name)	

PARAMETER	84838-28
Mercury (7470)	
Mercury	B.BRAYBO
Nickel (6010)	
Nickel	E.MARTSOLF
Vanadium (6010)	
Vanadium	E.MARTSOLF
Total Organic Carbon (9060)	
Total Organic Carbon	L.RILEY
Phosphorus, Total	
Total Phosphorus	L.RILEY
Total Kjeldahl Nitrogen (351.2)	
Total Kjeldahl Nitrogen-N	L.RILEY
Total Organic Halogen (9020A)	
Total Organic Halogen	R.DAVIS
Sulfide (376.2)	
Sulfide	K.HAMMOND
Phenolics, Total Recoverable (9065)	
Phenolics, Total Recoverables	K.BLACKSHE

Fed

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Sender's Name [illegible] Phone ([illegible]) 231 8447

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84829

4 5 1 7 9 1 0 8 7 0

4a Express Package Service *Packages under 150 lbs.* Delivery commitment may be later in some areas.

- ☒ FedEx Priority Overnight (Next business morning)
- ☐ FedEx Standard Overnight (Next business afternoon)
- ☐ FedEx 2Day* (Second business day)
- ☐ FedEx First Overnight (Earliest next business morning delivery to select locations)

* FedEx Letter Rate not available. Minimum charge: One pound FedEx 2Day rate.

4b Express Freight Service *Packages over 150 lbs.* Delivery commitment may be later in some areas.

- ☐ FedEx Overnight Freight (Next business day service for any distance)
- ☐ FedEx 2Day Freight (Second business day service for any distance)
- ☐ FedEx Express Saver Freight (Up to 3 business day service based upon distance)

(Call for delivery schedule. See back for detailed descriptions of freight products.)

5 Packaging

- ☐ FedEx Letter
- ☐ FedEx Pak (Declared value limit $500)
- ☐ FedEx Box
- ☐ FedEx Tube
- ☒ Other Pkg.

6 Special Handling

Does this shipment contain dangerous goods? ☐ Yes (As per attached Shipper's Declaration) ☐ Yes (Shipper's Declaration not required)

- ☐ Dry Ice (Dry Ice, 9, UN 1845) _____ x _____ kg 504 (Dangerous Goods Shipper's Declaration not required)
- CA ☐ Cargo Aircraft Only

7 Payment

Bill to: ☒ Sender (Account no. in Section 1 will be billed) ☐ Recipient ☐ Third Party ☐ Credit Card ☐ Cash/Check

(Enter FedEx account no. or Credit Card no. below)

[redacted]

Total Packages	Total Weight	Total Declared Value*	Total Charges
1	2 lbs	$ .00	$

* When declaring a value higher than $100 per shipment, you pay an additional charge. See SERVICE CONDITIONS, DECLARED VALUE AND LIMIT OF LIABILITY section in further information.

Credit Card Auth.

8 Release Signature

[illegible]

Your signature authorizes Federal Express to deliver this shipment without obtaining a signature and agrees to indemnify and hold harmless Federal Express from any resulting claims.

272

Questions?
Call 1-800-Go-FedEx
(1-800-463-3339)

WCSL 0297
Rev. Date 6/96
PART #17956
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Serial Number [illegible]865

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

- [x] 5102 LaRoche Avenue, Savannah, GA 31404 — Phone: (912) 354-7858 — Fax: (912) 352-0165
- [ ] 2846 Industrial Plaza Drive, Tallahassee, FL 32301 — Phone: (904) 878-3994 — Fax: (904) 878-9504
- [ ] 414 SW 12th Avenue, Deerfield Beach, FL 33442 — Phone: (954) 421-7400 — Fax: (954) 421-2584
- [ ] 900 Lakeside Drive, Mobile, AL 36693 — Phone: (334) 666-6633 — Fax: (334) 666-6696
- [ ] 6712 Benjamin Road, Suite 100, Tampa, FL 33634 — Phone: (813) 885-7427 — Fax: (813) 885-7049
- [ ] 100 Apple Drive, Suite 110, Destrehan, LA 70047 — Phone: (504) 764-1100 — Fax: (504) 725-1163

PROJECT REFERENCE: Solutia/RFI/AL
PROJECT NO.: 983-3223
P.O. NUMBER:
PROJECT LOC. (State): AL
SAMPLER(s) NAME: DLH, MAC
PHONE: (770) 496-1893
FAX: (770) 934-9476
CLIENT NAME: Golder Assoc.
CLIENT PROJECT MANAGER: Jon Radtke
CLIENT ADDRESS (CITY, STATE, ZIP): 3730 Chamblee Tucker Rd., Atlanta, Ga 30341

PAGE 1 OF 2

MATRIX TYPE: AQUEOUS (WATER) / SOLID OR SEMISOLID / AIR / NONAQUEOUS LIQUID (oil, solvent, etc.)

REQUIRED ANALYSES

Sample Date	Time	SL No.	Sample Identification	Aqueous (water)	Solid or semisolid	Air	Nonaqueous liquid	VOC - 8260 (HCl)	SVOC - 8270 (–)	OP - 8141 (–)	PCB (–)	Metals - 6010, 7060, 7421 (HNO3)	Mercury - 7470 (HNO3)	TOC - 9060 (HCl)	T Phosphorus + TKN 351.3 (H2SO4)	TOX - 9020 (H2SO4)	Sulfide - 376.1 (Zn Acetate)	Remarks
8/10			OWR-1S	X					2	1	2	2	2	1	1	1	1	Use 1 mercury
8/10			OWR-1S-F	X							2	1	1					+ 1 metals for
8/10	see BSHC		OWR-5D	X				3	2	1	2	1	1					lab duplicate
8/12			OWR-5D-F	X							2	1	1					

NUMBER OF CONTAINERS SUBMITTED

STANDARD REPORT DELIVERY: [X]
EXPEDITED REPORT DELIVERY (surcharge): [ ]
Date Due:

Relinquished by (Signature)	Date	Time	Relinquished by (Signature)	Date	Time	Relinquished by (Signature)	Date	Time
[signature]	[illegible]	3:30	Daniel L. Hoadley	8/11	10:51			
Received by (Signature)	**Date**	**Time**	**Received by (Signature)**	**Date**	**Time**	**Received by (Signature)**	**Date**	**Time**
			[signature]	8/12/98	9:27			

LABORATORY USE ONLY

Received for Laboratory by (Signature)	Date	Time	Custody Intact	Custody Seal No.	SL Log No.	Laboratory Remarks
[signature]	8/12/98	9:27	[x] YES [ ] NO			SS-84858

Serial Number 1 [illegible]

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

- [X] 5102 LaRoche Avenue, Savannah, GA 31404 — Phone: (912) 354-7858 — Fax: (912) 352-0165
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- [ ] 414 SW 12th Avenue, Deerfield Beach, FL 33442 — Phone: (954) 421-7400 — Fax: (954) 421-2584
- [ ] 900 Lakeside Drive, Mobile, AL 36693 — Phone: (334) 666-6633 — Fax: (334) 666-6696
- [ ] 6712 Benjamin Road, Suite 100, Tampa, FL 33634 — Phone: (813) 885-7427 — Fax: (813) 885-7049
- [ ] 100 Alpha Drive, Suite 110, Destrehan, LA 70047 — Phone: (504) 764-1100 — Fax: (504) 725-1163

PROJECT REFERENCE: Solution/RFI/AL
PROJECT NO: 983-3223
P.O. NUMBER:
PROJECT LOC (State): AL
SAMPLER(s) NAME: DLH, MAC
PHONE: (770) 496-1893
FAX: (770) 934-9476
CLIENT NAME: Golder Assoc
CLIENT PROJECT MANAGER: Jon Radtke
CLIENT ADDRESS (CITY, STATE, ZIP): 3730 Chamblee Tucker Rd., Atlanta, Ga 30341

MATRIX TYPE: ACCESS (WATER) / SOLID CHEM SOLID / AIR / NONAQUEOUS LIQUID (oil solvent etc.)

REQUIRED ANALYSES: Total phenols; H_2SO_4

PAGE 2 OF 2

[X] STANDARD REPORT DELIVERY
[ ] EXPEDITED REPORT DELIVERY (surcharge)
Date Due:

SAMPLE DATE	SAMPLE TIME	SL NO.	SAMPLE IDENTIFICATION	ACCESS (WATER)	SOLID CHEM SOLID	AIR	NONAQUEOUS LIQUID	NUMBER OF CONTAINERS SUBMITTED	REMARKS
8/10	13:41		OWR-~~AB~~ (LH) 15	X				1	

RELINQUISHED BY (SIGNATURE)	DATE	TIME	RELINQUISHED BY (SIGNATURE)	DATE	TIME	RELINQUISHED BY (SIGNATURE)	DATE	TIME
[signature]	8/4/98		[signature]	8/11	1051			
RECEIVED BY (SIGNATURE)	DATE	TIME	RECEIVED BY (SIGNATURE)	DATE	TIME	RECEIVED BY (SIGNATURE)	DATE	TIME
			[signature]	[illegible]	[illegible]			

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SL LOG NO.	LABORATORY REMARKS
[signature]	[illegible]	[illegible]	[ ] YES [ ] NO		[illegible]	

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-86494
Received: 22 OCT 98
Reported: 09 NOV 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 4503051364

CC: Mr. Alan G. Faust Project: RFIS04/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code. 11240113

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
86494-1	OWR-5D	10-21-98/1435	RFIS04
86494-12	OW-64	10-21-98/1402	RFIS04

PARAMETER	86494-1	86494-12
Total Organic Carbon (9060)		
Total Organic Carbon, mg/l	23	12
Preparation Date	11.02.98	11.02.98
Date Analyzed	11.02.98	11.02.98
Dilution factor	1.0	1.0
Batch ID	1102A	1102A
Phosphorous, Total (365.1)		
Phosphorus, Total, mg/l	0.039	6.8
Date Analyzed	11.02.98	11.02.98
Prep or Extraction Date	10.27.98	10.27.98
Dilution factor	1.0	20
Batch ID	1027P	1027P
Total Kjeldahl Nitrogen (351.2)		
Total Kjeldahl Nitrogen-N, mg/l	2.3	<0.20
Preparation Date	11.04.98	11.04.98
Date Analyzed	11.05.98	11.05.98
Dilution factor	1.0	1.0
Batch ID	1104A	1104A
Total Organic Halogen (9020A)		
Total Organic Halogen , mg/l	1.6	<0.010
Preparation Date	10.29.98	10.29.98
Date Analyzed	10.29.98	10.29.98
Dilution factor	10	1.0
Batch ID	1029C	1029C

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-86494
Received: 22 OCT 98
Reported: 09 NOV 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 4503051364

CC: Mr. Alan G. Faust Project: RFIS04/983-3223.002/MONSANTO RFI-ANNISTON

Sampled By: Client
Code. 11248119

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
86494-1	OWR-5D	10-21-98/1435	RFIS04
86494-12	OW-64	10-21-98/1402	RFIS04

PARAMETER	86494-1	86494-12
Sulfide (376.2)		
Sulfide , mg/l	<10*F65	<0.10
Preparation Date	10.28.98	10.28.98
Date Analyzed	10.28.98	10.28.98
Dilution factor	100	1.0
Batch ID	1028A	1028A
Phenolics, Total Recoverable (9065)		
Phenolics, Total Recoverable, mg/l	<0.050	<0.050
Preparation Date	10.27.98	10.27.98
Date Analyzed	10.27.98	10.27.98
Dilution factor	1.0	1.0
Batch ID	1027A	1027A
Sulfate as SO4 (375.4)		
Sulfate as SO4, mg/l	5.0	<5.0
Preparation Date	10.27.98	10.27.98
Date Analyzed	10.27.98	10.27.98
Dilution factor	1.0	1.0
Batch ID	1027A	1027A

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LOG NO: S8-86494
Received: 22 OCT 98
Reported: 09 NOV 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 4503051364

CC: Mr. Alan G. Faust Project: RFIS04/983-3223.002/MONSANTO RFI-ANNISTON

Sampled By: Client
Code: 11248119

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
86494-1	OWR-5D	10-21-98/1435	RFIS04
86494-12	OW 64	10-21-98/1402	RFIS04

PARAMETER	86494-1	86494-12
Nitrate-N (353.2)		
Nitrate-N, mg/l	<0.050	0.40
Preparation Date	10.22.98	10.22.98
Date Analyzed	10.22.98	10.22.98
Dilution factor	1.0	1.0
Batch ID	1027C	1027B
Total Dissolved Solids (160.1)		
Total Dissolved Solids, mg/l	970	45
Preparation Date	10.22.98	10.22.98
Date Analyzed	10.23.98	10.23.98
Dilution factor	2.0	1.0
Batch ID	1022A	1022A
Suspended Solids (160.2)		
Suspended Solids, mg/l	5400	140
Preparation Date	10.23.98	10.23.98
Date Analyzed	10.26.98	10.26.98
Dilution factor	10	1.0
Batch ID	1023B	1023B
Alkalinity (to pH 4.5) as CaCO3 (310.1)		
Alkalinity (to pH 4.5) as CaCO3, mg/l	11	14
Preparation Date	10.22.98	10.22.98
Date Analyzed	10.22.98	10.22.98
Dilution factor	1.0	1.0
Batch ID	1022A	1022A

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-86494
Received: 22 OCT 98
Reported: 09 NOV 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 4503051364

CC: Mr. Alan G. Faust Project: RFIS04/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 11248119

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
86494-1	OWR-5D	10-21-98/1435	RFIS04
86494-12	OW-64	10-21-98/1402	RFIS04

PARAMETER	86494-1	86494-12
Standard Plate Count		
Standard Plate Count, CFU/ml	960	10000
Preparation Date	10.22.98	10.22.98
Date Analyzed	10.22.98	10.22.98
Dilution factor	10	100
Batch ID	1022A	1022A

Methods: EPA 40 CFR Part 136

*F65 = Elevated detection limits were reported due to sample matrix interference which required sample or extract dilution.

Elizabeth E. Beauchamp, Project Manager

Final Page Of Report

Serial Number 1 [illegible]541

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

5102 LaRoche Avenue, Savannah, GA 31404 — Phone: (912) 354-7858 — Fax: (912) 352-0165
2846 Industrial Plaza Drive, Tallahassee, FL 32301 — Phone: (904) 878-3994 — Fax: (904) 878-9504
414 SW 12th Avenue, Deerfield Beach, FL 33442 — Phone: (954) 421-7400 — Fax: (954) 421-2584
900 Lakeside Drive, Mobile, AL 36693 — Phone: (334) 666-6633 — Fax: (334) 666-6696
5712 Benjamin Road, Suite 100, Tampa, FL 33634 — Phone: (813) 885-7427 — Fax: (813) 885-7049
109 Arena Drive, Suite 110, Destrehan, LA 70047 — Phone: (504) 764-1100 — Fax: (504) 725-1153

PROJECT REFERENCE: [illegible] AL — PROJECT NO: 183-3223.6 — P.O. NUMBER:

PROJECT LOC. (State): AL — SAMPLER(s) NAME: [illegible] — PHONE: [illegible] — FAX:

CLIENT NAME: Coffee Associates — CLIENT PROJECT MANAGER: Gina Kaelle

CLIENT ADDRESS (CITY, STATE, ZIP): [illegible]

MATRIX TYPE: AQUEOUS (DATE RECEIVED) / SOLID OR SEMI-SOLID / AIR / HAZARDOUS LIQUID OR SOLVENT

REQUIRED ANALYSES: TPH-418.1 TCL / TAL (Metals) TCLP Metals / Solids / TOX / Sulfide / [illegible] / H2S / HCN/H2S / [illegible] / H2S / Solids / Total Metals

PAGE 1 OF 1

STANDARD REPORT DELIVERY

EXPEDITED REPORT DELIVERY (surcharge) — Date Due:

SAMPLE DATE	SAMPLE TIME	SL NO.	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS SUBMITTED	REMARKS
10/24	1435		Cof-SD	1 1 1 1 1 1 1	
10/24	1902		Cof-GA	1 1 1 1 1 1 1	

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	10/24/95		[signature]					
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME
			[signature]	10/25/95	9:11			

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SL LOG NO.	LABORATORY REMARKS
[signature]	10/25/95	9:11	☑ YES ☐ NO		58364714	

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-86583
Received: 27 OCT 98
Reported: 10 NOV 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 4503051364

CC: Mr. Alan G. Faust Project: RFIS05/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 143981110

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
86583-2	DUP	10-28-98/1107	RFIS05
86583-3	OW-6A	10-28-98/1107	RFIS05
86583-4	OWR-5D	10-28-98/1148	RFIS05

PARAMETER	86583-2	86583-3	86583-4
Ferrous Iron (3500 Fe D)			
Iron, Ferrous (2+), mg/l	<0.10	<0.10	0.14
Preparation Date	10.27.98	10.27.98	10.27.98
Date Analyzed	10.27.98	10.27.98	10.27.98
Dilution factor	1.0	1.0	1.0
Batch ID	1027X	1027X	1027X

Methods: EPA SW-846, Update III.

/Elizabeth F. Beauchamp

FedEx USA Airbill Fed Ex Tracking Number 800450349625 0200 Form I.D. No. Recipient's Copy

1 From

Date [redacted]

Sender's Name _____ Phone ( ) _____

Company _____ S8-86583

Address _____ Dept./Floor/Suite/Room

City _____ State _____ ZIP _____

2 Your Internal Billing Reference Information _____

3 To

Recipient's Name _____ Phone ( ) _____

Company _____

Address _____ Dept./Floor/Suite/Room

(To "HOLD" at FedEx location, print FedEx address here)

☐ Check here if residence (Extra charge applies for FedEx Express Saver)

City _____ State _____ ZIP _____

For HOLD at FedEx Location check here

☐ Hold Weekday (Not available with FedEx First Overnight)

☐ Hold Saturday (Not available at all locations) (Available for FedEx Priority Overnight and FedEx 2Day only)

For Saturday Delivery check here

(Extra Charge. Not available to all locations) Available for FedEx Priority Overnight and FedEx 2Day only)

8 0 0 4 5 0 3 4 9 6 2 5

4a Express Package Service *Packages under 150 lbs.* Delivery commitments may be later in some areas.

☐ FedEx Priority Overnight (Next business morning) ☐ FedEx Standard Overnight (Next business afternoon) ☐ FedEx 2Day* (Second business day)

☐ FedEx Express Saver* (Third business day)

☐ FedEx First Overnight (Earliest business morning delivery to select locations)

*FedEx Letter Rate not available. Minimum charge. One pound rate.

4b Express Freight Service *Packages over 150 lbs.* Delivery commitments may be later in some areas.

☐ FedEx Overnight Freight (Next business day) ☐ FedEx 2Day Freight (Second business day) ☐ FedEx Express Saver Freight (Up to 3 business days)

(Call for delivery schedule. See back for detailed descriptions of freight services.)

5 Packaging ☐ FedEx Letter ☐ FedEx Pak ☐ FedEx Box ☐ FedEx Tube ☒ Other Pkg

Declared value limit $500

6 Special Handling

Does this shipment contain dangerous goods? ☐ Yes (As per attached Shipper's Declaration) ☐ Yes (Shipper's Declaration not required)

☐ Dry Ice Dry Ice, 9, UN 1845 ____ x ____ kg. 904 (Dangerous Goods Shipper's Declaration not required)

CA ☐ Cargo Aircraft Only

7 Payment

Bill to: ☒ Sender (Address on or section 1 will be billed) ☐ Recipient ☐ Third Party ☐ Credit Card ☐ Cash/Check

(Enter FedEx account no. or Credit Card no. below)

[redacted]

Total Packages	Total Weight	Total Declared Value*	Total Charges
		$ 500 .00	$

*When declaring a value higher than $100 per shipment, you pay an additional charge. See SERVICE CONDITIONS, DECLARED VALUE, AND LIMIT OF LIABILITY section for further information.

Credit Card Auth _____

8 Release Signature

Your signature authorizes Federal Express to deliver the shipment without obtaining a signature and agrees to indemnify and hold harmless Federal Express from any resulting claims.

287

Questions?

Call 1-800-Go-FedEx (800)463-3339

Rev. Date 5/97 Part #1 of 4 ©1994-97 FedEx PRINTED IN U.S.A.

Serial Number 5530

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

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- [ ] 2846 Industrial Plaza Drive, Tallahassee, FL 32301 — Phone: (904) 878-3994 — Fax: (904) 878-9504
- [ ] 414 SW 12th Avenue, Deerfield Beach, FL 33442 — Phone: (954) 421-7400 — Fax: (954) 421-2584
- [ ] 900 Lakeside Drive, Mobile, AL 36693 — Phone: (334) 666-6633 — Fax: (334) 666-6696
- [ ] 6712 Benjamin Road, Suite 100, Tampa, FL 33634 — Phone: (813) 885-7427 — Fax: (813) 885-7049
- [ ] 100 Alpha Drive, Suite 110, Destrehan, LA 70047 — Phone: (504) 764-1100 — Fax: (504) 725-1163

PROJECT REFERENCE	PROJECT NO.	P.O. NUMBER
Solution/RFI/AL	983-3223	

PROJECT LOC (State)	SAMPLER(s) NAME	PHONE	FAX
AL	Melethia Crosenberry	770/496-1853	770/434-4476

CLIENT NAME	CLIENT PROJECT MANAGER
Golder Associates	Gayle Pittman

CLIENT ADDRESS (CITY, STATE, ZIP): 3730 Chamblee Tucker Rd. Atlanta, GA 30341

MATRIX TYPE: AQUEOUS (WATER) / SOLID OR SEMISOLID / AIR / NONAQUEOUS LIQUID (oil, solvent, etc.)

REQUIRED ANALYSES: Ferrous Iron; HCl

PAGE ___ OF ___

[X] STANDARD REPORT DELIVERY

[ ] EXPEDITED REPORT DELIVERY (surcharge)

Date Due

SAMPLE DATE	SAMPLE TIME	SL NO.	SAMPLE IDENTIFICATION	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID	NUMBER OF CONTAINERS SUBMITTED	REMARKS
10-28	11:07		Dup	X				1	See Betsy
10-28	11:07		OW-6A	X				1	Beachamp for
10-28	11:48		OW R-5D	X				1	analyses

RELINQUISHED BY (SIGNATURE)	DATE	TIME	RELINQUISHED BY (SIGNATURE)	DATE	TIME	RELINQUISHED BY (SIGNATURE)	DATE	TIME
[signature]	10/28/98	3:00	[signature]	10-28	12:00			
RECEIVED BY (SIGNATURE)	DATE	TIME	RECEIVED BY (SIGNATURE)	DATE	TIME	RECEIVED BY (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SL LOG NO.	LABORATORY REMARKS
[signature]	10/27/98	8:51	[X] YES [ ] NO		58-8658	3

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-86420
Received: 20 OCT 98
Reported: 10 NOV 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 4503051364

CC: Mr. Alan G. Faust Project: RFIS03/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 17181110

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
86420-1	WEL-1	10-18-98	RFIS03

PARAMETER	86420-1
Organophosphorus Pesticides (8141)	
Ethyl Parathion, mg/l	<0.0010
Methyl Parathion, mg/l	<0.00050
Tetraethyl dithiopyrophosphate (Sulfotepp), mg/l	<0.00050
Surrogate - Triphenylphosphate	72 %
Date Extracted	10.22.98
Date Analyzed	10.31.98
Dilution factor	1.0
Batch ID	10220
Instrument ID	3GONPD
PCB's (8081/See Qualifier Z)	
PCB-1016, ug/l	<1.0
PCB-1221, ug/l	<1.0
PCB-1232, ug/l	<1.0
PCB-1242, ug/l	<1.0
PCB-1248, ug/l	<1.0
PCB-1254, ug/l	<1.0
PCB-1260, ug/l	<1.0
Total Polychlorinated Biphenyls, ug/l	<1.0
Surrogate - TCX	38 %
Date Extracted	10.22.98
Date Analyzed	10.27.98
Dilution factor	1.0

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-86420
Received: 20 OCT 98
Reported: 10 NOV 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 4503051364

CC: Mr. Alan G. Faust Project: RFIS03/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 171181110

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
86420-1	WEL-1	10-18-98	RFIS03

PARAMETER	86420-1
Acids and Base Neutrals (8270-APP9)	
p-Dichlorobenzene, ug/l	<10
o-Dichlorobenzene, ug/l	<10
p-Nitrophenol, ug/l	<50
2,4-Dichlorophenol, ug/l	<10
Pentachlorophenol, ug/l	<1.0
Phenol, ug/l	<10
2,4,5-Trichlorophenol, ug/l	<10
2,4,6-Trichlorophenol, ug/l	<10
o,o,o-Triethyl phosphorothioate, ug/l	<10
Surrogate - Phenol d5	53 %
Surrogate - 2-Fluorophenol	51 %
Surrogate - 2,4,6-Tribromophenol	70 %
Surrogate - Nitrobenzene - d5	86 %
Surrogate - 2-Fluorobiphenyl	88 %
Surrogate - Terphenyl - d14	84 %
Date Extracted	10.22.98
Date Analyzed	11.02.98
Dilution factor	1.0
Batch ID	1022A
Instrument ID	MSF5970

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
86420-1	WEL-1	10-18-98	RFIS03

PARAMETER	86420-1
Volatiles by GC/MS (8260)	
Methylene chloride (Dichloromethane), ug/l	<5.0
1,1,2,2-Tetrachloroethane, ug/l	<5.0
Chlorobenzene, ug/l	<5.0
Isopropylbenzene, ug/l	<5.0
Surrogate - Toluene-d8	96 %
Surrogate - 4-Bromofluorobenzene	98 %
Surrogate - Dibromofluoromethane	98 %
Date Analyzed	10.24.98
Dilution factor	1.0
Batch ID	2L1023
Clock ID	2L1023
Arsenic (6010)	
Arsenic, mg/l	<0.010
Preparation Date	10.23.98
Date Analyzed	10.28.98
Dilution factor	1.0
Batch ID	1023L
Barium (6010)	
Barium, mg/l	0.16
Preparation Date	10.23.98
Date Analyzed	10.28.98
Dilution factor	1.0
Batch ID	1023L

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Sampled By: Client
Code: 17181110

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
86420-1	WEL-1	10-18-98	RFIS03

PARAMETER	86420-1
Beryllium (6010)	
Beryllium, mg/l	<0.0040
Preparation Date	10.23.98
Date Analyzed	10.28.98
Dilution factor	1.0
Batch ID	1023L
Cadmium (6010)	
Cadmium, mg/l	<0.0050
Preparation Date	10.23.98
Date Analyzed	10.28.98
Dilution factor	1.0
Batch ID	1023L
Chromium (6010)	
Chromium, mg/l	0.057
Preparation Date	10.23.98
Date Analyzed	10.28.98
Dilution factor	1.0
Batch ID	1023L
Cobalt (6010)	
Cobalt, mg/l	0.036
Preparation Date	10.23.98
Date Analyzed	10.28.98
Dilution factor	1.0
Batch ID	1023L

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
86420-1	WEL-1	10-18-98	RFIS03

PARAMETER	86420-1
Lead (7421)	
Lead, mg/l	0.033
Preparation Date	10.27.98
Date Analyzed	10.29.98
Dilution factor	1.0
Batch ID	1027H
Manganese (6010)	
Manganese, mg/l	2.0
Preparation Date	10.23.98
Date Analyzed	10.28.98
Dilution factor	1.0
Batch ID	1023L
Mercury (7470)	
Mercury, mg/l	<0.00020
Preparation Date	10.26.98
Date Analyzed	10.26.98
Dilution factor	1.0
Batch ID	1026U
Nickel (6010)	
Nickel, mg/l	0.063
Preparation Date	10.23.98
Date Analyzed	10.28.98
Dilution factor	1.0
Batch ID	1023L

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
86420-1	WEL-1	10-18-98	RFIS03

PARAMETER	86420-1
Vanadium (6010)	
Vanadium, mg/l	0.081
Preparation Date	10.23.98
Date Analyzed	10.28.98
Dilution factor	1.0
Batch ID	1023L

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
86420-2	WEL-2-F	10-18-98	RFIS03

PARAMETER	86420-2
PCB's (8081/See Qualifier Z)	
PCB-1016, ug/l	<1.0
PCB-1221, ug/l	<1.0
PCB-1232, ug/l	<1.0
PCB-1242, ug/l	<1.0
PCB-1248, ug/l	<1.0
PCB-1254, ug/l	<1.0
PCB-1260, ug/l	<1.0
Total Polychlorinated Biphenyls, ug/l	<1.0
Surrogate - TCX	60 %
Date Extracted	10.22.98
Date Analyzed	10.27.98
Dilution factor	1.0
Arsenic (6010)	
Arsenic, mg/l	<0.010
Preparation Date	10.23.98
Date Analyzed	10.28.98
Dilution factor	1.0
Batch ID	1023L
Barium (6010)	
Barium, mg/l	0.068
Preparation Date	10.23.98
Date Analyzed	10.28.98
Dilution factor	1.0
Batch ID	1023L

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
86420-2	WEL-2-F	10-18-98	RFIS03

PARAMETER	86420-2
Beryllium (6010)	
Beryllium, mg/l	<0.0040
Preparation Date	10.23.98
Date Analyzed	10.28.98
Dilution factor	1.0
Batch ID	1023L
Cadmium (6010)	
Cadmium, mg/l	<0.0050
Preparation Date	10.23.98
Date Analyzed	10.28.98
Dilution factor	1.0
Batch ID	1023L
Chromium (6010)	
Chromium, mg/l	<0.010
Preparation Date	10.23.98
Date Analyzed	10.28.98
Dilution factor	1.0
Batch ID	1023L
Cobalt (6010)	
Cobalt, mg/l	<0.010
Preparation Date	10.23.98
Date Analyzed	10.28.98
Dilution factor	1.0
Batch ID	1023L

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
86420-2	WEL-2-F	10-18-98	RFIS03

PARAMETER	86420-2
Lead (7421)	
Lead, mg/l	<0.0050
Preparation Date	10.27.98
Date Analyzed	10.29.98
Dilution factor	1.0
Batch ID	1027H
Manganese (6010)	
Manganese, mg/l	0.19
Preparation Date	10.23.98
Date Analyzed	10.28.98
Dilution factor	1.0
Batch ID	1023L
Mercury (7470)	
Mercury, mg/l	<0.00020
Preparation Date	10.26.98
Date Analyzed	10.26.98
Dilution factor	1.0
Batch ID	1026U
Nickel (6010)	
Nickel, mg/l	0.0057
Preparation Date	10.23.98
Date Analyzed	10.28.98
Dilution factor	1.0
Batch ID	1023L

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86420-2	WEL-2-F	10-18-98	RFIS03

PARAMETER	86420-2
Vanadium (6010)	
Vanadium, mg/l	<0.010
Preparation Date	10.23.98
Date Analyzed	10.28.98
Dilution factor	1.0
Batch ID	1023L

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
86420-11	WEL-2	10-17-98	RFIS03

PARAMETER	86420-11
Arsenic (6010)	
Arsenic, mg/l	<0.010
Preparation Date	10.23.98
Date Analyzed	10.28.98
Dilution factor	1.0
Batch ID	1023L
Barium (6010)	
Barium, mg/l	0.15
Preparation Date	10.23.98
Date Analyzed	10.28.98
Dilution factor	1.0
Batch ID	1023L
Beryllium (6010)	
Beryllium, mg/l	<0.0040
Preparation Date	10.23.98
Date Analyzed	10.28.98
Dilution factor	1.0
Batch ID	1023L
Cadmium (6010)	
Cadmium, mg/l	<0.0050
Preparation Date	10.23.98
Date Analyzed	10.28.98
Dilution factor	1.0
Batch ID	1023L

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
86420-11	WEL-2	10-17-98	RFIS03

PARAMETER	86420-11
Chromium (6010)	
Chromium, mg/l	0.014
Preparation Date	10.23.98
Date Analysed	10.28.98
Dilution factor	1.0
Batch ID	1023L
Cobalt (6010)	
Cobalt, mg/l	0.019
Preparation Date	10.23.98
Date Analysed	10.28.98
Dilution factor	1.0
Batch ID	1023L
Lead (7421)	
Lead, mg/l	0.018
Preparation Date	10.27.98
Date Analysed	10.29.98
Dilution factor	1.0
Batch ID	1027H
Manganese (6010)	
Manganese, mg/l	1.7
Preparation Date	10.23.98
Date Analysed	10.28.98
Dilution factor	1.0
Batch ID	1023L

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
86420-11	WEL-2	10-17-98	RFIS03

PARAMETER	86420-11
Mercury (7470)	
Mercury, mg/l	<0.00020
Preparation Date	10.26.98
Date Analyzed	10.26.98
Dilution factor	1.0
Batch ID	1026U
Nickel (6010)	
Nickel, mg/l	0.035
Preparation Date	10.23.98
Date Analyzed	10.28.98
Dilution factor	1.0
Batch ID	1023L
Vanadium (6010)	
Vanadium, mg/l	0.033
Preparation Date	10.23.98
Date Analyzed	10.28.98
Dilution factor	1.0
Batch ID	1023L

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
86420-11	WEL-2	10-17-98	RFIS03

PARAMETER	86420-11
Acids and Base Neutrals (8270-APP9)	
p-Dichlorobenzene, ug/l	<10
o-Dichlorobenzene, ug/l	<10
p-Nitrophenol, ug/l	<50
2,4-Dichlorophenol, ug/l	<10
Pentachlorophenol, ug/l	<1.0
Phenol, ug/l	<10
2,4,5-Trichlorophenol, ug/l	<10
2,4,6-Trichlorophenol, ug/l	<10
o,o,o-Triethyl phosphorothioate, ug/l	<10
Surrogate - Phenol d5	28 %
Surrogate - 2-Fluorophenol	24 %
Surrogate - 2,4,6-Tribromophenol	56 %
Surrogate - Nitrobenzene - d5	74 %
Surrogate - 2-Fluorobiphenyl	78 %
Surrogate - Terphenyl - d14	86 %
Date Extracted	10.22.98
Date Analyzed	11.02.98
Dilution factor	1.0
Batch ID	1022A
Instrument ID	MSF5970

Methods: EPA SW-846, Update III.

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
86420-12	WEL-2	10-16-98	RFIS03

PARAMETER	86420-12
Volatiles by GC/MS (8260)	
Methylene chloride (Dichloromethane), ug/l	<5.0
1,1,2,2-Tetrachloroethane, ug/l	<5.0
Chlorobenzene, ug/l	<5.0
Isopropylbenzene, ug/l	<5.0
Surrogate - Toluene-d8	96 %
Surrogate - 4-Bromofluorobenzene	96 %
Surrogate - Dibromofluoromethane	96 %
Date Analyzed	10.24.98
Dilution factor	1.0
Batch ID	1L1024
Clock ID	1L1024
PCB's (8081/See Qualifier Z)	
PCB-1016, ug/l	<1.0
PCB-1221, ug/l	<1.0
PCB-1232, ug/l	<1.0
PCB-1242, ug/l	<1.0
PCB-1248, ug/l	<1.0
PCB-1254, ug/l	<1.0
PCB-1260, ug/l	<1.0
Total Polychlorinated Biphenyls, ug/l	<1.0
Surrogate - TCX	35 %
Date Extracted	10.22.98
Date Analyzed	10.27.98
Dilution factor	1.0

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
86420-12	WEL-2	10-16-98	RFIS03

PARAMETER	86420-12		
Organophosphorus Pesticides (8141)			
Ethyl Parathion, mg/l	<0.0010		
Methyl Parathion, mg/l	<0.00050		
Tetraethyl dithiopyrophosphate (Sulfotepp), mg/l	<0.00050		
Surrogate - Triphenylphosphate	78 %		
Date Extracted	10.22.98		
Date Analyzed	10.31.98		
Dilution factor	1.0		
Batch ID	10220		
Instrument ID	GCONPD		

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
86420-13	WEL-3	10-17-98	RFIS03

PARAMETER	86420-13
PCB's (8081/See Qualifier Z)	
PCB-1016, ug/l	<1.0
PCB-1221, ug/l	<1.0
PCB-1232, ug/l	<1.0
PCB-1242, ug/l	<1.0
PCB-1248, ug/l	<1.0
PCB-1254, ug/l	<1.0
PCB-1260, ug/l	<1.0
Total Polychlorinated Biphenyls, ug/l	<1.0
Surrogate TCX	47 %
Date Extracted	10.22.98
Date Analyzed	10.27.98
Dilution factor	1.0

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
86420-14	WEL-3	10-18-98	RFIS03

PARAMETER	86420-14
Organophosphorus Pesticides (8141)	
Ethyl Parathion, mg/l	<0.0010
Methyl Parathion, mg/l	<0.00050
Tetraethyl dithiopyrophosphate (Sulfotepp), mg/l	<0.00050
Surrogate - Triphenylphosphate	78 %
Date Extracted	10.22.98
Date Analyzed	10.31.98
Dilution factor	1.0
Batch ID	10220
Instrument ID	SGONPD

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Code: 171181110

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
86420-14	WEL-3	10-18-98	RFIS03

PARAMETER	86420-14
Acids and Base Neutrals (8270-APP9)	
p-Dichlorobenzene, ug/l	<10
o-Dichlorobenzene, ug/l	<10
p-Nitrophenol, ug/l	<50
2,4-Dichlorophenol, ug/l	<10
Pentachlorophenol, ug/l	<1.0
Phenol, ug/l	<10
2,4,5-Trichlorophenol, ug/l	<10
2,4,6-Trichlorophenol, ug/l	<10
O,O,O-Triethyl phosphorothioate, ug/l	<10
Surrogate - Phenol d5	36 %
Surrogate - 2-Fluorophenol	31 %
Surrogate - 2,4,6-Tribromophenol	59 %
Surrogate - Nitrobenzene - d5	70 %
Surrogate - 2-Fluorobiphenyl	76 %
Surrogate - Terphenyl - d14	94 %
Date Extracted	10.22.98
Date Analyzed	11.02.98
Dilution factor	1.0
Batch ID	1022A
Instrument ID	MSF5970

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-86420
Received: 20 OCT 98
Reported: 10 NOV 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 4503051364

CC: Mr. Alan G. Faust Project: RFIS03/983-3223.002/MONSANTO RFI-ANNISTON

Sampled By: Client
Code: 171181110

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
86420-14	WEL-3	10-18-98	RFIS03

PARAMETER	86420-14
Acids and Base Neutrals (8270-APP9)	
p-Dichlorobenzene, ug/l	<10
o-Dichlorobenzene, ug/l	<10
p-Nitrophenol, ug/l	<50
2,4-Dichlorophenol, ug/l	<10
Pentachlorophenol, ug/l	<1.0
Phenol, ug/l	<10
2,4,5-Trichlorophenol, ug/l	<10
2,4,6-Trichlorophenol, ug/l	<10
O,O,O-Triethyl phosphorothioate, ug/l	<10
Surrogate - Phenol d5	36 %
Surrogate - 2-Fluorophenol	31 %
Surrogate - 2,4,6-Tribromophenol	59 %
Surrogate - Nitrobenzene - d5	70 %
Surrogate - 2-Fluorobiphenyl	76 %
Surrogate - Terphenyl - d14	94 %
Date Extracted	10.22.98
Date Analyzed	11.02.98
Dilution factor	1.0
Batch ID	1022A
Instrument ID	MSF5970

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-86420
Received: 20 OCT 98
Reported: 10 NOV 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 4503051364

CC: Mr. Alan G. Faust Project: RFIS03/983-3223.002/MONSANTO RFI-ANNISTON

Sampled By: Client
Code: 171181110

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
86420-15	WEL-3	10-16-98	RFIS03

PARAMETER	86420-15
Volatiles by GC/MS (8260)	
Methylene chloride (Dichloromethane), ug/l	<5.0
1,1,2,2-Tetrachloroethane, ug/l	<5.0
Chlorobenzene, ug/l	<5.0
Isopropylbenzene, ug/l	<5.0
Surrogate - Toluene-d8	96 %
Surrogate - 4-Bromofluorobenzene	96 %
Surrogate - Dibromofluoromethane	96 %
Date Analyzed	10.24.98
Dilution factor	1.0
Batch ID	1L1024
Clock ID	1L1024

*Qualifier Z does not apply to any PCB data.

* Sampling dates and time are provided on the attached case narrative.

Methods: EPA SW-846, Update III.

Elizabeth P. Beardsley

FedEx USA Airbill FedEx Tracking Number 801488135016 0200 Form 1 of 2 Recipient's Copy

1 From

Date [redacted]

Sender's Name _____ Phone ( ) _____

Company _____

Address _____ Dept./Floor/Suite/Room

City _____ State _____ ZIP _____

2 Your Internal Billing Reference Information _____

3 To

Recipient's Name _____ Phone ( ) _____

Company _____

Address _____ Dept./Floor/Suite/Room

☐ Check here if residence (Extra charge applies for FedEx Express Saver)

City _____ State _____ ZIP _____

For HOLD at FedEx Location check here

☐ Hold Weekday (Not available with FedEx Saver Overnight)

☐ Hold Saturday (Not available at all locations) (Available to FedEx Priority Overnight and FedEx 2Day only)

For Saturday Delivery check here (Extra Charge. Not available to all locations) (Available for FedEx Priority Overnight and FedEx 2Day only)

58-86470

8 0 1 4 8 8 1 3 5 0 1 6

4a Express Package Service *Packages under 150 lbs.* Delivery commitment may be later in some areas

☒ FedEx Priority Overnight (Next business morning)

☐ FedEx Standard Overnight (Next business afternoon)

☐ FedEx 2Day* (Second business day)

☐ FedEx Express Saver* (Third business day)

☐ FedEx First Overnight (Earliest next business morning delivery to select locations)

* FedEx Letter Rate not available. Minimum charge One pound rate.

4b Express Freight Service *Packages over 150 lbs.* Delivery commitment may be later in some areas

☐ FedEx Overnight Freight (Next business day)

☐ FedEx 2Day Freight (Second business day)

☐ FedEx Express Saver Freight (Up to 3 business days)

(Call for delivery schedule. See back for different descriptions of freight services.)

5 Packaging ☐ FedEx Letter ☐ FedEx Pak ☐ FedEx Box ☐ FedEx Tube ☒ Other Pkg

Declared value limit $500

6 Special Handling

Does this shipment contain dangerous goods? ☐ Yes (As per attached Shipper's Declaration) ☐ Yes (Shipper's Declaration not required)

☐ Dry Ice Divided by 150 lbs. _____ x _____ kg ea. (Dangerous Goods Shipper's Declaration not required)

CA ☐ Cargo Aircraft Only

7 Payment

Bill to: ☒ Sender (Information in Section 1 will be used) ☐ Recipient ☐ Third Party ☐ Credit Card ☐ Cash/Check

(Enter FedEx account or Credit Card no. below)

[redacted]

Total Packages	Total Weight	Total Declared Value*	Total Charges
2	1	$ 2 .00	$

*Your declaration is over basic limit $100 per shipment, you pay an additional charge. See SERVICE CONDITIONS, DECLARED VALUE, AND LIMIT OF LIABILITY section for other information.

Credit Card Auth. _____

8 Release Signature _____

Your signature authorizes federal Express to deliver this shipment without obtaining a signature and agrees to indemnify and hold harmless FedEx Ex Express from any resulting claims.

Questions?
Call 1-800-Go-FedEx (800)463-3339

287

For Dist. 5/97
Part #150305
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Serial Number [illegible]

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue, Savannah, GA 31404 — Phone: (912) 354-7858 — Fax: (912) 352-0165
2846 Industrial Plaza Drive, Tallahassee, FL 32301 — Phone: (904) 878-3994 — Fax: (904) 878-9504
414 SW 12th Avenue, Deerfield Beach, FL 33442 — Phone: (954) 421-7400 — Fax: (954) 421-2584
900 Lakeside Drive, Mobile, AL 36693 — Phone: (334) 666-6633 — Fax: (334) 666-6696
6712 Benjamin Road, Suite 100, Tampa, FL 33634 — Phone: (813) 885-7427 — Fax: (813) 885-7049
100 Alpha Drive, Suite 110, Destrehan, LA 70047 — Phone: (504) 764-1100 — Fax: (504) 725-1163

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

PROJECT REFERENCE: Solutia/RFI/AL
PROJECT NO: 981 3223.3
P.O. NUMBER:
PROJECT LOC. (State): AL
SAMPLER(s) NAME: Hemingway, Gaddie, Lowenberg, Pittman
PHONE: 770 496-1813
FAX: 770 434-9476
CLIENT NAME: Golder Associates
CLIENT PROJECT MANAGER: Gayle Pittman
CLIENT ADDRESS (CITY, STATE, ZIP): 3730 Chamblee Tucker Rd Atlanta GA

PAGE 1 OF 1

MATRIX TYPE: AQUEOUS (WATER), SOLID OR SEMISOLID, AIR, NONAQUEOUS LIQUID (oil, solvent, etc.)

REQUIRED ANALYSES

SAMPLE DATE	SAMPLE TIME	SL NO.	SAMPLE IDENTIFICATION	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID	PCB's	Semi-VOA's	VOA's	Metals	Mercury	DP					REMARKS
*			WEL-1	x				1	1	3	1	1	1					*See sample bottles
*			WEL-3	x				1	1	3			1					for dates / times
			Temp. Blank	x										1				See Betsy Beachamp
																		for Analysis -
																		Call G. Pittman
																		w/ questions

STANDARD REPORT DELIVERY
EXPEDITED REPORT DELIVERY (surcharge)
Date Due

RELINQUISHED BY (SIGNATURE)	DATE	TIME	RELINQUISHED BY (SIGNATURE)	DATE	TIME	RELINQUISHED BY (SIGNATURE)	DATE	TIME
[signature]			[signature]	10-19	1500			
RECEIVED BY (SIGNATURE)	DATE	TIME	RECEIVED BY (SIGNATURE)	DATE	TIME	RECEIVED BY (SIGNATURE)	DATE	TIME
[signature]	10-17							

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SL LOG NO.	LABORATORY REMARKS
[signature]	10/20/98	9:05	☑ YES ☐ NO		SR-86420	

Serial Number 1[illegible]533

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

- [X] 5102 LaRoche Avenue, Savannah, GA 31404 — Phone: (912) 354-7858 — Fax: (912) 352-0165
- [ ] 2846 Industrial Plaza Drive, Tallahassee, FL 32301 — Phone: (904) 878-3994 — Fax: (904) 878-9504
- [ ] 414 SW 12th Avenue, Deerfield Beach, FL 33442 — Phone: (954) 421-7400 — Fax: (954) 421-2584
- [ ] 900 Lakeside Drive, Mobile, AL 36693 — Phone: (334) 666-6633 — Fax: (334) 666-6696
- [ ] 6712 Benjamin Road, Suite 100, Tampa, FL 33634 — Phone: (813) 885-7427 — Fax: (813) 885-7049
- [ ] 100 Alpha Drive, Suite 110, Destrehan, LA 70047 — Phone: (504) 764-1100 — Fax: (504) 725-1163

PROJECT REFERENCE: Solutia/RFI/AL

PROJECT NO.: 983 3223.3

P.O. NUMBER:

PROJECT LOC. (State): AL

SAMPLER(s) NAME: Chris Hemingway, Gayle Pittman, Jon Rattle, M. Cunningham

PHONE: 770 496 1893

FAX: 770 934 4476

CLIENT NAME: Geller Associates

CLIENT PROJECT MANAGER: Gayle Pittman

CLIENT ADDRESS (CITY, STATE, ZIP): 3730 Chamblee Tucker Rd Atlanta GA 30341

MATRIX TYPE: AQUEOUS (WATER) / SOLID OR SEMI-SOLID / AIR / NONAQUEOUS LIQUID (or solvent etc.)

REQUIRED ANALYSES

PAGE 1 OF 1

- [ ] STANDARD REPORT DELIVERY
- [ ] EXPEDITED REPORT DELIVERY (surcharge)

Date Due:

NUMBER OF CONTAINERS SUBMITTED

SAMPLE DATE	SAMPLE TIME	SL NO.	SAMPLE IDENTIFICATION	AQUEOUS (WATER)	SOLID OR SEMI-SOLID	AIR	NONAQUEOUS LIQUID (or solvent etc.)	PCB's	Semi-VOA's	VOA's	Metals	Mercury	OP					REMARKS
10-17	12:00		WEL-2 - Semi-VOA	X					1									Use analyses as
10-16	12:10		WEL-2 - OP	X									1					before & described
10-16	11:58		WEL-2 - PCB	X				1										in RFI - see
10-18	13:00		WEL-2-F - PCB	X				1										Betsy Beauchamp -
10-16	11:47		WEL-2 - VOA	X						3								Any Questions - please
10-17	12:05		WEL-2 - metals	X							1							call G. Pittman
10-17	12:15		WEL-2 - mercury	X								1						
10-18	13:00		WEL-2-F metals	X							1							
10-18	13:00		WEL-2-F mercury	X								1						
			temp blank	X										1				

RELINQUISHED BY (SIGNATURE)	DATE	TIME	RELINQUISHED BY (SIGNATURE)	DATE	TIME	RELINQUISHED BY (SIGNATURE)	DATE	TIME
[signature]	10/19/98		[signature]	10-19	15:00			
RECEIVED BY (SIGNATURE)	**DATE**	**TIME**	**RECEIVED BY (SIGNATURE)**	**DATE**	**TIME**	**RECEIVED BY (SIGNATURE)**	**DATE**	**TIME**
[signature]	10/20/98							

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SL LOG NO.	LABORATORY REMARKS:
C. Vasquez	10/20/98	9:05	[X] YES [ ] NO		S8-86420	

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& ENVIRONMENTAL SERVICES, INC.

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LOG NO: S8-86573
Received: 26 OCT 98
Reported: 10 NOV 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 4503051364

CC: Mr. Alan G. Faust Project: RFIS05/983-3223.002/MONSANTO RFI-ANNISTON

Sampled By: Client
Code: 171181110

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
86573-2	WEL-3-F	10-23-98/1200	RFIS05

PARAMETER	86573-2
PCB's (8081/See Qualifier Z)	
PCB-1016, ug/l	<1.0
PCB-1221, ug/l	<1.0
PCB-1232, ug/l	<1.0
PCB-1242, ug/l	<1.0
PCB-1248, ug/l	<1.0
PCB-1254, ug/l	<1.0
PCB-1260, ug/l	<1.0
Total Polychlorinated Biphenyls, ug/l	<1.0
Surrogate - TCX	30 %
Date Extracted	10.27.98
Date Analyzed	10.30.98
Dilution factor	1.0
Arsenic (6010)	
Arsenic, mg/l	<0.010
Preparation Date	10.29.98
Date Analyzed	10.30.98
Dilution factor	1.0
Batch ID	1029I
Barium (6010)	
Barium, mg/l	0.047
Preparation Date	10.29.98
Date Analyzed	10.30.98
Dilution factor	1.0
Batch ID	1029I

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-86573
Received: 26 OCT 98
Reported: 10 NOV 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 4503051364

CC: Mr. Alan G. Faust Project: RFIS05/983-3223.002/MONSANTO RFI-ANNISTON

Sampled By: Client
Code: 171181110

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
86573-2	WEL-3-F	10-23-98/1200	RFIS05

PARAMETER	86573-2
Beryllium (6010)	
Beryllium, mg/l	<0.0050
Preparation Date	10.29.98
Date Analyzed	10.30.98
Dilution factor	1.0
Batch ID	1029I
Cadmium (6010)	
Cadmium, mg/l	<0.0050
Preparation Date	10.29.98
Date Analyzed	10.30.98
Dilution factor	1.0
Batch ID	1029I
Chromium (6010)	
Chromium, mg/l	<0.010
Preparation Date	10.29.98
Date Analyzed	10.30.98
Dilution factor	1.0
Batch ID	1029I
Cobalt (6010)	
Cobalt, mg/l	<0.010
Preparation Date	10.29.98
Date Analyzed	10.30.98
Dilution factor	1.0
Batch ID	1029I

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

5102 LaHoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-86573
Received: 26 OCT 98
Reported: 10 NOV 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 4503051364

CC: Mr. Alan G. Faust Project: RFIS05/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 171181110

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
86573-2	WEL-3-F	10-23-98/1200	RFIS05

PARAMETER	86573-2
Lead (7421)	
Lead, mg/l	<0.0050
Preparation Date	10.30.98
Date Analyzed	11.05.98
Dilution factor	1.0
Batch ID	1030G
Manganese (6010)	
Manganese, mg/l	0.25
Preparation Date	10.29.98
Date Analyzed	10.30.98
Dilution factor	1.0
Batch ID	1029I
Mercury (7470)	
Mercury, mg/l	<0.00020U
Preparation Date	10.29.98
Date Analyzed	11.02.98
Dilution factor	1.0
Batch ID	1029T
Nickel (6010)	
Nickel, mg/l	<0.040
Preparation Date	10.29.98
Date Analyzed	10.30.98
Dilution factor	1.0
Batch ID	1029I

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LOG NO: S8-86573
Received: 26 OCT 98
Reported: 10 NOV 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 4503051364

CC: Mr. Alan G. Faust Project: RFIS05/983-3223.002/MONSANTO RFI-ANNISTON

Sampled By: Client
Code: 171181110

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
86573-2	WEL-3-F	10-23-98/1200	RFIS05

PARAMETER	86573-2
Vanadium (6010)	
Vanadium, mg/l	<0.010
Preparation Date	10.29.98
Date Analyzed	10.30.98
Dilution factor	1.0
Batch ID	1029I

*Qualifier Z does not apply to any PCB data.

Methods: EPA SW-846, Update III.

Elizabeth F. Beauchamp

Fed Ex USA Airbill

FedEx Tracking Number 8004 5034 9636

0200

Recipient's Copy

1 From

Date

Sender's Name

Phone ( )

5886573

Company

Address

Dept./Floor/Suite/Room

City State ZIP

2 Your Internal Billing Reference Information

3 To

Recipient's Name

Phone ( )

Company

Check non-residential

Address

(Extra charge applies for FedEx Express Saver)

Dept./Floor/Suite/Room

City State ZIP

For HOLD at FedEx Location check here

☐ Hold Weekday (Not available with FedEx First Overnight)

☐ Hold Saturday (Not available at all locations) (Available for FedEx Priority Overnight and FedEx 2Day only)

For Saturday Delivery check here

(Extra Charge. Not available at all locations) (Available at FedEx Priority Overnight and FedEx 2Day only)

8 [illegible] 4 5 0 3 4 9 6 3 6

4a Express Package Service *Packages under 150 lbs.*

Delivery commitment may be later in some areas

☒ FedEx Priority Overnight (Next business afternoon)

☐ FedEx Standard Overnight (Next business afternoon)

☐ FedEx 2Day* (Second business day)

☐ FedEx Express Saver* (Third business day)

☐ FedEx First Overnight (Earliest next business morning delivery; to select locations)

*FedEx Letter Rate not available. Minimum charge. One-pound rate.

4b Express Freight Service *Packages over 150 lbs.*

Delivery commitments may be later in some areas

☐ FedEx Overnight Freight (Next business day)

☐ FedEx 2Day Freight (Second business day)

☐ FedEx Express Saver Freight (3 to 5 business days)

(Call for delivery schedule. See back for detailed descriptions of freight services.)

5 Packaging

☐ FedEx Letter ☐ FedEx Pak (Declared value limit $500) ☐ FedEx Box ☐ FedEx Tube ☒ Other Pkg.

6 Special Handling

Does this shipment contain dangerous goods?

☐ Yes (In one checked Shipper's Declaration) ☐ Yes (Shipper's Declaration not required)

☐ Dry Ice (Dry Ice, 9, UN 1845) x ____ kg

(Dangerous Goods; Shipper's Declaration not required)

CA ☐ Cargo Aircraft Only

7 Payment

Bill to: ☒ Sender (Enter FedEx account no. in Section 1 will be billed) ☐ Recipient ☐ Third Party ☐ Credit Card ☐ Cash/Check

(Enter FedEx account no. or Credit Card no. below)

Total Packages	Total Weight	Total Declared Value*	Total Charges
1	[illegible]	$ [illegible] .00	$

*When declaring a value higher than $100 per shipment, you pay an additional charge. See SERVICE CONDITIONS, DECLARED VALUE AND LIMIT OF LIABILITY section for further information.

Credit Card Auth.

8 Release Signature

Your signature authorizes Federal Express to deliver this shipment without obtaining a signature and agrees to indemnify and hold harmless Federal Express from any resulting claims.

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Questions?
Call 1-800-Go-FedEx (800)463-3339

Rev. Date 5/97
Part #150393
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Serial Number 25109

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ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

☒ 5102 LaRoche Avenue, Savannah, GA 31404 — Phone: (912) 354-7858 — Fax: (912) 352-0165
☐ 2846 Industrial Plaza Drive, Tallahassee, FL 32301 — Phone: (904) 878-3994 — Fax: (904) 878-9504
☐ 414 SW 12th Avenue, Deerfield Beach, FL 33442 — Phone: (954) 421-7400 — Fax: (954) 421-2584
☐ 900 Lakeside Drive, Mobile, AL 36693 — Phone: (334) 666-6633 — Fax: (334) 666-6696
☐ 6712 Benjamin Road, Suite 100, Tampa, FL 33634 — Phone: (813) 885-7427 — Fax: (813) 885-7049
☐ 100 Alpha Drive, Suite 110, Destrehan, LA 70047 — Phone: (504) 764-1100 — Fax: (504) 725-1163

PROJECT REFERENCE	PROJECT NO.	P.O. NUMBER
Solutia / RFI / AL	483-3223	

PROJECT LOC. (State)	SAMPLER(s) NAME	PHONE	FAX
AL	Melettia Cruseberry	770/446-1893	770/934-9476

CLIENT NAME	CLIENT PROJECT MANAGER
Golder Associates	Gayle Pitman

CLIENT ADDRESS (CITY, STATE, ZIP): 3730 Chamblee-Tucker Rd Atlanta GA

MATRIX TYPE: AQUEOUS (WATER) / SOLID OR SEMISOLID / AIR / NONAQUEOUS LIQUID OR SEMISOLID

REQUIRED ANALYSES: PCB's / Metals and Mercury / HNO3

PAGE ___ OF ___

☐ STANDARD REPORT DELIVERY

☐ EXPEDITED REPORT DELIVERY (surcharge) — Date Due ___

SAMPLE DATE	SAMPLE TIME	SL NO.	SAMPLE IDENTIFICATION	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID OR SEMISOLID	NUMBER OF CONTAINERS SUBMITTED	REMARKS
10/23	12:00		WEL-3-F	X				1 1	See Betsy Beauchamp for analyses ☆ ☆ LIMITED VOLUME!! ☆ ☆

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
	10/24/98		Melettia Cruseberry	10-23	12:00			
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SL LOG NO.	LABORATORY REMARKS:
J Swafford	10/24/98	9:09	☐ YES ☐ NO		58 86579	

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-86397
Received: 17 OCT 98
Reported: 10 NOV 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 4503051364

CC: Mr. Alan G. Faust Project: RFIS03/983-3223.002/MONSANTO RFI-ANNISTON

Sampled By: Client
Code: 171181110

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
86397-1	DUP-W	10-15-98	RFIS03
86397-12	WEL-4	10-15-98	RFIS03

PARAMETER	86397-1	86397-12	
Organophosphorus Pesticides (8141)			
Ethyl Parathion, mg/l	<0.0010	<0.0010	
Methyl Parathion, mg/l	<0.00050	<0.00050	
Tetraethyl dithiopyrophosphate (Sulfotepp), mg/l	<0.00050	<0.00050	
Surrogate - Triphenylphosphate	78 %	88 %	
Date Extracted	10.22.98	10.22.98	
Date Analyzed	10.31.98	10.31.98	
Dilution factor	1.0	1.0	
Batch ID	10220	10220	
Instrument ID	SGONPD	SGONPD	
PCB's (8081/See Qualifier Z)			
PCB-1016, ug/l	<1.0	<1.0	
PCB-1221, ug/l	<1.0	<1.0	
PCB-1232, ug/l	<1.0	<1.0	
PCB-1242, ug/l	<1.0	<1.0	
PCB-1248, ug/l	<1.0	<1.0	
PCB-1254, ug/l	<1.0	<1.0	
PCB-1260, ug/l	<1.0	<1.0	
Total Polychlorinated Biphenyls, ug/l	<1.0	<1.0	
Surrogate - TCX	41 %	40 %	
Date Extracted	10.22.98	10.22.98	
Date Analyzed	10.27.98	10.27.98	
Dilution factor	1.0	1.0	

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-86397
Received: 17 OCT 98
Reported: 10 NOV 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 4503051364

CC: Mr. Alan G. Faust Project: RFIS03/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 171181110

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
86397-1	DUP-W	10-15-98	RFIS03
86397-12	WEL-4	10-15-98	RFIS03

PARAMETER	86397-1	86397-12
Acids and Base Neutrals (8270-APP9)		
p-Dichlorobenzene, ug/l	<10	<10
o-Dichlorobenzene, ug/l	<10	<10
p-Nitrophenol, ug/l	<50	<50
2,4-Dichlorophenol, ug/l	<10	<10
Pentachlorophenol, ug/l	<1.0	<1.0
Phenol, ug/l	<10	<10
2,4,5-Trichlorophenol, ug/l	<10	<10
2,4,6-Trichlorophenol, ug/l	<10	<10
o,o,o-Triethyl phosphorothioate, ug/l	<10	<10
Surrogate - Phenol d5	59 %	68 %
Surrogate - 2-Fluorophenol	56 %	66 %
Surrogate - 2,4,6-Tribromophenol	82 %	94 %
Surrogate - Nitrobenzene - d5	72 %	84 %
Surrogate - 2-Fluorobiphenyl	78 %	86 %
Surrogate - Terphenyl - d14	94 %	104 %
Date Extracted	10.22.98	10.22.98
Date Analyzed	11.02.98	11.02.98
Dilution factor	1.0	1.0
Batch ID	1022A	1022A
Instrument ID	MSF5970	MSF5970

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Sampled By: Client
Code: 171181110

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
86397-1	DUP-W	10-15-98	RFIS03
86397-12	WEL-4	10-15-98	RFIS03

PARAMETER	86397-1	86397-12
Volatiles by GC/MS (8260)		
Methylene chloride (Dichloromethane), ug/l	<5.0	<5.0
1,1,2,2-Tetrachloroethane, ug/l	<5.0	<5.0
Chlorobenzene, ug/l	<5.0	<5.0
Isopropylbenzene, ug/l	<5.0	<5.0
Surrogate - Toluene-d8	96 %	98 %
Surrogate - 4-Bromofluorobenzene	98 %	94 %
Surrogate - Dibromofluoromethane	96 %	98 %
Date Analyzed	10.24.98	10.24.98
Dilution factor	1.0	1.0
Batch ID	2L1023	2L1023
Clock ID	2L1023	2L1023
Arsenic (6010)		
Arsenic, mg/l	<0.010	<0.010
Preparation Date	10.23.98	10.23.98
Date Analyzed	10.28.98	10.28.98
Dilution factor	1.0	1.0
Batch ID	1023L	1023L
Barium (6010)		
Barium, mg/l	0.010	0.074
Preparation Date	10.23.98	10.23.98
Date Analyzed	10.28.98	10.28.98
Dilution factor	1.0	1.0
Batch ID	1023L	1023L

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

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Client PO. No.: 4503051364

CC: Mr. Alan G. Faust Project: RFIS03/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 171181110

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
86397-1	DUP-W	10-15-98	RFIS03
86397-12	WEL-4	10-15-98	RFIS03

PARAMETER	86397-1	86397-12
Beryllium (6010)		
Beryllium, mg/l	<0.0040	<0.0040
Preparation Date	10.23.98	10.23.98
Date Analyzed	10.28.98	10.28.98
Dilution factor	1.0	1.0
Batch ID	1023L	1023L
Cadmium (6010)		
Cadmium, mg/l	<0.0050	<0.0050
Preparation Date	10.23.98	10.23.98
Date Analyzed	10.28.98	10.28.98
Dilution factor	1.0	1.0
Batch ID	1023L	1023L
Chromium (6010)		
Chromium, mg/l	<0.010	0.012
Preparation Date	10.23.98	10.23.98
Date Analyzed	10.28.98	10.28.98
Dilution factor	1.0	1.0
Batch ID	1023L	1023L
Cobalt (6010)		
Cobalt, mg/l	<0.010	0.012
Preparation Date	10.23.98	10.23.98
Date Analyzed	10.28.98	10.28.98
Dilution factor	1.0	1.0
Batch ID	1023L	1023L

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Sampled By: Client
Code: 171181110

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
86397-1	DUP-W	10-15-98	RFIS03
86397-12	WEL-4	10-15-98	RFIS03

PARAMETER	86397-1	86397-12
Lead (7421)		
Lead, mg/l	<0.0050	0.016
Preparation Date	10.27.98	10.27.98
Date Analyzed	10.29.98	10.29.98
Dilution factor	1.0	1.0
Batch ID	1027H	1027H
Manganese (6010)		
Manganese, mg/l	0.053	1.1
Preparation Date	10.23.98	10.23.98
Date Analyzed	10.28.98	10.28.98
Dilution factor	1.0	1.0
Batch ID	1023L	1023L
Mercury (7470)		
Mercury, mg/l	<0.00020	<0.00020
Preparation Date	10.26.98	10.26.98
Date Analyzed	10.26.98	10.26.98
Dilution factor	1.0	1.0
Batch ID	1026U	1026U
Nickel (6010)		
Nickel, mg/l	<0.0040	0.025
Preparation Date	10.23.98	10.23.98
Date Analyzed	10.28.98	10.28.98
Dilution factor	1.0	1.0
Batch ID	1023L	1023L

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Code: 171181110

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
86397-1	DUP-W	10-15-98	RFIS03
86397-12	WEL-4	10-15-98	RFIS03

PARAMETER	86397-1	86397-12
Vanadium (6010)		
Vanadium, mg/l	<0.010	0.027
Preparation Date	10.23.98	10.23.98
Date Analyzed	10.28.98	10.28.98
Dilution factor	1.0	1.0
Batch ID	1023L	1023L

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Code: 171181110

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
86397-2	DUP-W-F	10-15-98	RFIS03
86397-13	WEL-4-F	10-15-98	RFIS03

PARAMETER	86397-2	86397-13
PCB's (8081/See Qualifier Z)		
PCB-1016, ug/l	<1.0	<1.0
PCB-1221, ug/l	<1.0	<1.0
PCB-1232, ug/l	<1.0	<1.0
PCB-1242, ug/l	<1.0	<1.0
PCB-1248, ug/l	<1.0	<1.0
PCB-1254, ug/l	<1.0	<1.0
PCB-1260, ug/l	<1.0	<1.0
Total Polychlorinated Biphenyls, ug/l	<1.0	<1.0
Surrogate - TCX	36 %	38 %
Date Extracted	10.22.98	10.22.98
Date Analyzed	10.27.98	10.27.98
Dilution factor	1.0	1.0
Arsenic (6010)		
Arsenic, mg/l	<0.010	<0.010
Preparation Date	10.23.98	10.23.98
Date Analyzed	10.28.98	10.28.98
Dilution factor	1.0	1.0
Batch ID	1023L	1023L

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
86397-2	DUP-W-F	10-15-98	RFIS03
86397-13	WEL-4-F	10-15-98	RFIS03

PARAMETER	86397-2	86397-13
Barium (6010)		
Barium, mg/l	0.011	0.012
Preparation Date	10.23.98	10.23.98
Date Analyzed	10.28.98	10.28.98
Dilution factor	1.0	1.0
Batch ID	1023L	1023L
Beryllium (6010)		
Beryllium, mg/l	<0.0040	<0.0040
Preparation Date	10.23.98	10.23.98
Date Analyzed	10.28.98	10.28.98
Dilution factor	1.0	1.0
Batch ID	1023L	1023L
Cadmium (6010)		
Cadmium, mg/l	<0.0050	<0.0050
Preparation Date	10.23.98	10.23.98
Date Analyzed	10.28.98	10.28.98
Dilution factor	1.0	1.0
Batch ID	1023L	1023L
Chromium (6010)		
Chromium, mg/l	<0.010	<0.010
Preparation Date	10.23.98	10.23.98
Date Analyzed	10.28.98	10.28.98
Dilution factor	1.0	1.0
Batch ID	1023L	1023L

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Sampled By: Client
Code: 171181110

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
86397-2	DUP-W-F	10-15-98	RFIS03
86397-13	WEL-4-F	10-15-98	RFIS03

PARAMETER	86397-2	86397-13
Cobalt (6010)		
Cobalt, mg/l	<0.010	<0.010
Preparation Date	10.23.98	10.23.98
Date Analyzed	10.28.98	10.28.98
Dilution factor	1.0	1.0
Batch ID	1023L	1023L
Lead (7421)		
Lead, mg/l	<0.0050	<0.0050
Preparation Date	10.27.98	10.27.98
Date Analyzed	10.29.98	10.29.98
Dilution factor	1.0	1.0
Batch ID	1027H	1027H
Manganese (6010)		
Manganese, mg/l	0.055	0.058
Preparation Date	10.23.98	10.23.98
Date Analyzed	10.28.98	10.28.98
Dilution factor	1.0	1.0
Batch ID	1023L	1023L
Mercury (7470)		
Mercury, mg/l	<0.00020	<0.00020
Preparation Date	10.26.98	10.26.98
Date Analyzed	10.26.98	10.26.98
Dilution factor	1.0	1.0
Batch ID	1026U	1026U

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Code: 171181110

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
86397-2	DUP-W-F	10-15-98	RFIS03
86397-13	WEL-4-F	10-15-98	RFIS03

PARAMETER	86397-2	86397-13			
Nickel (6010)					
Nickel, mg/l	<0.0040	<0.0040			
Preparation Date	10.23.98	10.23.98			
Date Analyzed	10.28.98	10.28.98			
Dilution factor	1.0	1.0			
Batch ID	1023L	1023L			
Vanadium (6010)					
Vanadium, mg/l	<0.010	<0.010			
Preparation Date	10.23.98	10.23.98			
Date Analyzed	10.28.98	10.28.98			
Dilution factor	1.0	1.0			
Batch ID	1023L	1023L			

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Code: 171181110

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
86397-11	Trip Blank	10-15-98	RFIS03

PARAMETER	86397-11
Volatiles by GC/MS (8260)	
Methylene chloride (Dichloromethane), ug/l	<5.0
1,1,2,2-Tetrachloroethane, ug/l	<5.0
Chlorobenzene, ug/l	<5.0
Isopropylbenzene, ug/l	<5.0
Surrogate - Toluene-d8	96 %
Surrogate - 4-Bromofluorobenzene	96 %
Surrogate - Dibromofluoromethane	100 %
Date Analyzed	10.24.98
Dilution factor	1.0
Batch ID	2L1023
Clock ID	2L1023

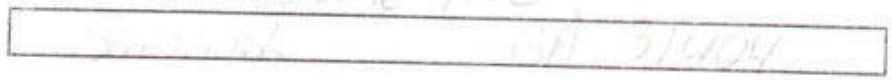
* Qualifier Z does not apply to any of the PCB data.

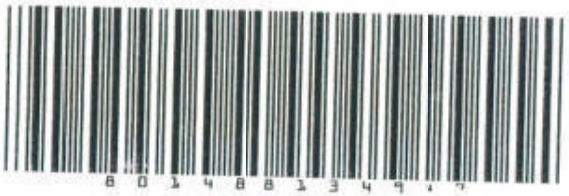
Methods: EPA SW-846, Update III.

Elizabeth F. Beauchamp

801488134947 0200

86397





287

Serial Number 1 1352

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

5102 LaRoche Avenue, Savannah, GA 31404 — Phone: (912) 354-7858 — Fax: (912) 352-0165
2846 Industrial Plaza Drive, Tallahassee, FL 32301 — Phone: (904) 878-3994 — Fax: (904) 878-9504
414 SW 12th Avenue, Deerfield Beach, FL 33442 — Phone: (954) 421-7400 — Fax: (954) 421-2584
900 Lakeside Drive, Mobile, AL 36693 — Phone: (334) 666-6633 — Fax: (334) 666-6696
6712 Benjamin Road, Suite 100, Tampa, FL 33634 — Phone: (813) 885-7427 — Fax: (813) 885-7049
100 Alpha Drive, Suite 110, Destrehan, LA 70047 — Phone: (504) 764-1100 — Fax: (504) 725-1163

PROJECT REFERENCE: Solutia/RFI/AL | PROJECT NO.: 4183-3223 | P.O. NUMBER:

PROJECT LOC. (State): AL | SAMPLER(S) NAME: Melissa Chambers, Christy [illegible] | PHONE: 770 496-7813 | FAX: 770 [illegible] 496-7676

CLIENT NAME: Golder Associates | CLIENT PROJECT MANAGER: Jon Rathke

CLIENT ADDRESS (CITY, STATE, ZIP): 3730 Chamblee Tucker Rd., Atlanta, GA 30341

PAGE 1 OF 1

STANDARD REPORT DELIVERY

EXPEDITED REPORT DELIVERY (surcharge)

Date Due

SAMPLE DATE	SAMPLE TIME	SL NO.	SAMPLE IDENTIFICATION	MATRIX TYPE: AQUEOUS/WATER	SOIL OR SEDIMENT	AIR	NON-AQUEOUS LIQUID (Specify)	REQUIRED ANALYSES: PCB	VOA	SVOA	OP	Metals	Mercury	NUMBER OF CONTAINERS SUBMITTED	REMARKS
								—	HCl	—	—	HNO3	HNO3		
10/5/98			Dup-6	✓										1	⑥ Dup sample was the same as Dup-W
10/5/98			Dup-W-F	✓										1	
10/5/98			MW-4	✓										3	⑥ Use MW-4 for MS/MSD.
10/5/98			MW-4-F	✓										3	⑥ More samples will arrive on Tues. (10/20/98) to be run with this batch.
			Trip	✓											

Please see labels for all times.

Please use the date on the label.

⑥ Please add Betsy Beachamp for target analyte list and detection limits.

⑥ Please use the metals and mercury sample with ~~time of the earliest time~~ (EB) the least amount of insoluble sediment. (I believe it is the sample with the earliest times.)

RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED BY (SIGNATURE)	DATE	TIME	RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED BY (SIGNATURE)	DATE	TIME
S. Campbell	10/9/98										
				10/9/98	1335						

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SL LOG NO.	LABORATORY REMARKS
S. Campbell	10/9/98	1140	☑ YES ☐ NO		58 54397	

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-86567
Received: 24 OCT 98
Reported: 10 NOV 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 4503051364

CC: Mr. Alan G. Faust Project: RFIS05/983-3223.002/MONSANTO RFI-ANNISTON
Sampled By: Client
Code: 171181110

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
86567-1	Field Blank	10-21-98/1330	RFIS05

PARAMETER	86567-1
Organophosphorus Pesticides (8141)	
Ethyl Parathion, mg/l	<0.0010
Methyl Parathion, mg/l	<0.00050
Tetraethyl dithiopyrophosphate (Sulfotepp), mg/l	<0.00050
Surrogate - Triphenylphosphate	90 %
Date Extracted	10.27.98
Date Analyzed	10.31.98
Dilution factor	1.0
Batch ID	1027N
Instrument ID	SGONPD
PCB's (8081/See Qualifier Z)	
PCB-1016, ug/l	<1.0
PCB-1221, ug/l	<1.0
PCB-1232, ug/l	<1.0
PCB-1242, ug/l	<1.0
PCB-1248, ug/l	<1.0
PCB-1254, ug/l	<1.0
PCB-1260, ug/l	<1.0
Total Polychlorinated Biphenyls, ug/l	<1.0
Surrogate - TCX	67 %
Date Extracted	10.27.98
Date Analyzed	10.30.98
Dilution factor	1.0

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Sampled By: Client
Code: 171181110

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
86567-1	Field Blank	10-21-98/1330	RFIS05

PARAMETER	86567-1
Acids and Base Neutrals (8270-APP9)	
p-Dichlorobenzene, ug/l	<10
o-Dichlorobenzene, ug/l	<10
p-Nitrophenol, ug/l	<50
2,4-Dichlorophenol, ug/l	<10
Pentachlorophenol, ug/l	<1.0
Phenol, ug/l	<10
2,4,5-Trichlorophenol, ug/l	<10
2,4,6-Trichlorophenol, ug/l	<10
o,o,o-Triethyl phosphorothioate, ug/l	<10
Surrogate - Phenol d5	69 %
Surrogate - 2-Fluorophenol	65 %
Surrogate - 2,4,6-Tribromophenol	83 %
Surrogate - Nitrobenzene - d5	72 %
Surrogate - 2-Fluorobiphenyl	76 %
Surrogate - Terphenyl - d14	84 %
Date Extracted	10.27.98
Date Analyzed	11.02.98
Dilution factor	1.0
Batch ID	1027A
Instrument ID	MSG5970

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-86567
Received: 24 OCT 98
Reported: 10 NOV 98

Ms. Gayle Pittman
Golder Associates, Inc.
3730 Chamblee Tucker Road
Atlanta, GA 30341

Client PO. No.: 4503051364

CC: Mr. Alan G. Faust Project: RFIS05/983-3223.002/MONSANTO RFI-ANNISTON

Sampled By: Client
Code: 171181110

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
86567-1	Field Blank	10-21-98/1330	RFIS05

PARAMETER	86567-1
Volatiles by GC/MS (8260)	
Methylene chloride (Dichloromethane), ug/l	<5.0
1,1,2,2-Tetrachloroethane, ug/l	<5.0
Chlorobenzene, ug/l	<5.0
Surrogate - Toluene-d8	112 %
Surrogate - 4-Bromofluorobenzene	108 %
Surrogate - Dibromofluoromethane	116 %
Date Analyzed	11.02.98
Dilution factor	1.0
Batch ID	2L1102
Clock ID	2L1102
Isopropylbenzene, ug/l	<5.0
Arsenic (6010)	
Arsenic, mg/l	<0.010
Preparation Date	10.29.98
Date Analyzed	10.29.98
Dilution factor	1.0
Batch ID	1029I
Barium (6010)	
Barium, mg/l	<0.010
Preparation Date	10.29.98
Date Analyzed	10.29.98
Dilution factor	1.0
Batch ID	1029I

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Sampled By: Client
Code: 171181110

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
86567-1	Field Blank	10-21-98/1330	RFIS05

PARAMETER	86567-1
Beryllium (6010)	
Beryllium, mg/l	<0.0050
Preparation Date	10.29.98
Date Analyzed	10.29.98
Dilution factor	1.0
Batch ID	1029I
Cadmium (6010)	
Cadmium, mg/l	<0.0050
Preparation Date	10.29.98
Date Analyzed	10.29.98
Dilution factor	1.0
Batch ID	1029I
Chromium (6010)	
Chromium, mg/l	<0.010
Preparation Date	10.29.98
Date Analyzed	10.29.98
Dilution factor	1.0
Batch ID	1029I
Cobalt (6010)	
Cobalt, mg/l	<0.010
Preparation Date	10.29.98
Date Analyzed	10.29.98
Dilution factor	1.0
Batch ID	1029I

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Sampled By: Client
Code: 171181110

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
86567-1	Field Blank	10-21-98/1330	RFIS05

PARAMETER	86567-1
Lead (7421)	
Lead, mg/l	<0.0050
Preparation Date	10.30.98
Date Analyzed	11.05.98
Dilution factor	1.0
Batch ID	1030G
Manganese (6010)	
Manganese, mg/l	<0.010
Preparation Date	10.29.98
Date Analyzed	10.29.98
Dilution factor	1.0
Batch ID	1029I
Mercury (7470)	
Mercury, mg/l	<0.00020
Preparation Date	10.29.98
Date Analyzed	11.02.98
Dilution factor	1.0
Batch ID	1029T
Nickel (6010)	
Nickel, mg/l	<0.040
Preparation Date	10.29.98
Date Analyzed	10.29.98
Dilution factor	1.0
Batch ID	1029I

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Sampled By: Client
Code: 171181110

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
86567-1	Field Blank	10-21-98/1330	RFIS05

PARAMETER	86567-1
Vanadium (6010)	
Vanadium, mg/l	<0.010
Preparation Date	10.29.98
Date Analyzed	10.29.98
Dilution factor	1.0
Batch ID	1029I

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
86567-2	WEL-1-F	10-20-98/1145	RFIS05
86567-16	Field Blank - F	10-21-98/1330	RFIS05

PARAMETER	86567-2	86567-16
PCB's (8081/See Qualifier Z)		
PCB-1016, ug/l	<1.0	<1.0
PCB-1221, ug/l	<1.0	<1.0
PCB-1232, ug/l	<1.0	<1.0
PCB-1242, ug/l	<1.0	<1.0
PCB-1248, ug/l	<1.0	<1.0
PCB-1254, ug/l	<1.0	<1.0
PCB-1260, ug/l	<1.0	<1.0
Total Polychlorinated Biphenyls, ug/l	<1.0	<1.0
Surrogate - TCX	48 %	42 %
Date Extracted	10.27.98	10.27.98
Date Analyzed	10.30.98	10.30.98
Dilution factor	1.0	1.0
Arsenic (6010)		
Arsenic, mg/l	<0.010	<0.010
Preparation Date	10.29.98	10.29.98
Date Analyzed	10.30.98	10.30.98
Dilution factor	1.0	1.0
Batch ID	1029I	1029I

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Sampled By: Client
Code: 171181110

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
86567-2	WEL-1-F	10-20-98/1145	RFIS05
86567-16	Field Blank - F	10-21-98/1330	RFIS05

PARAMETER	86567-2	86567-16
Barium (6010)		
Barium, mg/l	0.029	<0.010
Preparation Date	10.29.98	10.29.98
Date Analyzed	10.30.98	10.30.98
Dilution factor	1.0	1.0
Batch ID	1029I	1029I
Beryllium (6010)		
Beryllium, mg/l	<0.0050	<0.0050
Preparation Date	10.29.98	10.29.98
Date Analyzed	10.30.98	10.30.98
Dilution factor	1.0	1.0
Batch ID	1029I	1029I
Cadmium (6010)		
Cadmium, mg/l	<0.0050	<0.0050
Preparation Date	10.29.98	10.29.98
Date Analyzed	10.30.98	10.30.98
Dilution factor	1.0	1.0
Batch ID	1029I	1029I
Chromium (6010)		
Chromium, mg/l	<0.010	<0.010
Preparation Date	10.29.98	10.29.98
Date Analyzed	10.30.98	10.30.98
Dilution factor	1.0	1.0
Batch ID	1029I	1029I

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
86567-2	WEL-1-F	10-20-98/1145	RFIS05
86567-16	Field Blank - F	10-21-98/1330	RFIS05

PARAMETER	86567-2	86567-16
Cobalt (6010)		
Cobalt, mg/l	<0.010	<0.010
Preparation Date	10.29.98	10.29.98
Date Analyzed	10.30.98	10.30.98
Dilution factor	1.0	1.0
Batch ID	1029I	1029I
Lead (7421)		
Lead, mg/l	<0.0050	<0.0050
Preparation Date	10.30.98	10.30.98
Date Analyzed	11.05.98	11.05.98
Dilution factor	1.0	1.0
Batch ID	1030G	1030G
Manganese (6010)		
Manganese, mg/l	0.13	<0.010
Preparation Date	10.29.98	10.29.98
Date Analyzed	10.30.98	10.30.98
Dilution factor	1.0	1.0
Batch ID	1029I	1029I
Mercury (7470)		
Mercury, mg/l	<0.00020	<0.00020
Preparation Date	10.29.98	10.29.98
Date Analyzed	11.02.98	11.02.98
Dilution factor	1.0	1.0
Batch ID	1029T	1029T

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Sampled By: Client
Code: 171181110

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
86567-2	WEL-1-F	10-20-98/1145	RFIS05
86567-16	Field Blank - F	10-21-98/1330	RFIS05

PARAMETER	86567-2	86567-16
Nickel (6010)		
Nickel, mg/l	<0.040	<0.040
Preparation Date	10.29.98	10.29.98
Date Analyzed	10.30.98	10.30.98
Dilution factor	1.0	1.0
Batch ID	1029I	1029I
Vanadium (6010)		
Vanadium, mg/l	<0.010	<0.010
Preparation Date	10.29.98	10.29.98
Date Analyzed	10.30.98	10.30.98
Dilution factor	1.0	1.0
Batch ID	1029I	1029I

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CC: Mr. Alan G. Faust Project: RFIS05/983-3223.002/MONSANTO RFI-ANNISTON

Sampled By: Client
Code: 171181110

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
86567-11	WEL-3	10-21-98/1400	RFIS05

PARAMETER	86567-11
Arsenic (6010)	
Arsenic, mg/l	<0.010
Preparation Date	10.29.98
Date Analyzed	10.30.98
Dilution factor	1.0
Batch ID	1029I
Barium (6010)	
Barium, mg/l	0.048
Preparation Date	10.29.98
Date Analyzed	10.30.98
Dilution factor	1.0
Batch ID	1029I
Beryllium (6010)	
Beryllium, mg/l	<0.0050
Preparation Date	10.29.98
Date Analyzed	10.30.98
Dilution factor	1.0
Batch ID	1029I
Cadmium (6010)	
Cadmium, mg/l	<0.0050
Preparation Date	10.29.98
Date Analyzed	10.30.98
Dilution factor	1.0
Batch ID	1029I

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Sampled By: Client
Code: 171181110

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
86567-11	WEL-3	10-21-98/1400	RFIS05

PARAMETER	86567-11
Chromium (6010)	
Chromium, mg/l	<0.010
Preparation Date	10.29.98
Date Analyzed	10.30.98
Dilution factor	1.0
Batch ID	1029I
Cobalt (6010)	
Cobalt, mg/l	<0.010
Preparation Date	10.29.98
Date Analyzed	10.30.98
Dilution factor	1.0
Batch ID	1029I
Lead (7421)	
Lead, mg/l	<0.0050
Preparation Date	10.30.98
Date Analyzed	11.05.98
Dilution factor	1.0
Batch ID	1030G
Manganese (6010)	
Manganese, mg/l	0.25
Preparation Date	10.29.98
Date Analyzed	10.30.98
Dilution factor	1.0
Batch ID	1029I

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
86567-11	WEL-3	10-21-98/1400	RFIS05

PARAMETER	86567-11
Mercury (7470)	
Mercury, mg/l	<0.00020
Preparation Date	10.29.98
Date Analysed	11.02.98
Dilution factor	1.0
Batch ID	1029T
Nickel (6010)	
Nickel, mg/l	<0.040
Preparation Date	10.29.98
Date Analysed	10.30.98
Dilution factor	1.0
Batch ID	1029I
Vanadium (6010)	
Vanadium, mg/l	<0.010
Preparation Date	10.29.98
Date Analysed	10.30.98
Dilution factor	1.0
Batch ID	1029I

* Qualifier Z does not apply to any PCB data.

Ferrus Iron was recieved on Saturday with little holding time remaining. Ferrous Iron was resampled an the data provided in a subsequent report.

Methods: EPA SW-846, Update III.

Elizabeth P. Bourchamp

Serial Number 125793

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

5102 LaRoche Avenue, Savannah, GA 31404 — Phone: (912) 354-7858 — Fax: (912) 352-0165
2846 Industrial Plaza Drive Tallahassee, FL 32301 — Phone: (904) 878-3994 — Fax: (904) 878-9504
414 SW 12th Avenue, Deerfield Beach, FL 33442 — Phone: (954) 421-7400 — Fax: (954) 421-2584
900 Lakeside Drive, Mobile AL 36693 — Phone: (334) 666-6633 — Fax: (334) 666-6696
6712 Benjamin Road, Suite 100, Tampa, FL 33634 — Phone: (813) 885-7427 — Fax: (813) 885-7049
100 Alpha Drive, Suite 110 Destrehan, LA 70047 — Phone: (504) 764-1100 — Fax: (504) 725-1163

PROJECT REFERENCE	PROJECT NO	P.O. NUMBER
[illegible]/RFI/AL	953223	

PROJECT LOC. (State)	SAMPLER(s) NAME	PHONE	FAX
FL	Melanie Cummings	770 496 1393	770 934-9476

CLIENT NAME	CLIENT PROJECT MANAGER
Golder Associates	Gayle Pittman

CLIENT ADDRESS (CITY, STATE, ZIP)
3730 Chamblee Tucker Rd Atlanta GA 30341

MATRIX TYPE: AQUEOUS/WATER; SOLID OR SEMI-SOLID; AIR; NONAQUEOUS/LIQUID (other than H2O)

REQUIRED ANALYSES

PAGE 1 OF 1

STANDARD REPORT DELIVERY

EXPEDITED REPORT DELIVERY (surcharge)

Date Due

SAMPLE DATE	SAMPLE TIME	SL NO	SAMPLE IDENTIFICATION	AQUEOUS/WATER	SOLID OR SEMI-SOLID	AIR	NONAQUEOUS/LIQUID (other than H2O)	NUMBER OF CONTAINERS SUBMITTED								REMARKS
								PCB's	Semi-Vols	OP	PAH's	Explosives	Explosives Extra	Mercury	VOA's	
								Amber	Amber	Clear	Amber	Plastic		Plastic	HCl	
10-21	13:20		Field Blank	X				1	1	1	1			1	3	See Data Exchange for Analytes. Call Gayle w/ questions
10-21	11:45		MW-1-F	X				1			1			1		
10-21	15:20		Field Blank - F	X				1			1			1		
10-22	13:0[illegible]		DW-6									1	1			
10-22	12:45		COMP-5D									1	1			
10-21	12:[illegible]		MW-3							1				1		

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
S. Campbell	10/24/98			10-23				
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME
	10-24-98							

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO	SL LOG NO	LABORATORY REMARKS
	10/24/98	10:14	☑ YES ☐ NO		58-86567	

APPENDIX G-2

Background Soil Information

U.S. Army Corps of Engineers

BACKGROUND METALS SURVEY REPORT

FORT McCLELLAN
Delivery Order 0005
Contract Number DAAA-015-91-D-0017

FINAL

Prepared for:

U.S. Army Corps of Engineers
Mobile District
109 St. Joseph Street
Mobile, Alabama 36628-0001

Prepared by:

Science Applications International Corporation
1710 Goodridge Drive
McLean, Virginia 22102

July 1998

Table 4-7. Background Surface Soil Analytical Results
Fort McClellan, Alabama

Site ID		BG-S01	BG-S02	BG-S03	BG-S04	BG-S05	BG-S06	BG-S07
Field Sample Number		SAIC01	SAIC01	SAIC01	SAIC01	SAIC01	SAIC01	SAIC01
Site Type		BORE	BORE	BORE	BORE	BORE	BORE	BORE
Collection Date		7/24/97	7/23/97	7/29/97	7/28/97	7/29/97	7/29/97	7/29/97
Depth (ft)		0-1	0-1	0-1	0-1	0-1	0-1	0-1
METALS								
Parameter	Units							
Aluminum	ug/g	6720	7150	2880	8060	3930	5080	8530
Antimony	ug/g	0.317	0.153	0.13	0.145	0.243	0.356	0.217
Arsenic	ug/g	5.15	489 J	1.18 J	2.14 J	2.56 J	5.07 J	4.26 J
Barium	ug/g	75.5	47.1	17.2	56.4	43.9	122	60.9
Beryllium	ug/g	0.378	0.467	0.074	0.868	0.805	0.754	0.803
Cadmium	ug/g	0.066	0.13 U	0.104	0.085	0.056	0.143	0.036
Calcium	ug/g	579	124	197	143	105	17900	2210
Chromium	ug/g	10.6 J	804 J	5.48 J	4.31 J	5.6 J	7.57 J	9.41 J
Cobalt	ug/g	4.95	1.4	0.576	6.08	4.29	7.47	2.7
Copper	ug/g	4.61	2.93	1.88	2.72	8.26	8.98	6.1
Cyanide	ug/g	0.536 U	0.017 U	0.528 U	0.502 U	0.521 U	0.532 U	0.598 U
Hexavalent Chromium	ug/g	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Iron	ug/g	12800	6070	3370	5910	14000	11800	18000
Lead	ug/g	11.8 J	21.8	9.08	15.9	13.3	23.2	8.07
Magnesium	ug/g	233	116	80.7	189	206	9600	620
Manganese	ug/g	446 J	368	36.8	873	348	849	81.2
Mercury	ug/g	0.092	0.076	0.038 U	0.041 U	0.046	0.042 U	0.046 U
Nickel	ug/g	4.56 J	2.33 U	2.47	3.59	3.89	7.17	3.06
Potassium	ug/g	165	1.6 U	104	163	614	301	370
Selenium	ug/g	0.407 U	0.511 U	0.503 U	0.506 U	0.496 U	0.563 U	0.495 U
Silver	ug/g	0.048	0.026	0.02 U	0.027	0.048	0.029	0.053
Sodium	ug/g	254	311	267	259	310	376	283
Thallium	ug/g	1.081	0.054	0.019	0.175	0.08	0.206	0.058
Vanadium	ug/g	21.1	198	6.93	8.49	10.6	15.2	19.6
Zinc	ug/g	18.5	267	8.31	15.4	13.6	26.7	9.36

NA - Not analysed.
U - Not detected
J - Estimated value
X - Value not included in calculation of mean.

Table 4-7. Background Surface Soil Analytical Results
Fort McClellan, Alabama

Site ID		BG-S08	BG-S09	BG-S10	BG-S11	BG-S12	BG-S13	BG-S14
Field Sample Number		SAC01	SAC01	SAC01	SAC01	SAC01	SAC01	SAC01
Site Type		BORE	BORE	BORE	BORE	BORE	BORE	BORE
Collecton Date		7/29/97	7/22/97	8/4/97	8/3/97	7/22/97	7/22/97	7/22/97
Depth (ft)		0-1	0-1	0-1	0-1	0-1	0-1	0-1
METALS								
Parameter	Units							
Aluminum	ug/g	2950	5230	4910	7880	3850	3010	4150
Antimony	ug/g	0.098 U	0.1 U	0.107 U	0.605	0.172	0.182	0.111
Arsenic	ug/g	1.49 J	1.1 J	1.18	6.34	2 J	1.09 J	1.18 J
Barium	ug/g	14.4	18.7	58.6	16.7	23.5	67.5	34.1
Beryllium	ug/g	0.218	0.194	0.196	0.604	0.184	0.235	0.178
Cadmium	ug/g	0.024	0.43	0.054 U	0.047	0.046	0.057	0.033
Calcium	ug/g	86.2	754 U	432	147	154	193	116
Chromium	ug/g	5.51	4 J	3.65 J	65.9 J	10.9 J	1.90 J	6.06 J
Cobalt	ug/g	0.39	0.458	2.12	3.81	2.07	1.7	1.43
Copper	ug/g	2.14	0.502 U	2.13	7.75	1.98	8.41	2.61
Cyanide	ug/g	0.473 U	0.517 U	0.562 U	0.532 U	0.51 U	0.539 U	0.54 U
Hexavalent Chromium	ug/g	N/A	N/A	N/A	N/A	0.11 U	N/A	N/A
Iron	ug/g	11300	3840	4590	33800	6220	2510	3890
Lead	ug/g	2.89	2.59	11.7 J	12.5 J	13.5	50.8	5.69
Magnesium	ug/g	59.8	861	151	160	101	127	102
Manganese	ug/g	81.4	8.63	185 J	172 J	209	292	128
Mercury	ug/g	0.038 U	0.039 U	0.055	0.143	0.039 U	0.037 U	0.035 U
Nickel	ug/g	1.96 U	2.01 U	2.14 U	8.83 J	3.57	2.38	2
Potassium	ug/g	98.2 U	100 U	124	172	139	108	105
Selenium	ug/g	0.491 U	0.502 U	0.535 U	0.377 U	0.531 U	0.523 U	0.477 U
Silver	ug/g	0.02 U	0.02 U	0.054	0.114	0.021 U	0.026	0.019 U
Sodium	ug/g	78.3	318	351	258	358	350	283
Thallium	ug/g	0.05	0.041	0.074	0.127	0.046	0.058	0.039
Vanadium	ug/g	9.6	9.1	7.33	49.8	12.3	4.68	8.32
Zinc	ug/g	4.91 U	5.02 U	11	27.7	11	13.4	6.01

N/A - Not analysed.
U - Not detected
J - Estimated value
X - Value not included in calculation of mean.

Table 4-7. Background Surface Soil Analytical Results
Fort McClellan, Alabama

Site ID		BG-S15	BG-S15	BG-S16	BG-S17	BG-S18	BG-S19	BG-S20
Field Sample Number		SAIC01	SAIC01 D	SAIC01	SAIC01	SAIC01	SAIC01	SAIC01
Site Type		BORE	BORE	BORE	BORE	BORE	BORE	BORE
Collection Date		8/6/97	8/6/97	8/17/97	8/12/97	8/5/97	8/3/97	8/4/97
Depth (ft)		0-1	0-1	0-1	0-1	0-1	0-1	0-1
METALS								
Parameter	Units							
Aluminum	ug/g	4260	3760	4580	10300	6490	5530	4860
Antimony	ug/g	0.185	0.167	0.082 J	0.167	0.143	0.135	0.128
Arsenic	ug/g	3.66 J	0.815 J	1.31 J	4.05 J	1.6 J	1.41	2.12
Barium	ug/g	61.9	51.9	24.6	96.6	85.1	42	30.6
Beryllium	ug/g	0.584	0.517	0.213	0.606	0.453	0.35	0.231
Cadmium	ug/g	0.047 U	0.084 U	0.016 J	0.057 J	0.023 U	0.054	0.027 U
Calcium	ug/g	2110	2480	62.9	158	142	134	526
Chromium	ug/g	8.67 J	8.71 J	5.11	19.3	3.44 J	6.85 J	9.75 J
Cobalt	ug/g	7.33 J	7.05 J	1.22	3.65	31.9 J	1.46	1.42
Copper	ug/g	2.5	2.34	2.22	9.92	14.4	2.45	2.91
Cyanide	ug/g	0.542 U	0.481 U	0.502 U	0.525 U	0.579 U	0.555 U	0.498 U
Hexavalent Chromium	ug/g	0.11 U	N/A	0.11 U	N/A	0.13 U	N/A	0.11 U
Iron	ug/g	8290	8910	9020	27200	7730	8870	11900
Lead	ug/g	18.7	66.4	7.24	10.7	16.6	9.4 J	5.85 J
Magnesium	ug/g	373	491	105	254	157	114	261
Manganese	ug/g	842	813	43	351	1450	154 J	132 J
Mercury	ug/g	0.04 U	0.04	0.023 U	0.035	0.078	0.061	0.044
Nickel	ug/g	1.93	1.43	1.97	3.03	2.44	1.84 U	2.07 U
Potassium	ug/g	216	216	244	245	392	157	231
Selenium	ug/g	0.456 U	0.403 U	0.41 U	0.525 U	0.579 U	0.461 U	0.517 U
Silver	ug/g	1.028	0.915	0.034	0.033	0.19	0.159	0.041
Sodium	ug/g	421	360	258	371	563	303	328
Thallium	ug/g	1.093	0.114	0.02	0.073	0.139	0.057	0.04
Vanadium	ug/g	13.1	135	6.94	25.4	7.71	11.5	15.6
Zinc	ug/g	6.02	5.51	6.53	16.9	11.3	11.2	5.17

NA - Not analysed.
U - Not detected
J - Estimated value
X - Value not included in calculation of mean.

Table 4-7. Background Surface Soil Analytical Results
Fort McClellan, Alabama

Site ID		BG-S21	BG-S22	BG-S23	BG-S24	BG-S25	BGP-S01	BGP-S02
Field Sample Number		SAC01	SAIC01	SAIC01	SAIC01	SAIC01	SAIC01	SAIC01
Site Type		BORE	BORE	BORE	BORE	BORE	BORE	BORE
Collection Date		7/22/97	8/3/97	7/22/97	7/22/97	7/22/97	7/30/97	8/1/97
Depth (ft)		0-1	0-1	0-1	0-1	0-1	0-1	0-1
METALS								
Parameter	Units							
Aluminum	ug/g	2400	5530	6550	10100	3640	8270	11300
Antimony	ug/g	0.162	0.167	0.556	0.945	0.391	2.64	0.558
Arsenic	ug/g	2.49 J	2.38	3.91 J	7.3 J	1.98 J	48.5 J	10.4 J
Barium	ug/g	31.3	24.3	46.9	30	32.8	28.2	125
Beryllium	ug/g	0.306	0.135	0.752	0.331	0.169	0.462	0.511
Cadmium	ug/g	0.11	0.13	0.083	0.053	0.077	0.083	0.059
Calcium	ug/g	4090	153	2460	812	508	418	601
Chromium	ug/g	9.35 J	7.19 J	9.76 J	70 J	16.9 J	134	21.4
Cobalt	ug/g	2.44	0.918	6.43	4.51 J	2.5	2.19	10.3
Copper	ug/g	4.32	3.16	14.5	8.99	4.66	1.31	5.36
Cyanide	ug/g	0.571 U	0.596 U	0.534 U	0.526 U	0.522 U	0.588 U	0.553 U
Hexavaent Chromium	ug/g	N/A	N/A	N/A	N/A	N/A	0.11 U	N/A
Iron	ug/g	7780	9710	16300	36400	8530	56300	21600
Lead	ug/g	11.2	4.48 J	34.1	22.1	14.3	22.6	29
Magnesium	ug/g	2160	139	927	323	146	102	239
Mangarese	ug/g	269	17 J	358	244	265	881	2520
Mercury	ug/g	0.035 U	0.041 U	0.087	0.041 U	0.043 U	0.038 U	0.038 U
Nickel	ug/g	2.35	2.26 J	5.98	5.58	3.58	2.12 U	7.24
Potassium	ug/g	133	265	315	235	139	106 U	236
Selenium	ug/g	0.478 U	0.506 U	0.462 U	0.517 U	0.48 U	0.53 U	0.482 U
Silver	ug/g	0.097	0.021 U	0.06	0.073	0.019 U	0.029	0.046
Sodium	ug/g	337	334	334	351	287	283	297
Thallium	ug/g	0.055	0.062	0.055	0.125	0.042	0.052	0.069
Vanadium	ug/g	11.1	128	10.6	79.4	9.6	158	46.4
Zinc	ug/g	13	5.56	38.5	17.7	13.3	10.6 U	12.9

NA - Not analysed.
U - Not detected
J - Estimated value
X - Value not included in calculation of mean.

Table 4-7. Background Surface Soil Analytical Results
Fort McClellan, Alabama

Site ID		BGP-S03	BGP-S04	BGP-S04	BGP-S05	BGP-S06	BGP-S07	BGP-S08
Field Sample Number		SAIC01	SAIC01	SAIC01D	SAIC01	SAIC01	SAIC01	SAIC01
Site Type		BORE	BORE	BORE	BORE	BORE	BORE	BORE
Collection Date		8/2/97	8/1/97	8/1/97	8/1/97	8/1/97	8/1/97	8/17/97
Depth (ft)		0-1	0-1	0-1	0-1	0-1	0-1	0-1
METALS								
Parameter	Units							
Aluminum	ug/g	13600	8100	7120	2460	13500	3670	4780
Antimony	ug/g	0.858	0.513	0.502	0.14	0.626	0.638	0.306
Arsenic	ug/g	19.5	26.3 J	24.3 J	4.14 J	17.4 J	19.8 J	7.93
Barium	ug/g	288	88.8	138	19.6	126	11.2	52.5
Beryllium	ug/g	0.876	0.351	0.808	0.268	0.617	0.169	0.286 J
Cadmium	ug/g	0.123	0.095	0.114	0.048	0.131	0.036	0.041
Calcium	ug/g	498	502	504	221	455	140	218
Chromium	ug/g	18.9 J	17.6	18.2	11.2	16.2	29.5	10.1 J
Cobalt	ug/g	42.2	37.6	41.5	2.68	70.9	3.61	9.01
Copper	ug/g	9.8	14.2	15.2	6.38	9.04	4.67	3.4
Cyanide	ug/g	0.635 U	0.553 U	0.566 U	0.584 U	0.613 U	0.549 U	0.586 U
Hexavalent Chromium	ug/g	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Iron	ug/g	32000	19000	19500	8490	23000	18500	8420
Lead	ug/g	63.7 J	31.5	38.3	3.42	82.8	9.02	14.8
Magnesium	ug/g	268	229	246	79	331	83.8	138
Manganese	ug/g	5360 J	3090	3840	73.6	6850	216	1130 J
Mercury	ug/g	0.177	0.045 U	0.042 U	0.039 U	0.05	0.039 U	0.064
Nickel	ug/g	11.2 J	14.5	15.7	5.11	9.82	2.92	4.89
Potassium	ug/g	398	225	217	106 U	302	104	112 U
Selenium	ug/g	0.559 U	0.517 U	0.583 U	0.529 U	0.512 U	0.445 U	0.558 U
Silver	ug/g	1.87	0.921	0.026	0.021 U	0.117	0.022	0.029 J
Sodium	ug/g	340	319	355	348	322	278	321
Thallium	ug/g	0.26	0.047	0.057	0.015	0.047	0.024	0.032
Vanadium	ug/g	68.1	27.5	27.7	10.7	45.2	38.2	15.4
Zinc	ug/g	25.3	35.6	36.5	40.7	23.9	14.8	7.74

NA - Not analysed.
U - Not detected
J - Estimated value
X - Value not included in calculation of mean.

Table 4-7. Background Surface Soil Analytical Results
Fort McClellan, Alabama

Site ID		BGP-S09	BGP-S10	BGP-S11	BGP-S12	BGP-S13	BGP-S14	BGP-S15
Field Sample Number		SAIC01	SAIC01	SAIC01	SAIC01	SAIC01	SAIC01	SAIC01
Site Type		BORE	BORE	BORE	BORE	BORE	BORE	BORE
Collection Date		8/1/97	8/17/97	7/31/97	8/4/97	7/30/97	7/31/97	7/31/97
Depth (ft)		0-1	0-1	0-1	0-1	0-1	0-1	0-1
METALS								
Parameter	Units							
Aluminum	ug/g	4580	5130	7260	7680	4560	6820	7310
Antimony	ug/g	0.396	0.793 U	0.202	0.37	0.59	0.446	0.247
Arsenic	ug/g	17.3 J	222	2.42 J	12.9 J	3.94 J	7.06 J	3.22 J
Barium	ug/g	17.5	23.1	89.1	40	30.2	38.5	15
Beryllium	ug/g	0.201	0.143 J	0.391	0.662	0.402	0.513	0.171
Cadmium	ug/g	0.026	0.059	0.031	0.053 U	0.209	0.036	0.027
Calcium	ug/g	142	101	158	402	423	80.2	213
Chromium	ug/g	13.2	559 J	7.59	52.9 J	10.7	17.4	11.3
Cobalt	ug/g	1.98	124	7.4	2.18 J	3.5	1.84	0.911
Copper	ug/g	3.67	315	2.21	3.88	10.7	8.71	2.28
Cyanide	ug/g	0.589 U	0.591 U	0.568 J	0.594 U	0.563 U	0.525 U	0.556 U
Hexavalent Chromium	ug/g	N/A	N/A	N/A	N/A	0.11 U	N/A	N/A
Iron	ug/g	16300	6510	8460	24900	15800	18900	11700
Lead	ug/g	9.29	21.9	14.1	19.8	10.6	8.02	7.94
Magnesium	ug/g	103	135	181	184	652	172	160
Manganese	ug/g	295	131 J	1120	129	120	27.4	29.7
Mercury	ug/g	0.036 U	0.091	0.036 U	0.125	0.042 U	0.039 U	0.04 U
Nickel	ug/g	2.09 U	1.35 U	3.64	2.11 U	6.26	3.44	1.92 U
Potassium	ug/g	109	56.6 U	131	146	199	367	111
Selenium	ug/g	0.523 U	0.483 U	0.469 U	0.526 U	0.51 U	1.28	0.479 U
Silver	ug/g	0.021 U	0.019 U	0.021	0.774	0.026	0.044	0.019 U
Sodium	ug/g	326	318	307	507	336	348	300
Thallium	ug/g	0.018	0.013	0.044	0.453	0.052	0.017	0.031
Vanadium	ug/g	34	13	12.6	58.3	18.7	17.9	22.5
Zinc	ug/g	5.23 U	7.11	8.34	7.2	24.2	20	6.28

NA - Not analysed.
U - Not detected
J - Estimated value
X - Value not included in calculation of mean.

Table 4-7. Background Surface Soil Analytical Results
Fort McClellan, Alabama

Site ID		BGP-S16	BGP-S16	BGP-S17	BGP-S18	BGP-S19	BGP-S20	BGP-S21
Field Sample Number		SAIC01	SAIC01D	SAIC01	SAIC01	SAIC01	SAIC01	SAIC01
Site Type		BORE	BORE	BORE	BORE	BORE	BORE	BORE
Collection Date		7/31/97	7/31/97	7/31/97	8/1/97	7/31/97	8/1/97	7/31/97
Depth (ft)		0-1	0-1	0-1	0-1	0-1	0-1	0-1
METALS								
Parameter	Units							
Aluminum	ug/g	8500	9410	4690	5130	13000	4820	3320
Antimony	ug/g	0.427	0.444	0.281	0.186	0.949	0.126	1.04
Arsenic	ug/g	9.19	9.53 J	4.7 J	13 J	6.83 J	3.21	4.88
Barium	ug/g	161	167	58.5	35.1	38.8	20.6	64
Beryllium	ug/g	0.783	0.559	0.353	0.43	0.36	0.163	0.765
Cadmium	ug/g	0.054	0.061	0.083	0.028	0.046	0.026	0.132
Calcium	ug/g	589	566	1080	431	168	76.7	888
Chromium	ug/g	24.8 J	19.2	11.3	11.6	31.6	5.36 J	17 J
Cobalt	ug/g	7.27	7.65	1.68	3.76	1.79	1.82	8.32
Copper	ug/g	4	5	3.28	5.1	16.6	1.4	5.41
Cyanide	ug/g	0.56 U	0.59 U	0.576U	0.557 U	0.564 U	0.555 U	0.59 U
Hexavalent Chromium	ug/g	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Iron	ug/g	15700	16500	12500	12800	35600	8050	29700
Lead	ug/g	23.1	24.6	17.2	9.25	12	8.56 J	24.2 J
Magnesium	ug/g	189	238	260	249	271	89	103
Manganese	ug/g	2380 J	2100	80.9	174	20.9	129 J	1330 J
Mercury	ug/g	0.041	0.039 U	0.035 U	0.04 U	0.043 U	0.041	0.035 U
Nickel	ug/g	4.12 J	4.54	2.97	4.94	4.85	1.64 U	8.74 J
Potassium	ug/g	191	251	143	107	437	82.2 U	107 U
Selenium	ug/g	0.582 U	0.496 U	0.567 U	0.512 U	0.477 U	0.411 U	0.533 U
Silver	ug/g	0.256	0.443	0.051	0.024	0.019	0.016 U	0.025
Sodium	ug/g	383	368	320	337	349	223	355
Thallium	ug/g	0.229	0.304	0.139	0.176	0.123	0.1	0.099
Vanadium	ug/g	35.5	37.1	21	23.9	45.7	11.3	45
Zinc	ug/g	10.1	12.3	11.1	16.5	17.4	4.62	30.1

NA - Not analysed.
U - Notdetected
J - Estimated value
X - Value not included in calculation of mean.

Table 4-7. Background Surface Soil Analytical Results
Fort McClellan, Alabama

Site ID		BGP-S22	BGP-S23	BGP-S24	BGP-S25	BK-S01	BK-S02	BK-S03
Field Sample Number		SAIC01	SAIC01	SAIC01	SAIC01	BK-S0101	SAIC01	SAIC01
Site Type		BORE	BORE	BORE	BORE	BORE	BORE	BORE
Collection Date		8/7/97	7/30/97	7/31/97	7/30/97	4/13/92	4/12/94	4/12/94
Depth(ft)		0-1	0-1	0-1	0-1	0-1	0-1	0-1
METALS								
Parameter	Units							
Aluminum	ug/g	4830	5140	4670	5570	20400	22900	24100
Antimony	ug/g	0.107 U	0.122	1.39	0.242	N/A	1 U	1 U
Arsenic	ug/g	2.03	13.3 J	8.53	4.72 J	3.2 X	2.5 UX	4.93 X
Barium	ug/g	60	19	18.7	33.6	283	165	115
Beryllium	ug/g	0.182 J	0.196	0.365	0.466	1.97 X	0.939 X	1.42 X
Cadmium	ug/g	0.025	0.036	0.133	0.027	1.2 U	1.2 U	1.2 U
Calcium	ug/g	239	311	278	153	688	633	5840
Chromium	ug/g	5.04 J	12.1	16.8	12.8	17.5	14.4	23.3
Cobalt	ug/g	2.35	212	6.17 J	13.2	10.7	7.96	14.6
Copper	ug/g	1.61	362	7.44	4.12	10.1	8.82	14.8
Cyanide	ug/g	0.525 U	0.581 U	0.548 J	0.537 U	N/A	N/A	N/A
Hexavalent Chromium	ug/g	N/A	0.13 U	N/A	0.12 U	N/A	N/A	N/A
Iron	ug/g	4460	14300	23300	14300	31900	20800	33300
Lead	ug/g	5.42	7.2	8.58 J	8.98	28.2	15.1	36
Magnesium	ug/g	133	150	142	312	1380	1070	3860
Manganese	ug/g	269 J	120	127 J	227	811	393	985
Mercury	ug/g	0.027 U	0.037 U	0.076	0.036 U	0.05 U	0.05 U	0.322
Nickel	ug/g	2.14 U	2.2 U	16.9	8.79	10.2	8.02	14.6
Potassium	ug/g	107 U	114	200	186	6010	2740	1830
Selenium	ug/g	0.536 U	0.557 U	0.532 U	0.547 U	0.449 U	0.449 U	0.449 U
Silver	ug/g	0.033	0.032 U	0.024	0.062	0.803 U	0.803 U	0.803 U
Sodium	ug/g	338	378	269	319	38.7 U	38.7 U	38.7 U
Thallium	ug/g	0.033	0.032	0.316	0.06	N/A	34.3 UX	34.3 UX
Vanadium	ug/g	9.58	25	33.1	13.6	24.1	22.8	45.5
Zinc	ug/g	5.36 U	8.48	41.5	19.3	39	34.1	209

NA - Not analysed.
U - Not detected
J - Estimated value
X - Value not included in calculaton of mean.

Table 4-7. Background Surface Soil Analytical Results
Fort McClellan, Alabama

Site ID		BK-S04	SB-BK-101	SB-BK-102	SB-BK-201	SB-BK-202	SB-BK-301	SB-BK-302
Field Sample Number		SAIC01	SAIC01	SAIC0	SAIC01	SAIC01	SAIC01	SAIC01
Site Type		BORE	BORE	BORE	BORE	BORE	BORE	BORE
Collection Date		4/12/94	5/10/95	5/10/95	5/11/95	5/11/95	5/17/95	5/17/95
Depth (ft)		0-1	0.5	0.5	0.5	0-1	0-1	0-1
METALS								
Parameter	Units							
Aluminum	ug/g	39000	5700	13500	12000	9240	10100	10400
Antimony	ug/g	1 U	7.14 U	7.4 U	7.14 U	7.14 U	7.14 U	7.14 U
Arsenic	ug/g	7.97 X	18	4.2	4.03	3.38	2.39	2.11
Barium	ug/g	126	31.6	366	39.8	33.5	109	127
Beryllium	ug/g	1.38 X	0.5 UX	95 UX	0.5 UX	0.5 UX	0.632 X	0.684 X
Cadmium	ug/g	1.2 U	0.7 U	07 U	4.01 L	0.7 U	0.7 U	0.7 U
Calcium	ug/g	970	275	315	100 L	161	821	998
Chromium	ug/g	27.3	50.3	504	6.02 L	12.2	9.81	10.1
Cobalt	ug/g	11	1.42 U	2.58	10.8	7.84	8.03	7.6
Copper	ug/g	23.5	9.91	8.62	7.81	6.81	7.14	5.16
Cyanide	ug/g	N/A	0.92 U	0.52 U	0.92 L	0.92 U	0.92 U	0.92 U
Hexavalent Chromium	ug/g	N/A	N/A	NA	0.514 L	0.514 U	0.514 U	0.514 U
Iron	ug/g	41700	41700	45200	16600	13700	9440	9850
Lead	ug/g	35	22.5	262	24.1	20.4	22.7	17
Magnesium	ug/g	3100	317	279	310	265	391	440
Manganese	ug/g	797	290	485	664	459	1850	1610
Mercury	ug/g	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Nickel	ug/g	21.8	8.18	75	6.83	5.46	6.02	5.54
Potassium	ug/g	4780	282	230	211	193	286	229
Selenium	ug/g	0.449 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
Silver	ug/g	0.803 U	0.589 U	0.891	0.589 U	0.589 U	0.589 U	0.589 U
Sodium	ug/g	38.7 U	306	369	384	361	347	402
Thallium	ug/g	34.3 UX	6.62 U	6.62 U	6.62 U	6.62 U	6.62 U	6.62 U
Vanadium	ug/g	56.5	90.7	96.7	33.4	27.1	21.2	21.1
Zinc	ug/g	70.5	17.3	18.1	19.9	18.2	19.2	14

NA - Not analysed.
U - Not detected
J - Estimated value
X - Value not included in calculation of mean.

Table 4-7. Background Surface Soil Analytical Results
Fort McClellan, Alabama

Site ID		SS-BK-103	SS-BK-103	SS-BK-202	SS-BK-203	SS-BK-203	SS-BK-303	SS-BK-303
Field Sample Number		SAIC01	SAIC02	SAIC01	SAIC02	SAIC03	SAIC01	SAIC02
Site Type		SURF	SURF	SURF	SURF	SURF	SURF	SURF
Collection Date		5/10/95	1/30/96	5/11/95	1/27/96	1/27/96	5/17/95	1/28/96
Depth (ft)		0-5	0-1	0-1	0-1	0-1	0-1	0-1
METALS								
Parameter	Units							
Aluminum	ug/g	**13700**	**7100**	**7080**	**8030**	**6630**	**7960**	**7720**
Antimony	ug/g	7.14 U	7.14 U	7.14 U	7.14 U	7.14 U	7.14 U	7.14 U
Arsenic	ug/g	**15**	**6.56**	**3.32**	**3.6**	**2.46**	**2.42**	**3.76**
Barium	ug/g	**24.3**	**62.9**	**29.8**	**31.2**	**32.2**	**96.5**	**42**
Beryllium	ug/g	**0.5 UX**	**0.5 UX**	**0.5 UX**	**0.5 UX**	**0.5 UX**	**0.5 UX**	**0.5 UX**
Cadmium	ug/g	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U
Calcium	ug/g	**215**	**104**	100 U	**1080**	**1060**	**809**	100 U
Chromium	ug/g	**48.6**	**18.7**	**14.1**	**30.4**	**32**	**7.75**	**22.2**
Cobalt	ug/g	1.42 U	**16.1**	**6.38**	**2.82**	**3.54**	**6.67**	**8.24**
Copper	ug/g	**9.47**	**436**	**4.92**	**7.21**	**7.6**	**5.6**	**9.21**
Cyanide	ug/g	0.92 U	0.92 U	0.92 U	0.92 U	0.92 U	0.92 U	0.92 U
Hexavalent Chromium	ug/g	N/A	N/A	0.514 U	N/A	N/A	0.514 U	N/A
Iron	ug/g	**30600**	**12500**	**10300**	**20100**	**21600**	**7710**	**26000**
Lead	ug/g	**19.7**	**21.1**	**22**	**45.5**	**45.1**	**19.5**	**19.2**
Magnesium	ug/g	**246**	**595**	**189**	**382**	**330**	**296**	**225**
Manganese	ug/g	**273**	**1670**	**672**	**364**	**385**	**1140**	**699**
Mercury	ug/g	**0.0822**	0.05 U	0.05 J	**0.066**	**0.059**	0.05 U	0.05 U
Nickel	ug/g	**6.85**	**446**	**4.63**	**6.29**	**4.79**	**3.74**	**9.63**
Potassium	ug/g	**223**	**219**	**177**	**239**	**178**	**160**	**305**
Selenium	ug/g	0.25 U	0.25 U	0.25 J	0.25 U	0.25 U	0.25 U	0.25 U
Silver	ug/g	0.589 U	0.589 U	0.589 U	0.589 U	**1.82**	0.589 U	0.589 U
Sodium	ug/g	**361**	**350**	**388**	**472**	**451**	**297**	**361**
Thallium	ug/g	6.62 U	6.32 U	6.62 U	6.62 U	6.62 U	6.62 U	6.62 U
Vanadium	ug/g	**87.2**	**27**	**20.8**	**46.8**	**47.8**	**16.6**	**38.9**
Zinc	ug/g	**17.9**	**112**	8.03 U	**48.6**	**46.3**	**15.1**	**22.8**

NA - Not analysed.
U - Not detected
J - Estimated value
X - Value not included in calculation of mean.

APPENDIX H

Data Validation

APPENDIX II

LABORATORY RESULT'S DATA VALIDATION SUMMARY

1. Groundwater Data Validation Results

The groundwater laboratory results associated with the RFI sampling event were validated to determine the following:

- if proper chain-of-custody was maintained;
- if proper methods were used;
- if holding times were met;
- if proper detection limits were achieved;
- if method blanks, field blanks, and/or trip blanks indicated any contamination;
- if relative percent differences (RPDs) between a sample and it's duplicate were within control limits;
- if surrogate recoveries were within method established control limits; and
- if any matrix interference was evident; and
- and if laboratory control samples (LCS), LCS duplicate recoveries and RPDs were within control limits.

The data validation was done according to USEPA SW846 (SW846) methodologies and USEPA Contract Laboratory Program (CLP) National Functional Guidelines for Organic Data Review (February 1994).

Chain-of custody forms and holding times were examined and determined to be acceptable. Surrogate recoveries were within the established method control limits. Anomalies were not present in the PCB chromatographs. No target analytes were reported in any method blanks or trip blanks.

A field blank was taken to ensure target analytes were not introduced to samples in the field. A rinsate (field blank) sample was taken using the decontaminated equipment from OWR-7D. The rinsate blanks had target analytes reported: suspended solids (6.0 mg/L), standard plate count (10 CFU/mL), nitrate (2.7 mg/L), and total dissolved solids (12 mg/L). The groundwater sample results for these parameters were qualified as estimated (J) for results from all RFI wells except OW-6A and OWR-5D. that were less than 10 times the concentration found in the rinsate. Wells OW-6A and OWR-5D were sampled separately for the above mentioned parameters after the RFI sampling event to obtain more data for natural attenuation study.

The matrix spike (MS) and matrix spike duplicate (MSD) analysis are performed to verify the affect the sample matrix has on the precision and accuracy of the method and to verify the laboratories precision and accuracy in recovery of the target analyte during analysis. Additional groundwater samples from OWR-2S were submitted to the laboratory to be used for MS and MSD analysis. Nitrate, manganese, total Kjeldahl nitrogen (TKN) MS and MSD recoveries were outside method control limits. MS/MSD were reported for each sample batch by the laboratory in addition to the OWR-2S MS/MSD. These MS/MSD analyses were performed using laboratory supplied samples. Several of these MS/MSD recoveries were outside of control limits but they do not represent the sample matrices from the site and were not considered during validation. The MS/MSD evaluation cannot be used alone to validate data. It has to be used in conjunction with another data validation criteria discrepancy to qualify data. None of the sample data is qualified based on the MS/MSD deficiency alone.

Duplicate sample analysis verifies the laboratory and field precision at the time of analysis. The relative percent difference between the sample and it's duplicate should be within a control limit of 20%. Duplicate filtered and unfiltered samples were taken at OWR-2D to represent samples from the deeper residuum wells and at OWR-8S to represent samples from the upper residuum wells. The OWR-2D and duplicate RPDs for the standard plate count (32%), suspended solids (40%), and TKN (27%) were outside the control limit. The deep residuum groundwater samples were qualified as estimated due to these results. The filtered OWR-8S and it's duplicate's RPDs for lead (50%) and manganese (24%) were outside the control limits. The filtered groundwater samples from shallow residuum wells were qualified as estimated due to these results. The unfiltered WEL-4 and it's duplicate's RPD for barium (144%) was outside the control limits. The unfiltered WEL-1, WEL-2, WEL-3 and WEL-4 samples were qualified as estimated due to these results. The duplicate sample results are presented in Table H-1.

Savannah Laboratories (Savannah) noted that the OWR-2D duplicate and OW-10 samples' TOX analysis were repeated and demonstrated that the secondary activated carbon column consistently exceeded 10% of the two-column total TOX amount. According to Savannah, this is caused by weakly adsorbed organohalide components of the sample. Thus, the reported TOX concentration of this sample is likely to be biased low. The TOX result for the OWR-2D duplicate and OW-10 sample was qualified as estimated (J).

2. Soil Data Validation Results

The soil laboratory results associated with the RFI sampling event were validated to determine the following:

- if proper chain-of-custody was maintained;
- if proper methods were used;
- if holding times were met;
- if proper detection limits were achieved;
- if method blanks, field blanks, and/or trip blanks indicated any contamination;
- if relative percent differences (RPDs) between a sample and it's duplicate were within control limits; and
- if surrogate recoveries were within method established control limits: and
- if any matrix interference was evident; and
- and if laboratory control samples (LCS), LCS duplicate recoveries and RPDs were within control limits.

The data validation was done according to USEPA SW846 (SW846) methodologies and USEPA Contract Laboratory Program (CLP) National Functional Guidelines for Inorganic Data Review (February 1994).

Chain-of custody forms and holding times were examined and determined to be acceptable. Surrogate recoveries and MS/MSD recoveries were within the established method control limits. No target analytes were reported in any rinsate (field) blanks, method blanks or trip blanks.

A method blank was analyzed for each soil sample batch by the laboratory. The method blank analysis ensures contaminants were not introduced to the samples by the laboratories handling procedures. A method blank had a detection of aroclor 1248 (95 ug/kg). The samples associated with this method blank are SSR-18, SSR-19, SSR-20, and SSR-21. The aroclor 1248 results results that were less than 10 times the concentration found in the method blank for these samples were qualified as estimated.

Duplicate sample analysis verifies the laboratory and field precision at the time of analysis. According the the CLP protocal, soil duplicate results are expected to have a greater variance than water. Thus, only the sample and it's duplicate are qualified when the RPD is outside of control limits of 20%. The SSR-10 and duplicate (DUPE2) RPDs for aroclor 1242 (27%),

aroclor 1254 (33%), arsenic (28%), beryllium (223%), chromium (21%), cobalt (69%), lead (64%), manganese (47%), mercury (149%) and nickel (42%) were outside of control limits. The SSR-10 and duplicate results for these parameters were qualified as estimated. The SSR-15 and duplicate (DUPE1) RPDs for aroclor 1242 (< 100%), aroclor 1232 (< 100%), aroclor 1254 (< 100%), aroclor 1260 (< 100%), barium (25%), mercury (<100%) and nickle (25%) were outside control limits. The SSR-18 and duplicate (DUPE4) RPDs for aroclor 1248 (<100%), aroclor 1260 (<100%), arsenic (54%), barium (58%), chromium (62%), cobalt (26%), lead (26%), manganese (31%), mercury (40%) and vanadium (43%) were outside of control limits. The SSR-18 and duplicate results for these parameters were qualified as estimated. The duplicate sample results are presented in Table H-2.

Savannah noted that the methyl paration result in SSR-18 and SSR-21, aroclor 1248 result in SSR-18 and SSR-21, and ethyl parathion result in SSR-21 and was identifided using the retention time. Two dissimilar GC columns confirmed the presence of the target analyte in the sample, the percent difference between the columns was greater than 40%. Thus, these results were qualified as estimated.

3. Surface Water Data Validation Results

The surface water laboratory results associated with the RFI/CS were validated to determine the following:

- if proper chain-of-custody was maintained;
- if proper methods were used;
- if holding times were met:
- if proper detection limits were achieved;
- if method blanks indicated any contamination;
- if any matrix interference was noted by the laboratory; and
- and if laboratory control samples (LCS), LCS duplicate recoveries and RPDs were within control limits.

The data validation was done according to USEPA SW846 (SW846) methodologies and USEPA Contract Laboratory Program (CLP) National Functional Guidelines for Inorganic Data Review (February 1994).

Chain of custody forms and holding times were examined and determined to be acceptable. LCS and LCS duplicate recoveries were within the established method control limits. The LCS RPDs were within control limits. No target analytes were reported in any method blanks.

Savannah qualified the o,o,o-triethyl phosphorothioate results for DSN004 and DSN005. This was due to anomalies the laboratory detected during the analyses.

TABLE H-1
Groundwater Sampling QA/QC Results

Parameter	Units	OWR-02D	OWR-02D-Q	OWR-02D-F	OWR-02D-Q-F	OWR-08S	OWR-08S-Q	OWR-08S-F	OWR-08S-Q-F	WEL-04	WEL-04-Q	WEL-04-F	WEL-04-Q-F
Inorganic Indicators													
Alkalinity (to pH 4.5) as CaCO3	mg/L	120	120	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Iron, Ferrous (2+)	mg/L	< 0.10	< 0.10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Nitrate-N	mg/L	1.7 J	1.8 J	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Phenolics, Total Recoverables	mg/L	< 0.050	< 0.050	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Phosphorus, Total	mg/L	< 0.044	< 0.044	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Standard Plate Count	CFU/mL	720 J	520 J	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sulfate as SO4	mg/L	< 5.0	< 5.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sulfide	mg/L	< 0.10	< 0.10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Dissolved Solids	mg/L	180 J	170 J	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Kjeldahl Nitrogen-N	mg/L	0.71 J	0.54 J	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Organic Carbon	mg/L	< 1.0	< 1.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Organic Halogen	mg/L	0.032	0.028 J	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Suspended Solids	mg/L	6.0 J	9.0 J	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Metals													
Arsenic	mg/L	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Barium	mg/L	0.029	0.034	0.017	0.016	0.24	0.24	0.19	0.23	0.074 J	0.01	0.012	0.011
Beryllium	mg/L	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040
Cadmium	mg/L	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Chromium	mg/L	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	0.012	< 0.010	< 0.010	< 0.010
Cobalt	mg/L	< 0.010	< 0.010	< 0.010	< 0.010	0.029	0.030	0.024	0.028	0.012	< 0.010	< 0.010	< 0.010
Lead	mg/L	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.0060	0.027 J	0.045 J	0.016	< 0.0050	< 0.0050	< 0.0050
Manganese	mg/L	0.13	0.14	0.013	0.012 J	1.4	1.5	1.1 J	1.4 J	1.1	0.053	0.058	0.055
Mercury	mg/L	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	0.00033 J	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020
Nickel	mg/L	< 0.0040	< 0.0040	< 0.0040	< 0.0040	0.010	0.011	0.0091	0.010	0.025	< 0.0040	< 0.0040	< 0.0040
Vanadium	mg/L	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	0.027	< 0.010	< 0.010	< 0.010
Organophosphorus Pesticides													
Methyl parathion	µg/L	< 0.50	< 0.50	N/A	N/A	9.6	9.7	N/A	N/A	< 0.50	< 0.50	N/A	N/A
Parathion	µg/L	< 1.0	< 1.0	N/A	N/A	560	730	N/A	N/A	< 1.0	< 1.0	N/A	N/A
Tetraethyldithiopyrophosphate (Sulfotepp)	µg/L	< 0.50	< 0.50	N/A	N/A	1.8	1.9	N/A	N/A	< 0.50	< 0.50	N/A	N/A

N/A = Not Analyzed
Q = Field Duplicate
F = Filtered
J = Estimated Value

TABLE H-1
Groundwater Sampling QA/QC Results

Parameter	Units	OWR-02D	OWR-02D-Q	OWR-02D-F	OWR-02D-Q-F	OWR-08S	OWR-08S-Q	OWR-08S-F	OWR-08S-Q-F	WEL-04	WEL-04-Q	WEL-04-F	WEL-04-Q-F
PCBs													
Aroclor 1016	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 10	< 10	< 10	< 10	< 1.0	< 1.0	< 1.0	< 1.0
Aroclor 1221	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 10	< 10	< 10	< 10	< 1.0	< 1.0	< 1.0	< 1.0
Aroclor 1232	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 10	< 10	< 10	< 10	< 1.0	< 1.0	< 1.0	< 1.0
Aroclor 1242	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 10	< 10	< 10	< 10	< 1.0	< 1.0	< 1.0	< 1.0
Aroclor 1248	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 10	< 10	< 10	< 10	< 1.0	< 1.0	< 1.0	< 1.0
Aroclor 1254	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 10	< 10	< 10	< 10	< 1.0	< 1.0	< 1.0	< 1.0
Aroclor 1260	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 10	< 10	< 10	< 10	< 1.0	< 1.0	< 1.0	< 1.0
Total PCBs	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 10	< 10	< 10	< 10	< 1.0	< 1.0	< 1.0	< 1.0
SVOCs													
1,2-Dichlorobenzene	µg/L	< 10	< 10	N/A	N/A	< 40	< 40	N/A	N/A	< 10	< 10	N/A	N/A
1,4-Dichlorobenzene	µg/L	< 10	< 10	N/A	N/A	< 40	< 40	N/A	N/A	< 10	< 10	N/A	N/A
2,4,5-Trichlorophenol	µg/L	< 10	< 10	N/A	N/A	< 40	< 40	N/A	N/A	< 10	< 10	N/A	N/A
2,4,6-Trichlorophenol	µg/L	< 10	< 10	N/A	N/A	< 40	< 40	N/A	N/A	< 10	< 10	N/A	N/A
2,4-Dichlorophenol	µg/L	< 10	< 10	N/A	N/A	< 40	< 40	N/A	N/A	< 10	< 10	N/A	N/A
4-Nitrophenol	µg/L	< 50	< 50	N/A	N/A	390	340	N/A	N/A	< 50	< 50	N/A	N/A
o,o,o-Triethylphosphorothioate	µg/L	< 10	< 10	N/A	N/A	330	330	N/A	N/A	< 10	< 10	N/A	N/A
Pentachlorophenol	µg/L	< 1.0	< 1.0	N/A	N/A	1.2	< 1.0	N/A	N/A	< 1.0	< 1.0	N/A	N/A
Phenol	µg/L	< 10	< 10	N/A	N/A	< 40	< 40	N/A	N/A	< 10	< 10	N/A	N/A
VOCs													
1,1,2,2-Tetrachloroethane	µg/L	< 5.0	< 5.0	N/A	N/A	< 5.0	< 5.0	N/A	N/A	< 5.0	< 5.0	N/A	N/A
Chlorobenzene	µg/L	< 5.0	< 5.0	N/A	N/A	< 5.0	< 5.0	N/A	N/A	< 5.0	< 5.0	N/A	N/A
Isopropylbenzene	µg/L	< 5.0	< 5.0	N/A	N/A	< 5.0	< 5.0	N/A	N/A	< 5.0	< 5.0	N/A	N/A
Methylene chloride	µg/L	< 5.0	< 5.0	N/A	N/A	36	36	N/A	N/A	< 5.0	< 5.0	N/A	N/A

N/A = Not Analyzed
Q = Field Duplicate
F = Filtered
J = Estimated Value

TABLE H-2
Soil Sampling QA/QC Results

Parameter	Units	SSR-10	SSR-10-Q	SSR-15	SSR-15-Q	SSR-18	SSR-18-Q	SSR-22	SSR-22-Q
Inorganic Indicators									
Cation Exchange Capacity	meq/100g	15	17	N/A	N/A	N/A	N/A	N/A	N/A
Organic Carbon (Walkley-Black)	mg/kg	130	140	N/A	N/A	N/A	N/A	N/A	N/A
Petroleum Hydrocarbons	mg/kg	N/A	N/A	N/A	N/A	N/A	N/A	< 11	12
Sulfide, Acid Volatile	mg/kg	< 1.3	< 1.4	N/A	N/A	N/A	N/A	N/A	N/A
Total Organic Carbon	mg/kg	< 100	200	N/A	N/A	N/A	N/A	N/A	N/A
Metals									
Arsenic	mg/kg	6.8 J	9 J	7.2	8.2	33 J	19 J	N/A	N/A
Barium	mg/kg	25	21	36 J	28 J	55 J	30 J	N/A	N/A
Beryllium	mg/kg	1.5 J	1.9 J	0.62	< 0.53	< 0.51	< 0.52	N/A	N/A
Cadmium	mg/kg	< 0.59	< 0.61	< 0.55	< 0.53	< 0.51	< 0.52	N/A	N/A
Chromium	mg/kg	17 J	21 J	40	37	10 J	19 J	N/A	N/A
Cobalt	mg/kg	22 J	45 J	4.3	4	4.3 J	3.3 J	N/A	N/A
Lead	mg/kg	39 J	20 J	42	40	110 J	85 J	N/A	N/A
Manganese	mg/kg	680 J	1,100 J	100	120	370 J	270 J	N/A	N/A
Mercury	mg/kg	0.076 J	0.011 J	3.3 J	1.1 J	0.42 J	0.28 J	N/A	N/A
Nickel	mg/kg	17 J	26 J	8.6 J	6.7 J	11	13	N/A	N/A
Vanadium	mg/kg	55	67	52	47	15 J	9.7 J	N/A	N/A
Organophosphorus Pesticides									
Methyl parathion	mg/kg	< 0.022	< 0.023	< 0.020	< 0.020	0.10 J	0.10 J	N/A	N/A
Parathion	mg/kg	< 0.043	< 0.044	< 0.040	< 0.038	< 0.037	< 0.037	N/A	N/A
Tetraethyldithiopyrophosphate (Sulfotepp)	mg/kg	< 0.022	< 0.023	< 0.020	< 0.020	< 0.019	< 0.019	N/A	N/A

N/A = Not Analyzed
Q = Duplicate
J = Estimated Value

TABLE H-2
Soil Sampling QA/QC Results

Parameter	Units	SSR-10	SSR-10-Q	SSR-15	SSR-15-Q	SSR-18	SSR-18-Q	SSR-22	SSR-22-Q
PCBs									
Aroclor 1016	mg/kg	< 0.043	< 0.045	< 4	< 39	< 930	< 3,800	N/A	N/A
Aroclor 1221	mg/kg	< 0.043	< 0.045	< 4	< 39	< 930	< 3,800	N/A	N/A
Aroclor 1232	mg/kg	< 0.043	< 0.045	< 4 J	720	< 930	< 3,800	N/A	N/A
Aroclor 1242	mg/kg	0.059 J	0.045 J	46 J	< 39	< 930	< 3,800	N/A	N/A
Aroclor 1248	mg/kg	< 0.043	< 0.045	< 4	< 39	16,000 J	9,800 J	N/A	N/A
Aroclor 1254	mg/kg	0.028 J	0.02 J	12 J	97	< 930	< 3,800	N/A	N/A
Aroclor 1260	mg/kg	< 0.043	< 0.045	7.0 J	44	620 J	< 3,800 J	N/A	N/A
Total PCBs	mg/kg	0.087 J	0.065	65 J	860	17,000 J	9,800 J	N/A	N/A
SVOCs									
1,2-Dichlorobenzene	mg/kg	< 0.43	< 0.44	< 0.39	< 0.39	< 37	< 38	N/A	N/A
1,4-Dichlorobenzene	mg/kg	< 0.43	< 0.44	< 0.39	< 0.39	< 37	< 38	N/A	N/A
2,4,5-Trichlorophenol	mg/kg	< 0.43	< 0.44	< 0.39	< 0.39	< 37	< 38	N/A	N/A
2,4,6-Trichlorophenol	mg/kg	< 0.43	< 0.44	< 0.39	< 0.39	< 37	< 38	N/A	N/A
2,4-Dichlorophenol	mg/kg	< 0.43	< 0.44	< 0.39	< 0.39	< 37	< 38	N/A	N/A
4-Nitrophenol	mg/kg	< 2.2	< 2.3	< 2.0	< 2.0	< 190	< 190	N/A	N/A
o,o,o-Triethylphosphorothioate	mg/kg	< 0.43	< 0.44	< 0.39	< 0.39	< 37	< 38	N/A	N/A
Pentachlorophenol	mg/kg	< 2.2	< 2.3	< 2.0	< 2.0	< 190	< 190	N/A	N/A
Phenol	mg/kg	< 0.43	< 0.44	< 0.39	< 0.39	< 37	< 38	N/A	N/A
VOCs									
1,1,2,2-Tetrachloroethane	mg/kg	< 0.0057	< 0.0058	< 0.005	< 0.0048	< 0.0067	< 0.0049	N/A	N/A
Chlorobenzene	mg/kg	< 0.0057	< 0.0058	0.0088	0.017	< 0.0067	< 0.0049	N/A	N/A
Isopropylbenzene	mg/kg	< 0.0057	< 0.0058	< 0.005	< 0.0048	< 0.0067	< 0.0049	N/A	N/A
Methylene chloride	mg/kg	< 0.0057	< 0.0058	< 0.005	< 0.0048	< 0.0067	< 0.0049	N/A	N/A

N/A = Not Analyzed
Q = Duplicate
J = Estimated Value

APPENDIX I

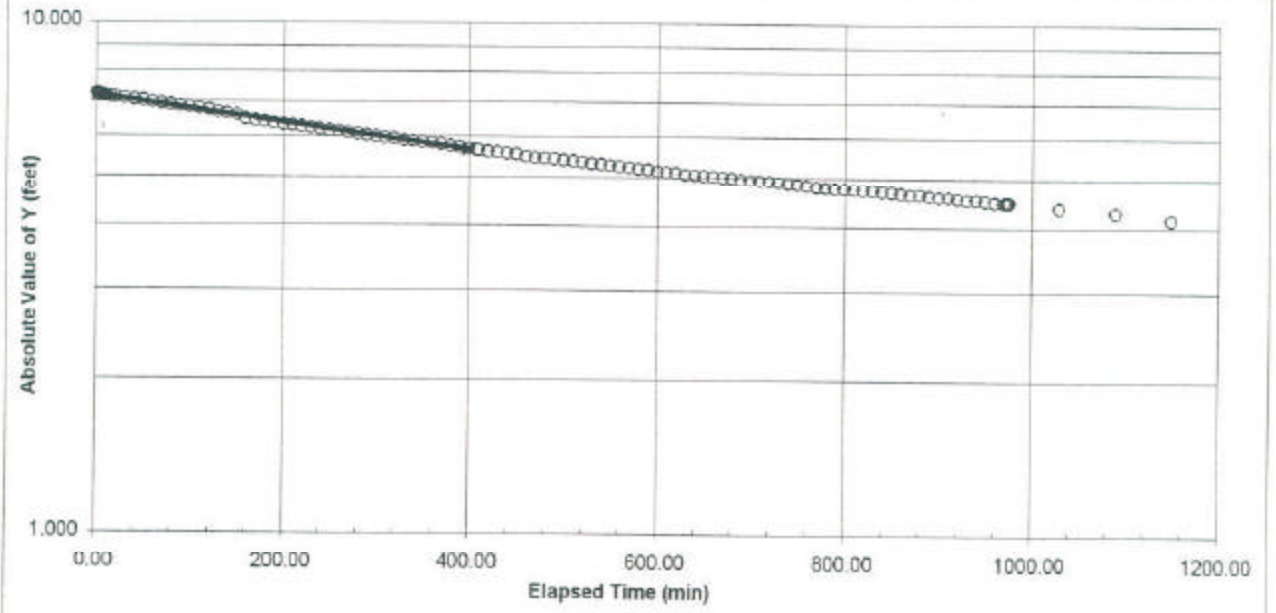
Variable Head Test Data and Calculations

Slug Test Data Analysis

Well Location:	MW-1B	Project No.:	983-3223
Test Date:	8/20/98	Project Name:	Solutia/RFI/AL
Drilling Method:	HSA	Testing By:	DLH
Test Type:	Falling Head	Analysis By:	CDH

Well and Aquifer Characteristics			Physical Analytical Parameters		
Casing Diameter:	2 inches	r_c	Effective Casing Radius:	0.0833 feet	
Borehole Diameter:	8 inches	r_w	Borehole Radius:	0.33 feet	
Depth to Bottom of Well:	62.5 feet	L_w	Saturated Well Length:	21.58 feet	
Depth to Top of Filter:	55.5 feet	L_e	Effective Well Length:	7 feet	
Depth to Static Water Level:	40.92 feet				
Saturated Aquifer Thickness:	60 feet	H	Saturated Aquifer Thickness:	60 feet	
Effective Porosity of Filter:	30%	n	Effective Porosity of Filter:	30%	

Aquifer Property Analysis							
Method Parameters					y_o	Initial y of best fit line:	7.166 feet
A	2.14	L_e/r_w	21.21		y_t	Terminal y of best fit line:	5.657 feet
B	0.30	$\ln(R_e/r_w)$	2.32		dt	Time between y_o and y_t:	307.33 min
C	0.00	Software Version:		1.00	K	Hydraulic Conductivity	3.48E-07 cm/sec



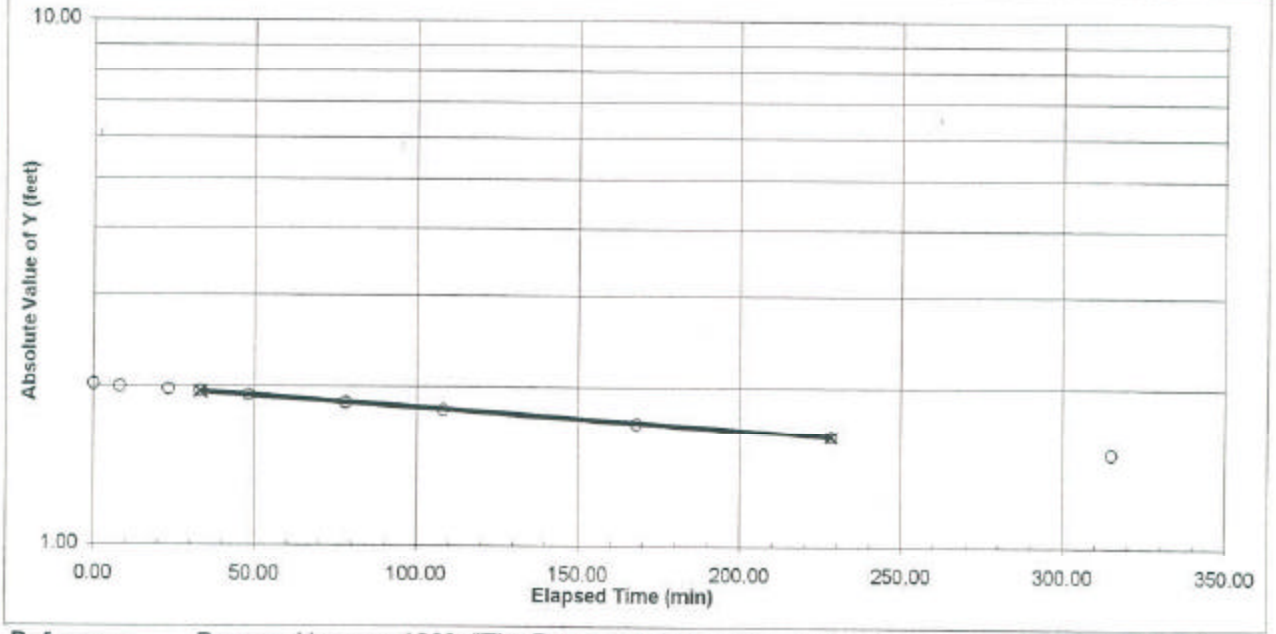
Reference: Bouwer, Herman; 1989; "The Bouwer and Rice Slug Test -- An Update"; GROUNDWATER, Vol. 27, No. 3, pp. 304 - 300.

Slug Test Data Analysis

Well Location:	CB-85	Project No.:	933-3223
Test Date:	8/19/98	Project Name:	SOLUTIA/RFI/AL
Drilling Method:	HSA	Testing By:	MAC
Test Type:	Falling Head	Analysis By:	JSR

Well and Aquifer Characteristics			Physical Analytical Parameters		
Casing Diameter:	2 inches	r_c	Effective Casing Radius:	0.0833 feet	
Borehole Diameter:	8 inches	r_w	Borehole Radius:	0.33 feet	
Depth to Bottom of Well:	32 feet	L_w	Saturated Well Length:	21.49 feet	
Depth to Top of Filter:	25 feet	L_e	Effective Well Length:	7 feet	
Depth to Static Water Level:	10.51 feet				
Saturated Aquifer Thickness:	60 feet	H	Saturated Aquifer Thickness:	60 feet	
Effective Porosity of Filter:	30%	n	Effective Porosity of Filter:	30%	

Aquifer Property Analysis							
Method Parameters					y_0	Initial y of best fit line:	1.95 feet
A	2.14	L_e/r_w	21.21		y_t	Terminal y of best fit line:	1.61 feet
B	0.30	$\ln(R_e/r_w)$	2.32		dt	Time between y_0 and y_t:	105.00 min
C	0.00	Software Version:		1.00	K	Hydraulic Conductivity	5.74E-07 cm/sec



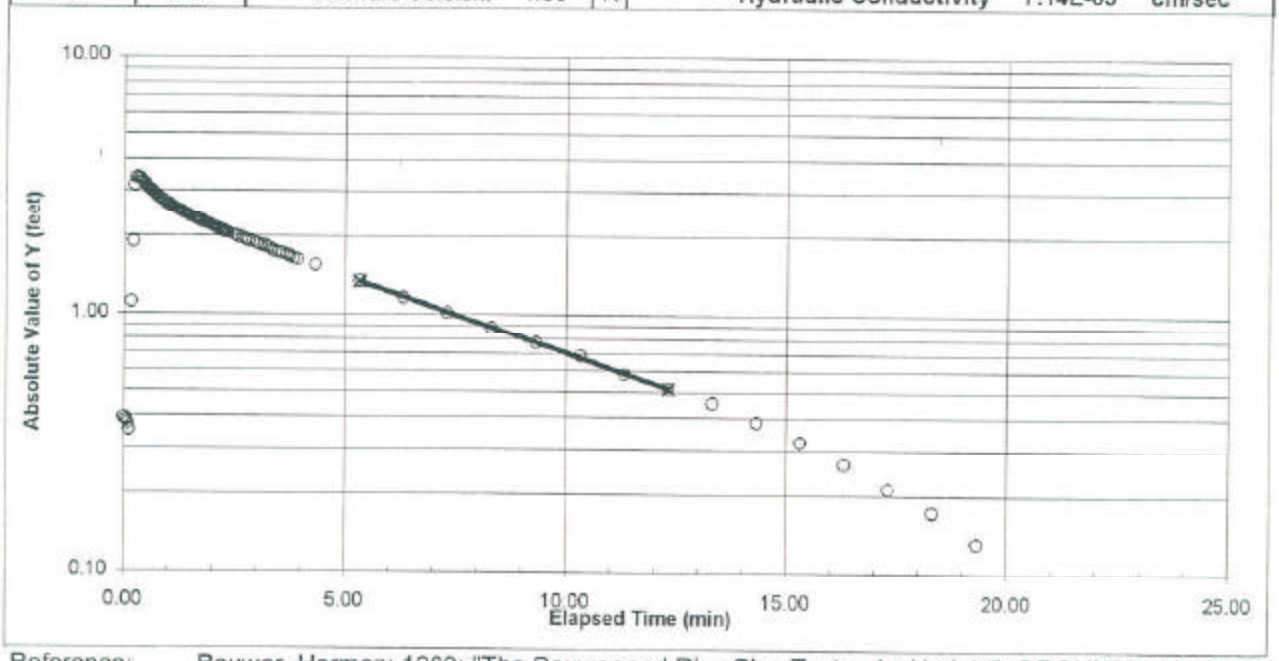
Reference: Bouwer, Herman; 1989; "The Bouwer and Rice Slug Test -- An Update"; GROUNDWATER, Vol. 27, No. 3, pp. 304 - 309.

Slug Test Data Analysis

Well Location:	OW-7	Project No.:	983-3223
Test Date:	8/19/98	Project Name:	Solutia/RFI/AL
Drilling Method:	HSA	Testing By:	DLH
Test Type:	Falling Head	Analysis By:	CDH

Well and Aquifer Characteristics			Physical Analytical Parameters		
Casing Diameter:	2 inches	r_c	Effective Casing Radius:	0.0833 feet	
Borehole Diameter:	8 inches	r_w	Borehole Radius:	0.33 feet	
Depth to Bottom of Well:	47 feet	L_w	Saturated Well Length:	11.38 feet	
Depth to Top of Filter:	40 feet	L_e	Effective Well Length:	7 feet	
Depth to Static Water Level:	35.62 feet				
Saturated Aquifer Thickness:	60 feet	H	Saturated Aquifer Thickness:	60 feet	
Effective Porosity of Filter:	30%	n	Effective Porosity of Filter:	30%	

Aquifer Property Analysis							
Method Parameters					y_0	Initial y of best fit line:	1.33 feet
A	2.14	L_e/r_w	21.21		y_t	Terminal y of best fit line:	0.51 feet
B	0.30	$\ln(R_e/r_w)$	2.07		dt	Time between y_0 and y_t:	7.00 min
C	0.00	Software Version:		1.00	K	Hydraulic Conductivity	7.14E-05 cm/sec



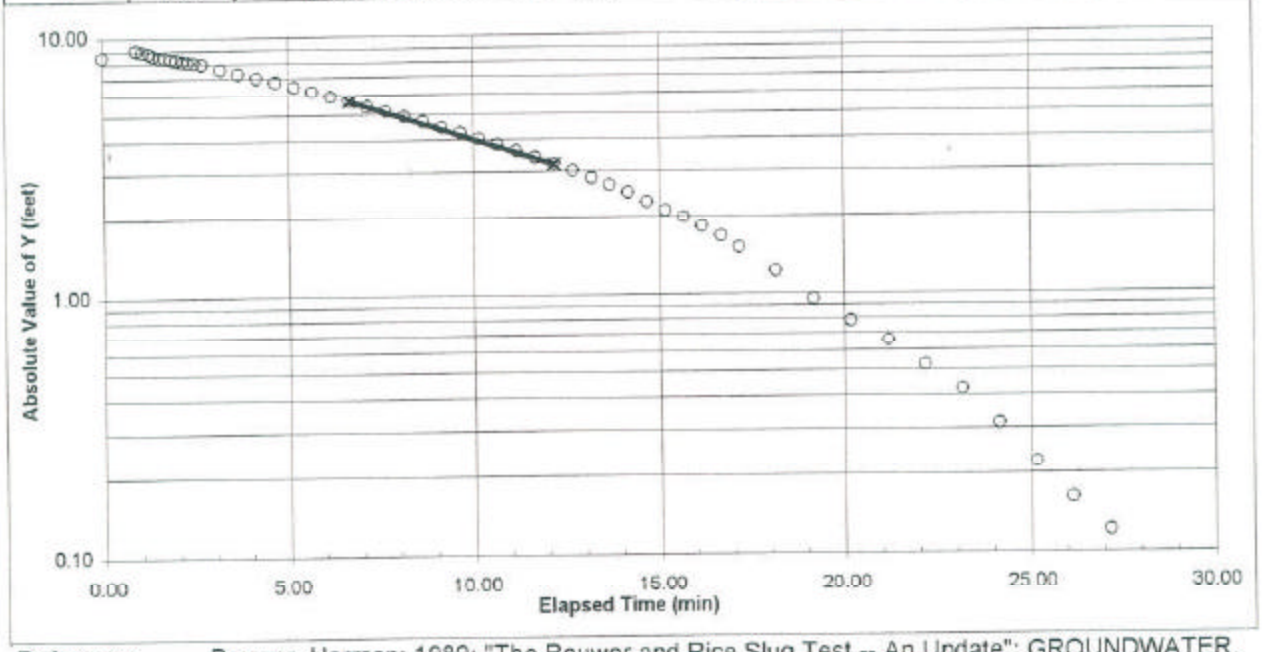
Reference: Bouwer, Herman; 1989; "The Bouwer and Rice Slug Test -- An Update"; GROUNDWATER, Vol. 27, No. 3, pp. 304 300.

Slug Test Data Analysis

Well Location:	OW-8A	**Project No.:**	983-3223
Test Date:	8/21/98	**Project Name:**	Solutia/RFI/AL
Drilling Method:	HSA	**Testing By:**	DLH
Test Type:	Rising Head	**Analysis By:**	CDH

Well and Aquifer Characteristics			Physical Analytical Parameters		
Casing Diameter:	2 inches	r_c	Effective Casing Radius:	0.1937 feet	
Borehole Diameter:	8 inches	r_w	Borehole Radius:	0.33 feet	
Depth to Bottom of Well:	25 feet	L_w	Saturated Well Length:	10.06 feet	
Depth to Top of Filter:	13 feet	L_e	Effective Well Length:	12 feet	
Depth to Static Water Level:	14.94 feet		Water Below Top of Filter		
Saturated Aquifer Thickness:	60 feet	H	Saturated Aquifer Thickness:	60 feet	
Effective Porosity of Filter:	30%	n	Effective Porosity of Filter	30%	

Aquifer Property Analysis							
Method Parameters							
A	2.65	L_e/r_w	36.36		y_0	Initial y of best fit line:	**5.63** feet
B	0.37	$\ln(R_e/r_w)$	2.24		y_t	Terminal y of best fit line:	**3.19** feet
C	0.00	Software Version:	1.00		dt	Time between y_0 and y_t:	5.50 min
					K	**Hydraulic Conductivity**	**1.84E-04** cm/sec



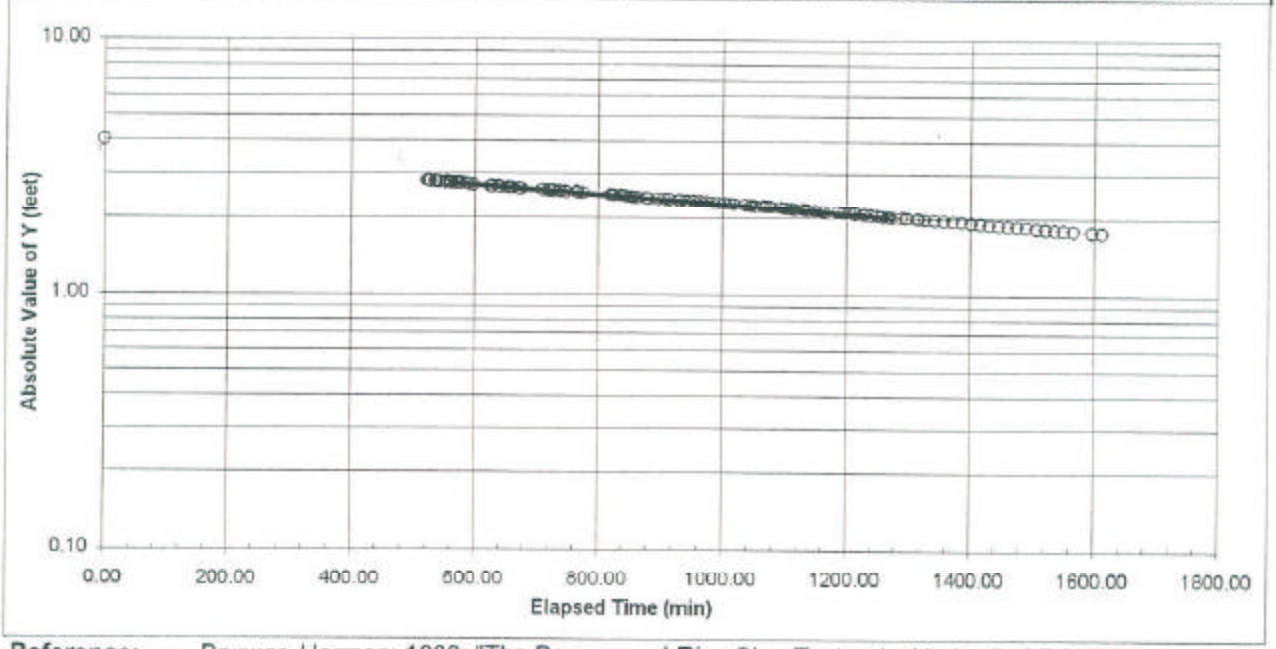
Reference: Bouwer, Herman; 1989; "The Bouwer and Rice Slug Test -- An Update"; GROUNDWATER, Vol. 27, No. 3, pp. 304 - 309.

Slug Test Data Analysis

Well Location:	OW-10	Project No.:	933-3223
Test Date:	9/30/98	Project Name:	SOLUTIA/RFI/AL
Drilling Method:	HSA	Testing By:	MAC
Test Type:	Falling Head	Analysis By:	JSR

Well and Aquifer Characteristics			Physical Analytical Parameters		
Casing Diameter:	2 inches	r_c	Effective Casing Radius:	0.0833 feet	
Borehole Diameter:	8 inches	r_w	Borehole Radius:	0.33 feet	
Depth to Bottom of Well:	38 feet	L_w	Saturated Well Length:	15.07 feet	
Depth to Top of Filter:	29 feet	L_e	Effective Well Length:	9 feet	
Depth to Static Water Level:	22.93 feet				
Saturated Aquifer Thickness:	60 feet	H	Saturated Aquifer Thickness:	60 feet	
Effective Porosity of Filter:	30%	n	Effective Porosity of Filter:	30%	

Aquifer Property Analysis							
Method Parameters					y_0	Initial y of best fit line:	2.74 feet
A	2.35	L_e/r_w	27.27		y_t	Terminal y of best fit line:	2.01 feet
B	0.32	$\ln(R_e/r_w)$	2.32		dt	Time between y_0 and y_t:	708.75 min
C	0.00	Software Version:		1.00	K	Hydraulic Conductivity	1.99E-07 cm/sec



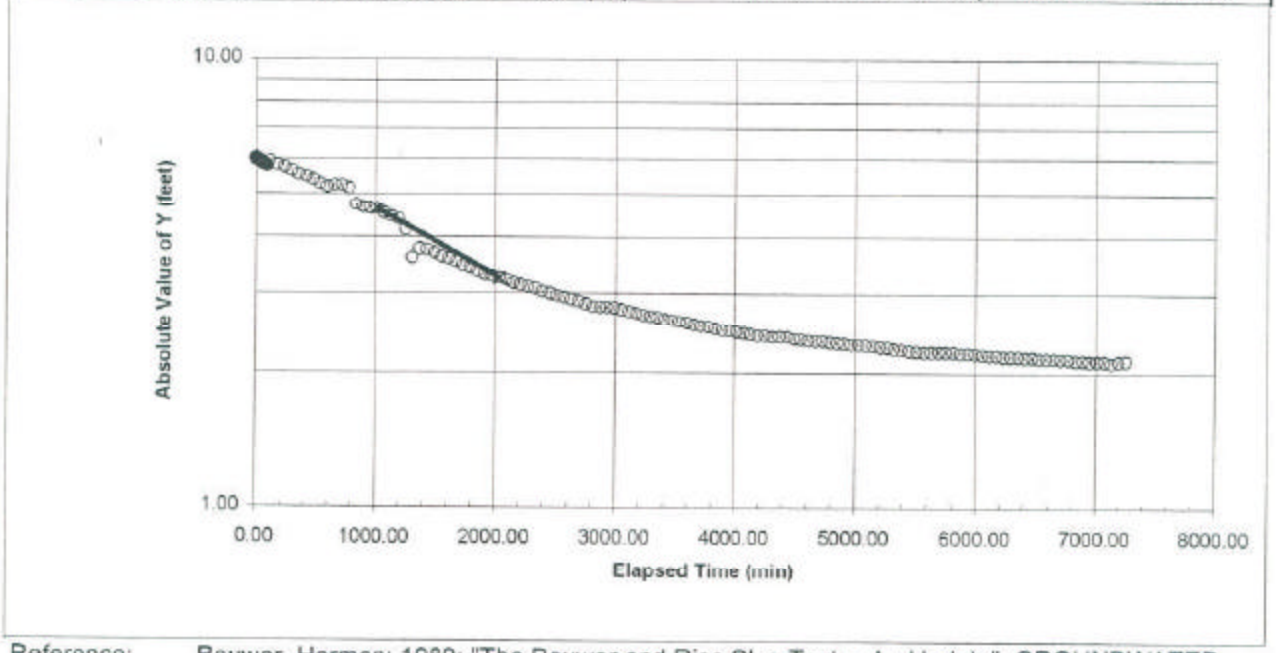
Reference: Bouwer, Herman; 1989; "The Bouwer and Rice Slug Test -- An Update"; GROUNDWATER, Vol. 27, No. 3, pp. 304 - 309

Slug Test Data Analysis

Well Location:	OW-15	Project No.:	983-3223
Test Date:	10/7/98	Project Name:	Solutia/RFI/AL
Drilling Method:	HSA	Testing By:	MAC
Test Type:	Falling Head	Analysis By:	CDH

Well and Aquifer Characteristics			Physical Analytical Parameters		
Casing Diameter:	2 inches	r_c	Effective Casing Radius:	0.0833 feet	
Borehole Diameter:	8 inches	r_w	Borehole Radius:	0.33 feet	
Depth to Bottom of Well:	40 feet	L_w	Saturated Well Length:	25.01 feet	
Depth to Top of Filter:	33 feet	L_e	Effective Well Length:	7 feet	
Depth to Static Water Level:	14.99 feet				
Saturated Aquifer Thickness:	60 feet	H	Saturated Aquifer Thickness:	60 feet	
Effective Porosity of Filter:	30%	n	Effective Porosity of Filter:	30%	

Aquifer Property Analysis							
Method Parameters					y_0	Initial y of best fit line:	4.62 feet
A	2.14	L_e/r_w	21.21		y_t	Terminal y of best fit line:	3.24 feet
B	0.30	$\ln(R_e/r_w)$	2.38		dt	Time between y_0 and y_t:	1020.00 min
C	0.00	Software Version:		1.00	K	Hydraulic Conductivity	2.08E-07 cm/sec



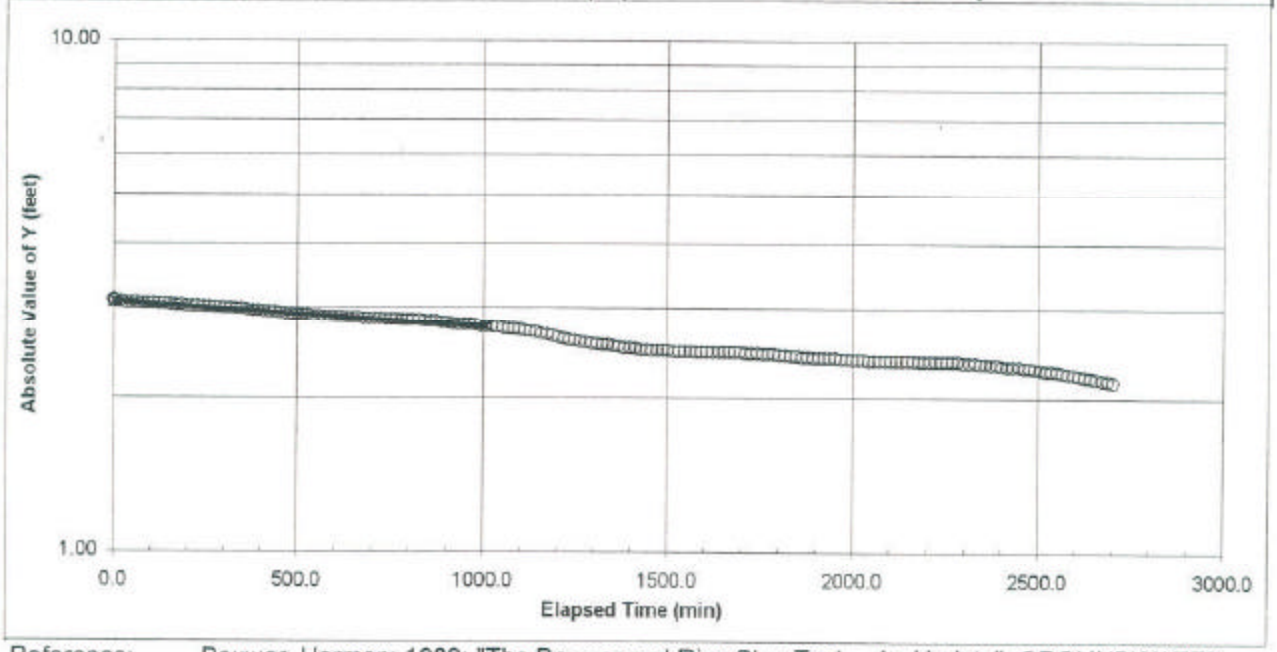
Reference: Bouwer, Herman; 1989; "The Bouwer and Rice Slug Test -- An Update"; GROUNDWATER, Vol. 27, No. 3, pp. 304 - 309.

Slug Test Data Analysis

Well Location:	OWR-1D	**Project No.:**	933-3223
Test Date:	8/19/98	**Project Name:**	SOLUTIA/RFI/AL
Drilling Method:	HSA	**Testing By:**	CDH
Test Type:	Falling Head	**Analysis By:**	JSR

Well and Aquifer Characteristics			Physical Analytical Parameters		
Casing Diameter:	2 inches		r_c	Effective Casing Radius:	0.0833 feet
Borehole Diameter:	8 inches		r_w	Borehole Radius:	0.33 feet
Depth to Bottom of Well:	67 feet		L_w	Saturated Well Length:	18.11 feet
Depth to Top of Filter:	55 feet		L_e	Effective Well Length:	12 feet
Depth to Static Water Level:	48.89 feet				
Saturated Aquifer Thickness:	60 feet		H	Saturated Aquifer Thickness:	60 feet
Effective Porosity of Filter:	30%		n	Effective Porosity of Filter:	30%

Aquifer Property Analysis							
Method Parameters					y_0	Initial y of best fit line:	**3.08** feet
A	2.65	L_e/r_w	36.36		y_t	Terminal y of best fit line:	**2.74** feet
B	0.37	$\ln(R_e/r_w)$	2.62		dt	Time between y_0 and y_t:	1005.00 min
C	0.00	Software Version:		1.00	K	**Hydraulic Conductivity**	**4.31E-08 cm/sec**



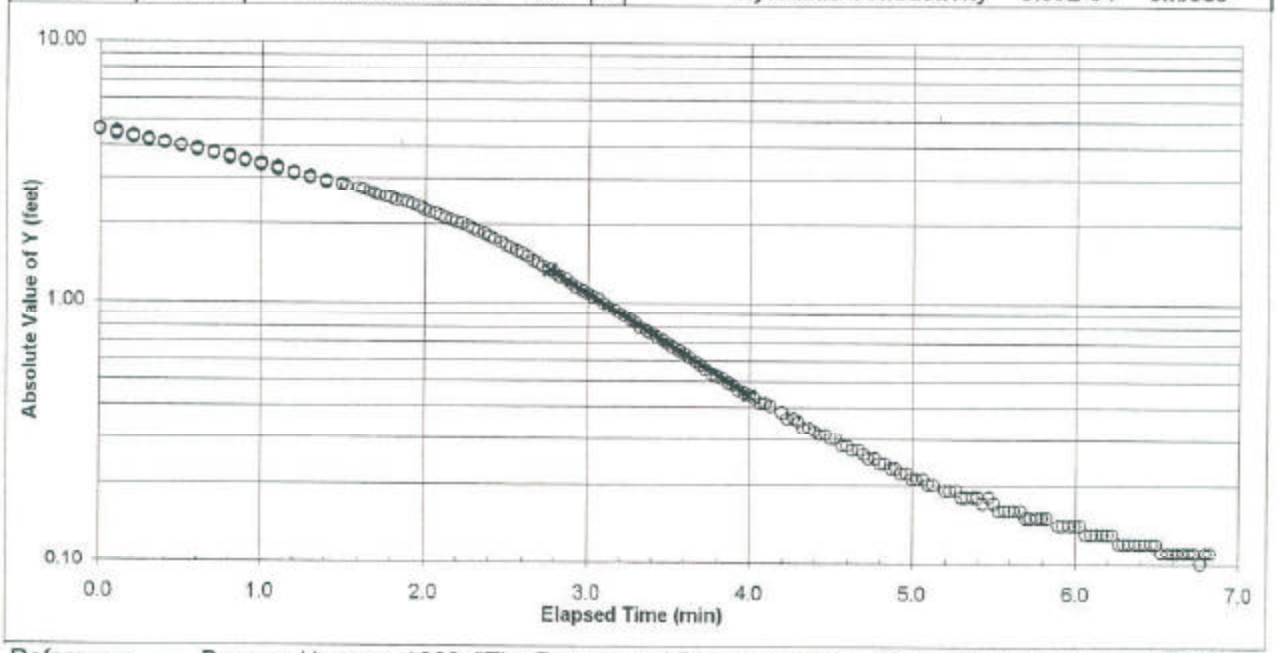
Reference: Bouwer, Herman; 1989; "The Bouwer and Rice Slug Test -- An Update"; GROUNDWATER, Vol. 27, No. 3, pp. 304 - 309.

Slug Test Data Analysis

Well Location:	OWR-1S	**Project No.:**	933-3223
Test Date:	8/19/98	**Project Name:**	SOLUTIA/RFI/AL
Drilling Method:	HSA	**Testing By:**	CDH
Test Type:	Falling Head	**Analysis By:**	JSR

Well and Aquifer Characteristics			Physical Analytical Parameters		
Casing Diameter:	2 inches	r_c	Effective Casing Radius:	0.0833 feet	
Borehole Diameter:	8 inches	r_w	Borehole Radius:	0.33 feet	
Depth to Bottom of Well:	37 feet	L_w	Saturated Well Length:	20.38 feet	
Depth to Top of Filter:	25 feet	L_e	Effective Well Length:	12 feet	
Depth to Static Water Level:	16.62 feet				
Saturated Aquifer Thickness:	60 feet	H	Saturated Aquifer Thickness:	60 feet	
Effective Porosity of Filter:	30%	n	Effective Porosity of Filter:	30%	

Aquifer Property Analysis							
Method Parameters					y_0	Initial y of best fit line:	**1.33** feet
A	2.65	L_e/r_w	36.36		y_t	Terminal y of best fit line:	**0.44** feet
B	0.37	$\ln(R_e/r_w)$	2.57		dt	Time between y_0 and y_t:	1.23 min
C	0.00	Software Version:		1.00	K	**Hydraulic Conductivity**	**3.39E-04 cm/sec**



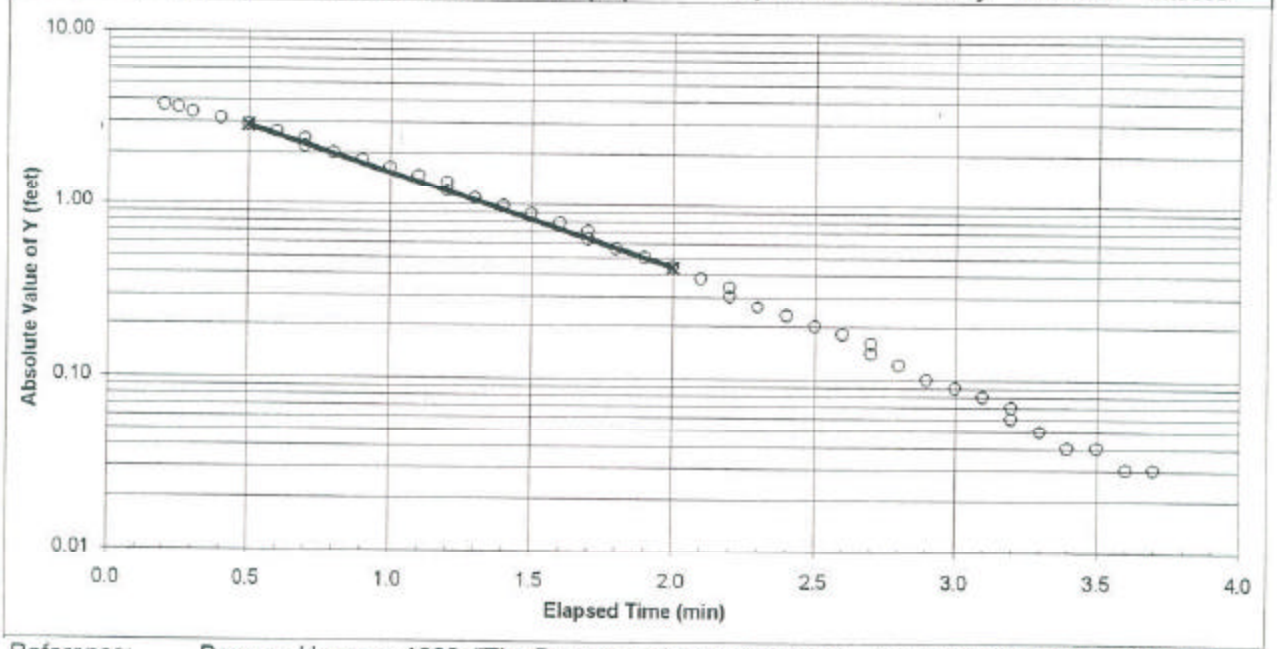
Reference: Bouwer, Herman; 1989; "The Bouwer and Rice Slug Test -- An Update"; GROUNDWATER, Vol. 27, No. 3, pp. 304 - 309.

Slug Test Data Analysis

Well Location:	OWR-2D	Project No.:	933-3223
Test Date:	8/19/98	Project Name:	SOLUTIA/RFI/AL
Drilling Method:	HSA	Testing By:	CDH
Test Type:	Falling Head	Analysis By:	JSR

Well and Aquifer Characteristics			Physical Analytical Parameters		
Casing Diameter:	2 inches	r_c	Effective Casing Radius:	0.0833 feet	
Borehole Diameter:	8 inches	r_w	Borehole Radius:	0.33 feet	
Depth to Bottom of Well:	110 feet	L_w	Saturated Well Length:	27.6 feet	
Depth to Top of Filter:	98 feet	L_e	Effective Well Length:	12 feet	
Depth to Static Water Level:	82.4 feet				
Saturated Aquifer Thickness:	60 feet	H	Saturated Aquifer Thickness:	60 feet	
Effective Porosity of Filter:	30%	n	Effective Porosity of Filter:	30%	

Aquifer Property Analysis							
Method Parameters					y_0	Initial y of best fit line:	**2.85** feet
A	2.65	L_e/r_w	36.36		y_t	Terminal y of best fit line:	**0.44** feet
B	0.37	$\ln(R_e/r_w)$	2.72		dt	Time between y_0 and y_t:	1.50 min
C	0.00	Software Version:		1.00	K	**Hydraulic Conductivity**	**4.98E-04** cm/sec



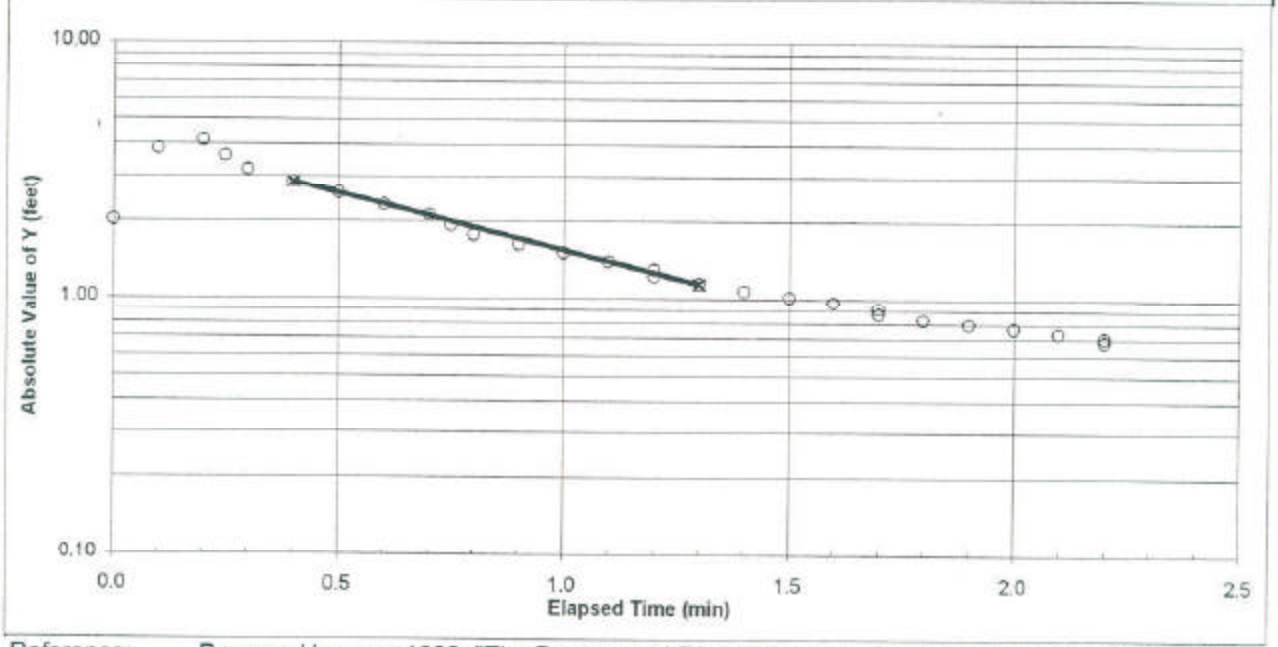
Reference: Bouwer, Herman; 1989; "The Bouwer and Rice Slug Test -- An Update"; GROUNDWATER. Vol. 27, No. 3, pp. 304 - 309.

Slug Test Data Analysis

Well Location:	OWR-2S	**Project No.:**	933-3223
Test Date:	8/19/98	**Project Name:**	SOLUTIA/RFI/AL
Drilling Method:	HSA	**Testing By:**	CDH
Test Type:	Falling Head	**Analysis By:**	JSR

Well and Aquifer Characteristics			Physical Analytical Parameters		
Casing Diameter:	2 inches	r_c	Effective Casing Radius:	0.0833 feet	
Borehole Diameter:	8 inches	r_w	Borehole Radius:	0.33 feet	
Depth to Bottom of Well:	37 feet	L_w	Saturated Well Length:	24.26 feet	
Depth to Top of Filter:	25 feet	L_e	Effective Well Length:	12 feet	
Depth to Static Water Level:	12.74 feet				
Saturated Aquifer Thickness:	60 feet	H	Saturated Aquifer Thickness:	60 feet	
Effective Porosity of Filter:	30%	n	Effective Porosity of Filter:	30%	

Aquifer Property Analysis							
Method Parameters					y_0	Initial y of best fit line:	**2.83** feet
A	2.65	L_e/r_w	36.36		y_t	Terminal y of best fit line:	**1.14** feet
B	0.37	$\ln(R_e/r_w)$	2.66		dt	Time between y_0 and y_t:	0.90 min
C	0.00	Software Version:		1.00	K	**Hydraulic Conductivity**	**3.95E-04** **cm/sec**



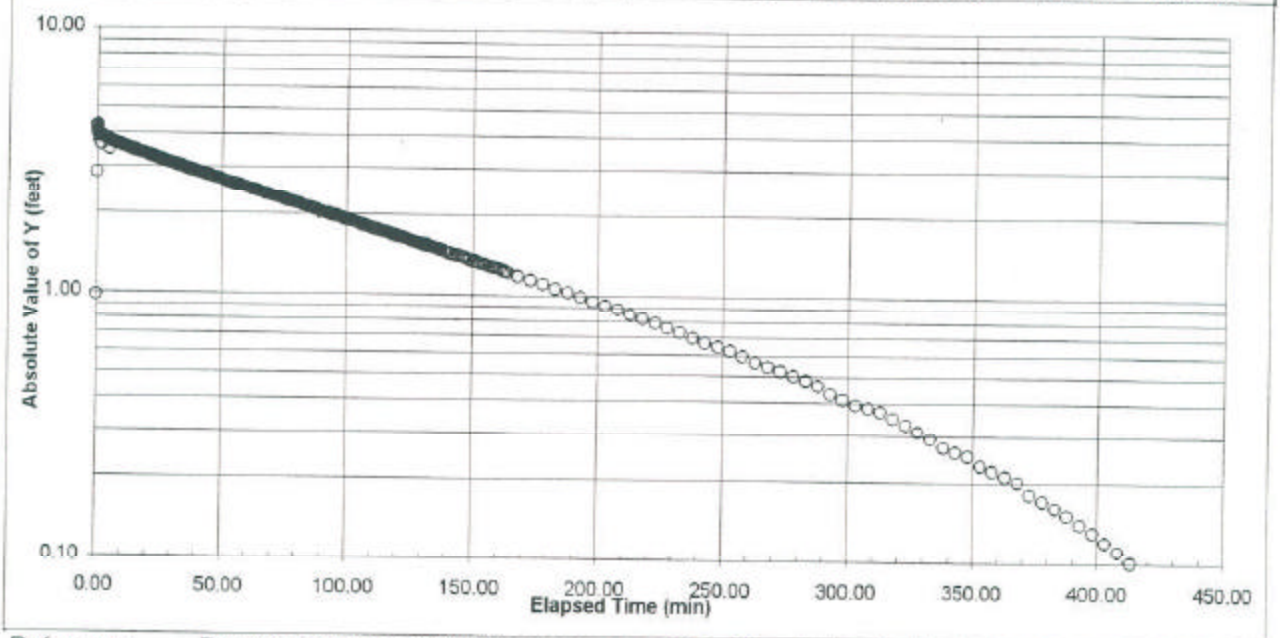
Reference: Bouwer, Herman; 1989; "The Bouwer and Rice Slug Test -- An Update"; GROUNDWATER. Vol. 27, No. 3, pp. 304 - 309.

Slug Test Data Analysis

Well Location:	OWR-3S	**Project No.:**	933-3223
Test Date:	9/29/98	**Project Name:**	SOLUTIA/RFI/AL
Drilling Method:	HSA	**Testing By:**	MAC
Test Type:	Falling Head	**Analysis By:**	JSR

Well and Aquifer Characteristics			Physical Analytical Parameters	
Casing Diameter:	2 inches	r_c	Effective Casing Radius:	0.0833 feet
Borehole Diameter:	8 inches	r_w	Borehole Radius:	0.33 feet
Depth to Bottom of Well:	37 feet	L_w	Saturated Well Length:	25.14 feet
Depth to Top of Filter:	25 feet	L_e	Effective Well Length:	12 feet
Depth to Static Water Level:	11.86 feet			
Saturated Aquifer Thickness:	60 feet	H	Saturated Aquifer Thickness:	60 feet
Effective Porosity of Filter:	30%	n	Effective Porosity of Filter:	30%

Aquifer Property Analysis							
Method Parameters					y_0	Initial y of best fit line:	3.90 feet
A	2.65	L_e/r_w	36.36		y_t	Terminal y of best fit line:	2.01 feet
B	0.37	$\ln(R_e/r_w)$	2.67		dt	Time between y_0 and y_t:	90.37 min
C	0.00	Software Version:		1.00	K	**Hydraulic Conductivity**	**2.88E-06 cm/sec**



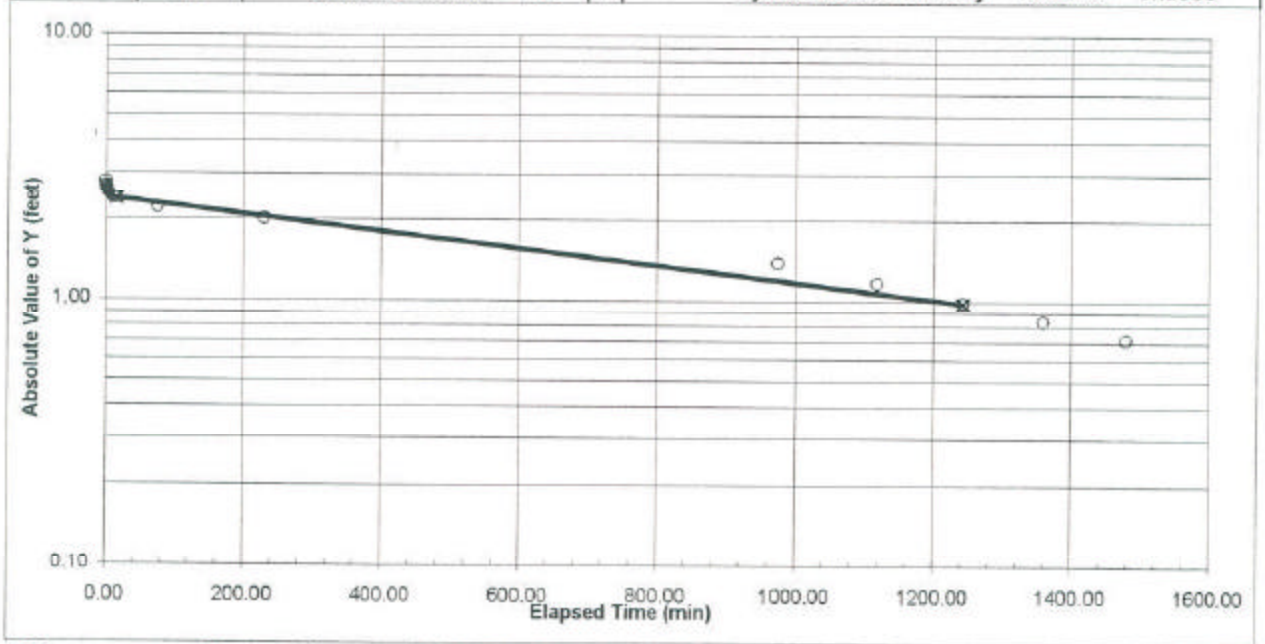
Reference: Bouwer, Herman; 1989; "The Bouwer and Rice Slug Test -- An Update"; GROUNDWATER, Vol. 27, No. 3, pp. 304 - 309.

Slug Test Data Analysis

Well Location:	OWR-4D	Project No.:	983-3223
Test Date:	10/6/98	Project Name:	Solutia/RFI/AL
Drilling Method:	HSA	Testing By:	MAC
Test Type:	Rising Head	Analysis By:	JSR

Well and Aquifer Characteristics			Physical Analytical Parameters		
Casing Diameter:	2 inches	r_c	Effective Casing Radius:	0.1937 feet	
Borehole Diameter:	8 inches	r_w	Borehole Radius:	0.33 feet	
Depth to Bottom of Well:	85 feet	L_w	Saturated Well Length:	11.73 feet	
Depth to Top of Filter:	73 feet	L_e	Effective Well Length:	12 feet	
Depth to Static Water Level:	73.27 feet		Water Below Top of Filter		
Saturated Aquifer Thickness:	60 feet	H	Saturated Aquifer Thickness:	60 feet	
Effective Porosity of Filter:	30%	n	Effective Porosity of Filter:	30%	

Aquifer Property Analysis							
Method Parameters					y_0	Initial y of best fit line:	2.38 feet
A	2.65	L_e/r_w	36.36		y_1	Terminal y of best fit line:	0.98 feet
B	0.37	$\ln(R_e/r_w)$	2.32		dt	Time between y_0 and y_1:	1228.42 min
C	0.00	Software Version:		1.00	K	Hydraulic Conductivity	1.33E-06 cm/sec



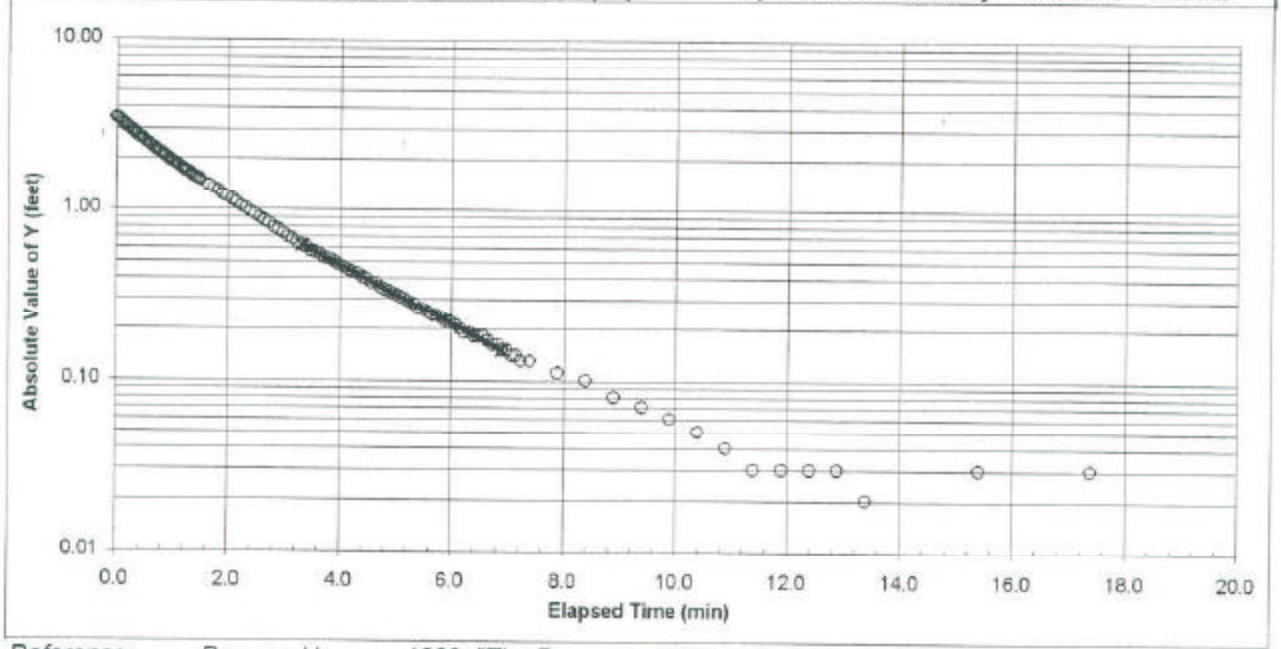
Reference: Bouwer, Herman; 1989; "The Bouwer and Rice Slug Test -- An Update"; GROUNDWATER, Vol. 27, No. 3, pp. 304 - 309.

Slug Test Data Analysis

Well Location:	OWR-5D	Project No.:	933-3223
Test Date:	8/18/98	Project Name:	SOLUTIA/RFI/AL
Drilling Method:	HSA	Testing By:	CDH
Test Type:	Falling Head	Analysis By:	JSR

Well and Aquifer Characteristics			Physical Analytical Parameters		
Casing Diameter:	2 inches	r_c	Effective Casing Radius:	0.0833 feet	
Borehole Diameter:	8 inches	r_w	Borehole Radius:	0.33 feet	
Depth to Bottom of Well:	68 feet	L_w	Saturated Well Length:	19.67 feet	
Depth to Top of Filter:	56 feet	L_e	Effective Well Length:	12 feet	
Depth to Static Water Level:	48.33 feet				
Saturated Aquifer Thickness:	60 feet	H	Saturated Aquifer Thickness:	60 feet	
Effective Porosity of Filter:	30%	n	Effective Porosity of Filter:	30%	

Aquifer Property Analysis							
Method Parameters					y_0	Initial y of best fit line:	0.62 feet
A	2.65	L_e/r_w	36.36		y_t	Terminal y of best fit line:	0.15 feet
B	0.37	$\ln(R_e/r_w)$	2.56		dt	Time between y_0 and y_t:	3.58 min
C	0.00	Software Version:		1.00	K	Hydraulic Conductivity	1.49E-04 cm/sec



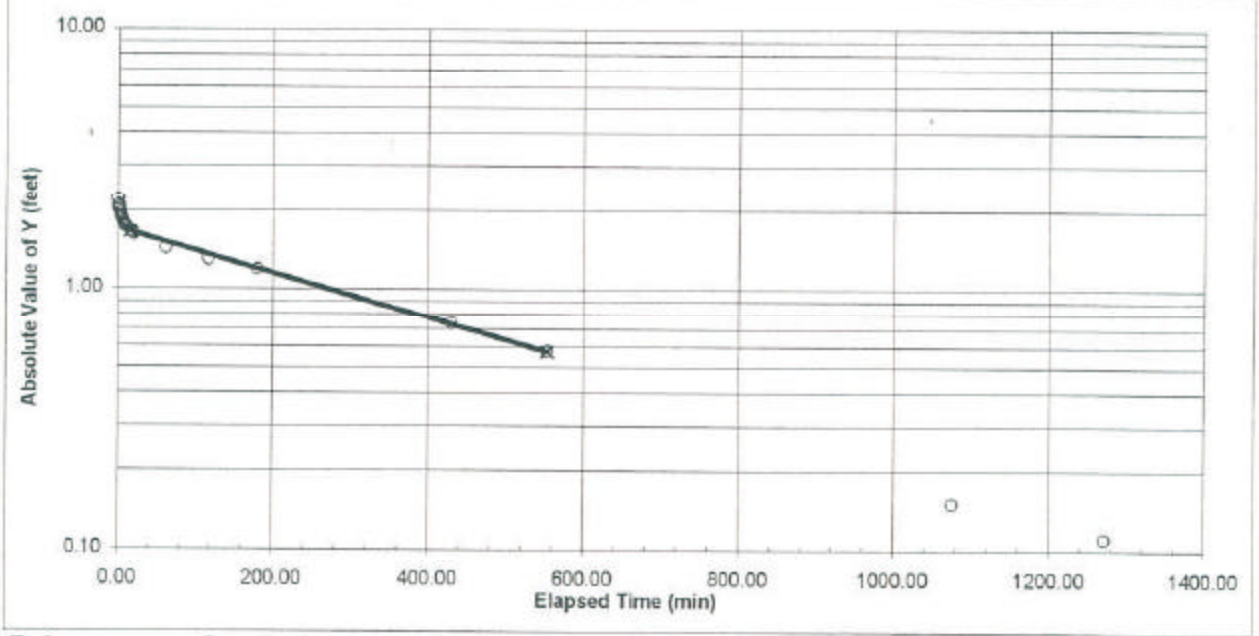
Reference: Bouwer, Herman; 1989; "The Bouwer and Rice Slug Test -- An Update"; GROUNDWATER, Vol. 27, No. 3, pp. 304 - 309.

Slug Test Data Analysis

Well Location:	OWR-6D	Project No.:	983-3223
Test Date:	10/5/98	Project Name:	Solutia/RFI/AL
Drilling Method:	HSA	Testing By:	MAC
Test Type:	Rising Head	Analysis By:	JSR

Well and Aquifer Characteristics			Physical Analytical Parameters		
Casing Diameter:	2 inches	r_c	Effective Casing Radius:	0.1937 feet	
Borehole Diameter:	8 inches	r_w	Borehole Radius:	0.33 feet	
Depth to Bottom of Well:	67 feet	L_w	Saturated Well Length:	8.13 feet	
Depth to Top of Filter:	55 feet	L_e	Effective Well Length:	12 feet	
Depth to Static Water Level:	58.87 feet		Water Below Top of Filter		
Saturated Aquifer Thickness:	60 feet	H	Saturated Aquifer Thickness:	60 feet	
Effective Porosity of Filter:	30%	n	Effective Porosity of Filter:	30%	

Aquifer Property Analysis							
Method Parameters					y_0	Initial y of best fit line:	1.65 feet
A	2.65	L_e/r_w	36.36		y_t	Terminal y of best fit line:	0.57 feet
B	0.37	$\ln(R_e/r_w)$	2.14		dt	Time between y_o and y_t:	538.50 min
C	0.00	Software Version:		1.00	K	Hydraulic Conductivity	3.35E-06 cm/sec



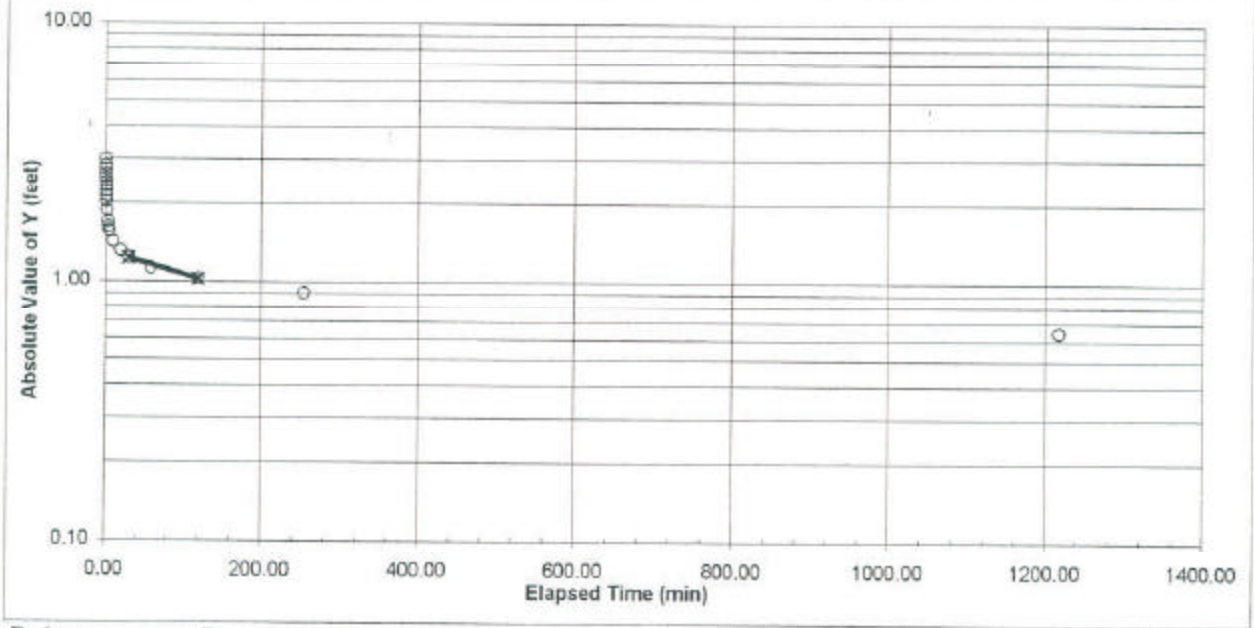
Reference: Bouwer, Herman; 1989; "The Bouwer and Rice Slug Test -- An Update"; GROUNDWATER, Vol. 27, No. 3, pp. 304 300.

Slug Test Data Analysis

Well Location:	OWR-7D	Project No.:	983-3223
Test Date:	10/5/98	Project Name:	Solutia/RFI/AL
Drilling Method:	HSA	Testing By:	MAC
Test Type:	Rising Head	Analysis By:	JSR

Well and Aquifer Characteristics			Physical Analytical Parameters		
Casing Diameter:	2 inches	r_c	Effective Casing Radius:	0.1937 feet	
Borehole Diameter:	8 inches	r_w	Borehole Radius:	0.33 feet	
Depth to Bottom of Well:	67 feet	L_w	Saturated Well Length:	4.01 feet	
Depth to Top of Filter:	55 feet	L_e	Effective Well Length:	12 feet	
Depth to Static Water Level:	62.99 feet		Water Below Top of Filter		
Saturated Aquifer Thickness:	60 feet	H	Saturated Aquifer Thickness:	60 feet	
Effective Porosity of Filter:	30%	n	Effective Porosity of Filter:	30%	

Aquifer Property Analysis							
Method Parameters					y_0	Initial y of best fit line:	1.23 feet
A	2.65	L_e/r_w	36.36		y_t	Terminal y of best fit line:	1.02 feet
B	0.37	$\ln(R_e/r_w)$	1.77		dt	Time between y_0 and y_t:	00.00 min
C	0.00	Software Version:		1.00	K	Hydraulic Conductivity	2.92E-06 cm/sec



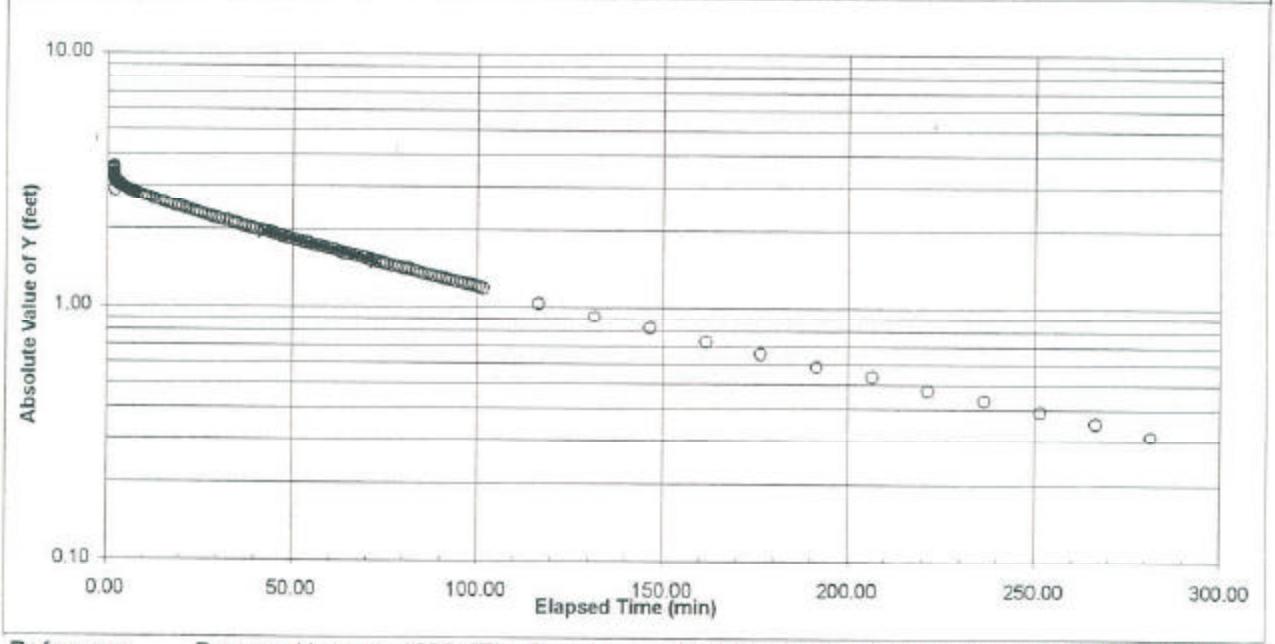
Reference: Bouwer, Herman; 1989; "The Bouwer and Rice Slug Test -- An Update"; GROUNDWATER, Vol. 27, No. 3, pp. 304 - 309.

Slug Test Data Analysis

Well Location:	OWR-8S	Project No.:	983-3223
Test Date:	10/6/98	Project Name:	Solutia/RFI/AL
Drilling Method:	HSA	Testing By:	MAC
Test Type:	Falling Head	Analysis By:	CDH

Well and Aquifer Characteristics			Physical Analytical Parameters		
Casing Diameter:	2 inches	r_c	Effective Casing Radius:	0.0833 feet	
Borehole Diameter:	8 inches	r_w	Borehole Radius:	0.33 feet	
Depth to Bottom of Well:	37 feet	L_w	Saturated Well Length:	23.3 feet	
Depth to Top of Filter:	25 feet	L_e	Effective Well Length:	12 feet	
Depth to Static Water Level:	13.7 feet				
Saturated Aquifer Thickness:	60 feet	H	Saturated Aquifer Thickness:	60 feet	
Effective Porosity of Filter:	30%	n	Effective Porosity of Filter:	30%	

Aquifer Property Analysis							
Method Parameters					y_0	Initial y of best fit line:	1.95 feet
A	2.65	L_e/r_w	36.36		y_t	Terminal y of best fit line:	1.50 feet
B	0.37	$\ln(R_e/r_w)$	2.64		dt	Time between y_0 and y_t:	30.00 min
C	0.00	Software Version:		1.00	K	Hydraulic Conductivity	3.39E-06 cm/sec



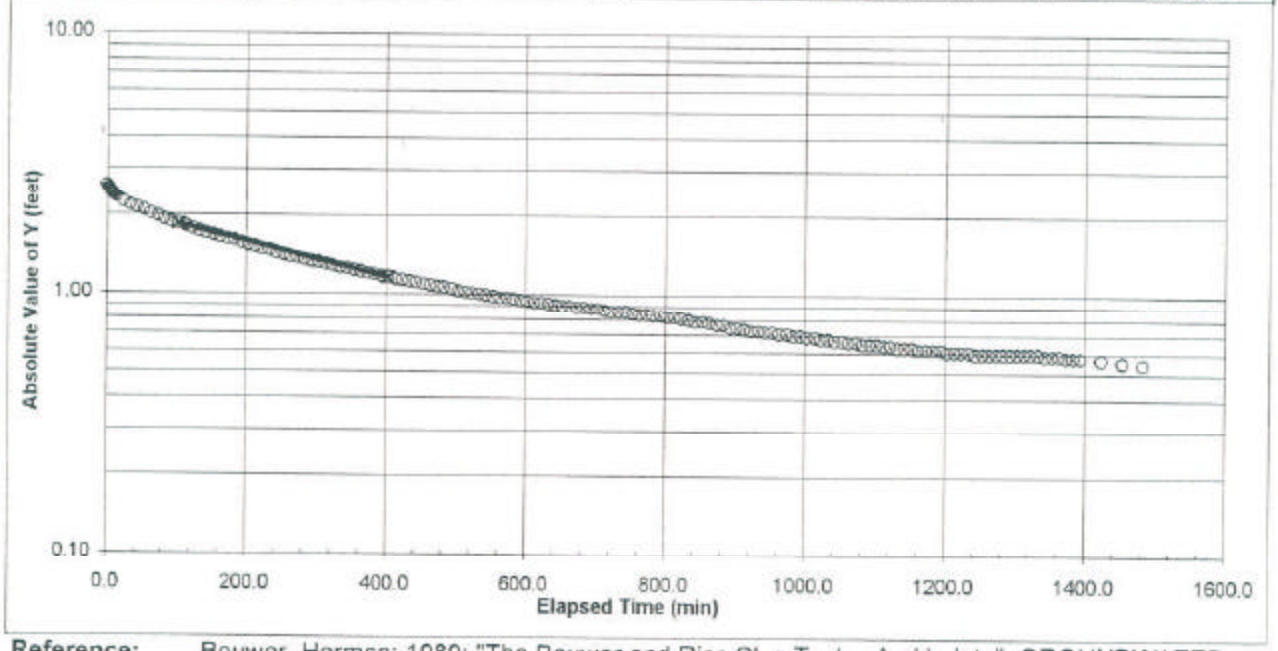
Reference: Bouwer, Herman; 1989; "The Bouwer and Rice Slug Test -- An Update"; GROUNDWATER, Vol. 27, No. 3, pp. 304 - 309.

Slug Test Data Analysis

Well Location:	OWR-9S	Project No.:	933-3223
Test Date:	8/19/98	Project Name:	SOLUTIA/RFI/AL
Drilling Method:	HSA	Testing By:	CDH
Test Type:	Falling Head	Analysis By:	JSR

Well and Aquifer Characteristics			Physical Analytical Parameters		
Casing Diameter:	2 inches	r_c	Effective Casing Radius:	0.0833 feet	
Borehole Diameter:	8 inches	r_w	Borehole Radius:	0.33 feet	
Depth to Bottom of Well:	54.5 feet	L_w	Saturated Well Length:	16.89 feet	
Depth to Top of Filter:	42 feet	L_e	Effective Well Length:	12.5 feet	
Depth to Static Water Level:	37.61 feet				
Saturated Aquifer Thickness:	60 feet	H	Saturated Aquifer Thickness:	60 feet	
Effective Porosity of Filter:	30%	n	Effective Porosity of Filter:	30%	

Aquifer Property Analysis							
Method Parameters					y_0	Initial y of best fit line:	1.83 feet
A	2.71	L_e/r_w	37.88		y_t	Terminal y of best fit line:	1.15 feet
B	0.37	$\ln(R_e/r_w)$	2.61		dt	Time between y_0 and y_t:	300.00 min
C	0.00	Software Version:		1.00	K	Hydraulic Conductivity	5.48E-07 cm/sec



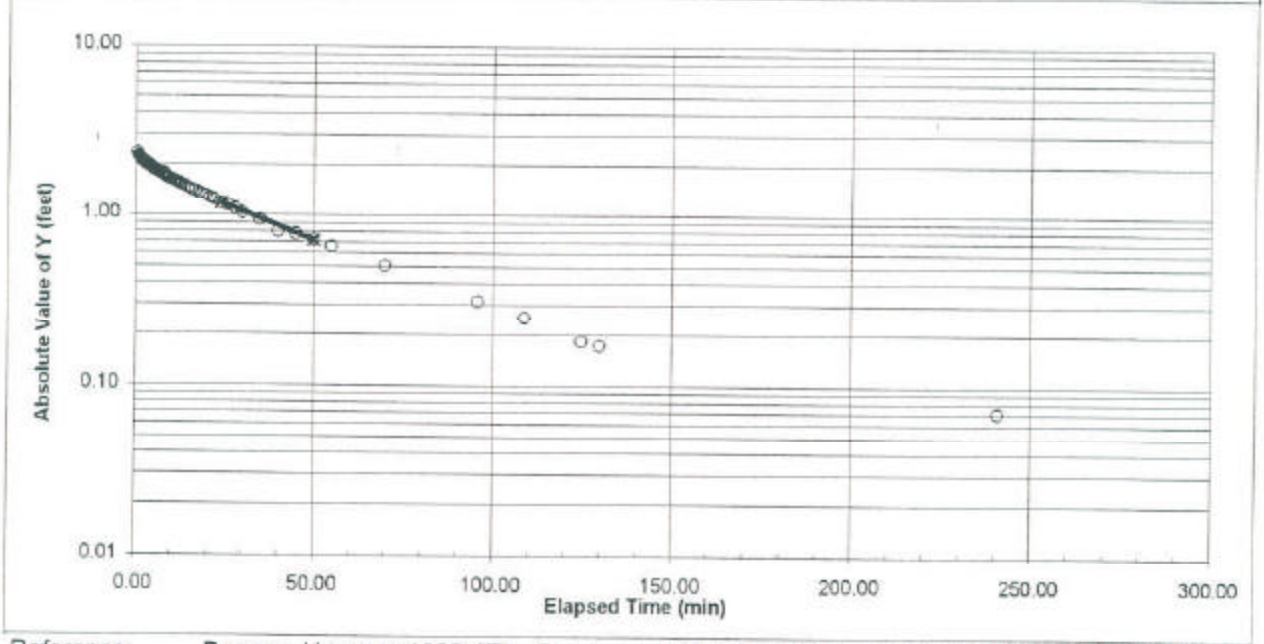
Reference: Bouwer, Herman; 1989; "The Bouwer and Rice Slug Test -- An Update"; GROUNDWATER, Vol. 27, No. 3, pp. 304 - 309.

Slug Test Data Analysis

Well Location:	PZR-1	Project No.:	983-3223
Test Date:	8/19/98	Project Name:	Solutia/RFI/AL
Drilling Method:	HSA	Testing By:	DLH
Test Type:	Rising Head	Analysis By:	JSR

Well and Aquifer Characteristics			Physical Analytical Parameters		
Casing Diameter:	2 inches	r_c	Effective Casing Radius:	0.1937 feet	
Borehole Diameter:	8 inches	r_w	Borehole Radius:	0.33 feet	
Depth to Bottom of Well:	60 feet	L_w	Saturated Well Length:	8.95 feet	
Depth to Top of Filter:	38 feet	L_e	Effective Well Length:	22 feet	
Depth to Static Water Level:	51.05 feet		Water Below Top of Filter		
Saturated Aquifer Thickness:	60 feet	H	Saturated Aquifer Thickness:	60 feet	
Effective Porosity of Filter:	30%	n	Effective Porosity of Filter:	30%	

Aquifer Property Analysis							
Method Parameters					y_0	Initial y of best fit line:	1.17 feet
A	3.54	L_e/r_w	66.67		y_t	Terminal y of best fit line:	0.71 feet
B	0.54	$\ln(R_e/r_w)$	2.34		dt	Time between y_0 and y_t:	26.00 min
C	0.00	Software Version:		1.00	K	Hydraulic Conductivity	1.95E-05 cm/sec



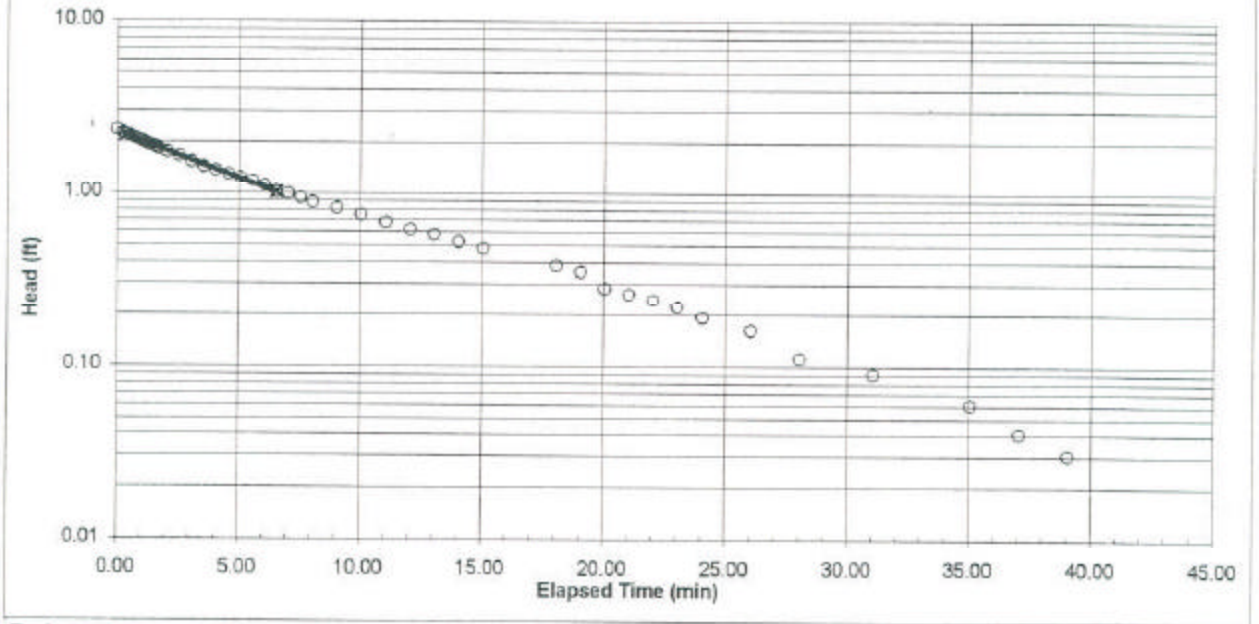
Reference: Bouwer, Herman; 1989; "The Bouwer and Rice Slug Test -- An Update"; GROUNDWATER, Vol. 27, No. 3, pp. 304 - 309.

Slug Test Data Analysis

Well Location:	PZR-2	Project No.:	983-3223
Test Date:	8/20/98	Project Name:	Solutia/RFI/AL
Drilling Method:	HSA	Testing By:	DLH
Test Type:	Rising Head	Analysis By:	JSR

Well and Aquifer Characteristics			Physical Analytical Parameters		
Casing Diameter:	2 inches	r_c	Effective Casing Radius:	0.1937 feet	
Borehole Diameter:	8 inches	r_w	Borehole Radius:	0.33 feet	
Depth to Bottom of Well:	62 feet	L_w	Saturated Well Length:	12.01 feet	
Depth to Top of Filter:	40 feet	L_e	Effective Well Length:	22 feet	
Depth to Static Water Level:	49.99 feet		Water Below Top of Filter		
Saturated Aquifer Thickness:	60 feet	H	Saturated Aquifer Thickness:	60 feet	
Effective Porosity of Filter:	30%	n	Effective Porosity of Filter:	30%	

Aquifer Property Analysis							
Method Parameters					y_0	Initial y of best fit line:	2.18 feet
A	3.54	L_e/r_w	66.67		y_t	Terminal y of best fit line:	1.01 feet
B	0.54	$\ln(R_e/r_w)$	2.50		dt	Time between y_0 and y_t:	6.22 min
C	0.00	Software Version:		1.00	K	Hydraulic Conductivity	1.34E-04 cm/sec



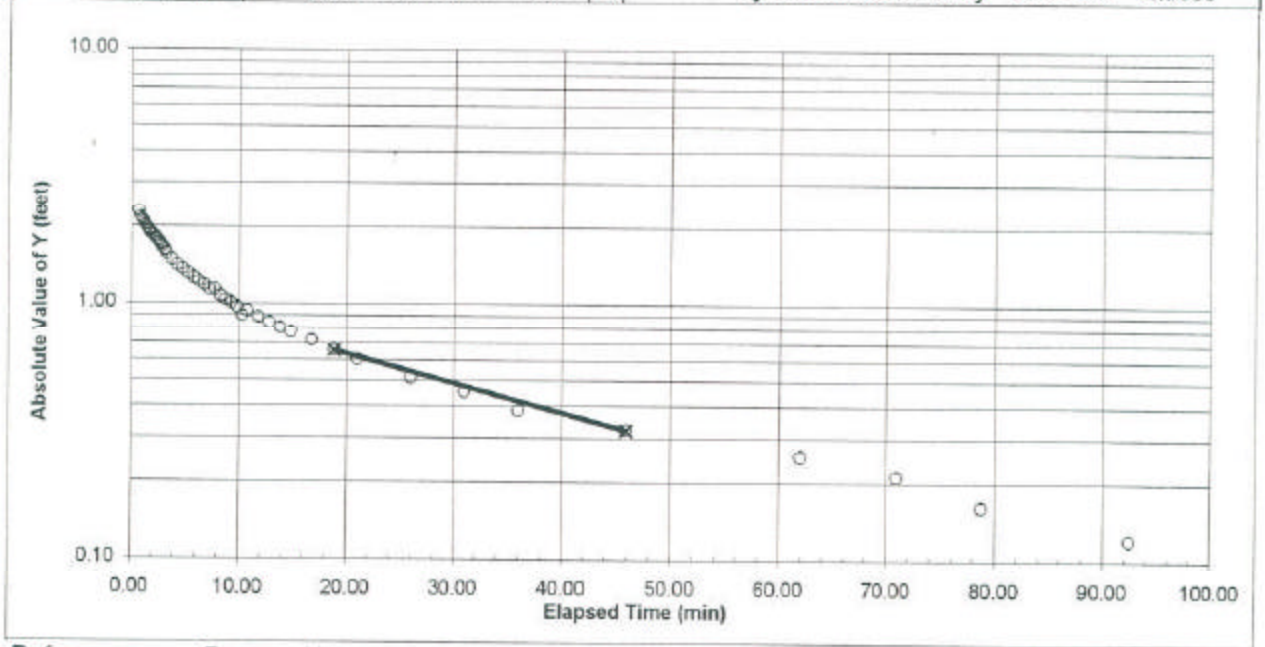
Reference: Bouwer, Herman; 1989; "The Bouwer and Rice Slug Test -- An Update"; GROUNDWATER, Vol. 27, No. 3, pp. 304 - 309.

Slug Test Data Analysis

Well Location:	PZR-3	**Project No.:**	983-3223
Test Date:	8/20/98	**Project Name:**	Solutia/RFI/AL
Drilling Method:	HSA	**Testing By:**	DLH
Test Type:	Rising Head	**Analysis By:**	CDH

Well and Aquifer Characteristics			Physical Analytical Parameters		
Casing Diameter:	2 inches	r_c	Effective Casing Radius:	0.1937 feet	
Borehole Diameter:	8 inches	r_w	Borehole Radius:	0.33 feet	
Depth to Bottom of Well:	62 feet	L_w	Saturated Well Length:	16.65 feet	
Depth to Top of Filter:	40 feet	L_e	Effective Well Length:	22 feet	
Depth to Static Water Level:	45.35 feet		Water Below Top of Filter		
Saturated Aquifer Thickness:	60 feet	H	Saturated Aquifer Thickness:	60 feet	
Effective Porosity of Filter:	30%	n	Effective Porosity of Filter:	30%	

Aquifer Property Analysis							
Method Parameters					y_0	Initial y of best fit line:	**0.65** feet
A	3.54	L_e/r_w	66.67		y_t	Terminal y of best fit line:	**0.32** feet
B	0.54	$\ln(R_e/r_w)$	2.68		dt	Time between y_0 and y_t:	27.17 min
C	0.00	Software Version:		1.00	K	**Hydraulic Conductivity**	**3.03E-05 cm/sec**



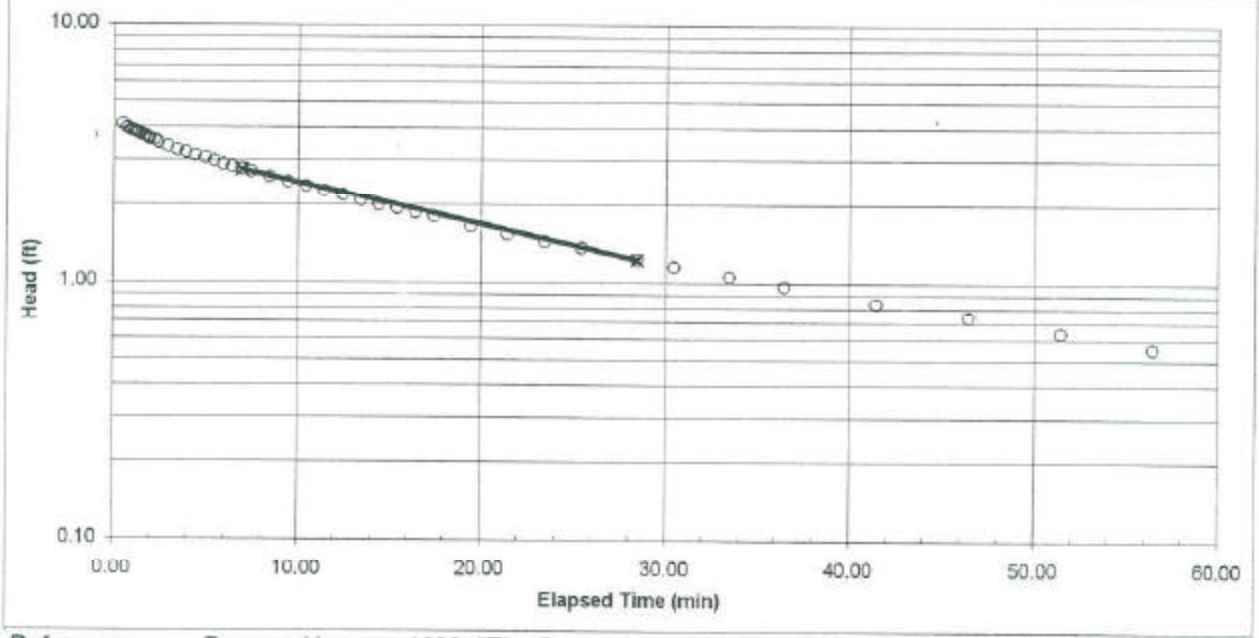
Reference: Bouwer, Herman; 1989; "The Bouwer and Rice Slug Test -- An Update"; GROUNDWATER, Vol. 27, No. 3, pp. 304 - 300.

Slug Test Data Analysis

Well Location:	PZR-4	Project No.:	983-3223
Test Date:	8/20/98	Project Name:	Solutia/RFI/AL
Drilling Method:	HSA	Testing By:	DLH
Test Type:	Rising Head	Analysis By:	JSR

Well and Aquifer Characteristics			Physical Analytical Parameters		
Casing Diameter:	2 inches	r_c	Effective Casing Radius:	0.1937 feet	
Borehole Diameter:	8 inches	r_w	Borehole Radius:	0.33 feet	
Depth to Bottom of Well:	62 feet	L_w	Saturated Well Length:	17.77 feet	
Depth to Top of Filter:	40 feet	L_e	Effective Well Length:	22 feet	
Depth to Static Water Level:	44.23 feet		Water Below Top of Filter		
Saturated Aquifer Thickness:	60 feet	H	Saturated Aquifer Thickness:	60 feet	
Effective Porosity of Filter:	30%	n	Effective Porosity of Filter	30%	

Aquifer Property Analysis							
Method Parameters					y_0	Initial y of best fit line:	**2.74** feet
A	3.54	L_e/r_w	66.67		y_t	Terminal y of best fit line:	**1.22** feet
B	0.54	$\ln(R_e/r_w)$	2.71		dt	Time between y_0 and y_t:	21.50 min
C	0.00	Software Version:		1.00	K	**Hydraulic Conductivity**	**4.42E-05 cm/sec**



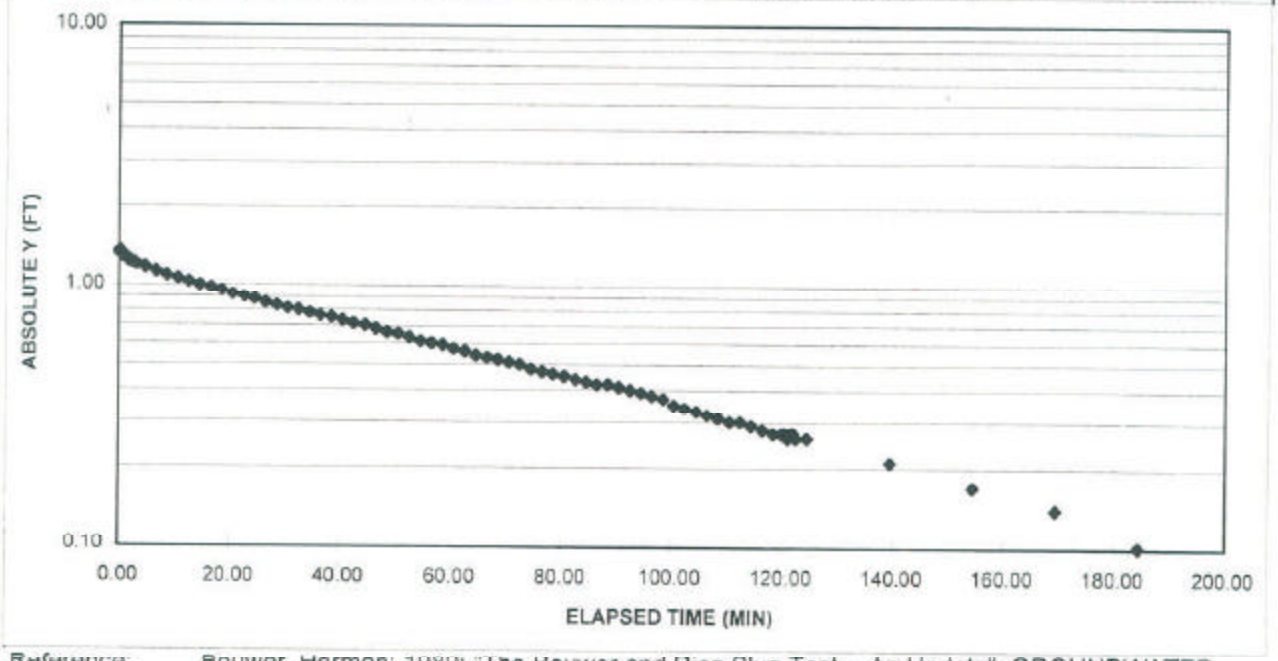
Reference: Bouwer, Herman; 1989; "The Bouwer and Rice Slug Test -- An Update"; GROUNDWATER, Vol. 27, No. 3, pp. 304 - 309.

Slug Test Data Analysis

Well Location:	PZR-5	Project No.:	983-3223
Test Date:	8/10/98	Project Name:	Solutia/RFI/AL
Drilling Method:	HSA	Testing By:	DLH
Test Type:	Falling Head	Analysis By:	JSR

Well and Aquifer Characteristics			Physical Analytical Parameters		
Casing Diameter:	2 inches	r_c	Effective Casing Radius:	0.0833 feet	
Borehole Diameter:	8 inches	r_w	Borehole Radius:	0.33 feet	
Depth to Bottom of Well:	47 feet	L_w	Saturated Well Length:	27 feet	
Depth to Top of Filter:	25 feet	L_e	Effective Well Length:	22 feet	
Depth to Static Water Level:	20 feet				
Saturated Aquifer Thickness:	60 feet	H	Saturated Aquifer Thickness:	60 feet	
Effective Porosity of Filter:	30%	n	Effective Porosity of Filter:	30%	

Aquifer Property Analysis							
Method Parameters					y_0	Initial y of best fit line:	0.85 feet
A	3.54	L_e/r_w	66.67		y_1	Terminal y of best fit line:	0.71 feet
B	0.54	$\ln(R_e/r_w)$	2.94		dt	Time between y_0 and y_1:	16.00 min
C	0.00	Software Version:		1.00	K	Hydraulic Conductivity	2.65E-06 cm/sec



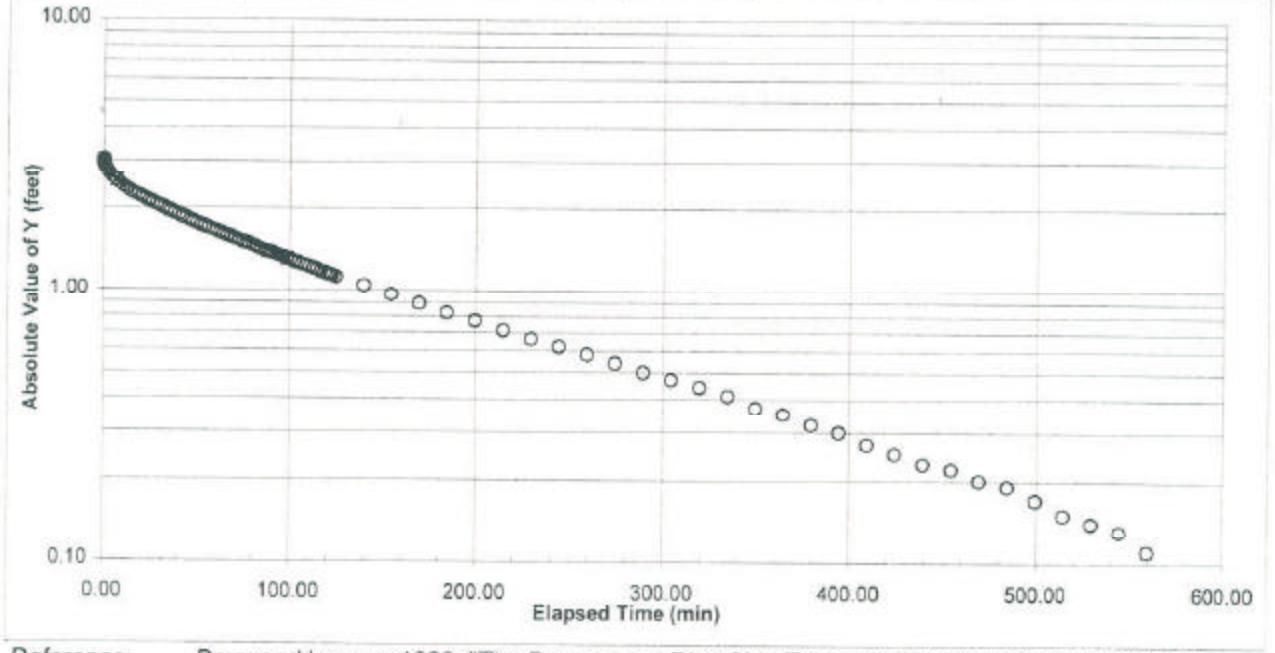
Reference: Bouwer, Herman; 1989; "The Bouwer and Rice Slug Test -- An Update"; GROUNDWATER, Vol. 27, No. 3, pp. 304 - 309.

Slug Test Data Analysis

Well Location:	PZR-6	Project No.:	983-3223
Test Date:	8/18/98	Project Name:	Solutia/RFI/AL
Drilling Method:	HSA	Testing By:	DLH
Test Type:	Falling Head	Analysis By:	JSR

Well and Aquifer Characteristics			Physical Analytical Parameters		
Casing Diameter:	2 inches	r_c	Effective Casing Radius:	0.0833 feet	
Borehole Diameter:	8 inches	r_w	Borehole Radius:	0.33 feet	
Depth to Bottom of Well:	47 feet	L_w	Saturated Well Length:	22.44 feet	
Depth to Top of Filter:	25 feet	L_e	Effective Well Length:	22 feet	
Depth to Static Water Level:	24.56 feet				
Saturated Aquifer Thickness:	60 feet	H	Saturated Aquifer Thickness:	60 feet	
Effective Porosity of Filter:	30%	n	Effective Porosity of Filter:	30%	

Aquifer Property Analysis							
Method Parameters					y_0	Initial y of best fit line:	2.52 feet
A	3.54	L_e/r_w	66.67		y_t	Terminal y of best fit line:	1.30 feet
B	0.54	$\ln(R_e/r_w)$	2.84		dt	Time between y_0 and y_t:	92.00 min
C	0.00	Software Version:	1.00		K	Hydraulic Conductivity	1.64E-06 cm/sec



Reference: Bouwer, Herman; 1989; "The Bouwer and Rice Slug Test -- An Update", GROUNDWATER, Vol. 27, No. 3, pp. 304 - 309.

TABLE I-1
Summary of Permeability Data
from Previous Investigations

Source	Range of Permeabilities (cm/sec) and [ft/day]	Comments
Soil Surveys of Calhoun County, Alabama, U.S. Department of Agriculture, 1958 and 1961	5.6×10^{-4} to 7.1×10^{-3} [1.6×10^{0} to 2.0×10^{1}]	Regional surficial soil data
Geraghty & Miller, Assessment of Hydrogeologic Conditions North of the Solid-Waste Landfill Area, Monsanto Company, Anniston, Alabama, March 10, 1982	1.2×10^{-8} to 1.2×10^{-7} [3.4×10^{-5} to 3.4×10^{-4}]	Clays (residuum) beneath plant area 5 to 20 feet in thickness
Geraghty & Miller, Assessment of Hydrogeologic Conditions at the Solid-Waste Landfill Area, Monsanto Company, Anniston, Alabama, December 3, 1980	1.3×10^{-9} to 1.0×10^{-7} [3.7×10^{-6} to 2.8×10^{-4}]	Clays beneath landfill area 10 to 20 feet in thickness
Law Engineering Testing Company, Report of Subsurface Investigation Proposed Waste Disposal Area, July 30, 1973	1.062×10^{-6} [3.010 to 10^{-3}] (laboratory permeability test)	Upper surficial layer of natural soils (residuum) in area of WMA-I
Law Engineering Testing Company, Report of Subsurface Investigation Proposed Waste Disposal Area, July 30, 1973	7.428×10^{-6} [2.106×10^{-2}] (laboratory permeability test)	Lower residual (residuum) soil zone derived from weathering of underlying formation in area of WMA-I

APPENDIX J

Risk Analysis for HEA

APPENDIX J-1

Standard Equations and Exposure Values to Calculate PRGs

The standard equations and exposure values used to calculate Preliminary Remediation Goals (PRGs) for carcinogenic and non-carcinogenic contaminants in industrial soil and tap water (USEPA, 2002a).

Combined Exposures to Carcinogenic Contaminants in Industrial Soil

$$C(\text{mg/kg}) = \frac{TR \times BW_a \times AT_c}{EF_a \times ED_a \left[\left(\frac{IRS_o \times CSF_o}{10^6 \, mg/kg} \right) + \left(\frac{SA_a \times AF_a \times ABS \times CSF_o}{10^6 \, mg/kg} \right) + \left(\frac{IRA_a \times CSF_i}{VF_s} \right) \right]}$$

Combined Exposures to Noncarcinogenic Contaminants in Industrial Soil

$$C(mg/kg) = \frac{THQ \times BW_a \times AT_n}{EF_a \times ED_a \left[\left(\frac{1}{RfD_o} \times \frac{IRS_o}{10^6 \, mg/kg} \right) + \left(\frac{1}{RfD_o} \times \frac{SA_a \times AF_a \times ABS}{10^6 \, mg/kg} \right) + \left(\frac{1}{RfD_i} \times \frac{IRA_a}{VF_s^a} \right) \right]}$$

* Use VFs for volatile chemicals (defined as having Henry's Law Constant [atm-m^3/mol] greater than 10^{-5} and a molecular weight less than 200 grams/mol) or PEF for non-volatile chemicals.

Ingestion and Inhalation Exposures to Carcinogenic Contaminants in Water

$$C(\mu g/L) = \frac{TR \times AT_c \times 1000 \mu g/mg}{EF_r \left[(IFW_{adj} \times CSF_o) + (VF_w \times InhFadj \times CSF_i) \right]}$$

Ingestion and Inhalation Exposures to Noncarcinogenic Contaminants in Water

$$C(\mu g/L) = \frac{THQ \times BW_a \times AT_n \times 1000 \mu g/mg}{EF_r \times ED_r \left[\left(\frac{IRW_a}{RfD_o} \right) + \left(\frac{VF_w \times IRA_a}{RfD_i} \right) \right]}$$

Standard Default Factors and Chemical Specific Values Used in PRG Calculations

Symbol	Definition (units)	Default	Reference
CSFo	Cancer slope factor, oral $(mg/kg\text{-}d)^{-1}$	CS	IRIS, HEAST, or NCEA
CSFi	Cancer slope factor, inhalation $(mg/kg\text{-}d)^{-1}$	CS	IRIS, HEAST, or NCEA
RfDo	Reference dose, oral (mg/kg-d)	CS	IRIS, HEAST, or NCEA
RfDi	Reference dose, inhalation (mg/kg-d)	CS	IRIS, HEAST, or NCEA
TR	Target cancer risk	10^{-6}	
THQ	Target hazard quotient	1	
BWa	Body weight, adult (kg)	70	RAGS (Part A), EPA 1989 (EPA/540/1-89/002)
ATc	Averaging time – carcinogens (days)	25550	RAGS (Part A), EPA 1989 (EPA/540/1-89/002)
ATn	Averaging time – noncarcinogens (days)	ED*365	
SAa	Exposed surface area, worker (cm^2/day)	3300	Dermal Assessment, EPA 2001 (EPA/540/R/99/005)
AFa	Adherence factor, worker (mg/cm^2)	0.2	Dermal Assessment, EPA 2001 (EPA/540/R/99/005)
ABS	Skin absorption (unitless):		Dermal Assessment, EPA 2001 (EPA/540/R/99/005)
	■ semi-volatile organics	CS	
	■ organics	CS	
	■ inorganics	CS	
IRAa	Inhalation rate – adult (m^3/day)	20	Exposure factors, EPA 1991 (OSWER No. 9285.6-03)
IRWa	Drinking water ingestion – adult (L/day)	2	RAGS (Part A), EPA 1989 (EPA/540/1-89/002)
IRSo	Soil ingestion – occupational (mg/day)	50	Exposure factors, EPA 1991 (OSWER No. 9285.6-03)
IFWadj	Ingestion factor – water [(L-yr)/(kg-dy)]	1.1	By analogy to RAGS (Part B) USEPA, 1991
InhFadj	Inhalation factor – air $[(m^3\text{-}yr)/(kg\text{-}dy)]$	11	By analogy to RAGS (Part B) USEPA, 1991
EFo	Exposure frequency – occupational (d/y)	250	Exposure factors, EPA 1991 (OSWER No. 9825.6-03)
EFr	Exposure frequency – residential (d/y)	350	Exposure factors, EPA 1991 (OSWER No. 9825.6-03)
EDo	Exposure duration – occupational (years)	25	Exposure factors, EPA 1991 (OSWER No. 9285.6-03)
EDr	Exposure duration – residential (years)	30	Exposure factors, EPA 1991 (OSWER No. 9285.6-03)
PEF*	Particulate emission factor (m^3/kg)	1.316×10^9	Soil Screening Guidance (EPA 1996a,b)
VFs*	Volatilization factor for soil (m^3/kg)	derived	Soil Screening Guidance (EPA 1996a,b)
VFw	Volatilization factor for water (m^3/kg)	0.5	RAGS (Part A), EPA 1989 (EPA/540/1-89/002)

CS = chemical specific value; derived values require additional formulae

*Use VF_s for volatile chemicals (defined as having a Henry's Law Constant $[atm\text{-}m^3/mol]$ greater than 10^{-5} and a molecular weight less than 200 grams/mol) or PEF for non-volatile chemicals.

APPENDIX J-2

Toxicological Profiles

METHYLENE CHLORIDE

The USEPA (2002) oral reference dose of 6E-02 mg/kg-day is based on liver toxicity in rats. The basis of this value is derived from a two-year drinking water study by the National Coffee Association (as cited in USEPA, 2002). A no observed adverse effect level (NOAEL) of 5.85 mg/kg-day was identified in the study. An uncertainty factor of 100 was applied this NOAEL to derive the reference dose.

USEPA (2002) classifies methylene chloride as a B2 or probable human carcinogen. USEPA believes there is inadequate human data, but sufficient animal evidence of carcinogenicity. An increase incidence of heptaocellular neoplasms and alveolar/bronchiolar neoplasms in male and female mice was observed. Also observed was an increased incidence of benign mammary tumors in both sexes of rats, salivary gland sarcomas in male rats and leukemia in female rats. USEPA (2002) notes there is some positive genotoxicity data to support this conclusion, although results in mammalian systems are generally negative.

The oral slope factor, 7.5E-03 $(mg/kg\text{-}day)^{-1}$, is the arithmetic mean of slope factors from the National Toxicology Program (NTP, 1986 as cited in USEPA, 2002) and the National Coffee Association (NCA, 1983 as cited in USEPA, 2002) data. Hepatocellular carcinomas and adenomas were observed in female B6C3F1 mice exposed via inhalation (NTP, 1986 as cited in USEPA, 2002). Hepatocellular cancer and neoplastic nodules were observed in male B6C3F1 mice dosed in drinking water (NCA, 1982 as cited in USEPA, 2002).

The inhalation unit risk of 4.7E-07 $(ug/m^3)^{-1}$ is based on data from the NTP (1986 as cited in USEPA, 2002) inhalation study. Combined hepatocellular and alveolarbronchiolar adenomas and carcinomas were observed in female B6C3F1 mice. The animals were dosed by inhalation at 0, 2000 and 4000 ppm (USEPA, 2002).

References

USEPA. 2002. Integrated Risk Information System online search. http://www.epa.gov/iris/

PARATHION (ETHYL PARATHION)

USEPA (2002) classifies parathion as a class C or possible human carcinogen, based on a single study which showed an increase in adrenal cortical tumors in female and male Osborne-Mendel rats, and positive trends for thyroid follicular adenomas and pancreatic islet-cell carcinomas in male rats. USEPA (2002) does not provide a quantitative assessment of cancer or noncancer effects.

For this human health risk assessment, and consistent with USEPA Region 9 (2002a), a value presented in the 1997 Health Effects Assessment Summary Tables was used. This value is the chronic oral reference dose of 6E-03 mg/kg-day, which is based on reduced cholinesterase activity in humans (USEPA, 1997).

References

USEPA. 1997. Health Effects Assessment Summary Tables. EPA-540-R-97-036. Solid Waste and Emergency Response.

USEPA. 2002. Integrated Risk Information System online search. http://www.epa.gov/iris/

USEPA, 2002a. Preliminary Remediation Goals. USEPA Region 9, Waste Program. http://www.epa.gov/region09/waste/sfund/prg/index.htm

APPENDIX J-3

Deed Restrictions

METHYL PARATHION

The USEPA (2002) chronic oral reference dose for methyl parathion is 2.5E-04 mg/kg-day. This value is based on a no observable effect level (NOEL) for hematological parameters. The two-year rat feeding study by Monsanto dosed sixty rats per sex per dose group at concentrations of 0.5, 5 or 50 ppm in the diet. One of 5 males in the low-dose group and 1 of 5 in the mid-dose group reportedly showed moderate degenerative changes in sciatic nerve preparations. A NOEL could not be adequately identified from this information. However, a NOEL of 0.5 ppm (0.025 mg/kg-day) can be established based on effects observed in hematological parameters. Hemoglobin, hematocrit, and RBCs were slightly reduced in mid- and high-dose males, and moderately reduced in high- dose females (USEPA, 2002).

Methyl parathion has not undergone a complete evaluation and determination for evidence of human carcinogenic potential (USEPA, 2002).

References

USEPA. 2002. Integrated Risk Information System online search. http://www.epa.gov/iris/

SULFOTEPP (TETRAETHYLDITHIOPYROPHOSPHATE)

Sulfotepp is a restricted use pesticide. It is registered for use in greenhouses primarily to control whiteflies on poinsettias prior to shipment. It is also labeled to control insects, mites and thrips on other ornamental plants. Sulfotepp is classified as a fumigant, applied via smoke generators. Annual usage is low (3,000 - 5,000 pounds): use has been declining in recent years (2002b).

USEPA (2002a) reports a chronic oral reference dose for sulfotepp of 5E-04 mg/kg-day based on plasma cholinesterase and RBC inhibition in rats. SPF Wistar rats were fed 0, 5, 10, 20 or 50 ppm tetraethyldithiopyrophosphate (TEDP) in the diet for 3 months. At the end of the study the only cholinesterase activity differed from controls. Rats fed 20 and 50 ppm exhibited depressed plasma and erythrocyte cholinesterase activity in a dose related manner. As a result, 20 ppm is the lowest observed adverse effect level (LOAEL) and 10 ppm, the no observed effect level (NOEL).

References

USEPA. 2002. Integrated Risk Information System online search. http://www.epa.gov/iris/

USEPA. 2002b. Sulfotepp Summary.
http://www.epa.gov/pesticides/op/sulfotepp.htm

4-NITROPHENOL (PARANITROPHENOL)

Acute (short-term) inhalation or ingestion of 4-nitrophenol in humans causes headaches, drowsiness, nausea, and cyanosis (blue color in lips, ears, and fingernails) (ATSDR, 1992). Contact with eyes causes irritation (ATSDR, 1992). The only toxicological signs of probable relevance to public health are hematological effects observed in animals exposed to 4-nitrophenol (ATSDR, 1992).

Induction of methemoglobinemia was observed in rats after acute inhalation exposure. This finding was reported in only one study, and it appears relevant because the formation of methemoglobin in humans and animals has been associated with aromatic amino and nitro compounds (ATSDR, 1992).

A provisional chronic oral reference dose of 8E-03 mg/kg-day provided by USEPA Region 9 (USEPA, 2002a) was used in this HEA.

References

Agency for Toxic Substances and Disease Registry (ATSDR). 1992. Toxicological Profile for Nitrophenols: 2-Nitrophenol and 4-Nitrophenol. US Department of Health and Human Services, Public Health Service, ATSDR, Atlanta, GA. http://www.atsdr.cdc.gov/toxprofiles/

USEPA, 2002a. Preliminary Remediation Goals. USEPA Region 9, Waste Program. http://www.epa.gov/region09/waste/sfund/prg/index.htm

PENTACHLOROPHENOL

USEPA (2002) has derived a chronic oral reference dose for pentachlorophenol of 3E-02 mg/kg-day based on a no observed adverse effect level (NOAEL) in rats. USEPA (2002) identified only one chronic study regarding oral exposure in the available literature. Rats (25 per sex) were dosed with 3, 10, or 30 mg/kg-day in diet. A reduced rate of body weight gain and increased specific gravity of the urine were observed in females dosed at 30 mg/kg-day. At 10 mg/kg-day or higher, pigmentation of the liver and kidneys was observed in females. The same effect was seen in males exposed to 30 mg/kg-day. The 3 mg/kg-day level of exposure was reported by USEPA (2002) as a chronic NOAEL.

The USEPA (2002) classifies pentachlorophenol as a B2 carcinogen, a probable human carcinogen. This classification is based on inadequate human data and sufficient evidence of carcinogenicity in animals. A statistically significant increase in the incidences of multiple biologically significant tumor types (hepatocellular adenomas and carcinomas, adrenal medulla pheochromocytomas and malignant pheochromocytomas, and/or hemangiosarcomas and hemangiomas) in one or both sexes of B6C3F1 mice using two different preparations of pentachlorophenol were observed. Two uncommon tumors (adrenal medulla pheochromocytomas and hemangiomas/hemangiosarcomas) were observed with both preparations. Results from cytogenic studies, which provide some indication that pentachlorophenol has clastogenic potential, further support this classification (USEPA, 2002).

The USEPA (2002) derived oral slope factor for pentachlorophenol is 1.2E-1 $(mg/kg\text{-}day)^{-1}$. This value is based on hepatocellular adenoma/carcinoma, pheochromocytoma/malignant pheochromocytoma, hemangiosarcoma/hemangioma (pooled incidence) in female B6C3F1 mice (USEPA, 2002).

References

USEPA. 2002. Integrated Risk Information System online search. http://www.epa.gov/iris/

POLYCHLORINATED BIPHENYLS (PCBs)

The USEPA (2002) classifies PCBs as a B2 or a probable human carcinogen. The basis for this classification is liver tumors in female rats exposed to Aroclors 1260, 1254, 1242 and 1016, and in male rats exposed to 1260. The human carcinogenicity data is equivocal.

The USEPA (2002) oral slope factor is based on liver hepatocellular adenomas, carcinomas, cholangiomas, or cholangiocarcinomas observed in female Sprague-Dawley rats. USEPA (2002) recommends a tiered approach to determine the appropriate cancer potency values to use for PCB mixtures. An upper bound slope factor of 2 $(mg/kg\text{-}day)^{-1}$ is suggested for use for food chain exposure, sediment or soil ingestion, dust or aerosol inhalation, dermal exposure (if an absorption factor has been applied), presence of dioxin-like, tumor-promoting, or persistent congeners and for early-life

exposure. For ingestion of water-soluble congeners, inhalation of evaporated congeners and for dermal exposure (if no absorption factor has been applied) the recommended upper-bound value is 0.4 $(mg/kg\text{-}day)^{-1}$. Lastly, in circumstances where congeners of 4 chlorines or more comprise less than 0.5% of total PCBs, an upper-bound value of 0.07 $(mg/kg\text{-}day)^{-1}$ is recommended.

USEPA (2002) has derived Aroclor specific chronic oral reference doses. For Aroclor 1254 the value is 2E-05 mg/kg-day, based on immunological responses in rhesus monkeys including ocular exudate, inflamed and prominent Meibomian glands, distorted growth of finger and toe nails, and decreased antibody (IgG and IgM) response to sheep erythrocytes. A chronic oral reference dose of 7E-05 mg/kg-day has been derived by the USEPA (2002) for Aroclor 1016. This value is based on reduced birth weights in rhesus monkeys.

References

USEPA. 2002. Integrated Risk Information System online search. http://www.epa.gov/iris/

ARSENIC

USEPA (2002) has derived a chronic oral reference dose for arsenic of 3E-04 mg/kg-day. This value is based on a no observed adverse effect level (NOAEL) for hyperpigmentation, keratosis and possible vascular complication following chronic oral exposure in humans. An increased incidence of blackfoot disease, a significant adverse effect that increases with age and dose has reportedly been related to the presence of arsenic in the drinking water of residents southwestern Taiwan (Tseng, 1977 as cited in USEPA, 2002). However, a recent work by (Lu, 1990 as cited in USEPA, 2002) indicates that this observation may not be strictly due to arsenic exposure.

Increased incidences of hyperpigmentation and keratosis were seen with increasing age and dose by Tseng et al. (1968 as cited in USEPA, 2002). The control group described in Tseng et al. (1968 as cited in USEPA, 2002) shows no evidence of skin lesions and presumably blackfoot disease, although this latter point is not explicitly stated. This group is considered a NOAEL.

The arithmetic mean of the arsenic concentration in the wells used by the individuals in the NOAEL group is 9 ug/L (range: 1-17 ug/L) (Abernathy et al., 1989 as cited in USEPA, 2002). Using estimates provided by Abernathy et al. (1989), the NOAEL dose for both food and water are as follows: NOAEL - [9 ug/L x 4.5 L/day + 2 ug/day (contribution of food)] x (1/55 kg) = 0.8 ug/kg-day.

USEPA (2002) classifies arsenic as a class A or known human carcinogen. This is based on an increased lung cancer mortality observed in humans exposed mainly through inhalation. Also, increased mortality from multiple internal organ cancers (liver, kidney, lung, and bladder) and an increased incidence of skin cancer were observed in populations consuming drinking water high in inorganic arsenic (USEPA, 2002).

The oral slope factor, 1.5E+00 $(mg/kg\text{-}day)^{-1}$, was based on the prevalence of skin cancer. It was assumed the skin cancer risk in the US population was similar to that in the Taiwanese population. The USEPA (2002) inhalation unit risk of 4.3E-03 $(ug/m^3)^{-1}$ is based lung cancer in occupationally exposed males.

References

USEPA. 2002. Integrated Risk Information System online search. http://www.epa.gov/iris/

BARUIM

The USEPA (2002) chronic oral reference dose for barium is 7E-02 mg/kg-day. It is derived based on a no observed adverse effect level (NOAEL) in humans. The potential for hypertension to develop has been seen in experimental animals exposed acutely and chronically to high concentrations of barium. As a result, human studies were initiated to examine the potential effect exposure to lower concentrations of barium had on blood pressure, electrocardiographic events, serum and urinary markers of toxicity following barium exposure. Barium induced toxicity was not seen in exposed humans and as a result a dose at which no adverse effects were observed was identified. This dose serves as the basis for derivation of the reference dose (USEPA, 2002).

The chronic inhalation reference dose, 1.4E-04 mg/kg-day, is based on fetotoxicity in rats dosed via inhalation for 4 months. This value is provided in the Health Effects Assessment Summary Tables (USEPA, 1997).

USEPA (2002) classifies Barium as a group D carcinogen, not classifiable as to human carcinogenicity.

References

USEPA. 2002. Integrated Risk Information System online search. http://www.epa.gov/iris/

BERYLLIUM

The chronic oral reference dose for beryllium is 2E-03 mg/kg-day (USEPA, 2002). USPA (2002) derives this value using dose-response modeling of the data for small intestinal lesions in male and female dogs. The beagle dogs in groups of 5 male and 5 female animals were fed diets (for 1 h per day) of 0, 5, 50, or 500 ppm beryllium (as beryllium sulfate tetrahydrate) for 172 weeks. A benchmark dose (the lower 95% confidence limit on the dose from the maximum likelihood estimate [MLE] of a 10% relative change) of 0.46 mg/kg-day (MLE = 1.4 mg/kg-day) was derived from this data, and an uncertainty factor of 300 was applied.

The USEPA (2002) reference concentration for beryllium is 2E-02 ug/m^3. It is based on sensitization and progression to chronic beryllium disease in occupationally exposed humans. Chronic beryllium disease is a chronic inflammatory lung lesion that can result from inhalation exposure to beryllium. It involves a beryllium-specific immune response and is characterized by granuloma formation (USEPA, 2002).

USEPA (2002) classifies beryllium as a probable human carcinogen (B1). This conclusion is supported by limited evidence of lung cancer in occupationally exposed humans and sufficient evidence of lung cancer in animals. The animal evidence includes lung cancer in rats and monkeys inhaling beryllium, lung tumors in rats exposed to beryllium via intratracheal instillation, and osteosarcomas in rabbits and possibly mice receiving intravenous or intramedullary injection (USEPA, 2002).

The inhalation unit risk value is 2.4E-03 $(ug/m^3)^{-1}$, based on lung cancer in occupationally exposed human males (USEPA, 2002).

References

USEPA. 2002. Integrated Risk Information System online search. http://www.epa.gov/iris/

CHROMIUM

Hexavalent chromium (Cr6) is a group A or known human carcinogen by the inhalation route of exposure (USEPA, 2002). By the oral route, the carcinogenicity of Cr6 cannot be determined (group D). This assessment is based on epidemiological studies of chromium-exposed workers. Although workers were exposed to both trivalent chromium (Cr3) and Cr6, only Cr6 has been found to be carcinogenic in animal studies and as such, only Cr6 is classified as a human carcinogen (USEPA, 2002). Trivalent chromium has not been shown to be carcinogenic by any route of exposure (USEPA, 2002).

In dealing with the two species found in the environment (i.e., total chrome), and consistent with the USEPA (2002a) Region 9 approach used in developing the preliminary remediation goals, the inhalation unit risk is 1.2E-02 $(ug/m^3)^{-1}$:

> *For Chromium 6 (Cr6), IRIS shows an air unit risk of 1.2E-2 per (ug/cu.m) or expressed as an inhalation cancer slope factor (adjusting for inhalation/body weight) of 42 $(mg/kg\text{-}day)^{-1}$. However, the supporting documentation in the IRIS file states that these toxicity values are based on an assumed 1:6 ratio of Cr6:Cr3. Because of this assumption, we in Region 9 prefer to present PRGs based on these cancer toxicity values as "total chromium" numbers. In the PRG tables, we also include a Cr6 specific value (assuming 100% Cr6) that is derived by multiplying the "total chromium" value by 7, yielding a cancer potency factor of 290 $(mg/kg\text{-}day)^{-1}$. This is considered to be an overly conservative assumption by some within the Agency.*

The unit reference concentration is based on lung cancer in occupationally exposed humans. The epidemiological data show lung cancer rates increase with the level of exposure to Cr6 (USEPA, 2002).

References

USEPA. 2002. Integrated Risk Information System online search. http://www.epa.gov/iris/

USEPA, 2002a. Preliminary Remediation Goals. USEPA Region 9, Waste Program. http://www.epa.gov/region09/waste/sfund/prg/index.htm

LEAD

Lead toxicity is assessed using pharmacokinetic models. The EPA's Integrated Exposure Uptake Biokinetic (IEUBK) Model is designed to predict the probable blood lead concentrations for children between six months and seven years of age who have been exposed to lead through various sources (air, water, soil, dust, diet and *in utero* contributions from the mother) (TRW, 2002). The adult lead model assesses risks associated with non-residential adult exposures to lead in soil (TRW, 2002).

The populations most susceptible to lead health effects are young children (USEPA, 1994) and women of child-bearing age (fetal exposure; TRW, 2002). As a health-based goal, EPA has sought to limit the risk to young children of having elevated blood lead concentrations. Current Office of Solid Waste and Emergency Response (OSWER) guidance calls for the establishment of cleanup goals to limit childhood risk of exceeding 10 µg/dL to 5% (USEPA, 1994).

USEPA (2002) considers lead to be a probable human carcinogen (B2) with sufficient animal evidence and inadequate human evidence. Rat and mouse assays have shown significant increases in renal tumors following dietary and subcutaneous exposure to soluble lead salts. No quantitative assessment of carcinogenicity (e.g., slope factors or unit risk values) is available (USEPA, 2002)

References

Technical Review Workgroup for Lead (TRW). 2002.
http://www.epa.gov/superfund/programs/lead/trwhome.htm

U.S. EPA. 1994. Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities. OSWER Directive No. 9355.4-12. Office of Emergency and Remedial Response, Washington, D.C. EPA/540/F-94/043, PB94-963282.

USEPA. 2002. Integrated Risk Information System online search. http://www.epa.gov/iris/

MANGANESE

The chronic oral reference dose of 1.4E-01 mg/kg-day was derived by the USEPA (2002). The agency concluded that an intake of 10 mg/day in the human diet was without deleterious effects. This value is divided by a body weight of 70 kg resulting in the oral reference dose (1.4E-01). Manganese is an essential element and as a result any assessment of risks must account for both the essentiality and the toxicity of manganese. USEPA (2002) concludes, "The reference dose is estimated to be an intake for the general population that is not associated with adverse health effects; this is not meant to imply that intakes above the reference dose are necessarily associated with toxicity. Some individuals may, in fact, consume a diet that contributes more than 10 mg Mn/day without any cause for concern."

The USEPA (2002) chronic oral reference dose of 1.4E-01 mg/kg day includes manganese from all sources, including diet. According to USEPA Region 9 (2002a) "The author of the IRIS assessment for manganese recommends that the dietary contribution from the normal U.S. diet (an upper limit of 5 mg/day) be subtracted when evaluating non-food (e.g. drinking water or soil) exposures to manganese, leading to a RfD of 0.071 mg/kg-day for non-food items." USEPA (2002) also recommends a modifying factor of 3 be applied if the reference dose is being used to assess nondietary exposures. As a result and consistent with USEPA Region 9, the reference dose of 2.4E-02 mg/kg-day was used in the HEA.

USEPA, 2002 has derived a chronic inhalation reference concentration of 5E-05 ug/m^3. This value is based on impaired neurobehavioral function following occupational exposure to manganese dioxide.

Manganese is not classifiable as to its human carcinogenicity (USEPA, 2002)

References

USEPA. 2002. Integrated Risk Information System online search. http://www.epa.gov/iris/

USEPA, 2002a. Preliminary Remediation Goals. USEPA Region 9, Waste Program. http://www.epa.gov/region09/waste/sfund/prg/index.htm

MERCURY

Consistent with USEPA Region 9 (2002a) a chronic oral reference concentration of 3.0E-04 mg/kg-day was used for mercury and compounds (USEPA, 2002). The reference dose is back calculated from a drinking water equivalent level (DWEL) for mercuric chloride of 0.01 mg/L. The DWEL was based on the weight of evidence from studies using the Brown Norway rat and limited human tissue data. The adverse effect used in the derivation of these values was mercuric-mercury induced autoimmune glomerulonephritis. The Peer Review Workshop on Mercury Issues in Cincinnati (1987 as cited in USEPA, 2002) reached these conclusions by consensus.

USEPA (2002) classifies mercuric chloride a possible human carcinogen (C). This classification is based on the absence of human data and limited animal evidence of carcinogenicity.

References

USEPA. 2002. Integrated Risk Information System online search. http://www.epa.gov/iris/

USEPA, 2002a. Preliminary Remediation Goals. USEPA Region 9, Waste Program. http://www.epa.gov/region09/waste/sfund/prg/index.htm

NICKEL

USEPA (2002) has derived a chronic oral reference dose for nickel (soluble salts) of 2.0E-02 mg/kg-day based on decreased body and organ weights in rats. The two year feeding study summarized by USEPA (2002) dosed rats at 0, 100, 1000 or 2500 ppm nickel (0, 5, 50 and 125 mg/kg bw) in diet. A significant decrease in body weight was seen in high dose male and female rats compared to controls. Significantly higher heart-to-body weight ratios and lower liver-to-body weight ratios were seen in 2500 and 1000 ppm dose groups of female rats. No significant effects were reported at 100 ppm (NOAEL). USEPA (2002) noted: "In this study, 2-year survival was poor, particularly in control rats of both sexes (death: 44/50), raising some concern about the interpretation of the results of this study."

The carcinogenic potential of nickel soluble salts has not been evaluated by USEPA (2002).

References

USEPA. 2002. Integrated Risk Information System online search. http://www.epa.gov/iris/

VANADIUM

Consistent with USEPA Region 9 (2002a), a value of 7E-03 mg/kg-day was used in this HEA. This chronic oral reference dose is based on a no observed adverse effect level (NOAEL) in rats given vanadium in drinking water.

References

Agency for Toxic Substances and Disease Registry (ATSDR). 1992. Toxicological Profile for Vanadium. US Department of Health and Human Services, Public Health Service, ATSDR, Atlanta, GA. http://www.atsdr.cdc.gov/toxprofiles/

USEPA. 1997. Health Effects Assessment Summary Tables. EPA-540-R-97-036. Solid Waste and Emergency Response.

USEPA, 2002a. Preliminary Remediation Goals. USEPA Region 9, Waste Program. http://www.epa.gov/region09/waste/sfund/prg/index.htm

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CALHOUN COUNTY)

AFFIDAVIT

KNOW ALL MEN BY THESE PRESENTS that Whereas, the undersigned, Solutia Inc., Anniston, Alabama, is the sole owner of record of the following described real estate, to wit:

Parcel 1:

Commencing at the southwest corner of the SW¼ of NE¼ Section 12, T. 16 S, R. 7 E; thence easterly along the south line of said SW¼ of NE¼, a distance of 1,165 feet, more or less, to the northwest right of way line of Old Alabama Highway No. 202 and the point of beginning of the property herein to be conveyed; thence northeasterly along said northwest right of way line, a distance of 210 feet, more or less, to a point that is 80 feet southwesterly of and at right angles to the office revised centerline of a connector road to Project No. F-200(9);thence Southeasterly along a curve to the left (concave northeasterly) having a radius of 1,989.86 feet parallel with said office revised centerline, a distance of 215 feet, more or less, to the southeast right of way line of said Old Alabama Highway No. 202; thence southwesterly along the southeast right of way line of said Old Alabama Highway No. 202, a distance of 670 feet, more or less, to a point that is 125 feet northwesterly of and at right angles to the centerline of Project No. F-200 (9); thence southwesterly along a line, a distance of 305 feet, more or less, to a point on the northwest right of way line of said Old Alabama Highway No. 202 that is 95 feet northwesterly of and at right angles to the centerline of said project; thence northeasterly along the northwest right of way line of said Old Alabama Highway No. 202, a distance of 892 feet, more or less, to the point of beginning.

Said strip of land lying in the SW¼ of NE¼ and the NW¼ of SE¼, Section 12, T. 16 S, R. 7 E, and containing 1.54 acres, more or less.

Parcel 2:

A parcel of land in the southwest ¼ of Section 12, Township 16 South, Range 7 East, more particularly described as follows:

Commence at the northwest corner of Section 12, Township 16 South, Range 7 East, thence S 34 degrees 20' 06" E 3197.76 feet to the point of beginning; thence S 89 degrees 50' 02" E 452.23 feet; thence S 00 degrees 18' 13" E 329.82 feet; thence N 89 degrees 46' 10" E 195.01 feet; thence S 00 degrees 18' 55" E 257.56 feet; thence S 33 degrees 03' 55" E 484.29 feet; thence S 71 degrees 13' 19" W 145.35 feet; thence S 72

degrees 22' 20" W 157.67 feet; thence S 73 degrees 49' 01" W 97.04 feet; thence N 89 degrees 14' 44" W 548.38 feet; thence N 00 degrees 45' 52" E 1108.21 feet to the point of beginning.

Parcel 3:
The NE-¼ of Section 13 and the SE-¼ of the NW-¼ of Section 13, Township 16, S., Range 7, E.

Parcel 4:
20 acres in the SE-¼ of the SW-¼ of Section 7, Township 16, Range 8, lying outside of the City Limits of the City of Anniston.

Parcel 5:
The W-½ of the NW-¼ of Section 18, Township 16, Range 8.

Parcel 6:
All of Blocks 6, 7, 8, 34, 35 and 36, according to the map of O'Connell's Addition to Montrose Addition, and a tract starting at the NW corner of Lot 1 in Block 6, running north along the east line of Parkwin Street to the south line of 8th Street, running east along the south line of 8th Street 255 feet, more or less to a point on the west right of way of Clydesdale Avenue, running thence south parallel to Parkwin Street 200 feet more or less to the northeast corner of Lot 11 in said Block 6, running west parallel to 8th Street a distance of 255 feet, more or less, to the point of beginning.

Parcel 7:
A tract containing 22 acres more or less in the NE-¼ of the SW-¼ of Sec. 12, Twp. 16, S., Range 7, E., which is the east 26 acres of said NE-¼ of said SW-¼, excepting a tract which begins at a point 470 feet east of the northwest corner of said NE-¼ of said SW-¼, running thence S 00° 59' W 274 feet, running thence east 225 feet, running thence S 00° 59' W 38.25 feet, running thence East 428.7 feet, running thence N 00° 05' W 312.4 feet to the east and west median line of said Section 12, running thence west along said Median line 648.4 feet to the point of beginning which excepted tract contains 4 acres, more or less, sold to the Alabama Power Company; and 34 acres in the NE-¼ of the SE¼ lying outside the city limits of Anniston; and the S-½ of the SE-¼ and a tract in the SE-¼ of the NW¼ being 810 feet on the west 229 feet on the north 925 feet on the east and 200 feet on the south. bounded north by the L. & N. Railroad, east by the north and south half-section line and south by 5th Street; and the mineral rights in the SE-¼ of the SW-¼, except the mineral rights in a tract described as commencing at the SE corner of the W-½ of the SE-¼ of the SW-¼ of Sec. 12, Twp. 16, Range 7 East, thence running west 210 feet, thence north 910 feet to a point of beginning, thence running north 199 feet to the Bankhead Highway, thence westerly along the said Bankhead Highway 230 feet, thence south 107 feet, thence east 210 feet to the point of beginning, sold to R. C. Green, all in Section 12, Twp. 16, Range 7.

Parcel 8:

The portions of the following-described and streets and alleys as previously vacated, to wit:

Parkwin Street, extending from the north property line of said Monsanto Chemical Company, a corporation, and being from a point even with the north boundary lines of Blocks 7 and 6, as shown by said map, and extending from said point south until said Parkwin Street intersects with the said Bankhead Highway, the said Bankhead Highway being the property line of said Monsanto Chemical Company, a corporation, at the southern extremity of the said Parkwin Street;

Also Duncan Street, beginning its point of intersection with the north property line of said Monsanto Chemical Company, a corporation, and extending from said point south until said Duncan Street intersects with the Bankhead Highway, being the South property line of said Monsanto Chemical Company, a corporation, and along said Duncan Avenue;

Also Seventh Street, beginning at a point where it intersects with the east property line of the Monsanto Chemical Company, and even with the eastern boundary of Blocks 6 and 9 of said the Map of Montrose Land Company, and thence extending westwardly for the full length of said Seventh Street, to the west property of the said Monsanto Chemical Company;

Also Fifth Street, from the point where it intersects with the east property line of said Monsanto Chemical Company, being the west boundary line of said Bankhead Highway at said point, and extending from said point westwardly to a point even with the west boundary lines of Blocks 19 and 20, and thence extending westwardly to a point even with the west boundary line of said Monsanto Chemical Company, a corporation, and being a point even with the fence, as now located on the west property line of said Monsanto Chemical Company, a corporation, and east of said Fifth Street as extended and as now located;

Also, a 20 feet wide alley beginning at the point of intersection of the east line of Lot 9, Block 11, Montrose Addition to the City of Anniston, thence continue southward to its intersection with the south line of Lot 9, Block 1, of said Montrose Springs Addition;

Also, a 30 feet wide east-west alley running from the southwest corner of Lot 19, Block 13, Montrose Springs Addition, thence east along the south lines of Blocks 13, and 14 to the west line of a 20 feet wide north-south alley running along the east line of Block 14, Montrose Springs Addition;

Also, a 20 feet wide north-south alley running from the point of intersection of the east line of Lot 36, Block 13, Montrose Springs Addition southward to the southeast line of Lot 19, Block 13, of said Addition;

Also, a 20 feet wide alley running from the southeast corner of Lot 7, Block 4, Montrose Addition to the City of Anniston, thence northward 320 feet more or less to the North line of Lot 1, of said Block 4 (if extended);

END OF DESCRIPTION

And Whereas, Solutia Inc., the said property, or portions thereof has over time been used for or in connection with the manufacture, storage and disposal of certain hazardous substances,

And Whereas, Solutia Inc. is desirous of introducing controls on the future usage of the property taking into account its current and past usage,

Now Therefore, Solutia Inc. does hereby establish that the described property shall be perpetually restricted as follows:

1. The premises shall be restricted for use for industrial purposes only. Industrial uses permitted include manufacturing, office space and light industrial, but exclude residential housing and similar uses.

2. Ground water underlying said real property is restricted so as to provide that it shall not be used or otherwise consumed for potable, industrial, agricultural or other supply purposes. Such restrictions shall in no event, however, limit or otherwise inhibit or prevent the monitoring, sampling, investigation or remediation of ground water underlying the property.

IN WITNESS WHEREOF, David L. Cain, as Plant Manager of Solutia Inc. has hereunto set his hand and seal this 16th day of October, 2002.

Solutia Inc.

By: David L. Cain
Its: Plant Manager

STATE OF ALABAMA)
:
CALHOUN COUNTY)

I, the undersigned, a Notary Public in and for said State and County, do hereby certify that David L. Cain as Plant Manager for Solutia Inc., whose name is signed to the

foregoing conveyance, and who is known to me, acknowledged before me on this day that, being informed of the contents of said conveyance, he with full authority executed to same voluntarily on the day the same bears date.

Given under my hand and seal this the 16th day of October, 2002.

Cathy W. Scott
NOTARY PUBLIC

CATHY W. SCOTT NOTARY PUBLIC

Recording Fee	21.00
TOTAL	21.00

APPENDIX J-4

Derivation of Groundwater to Surface Water Dilution Factor

Derivation of Groundwater to Surface Water Dilution Factor

Certain constituents (chiefly naturally occurring metals such as lead, manganese, and nickel) were detected in perimeter monitoring wells above screening levels in the northeast portion of the Solutia facility. The northeast portion of the Solutia facility is monitored by shallow residuum monitoring wells OW-9, OW-10, OWR-01S, OWR-9S and CB-85 and deep residuum wells OWR-01D and OWR-06D. ADEM has expressed a concern that these constituents could be leaving the Solutia facility and discharging into surface waters. While there is no direct evidence of this off-site migration and discharge, Solutia has conducted a hypothetical analysis to evaluate what the expected concentrations might be under such a hypothetical scenario.

Fate and transport processes of naturally occurring metal constituents are complex. These processes depend on a variety of geochemical parameters (such as pH and redox conditions), formation parameters (such as clay mineralogy, and cation exchange capacity) as well as transport parameters including hydraulic gradient and conductivity, as well as type, size, and concentration of the source term. As constituents travel within the aquifer, they will be subject to adsorption, some of which will be reversible, some of which will be non-reversible. In addition, as the constituents travel along the flow path, constituents in groundwater will be subject to mixing as a result of hydrodynamic dispersion within the aquifer and infiltrating rainwater. In addition, the most significant mixing component will occur as groundwater discharges to the receiving surface water. Mixing will occur with groundwater discharging into the receiving surface water from the opposite side of the surface water, as well as upstream water in the surface water feature.

As mentioned above, there are no data to be used to model the hypothetical transport of constituent from the northeast section of the Solutia site. However, with simplifying assumptions considering only mixing with the receiving water, a prediction of a hypothetical constituent concentration in the receiving waters is possible.

For the Solutia facility, the receiving water to the northeast is Snow Creek (at about the confluence with the 11th Street Ditch). Snow creek is about 3,000 feet from the OW-9 and OW-10 area as measured in a down gradient direction. As reported in the Off-Site RFI Work Plan (BB&L, 1999), flow in Snow Creek at this location averages between 5 and 6 cubic feet per second (cfs). If the lower end to the flow range (5 cfs) is chosen, and the units changed to cubic feet per day (cfd), the flow in Snow Creek above the discharge of groundwater from the northeast portion of the Solutia facility can be estimated at 432,000 cfd.

Hypothetical discharge from the northeast area of the Solutia facility was assumed to be as a single plume with a width of about 400 feet (distance between OW-9 and OWR-01S). It was also assumed that the plume was 50 feet deep (approximate one-half thickness of the residuum in this area). It should be noted that both of these assumptions are

extremely conservative. In fact the detections of constituents in wells in the northeast was generally sporadic. For the most part, a constituent might be present in OW-9 but not in OW-10. Alternately, a constituent might be present in both OW-9 and OW-10, but not in OWR-1S. In addition, it is highly unlikely that groundwater from the entire shallow residuum is discharging into the creek.

There is no available groundwater flow information in the area between the Solutia facility and the hypothetical discharge zone. For the hypothetical discharge model, groundwater flow conditions (hydraulic conductivity and hydraulic gradient) present across site are presumed present in the area between the site and Snow Creek. As such, the assumed hydraulic conductivity is 8×10^{-2} ft/d and the gradient is assumed to be 0.015 ft/ft.

The volumetric flow to the discharge zone is represented by the product of hydraulic conductivity (8×10^{-2} ft/d) multiplied by the hydraulic gradient (0.015 ft/ft) multiplied by the cross-sectional area (400 ft x 50 ft). Thus, the volumetric flow is 24 cfd.

It is reasonable to assume that the same volume of flow is entering Snow Creek from the opposite side of the creek. This water can be assumed to be non-impacted. The water flowing in Snow Creek from above the discharge zone is also assumed to be non-impacted. The total flow after the mixing in the discharge zone would be a summation of the three erms (432,000 cfd + 24 cfd + 24 cfd), which equals 432,048 cfd. The effect of this mixing can be expressed as a concentration reduction factor as 24 cfd divided by 432,048 cfd. Stated another way, the concentration in Snow Creek would be approximately 18,000 times lower than the initial concentrations after the mixing zone.

APPENDIX J-5

DermalAbsorption of PCBs

Dermal Absorption of PCBs

In the development of the PRG for PCBs in soil, Region 9 has adopted a dermal absorption factor of 14% for based on a recommendation from the USEPA dermal work group (USEPA, 2001). The change in the absorption factor from 6% (USEPA, 1992b) was attributed to the recent study by Wester et al. (1993a). However, there are serious questions concerning the methodology employed in this study, the relevance of the findings to the situation likely encountered at the Solutia facility, and whether the USEPA considered all relevant information when making its decision to use these data for regulatory purposes. The following paragraphs highlight the specific areas which call into question the scientific justification for adopting a 14% dermal absorption factor for PCBs.

In Wester et al. (1993a), PCB-contaminated soil was applied to the abdominal skin of female rhesus monkeys for a period of 24 hours. Following removal, absorption of PCBs (Aroclor 1242 and Aroclor 1254) was determined by urinary and fecal excretion over a 5 week period. The amount of PCB excreted following dermal exposure was compared to the amount excreted following an intravenous administration (assumed to represent 100% absorption). Although the study provided interesting information on the kinetics of dermal absorption of PCBs in rhesus monkeys, there are significant questions as to the direct extrapolation to the general human population. The following paragraphs highlight a number of the concerns we have regarding the applicability and relevance of the absorption factor reported by Wester and co-workers, particularly for use in developing risk-based remediation goals. This listing is not complete, nor have we addressed the various issues in an exhaustive manner. Rather, the appendix is provided with the intent of briefly outlining those technical issues that are most significant in terms of direct application of these research results to potential cleanup levels.

1. Appropriateness of the Rhesus Monkey as a Surrogate for Humans

The rhesus monkey has been shown to be a uniquely sensitive organism with regard to PCBs, even among non-human primates. Tryphonas et al. (1986) investigated the relative toxicity of Aroclor 1254 in the rhesus monkey relative to the cynomolgus monkey. These investigators found that when individuals from these two species were given the same oral dose of Aroclor 1254 (200 µg/kg body weight/day), the rhesus accumulated PCBs at almost twice the rate as the cynomolgus, achieving a steady-state body burden twice that of the cynomolgus. The rhesus monkeys also exhibited far greater frank toxicity from this dose of PCBs. This lead the authors to conclude:

> *The increased susceptibility of the rhesus coincided with higher blood and adipose tissue PCB concentrations. In view of these data, this was interpreted to mean that the increased susceptibility of the rhesus may be a reflection of faster absorption and/or slower elimination.* (emphasis added)

The rhesus monkey is also more sensitive to PCB mediated toxicity than humans (Kimbrough, 1995). Since it is clear that the pharmacokinetics of PCBs in the rhesus is significantly different from another closely related non-human primate, one can only speculate as to the lack of concordance between the rhesus and humans. Such concordance in the distribution, metabolism and elimination is at the heart of extrapolating these findings for use in human health risk assessments, therefore the adoption of a 14% absorption factor requires a substantial amount of additional information.

Also, USEPA's *Dermal Exposure Assessment: Principals and Application* (USEPA, 1992b) cites a study by one of Wester's co-authors (i.e., Maibach) as demonstrating that the permeability in the monkey is greater than in human skin. The USEPA concluded that this study demonstrated that "in vitro percutaneous absorption of nitroaromatic compounds to be similar in humans and monkey skin, but the excised human skin tended to be somewhat less permeable" (emphasis added) then excised monkey skin. For example, 2,4-dinitrochlorobenzene, a chemical with a log $K_{O/W}$ of 1.9, 32.5% of the dose was absorbed by excised human skin while 48.4% of the dose was absorbed by monkey skin. Similarly, USEPA refers to a report from Marzulli et al. (1969) which ranked the in vitro percutaneous absorption by the monkey as higher than human skin.

In 1990, Wester and co-workers reported that the in vivo percutaneous absorption of DDT (in acetone) was nearly two-fold higher in the rhesus monkey (18.9%) than in man (10.4%), although due to intra-individual variability, the authors report that this difference was not statistically significant (Wester et al., 1990). Interestingly, these authors also reported that in the rhesus monkey, in vivo percutaneous absorption of DDT (a molecule similar in important characteristics to certain PCB congeners) from soil was only 3% and the absorption of chlordane (another highly lipophilic chlorinated cyclic hydrocarbon) was only 4.2% (Wester et al., 1993b). These absorption rates are dramatically lower than those reported by these investigators for Aroclor 1242 and Aroclor 1254.

Similarly, Moody et al. (1990) reported on the use of the rhesus monkey as a suitable surrogate for dermal absorption humans:

> *According to Wester and Maibach (1975), the rhesus monkey is thought to best mimic humans, and although the present data are not inconsistent with this hypothesis, absorption of 2,4-D isooctyl applied in acetone to monkey forehead was significantly greater than the same site in humans.*

These kinds of significant differences were not quantified by Wester et al., and therefore make the relevance of their findings to humans equivocal. This is particularly relevant when the attempted extrapolation is for the purpose of quantitative risk-based remediation goals.

In a related manner, based on the information contained in the Wester et al. (1990) report, following an intravenous administration to rhesus monkeys, 55.5% of the dose was excreted within 30 days following dosing. Therefore, according to these data, the half-life of Aroclor 1242 in the rhesus monkey was less than 30 days. With Aroclor 1254, 27% of the administered dose was excreted in 30 days, roughly corresponding to a 60-day half-life (assuming excretion was linear). This is a significantly shorter half-life than those reported for Aroclor 1242 in humans occupationally exposed to PCBs. These individuals would represent the most relevant comparison since, like the rhesus monkeys, those persons encountering PCBs in the workplace were exposed to "neat" PCB mixtures. Phillips et al., (1989) reported a composite half-life for Aroclor 1242 of 2.6 years and for Aroclor 1254 of 4.8 years in occupationally exposed workers (half-life in both instances was inversely related to initial serum concentration). Taylor and Lawrence (1992) report slightly shorter half-lives for both, with Aroclor 1242 having a half-life of 1.8 years and Aroclor 1254 having one of 3.3 years. None of the major studies contained in the scientific literature report half-lives of less than 6 months to one year (e.g., Steele et al., 1986). Comparisons of this nature suggest that the pharmacokinetics of PCBs in the rhesus monkey as reported by Wester et al. are not quantitatively similar to humans. It is this underlying premise that forms the basis of the monkey-to-human extrapolation of the dermal absorption factor. If the underlying postulate is unreliable, the quantitative extrapolation must also be flawed.

2. Exposure Duration

In order to estimate the dermal absorption of PCBs, Wester et al. (1993a) allowed PCB-containing soil to remain in contact with abdominal skin of Rhesus Monkeys for 24 hours. This exposure duration does not simulate any realistic condition, and in fact is likely to be two to three-fold longer than exposures experienced via any likely activity. Whether dermal contact occurs as a result of occupational or recreational activity, the soil would invariably fall from the skin or be removed with soap and water within 8 to 12 hours. It is difficult to envision an exposure scenario where an individual would repeatedly allow PCB-containing soil to remain in direct contact with the skin for more than 12 hours, and certainly not 24 hours. Recently, Gardner and Matthews (1998) applied PCBs to the skin of rats using acetone as the application vehicle and demonstrated that "penetration into the skin appears to follow first order kinetics." This means that the rate of absorption is expected to be linear, and the amount absorbed is time dependent. Thus, the use of excessive exposure duration would overestimate the percentage absorbed by two to three-fold as well. In fact, absorption in the case of the Wester et al. (1993) study may not be as rapid as a completely linear relationship suggests. The use of soil as the application media likely resulted in a delay of PCBs moving from the dry soil matrix to the skin, essentially blunting the initial phase of penetration into the skin. If in fact these conditions existed in the Wester study, the overestimation of percutaneous absorption by these investigators would be even greater, since the delay would have a greater impact with the shorter, more realistic, exposure durations.

The finding recently reported by these same authors supports this conclusion. Wester et al. (1996) observed as significant lag time in the absorption of 2,4-dichlorophenoxyacetic acid (2,4,-D), a compound similar in lipophilicity and absorption kinetics to PCBs, when applied in a soil matrix to skin. In fact, no percutaneous absorption (i.e., < 1%) of 2,4-D in soil was observed until 16 hours after the onset of exposure. These investigators concluded:

> *Noteworthy is that the delay (lag time) in absorption from soil is 8 [hours]. This 8-h time period is the same as a normal work day, suggesting that a good body cleaning after work may be beneficial (especially when soap and water will decontaminate 2,4-d from skin).*

And

> *Calculations based on assumed linearity [of absorption] can falsely estimate potential human health hazard.*

The findings of this most recent study are particularly important when dermal exposure estimates are used to calculate risk-based action levels.

3. Bioavailablity Only Crudely Determined

The use of urine and fecal samples collected from metabolic chambers over an extended period of time introduces a great deal of uncertainty and the potential for sampling error. The more appropriate, and far more accurate, measure of bioavailability is to measure the concentration of the chemical in serial blood samples. This permits one to calculate the area under the concentration-time curve, from which one can calculate the fraction of the dose reaching the systemic circulation, which is the measure of bioavailability (Benet and Sheiner, 1985). A comparison of the total internalized dose from the intravenous route of exposure to the total dose from the dermal route would provide a more direct estimate of the percentage of the absorbed dose. Apparently, these data were not collected, and unfortunately we are left only with the crude estimate of bioavailability.

4. Mode of Application May Have Enhanced Absorption

The authors specifically noted that care was taken to insure that the application area was not occluded. However, the fact that the layer of soil was constrained on the skin for 24 hours constituted a physical barrier to gas and moisture exchange different from the conditions that would occur in a typical exposure setting. Goodman and Gilman's (1985) *The Pharmacological Basis of Therapeutics* states: "Because hydrated skin is more permeable than dry skin, the dosage form may be modified or an occlusive dressing may be used to facilitate absorption." Similarly, these authors (Wester et al., 1993a) reported that using an in vitro preparation, water was the most efficient dosing vehicle for enhancing PCB absorption. Given the microenvironment conditions likely to result from the application procedure, the potential that this procedure might "facilitate absorption" of PCBs, relative to actual exposure conditions, must be considered.

5. Default Absorption Factor Ignores Role of Soil Type in Affecting Absorption

The role of organic carbon in soil and sediment in reducing the bioavailability of lipophilic chemicals is well established. The reduction in bioavailability results in retarding the absorption into an organism regardless of the route of administration (Umbriet et al., 1986; Shu et al., 1988; USEPA, 1989b). Acceptance of the dermal absorption factor suggested by Wester et al. without a consideration of the significant modifying effect of soil organic content will result in dose estimation errors. Wester and co-workers used as the soil matrix material that was relatively low in organic carbon content (0.9%). Application of an absorption factor derived from these soils to site-specific areas where organic carbon may be higher would overestimate the dermal absorption, and consequently the contribution of this exposure pathway to the total dose. This particular attribute of the soil is easily determined, and therefore should be incorporated into the determination of a site-specific target cleanup level.

In addition, recent studies have demonstrated an "aging" or "weathering" process occurring with lipophilic chemicals associated with soils. That is, organic constituents that have been weathered in soil frequently exhibit reduced chemical bioavailability (Alexander, 1995; Loehr, 1996). Since the PCBs/soil matrix used in the study by Wester et al. was made just prior to the initiation of the study, the quantitative effect of this potential process could not be evaluated. However, this would represent another site-specific soil characteristic that could be and should be evaluated and incorporated into the derivation of target cleanup goals.

Recently, Mayes et al. (2001) reported on the results of a PCB dermal absorption study conducted on monkeys. The goal of the investigation was to duplicate, to the extent possible, the Wester et al. (1993) study which forms the basis of the dermal absorption factor used by Region 9 to develop the soil PRGs for PCBs. Perhaps the most significant difference between the studies was that Mayes and co-workers used a soil matrix with a total organic carbon more typical of common soils (5% in the Mayes study and less than 1% in the Wester report). While Wester et al. concluded that approximately 14% of the dermally applied dose was absorbed following a 24 hour exposure, Mayes et al. found that only 4% of the applied dose was absorbed. These more recent data indicate that the use of the 14% dermal absorption factor results in a 3-fold overestimation of the dose received from PCBs in soil contacting the skin.

6. Pharmacokinetics of PCBs May Not Be Independent of Route of Administration

The implicit assumption forming the basis of calculations by Wester et al. is that there are no significant differences in the distribution, metabolism, or elimination of PCBs whether they are administered via intravenous injection or via dermal application. That is, the authors assume that the proportion of the systemic dose eliminated in the feces and the urine are the same over time, regardless of the route of administration. However, there are reports in the scientific literature suggesting that at a minimum, this relationship should be confirmed prior to its application for deriving dosing estimates.

Injection of PCBs into the cephalic vein results in the immediate and rapid distribution of the mixture into the systemic circulation. Given the location of the injection site and the circulatory architecture, no metabolism occurs prior to the systemic distribution of PCBs. Distinct differences in the distribution of PCBs following dermal exposure could affect the apparent bioavailability due to their non-polar nature. With dermal applications, PCBs must cross a number of barriers prior to entering the systemic circulation. Garner and Matthews (1998) suggest that for lipophilic chemicals like PCBs, the rate-limiting step in dermal absorption is the penetration into the relatively water-rich epidermis. Therefore, rather than a rapid distribution phase, dermal absorption results in a relatively slow, continual release into the systemic circulation.

Perhaps most significant in terms of the relationship assumed by Wester et al. is that metabolism of certain PCBs congeners appears to take place in the skin prior to release into the systemic circulation. Noonan and Wester (1989) reported that the skin contains cytochrome P450 activities in the epidermis that are approximately 80% of the enzyme activity found in the liver. Garner and Matthews (1998) report that preliminary evidence from their laboratory demonstrates that skin slices are capable of metabolizing PCBs. These data suggest that unlike an intravenous injection, there may be a significant "first pass effect," where certain PCB congeners are metabolized to excretable forms prior to entering the systemic circulation. The result of this first pass effect is these congeners are 1) more water soluble and less likely to be distributed to adipose stores; and 2) more rapidly eliminated. The consequence of failing to consider this difference lead to an overestimation of the absorbed dose from dermal exposure. Based on the assumption that the kinetics are identical, Wester et al. assumed that the same proportion of the absorbed dose is eliminated. However, if a portion of the dermally applied PCB congeners are metabolized prior to entering the systemic circulation, a higher percentage of the absorbed dose will be eliminated in the feces and the urine relative to the iv dose. That is, the elimination rate is higher for the dermal dose relative to the iv dose. However, if the proportion of the absorbed dermal dose eliminated in the urine and feces is assumed to be the same proportion as the intravenous dose, the estimate of the total absorbed dose from the dermal route of exposure would be overestimated.

Summary

The preceding paragraphs briefly address some of the technical concerns associated with adopting the study by Wester et al. (1993a) for use in quantitative risk estimates, including the derivation of risk-based cleanup criteria. Although some of the specific topics detailed above may not, individually, have a dramatic effect on the estimate of the dermal absorption efficiency, taken collectively they have a significant quantitative impact. Based on the level of uncertainty, and likely overestimation inherent in the adoption of the absorption factor from Wester et al., the use of this value for regulatory purposes should be reconsidered.

APPENDIX J-6

Site Specific Values used to Calculate SSTLs

Site-specific values were used to calculate PCB and arsenic site-specific target levels (SSTLs) for the Low Contact Areas (LCAs) and High Contact Areas (HCAs) of the Anniston facility. All other variables are standard default values (Appendix J-1).

Concentration in HCA or C_{HCA}(mg/kg) =

$$\frac{\mathbf{TR}_{\mathbf{Ann}} \times BW_a \times AT_c}{EF_o \times ED_o \left[\left(\frac{IRS_o \times CSF_o \times \mathbf{IAF}_{\mathbf{Ann}}}{10^6 (mg/kg)} \right) + \left(\frac{\mathbf{SA}_{\mathbf{aAnnHigh}} \times AF_a \times \mathbf{ABS}_{\mathbf{ann}} \times CSF_o}{10^6 (mg/kg)} \right) + \left(\frac{IRA_a \times CSF_i}{PEF} \right) \right]}$$

Site-specific values applicable to HCAs of the Anniston, Solutia Facility

Symbol	Definition	Value	References
TR_{Ann}	Target Cancer Risk – (Anniston, Solutia)	1E-05	USEPA, 1990
IAF_{Ann}	Ingestion Absorption Factor (unitless)	0.3 (PCBs)	USEPA, 1986
		0.3 (arsenic)	Roberts, et al., 2002
$SA_{aAnnHigh}$	Exposed surface area –adult head +hands (cm^2/day)	2290	USEPA, 1997
ABS_{ann}	Skin Absorption Factor	0.06 (PCBs)	USEPA, 1992b
		0.03 (arsenic)	USEPA, 2001

Derivation of the SSTL for the Low Contact Area utilizes the inspector/supervisor as the receptor. This receptor has been described to have 100 days of exposure in the HCA (at SSTL of 33.7 ppm derived using the above equations for PCBs and 66 ppm for arsenic) and 50 days in the LCA at an unknown soil concentration. A lifetime cancer risk of 1 X 10^{-5} has been set as a target risk for PCBs and arsenic in industrial soil at the facility. Based on these assumptions, the following equations and site-specific values have been used to calculate the SSTL for the LCA.

Target Cancer Risk (TR_{ann}) = HCA_{risk} + LCA_{risk}

where:

Symbol	Definition (units)	Default	References
TR_{Ann}	Target cancer risk (unitless)	1E-05	USEPA, (2002)
HCA_{risk}	Lifetime cancer risk for production workers in the high contact area	Unknown	Calculated
LCA_{risk}	Lifetime cancer risk for production workers in the high contact area	Unknown	Calculated

The HCA_{risk} can be derived for the inspector/supervisor by using the SSTL calculated for the HCA (33.7 ppm PCB and 66 ppm arsenic) as the soil concentration. Additional site-specific values can be used to represent the inspector/supervisor exposure in the high contact area. The following equation adapted from USEPA guidelines (1989b, 2002a) was used to calculate HCA_{risk}.

$$HCA_{risk} =$$

$$\left[\frac{\left(C_{HCA}\times IRS_o\times IAF_{Ann}\times EF_{100}\times ED_o\times 10^{-6}\right)}{BW_a\times AT_c}xCSFo\right]$$

$$+\left[\frac{\left(C_{HCA}\times\left(\left(SA_{head}\times AF_{head}\right)+\left(SA_{hands}\times AF_{hands}\right)\right)ABS_{ann}\times EF_{100}\times ED_o\times 10^{-6}\right)}{BW_a\times AT_c}xCSFo\right]$$

$$+\left[\frac{\left(C_{HCA}\times IRA_a\times EF_{100}\times ED_o\right)}{PEF\times BW_a\times AT_c}xCSFi\right]$$

Site-specific values for the inspector exposure (HCA) scenario at the Anniston, Solutia Facility

Symbol	Definition	Value	References
C_{HCA}	Chemical Concentration (SSTL) in the high contact area (mg/kg) derived	33.7 (PCBs) 66 (arsenic)	Calculated
IAF_{Ann}	Ingestion Absorption Factor (unitless)	0.3 (PCBs) 0.3 (arsenic)	USEPA, 1986 Roberts, et al., 2002
EF_{100}	Exposure frequency – occupational – high contact area (days/year)	100	Solutia, 1998
SA_{head}	Exposed surface area – adult head (cm^2/day)	1300	USEPA, 2001
AF_{head}	Adherence factor – groundskeeper, head (mg/cm^2)	0.004	USEPA, 2001
SA_{hands}	Exposed surface area – adult, hands (cm^2/day)	990	USEPA, 2001
AF_{hands}	Adherence factor – groundskeeper, hands (mg/cm^2)	0.046	USEPA, 2001
ABS_{ann}	Skin Absorption Factor	0.06 (PCBs) 0.03 (arsenic)	USEPA, 1992b USEPA, 2001
CSFo	Cancer slope factor - oral $(mg/kg\text{-}day)^{-1}$	2.0 PCB 1.5 Arsenic	IRIS, HEAST or NCEA
CSFi	Cancer slope factor - oral $(mg/kg\text{-}day)^{-1}$	2.0 PCB 15 Arsenic	IRIS, HEAST or NCEA

a The absorption factor used in the default calculation was 1.0, (representing 100% absorption), The alternative ABS was proposed in USEPA, 1986a

Solving the equation with the site-specific values, and standard default values supplied in Appendix K1 for all other variables, we get:

HCA_{risk} (mg/kg-day) = $1.7x10^{-6}$ (PCB) and $2.3\ x10^{-6}$ (arsenic)

To determine LCA_{risk}, the cumulative area risk equation can be rearranged:

Target Cancer Risk = HCA_{risk} + LCA_{risk}

Target Cancer Risk - HCA_{risk} = LCA_{risk}

1E-05 – $1.7\ x10^{-6}$ = $8.3\ x10^{-6}$ (PCB)

$1E\text{-}05 - 2.3 \times 10^{-6} = 7.7 \times 10^{-6}$ (arsenic)

Using this area specific target risk value (LCA_{risk}), the SSTL for the LCA can be determined. Variables in bold were substituted with site-specific values. All other values should be standard default (Appendix J-1)

$$\text{Concentration in LCA or } C_{LCA} \text{ (mg/kg)} = \frac{LCA_{risk} \times BW_a \times AT_c}{\left(\mathbf{EF_{50}} \times ED_a \left[\left(\frac{IRS_o \times CSF_o \times IAF_{Ann}}{10^6 (mg/kg)}\right) + \left(\frac{[(\mathbf{SA_{head}} \times \mathbf{AF_{head}}) + (\mathbf{SA_{hands}} \times \mathbf{AF_{hands}})]\mathbf{ABS_{ann}} \times CSF_o}{10^6 (mg/kg)}\right) + \left(\frac{IRA_a \times CSF_i}{PEF}\right)\right]\right)}$$

Site-specific values for the inspector exposure (LCA) scenario at the Anniston, Solutia Facility

Symbol	Definition	Value	References
LCA_{risk}	Risk Proportion derived for the LCA – (Anniston, Solutia)	8.3E-06 (PCB) 7.7E-06 (arsenic)	Derived in previous equation
EF_{50}	Exposure frequency – occupational – low frequency area (days/year)	50	Solutia, 1998
IAF_{Ann}	Ingestion Absorption Factor (unitless)	0.3 (PCBs) 0.3 (arsenic)	USEPA, 1986 Roberts, et al., 2002
SA_{head}	Exposed surface area – adult head (cm^2/day)	1300	USEPA, 2001
AF_{head}	Adherence factor – groundskeeper, head (mg/cm^2)	0.004	USEPA, 2001
SA_{hands}	Exposed surface area – adult, hands (cm^2/day)	990	USEPA, 2001
AF_{hands}	Adherence factor – groundskeeper, hands (mg/cm^2)	0.046	USEPA, 2001
ABS_{ann}	Skin Absorption Factor	0.06 (PCBs) 0.03 (arsenic)	USEPA, 1992b USEPA, 2001

Derivation of Construction Risks

Site-specific values were used to calculate PCB and arsenic site-specific target levels (SSTLs) for excavation workers (construction workers) at the Anniston facility. Variables in bold were substituted with site-specific values. All other variables are standard default values (Appendix J-1).

Concentration in Soil or C_s (mg/kg) =

$$\frac{\mathbf{TR}_{Ann} \times BW_a \times AT_c}{\mathbf{EF}_{con} \times \mathbf{ED}_{con}\left[\left(\frac{\mathbf{IRS}_{con} \times CSF_o \times \mathbf{IAF}_{Ann}}{10^6 (mg/kg)}\right)+\left(\frac{((\mathbf{SA}_{chd} \times \mathbf{AF}_{chd})+(\mathbf{SA}_{chnd} \times \mathbf{AF}_{chnd})) \times \mathbf{ABS}_{Ann} \times CSF_o}{10^6 (mg/kg)}\right)+\left(\frac{IRA_a \times CSF_i}{PEF}\right)\right]}$$

Site-specific values applicable to the Construction Worker at the Anniston, Solutia Facility

Symbol	Definition	Value	References
TR_{Ann}	Target Cancer Risk – (Anniston, Solutia)	1E-05	USEPA, 1990
IRS_{con}	Ingestion rate soil – construction worker (mg/day)	480	USEPA, 1991
IAF_{Ann}	Ingestion Absorption factor (unitless)a	0.3 (PCB) 0.3 (arsenic)	USEPA, 1986a Roberts, et al., 2002
SA_{chd}	Exposed surface area – adult head (cm^2/day)	1300	USEPA, 2001
AF_{chd}	Adherence factor – construction worker, head (mg/cm^2)	0.029	USEPA, 2001
SA_{chnd}	Exposed surface area – adult, hands (cm^2/day)	990	USEPA, 2001
AF_{chnd}	Adherence factor – construction worker, hands (mg/cm^2)	0.24	USEPA, 2001
ABS_{ann}	Skin absorption factor	0.06 (PCB) 0.03 (arsenic)	USEPA, 1992b
EF_{con}	Exposure frequency – construction worker (d/y)	120 dy/year	Professional Judgement
ED_{con}	Exposure duration – construction worker (years)	1	Professional Judgement

Derivation of Trespasser Risks

Site-specific values were used to calculate PCB and arsenic site-specific target levels (SSTLs) for potential trespassers at the Anniston facility. Variables in bold were substituted with site-specific values. All other variables are standard default values (Appendix J-1).

Concentration for Soil or C_s (mg/kg) =

$$\frac{\mathbf{TR}_{Ann} \times BW_a \times AT_c}{\mathbf{EF}_{tres} \times \mathbf{ED}_{tres}\left[\left(\frac{\mathbf{IRS}_{tres} \times CSF_o \times \mathbf{IAF}_{Ann}}{10^6 (mg/kg)}\right)+\left(\frac{\mathbf{SA}_{tres} \times \mathbf{AF}_{tres} \times \mathbf{ABS}_{Ann} \times CSF_o}{10^6 (mg/kg)}\right)+\left(\frac{IRA_a \times CSF_i}{PEF}\right)\right]}$$

Site-specific values applicable to the Trespasser at the Anniston, Solutia Facility

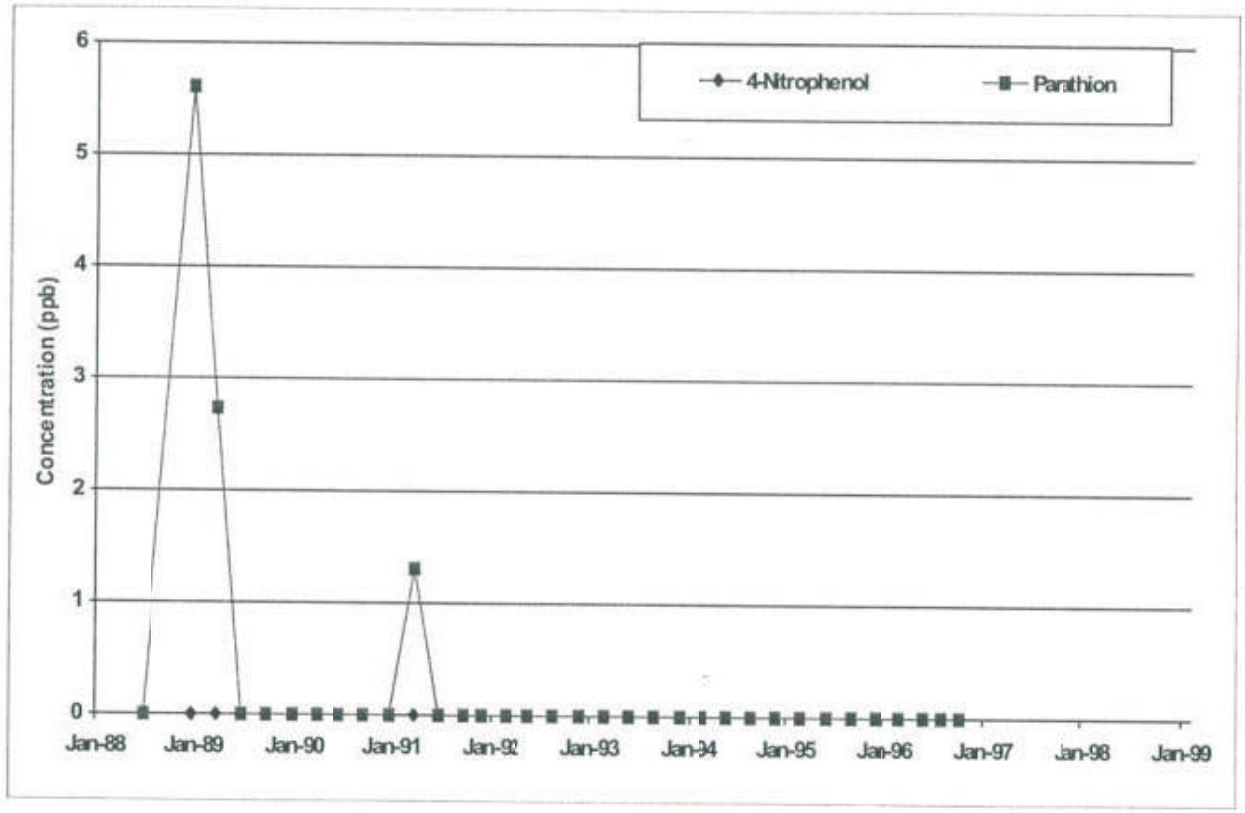
Symbol	Definition	Value	References
TR_{Ann}	Target Cancer Risk – (Anniston, Solutia)	1E-05	USEPA, 1990
IRS_{tres}	Ingestion rate soil – trespasser (mg/day)	100	USEPA, 1997
IAF_{Ann}	Ingestion Absorption factor (unitless)a	0.3 (PCB) 0.3 (arsenic)	USEPA, 1986a
SA_{tres}	Surface area – adolescent head, hands, forearms and lower legs (cm^2/day)	5300	USEPA, 2001
AF_{tres}	Adherence factor – 13 to 15 year old soccer players (mg/cm^2)	0.04	USEPA, 2001
ABS_{ann}	Skin absorption factor	0.06 (PCB) 0.03 (arsenic)	USEPA, 1992b
EF_{tres}	Exposure frequency – trespasser (d/y)	24 (2 days per week for 12 weeks of summer)	Professional Judgement
ED_{tres}	Exposure duration – occupational (years)	10	Region 4 Risk Assessment Bulletin (USEPA, 2002)

APPENDIX K

Parathion and 4-nitrophenol Data Plots
Concentrations vs. Time

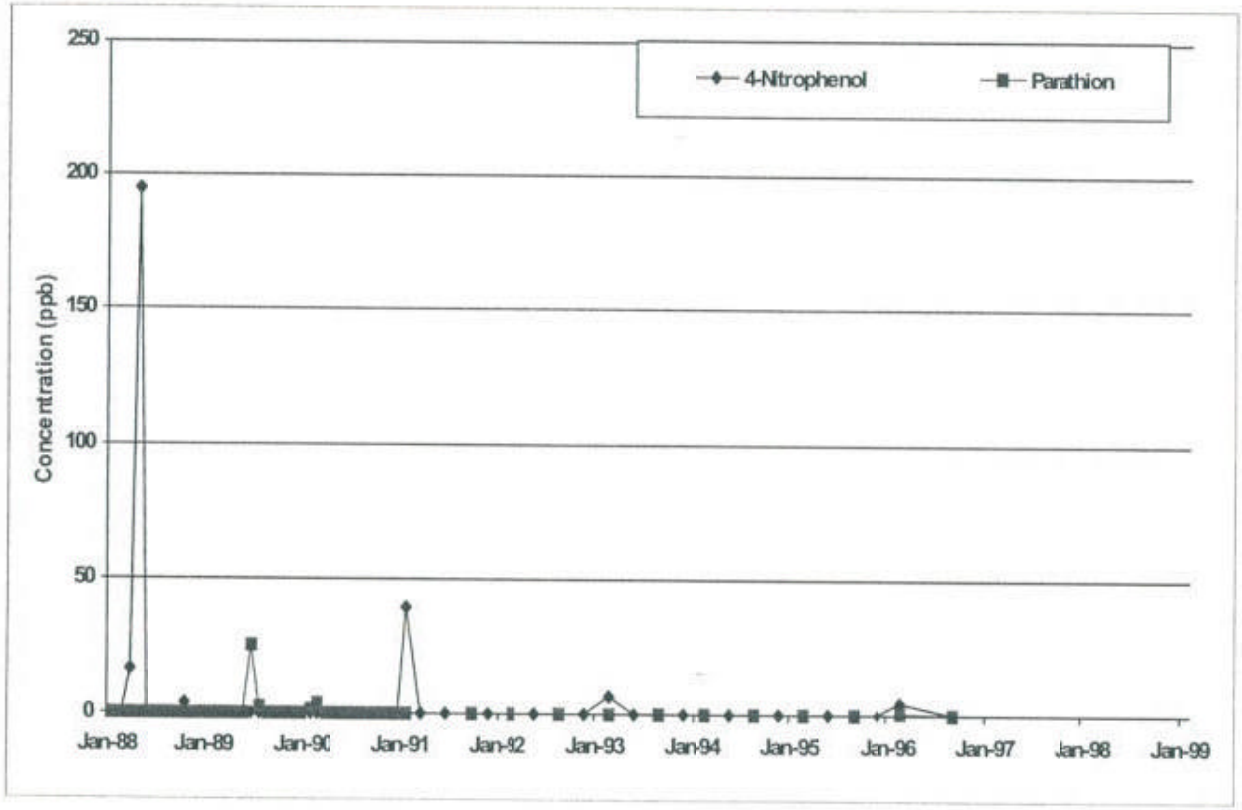
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

IW-01



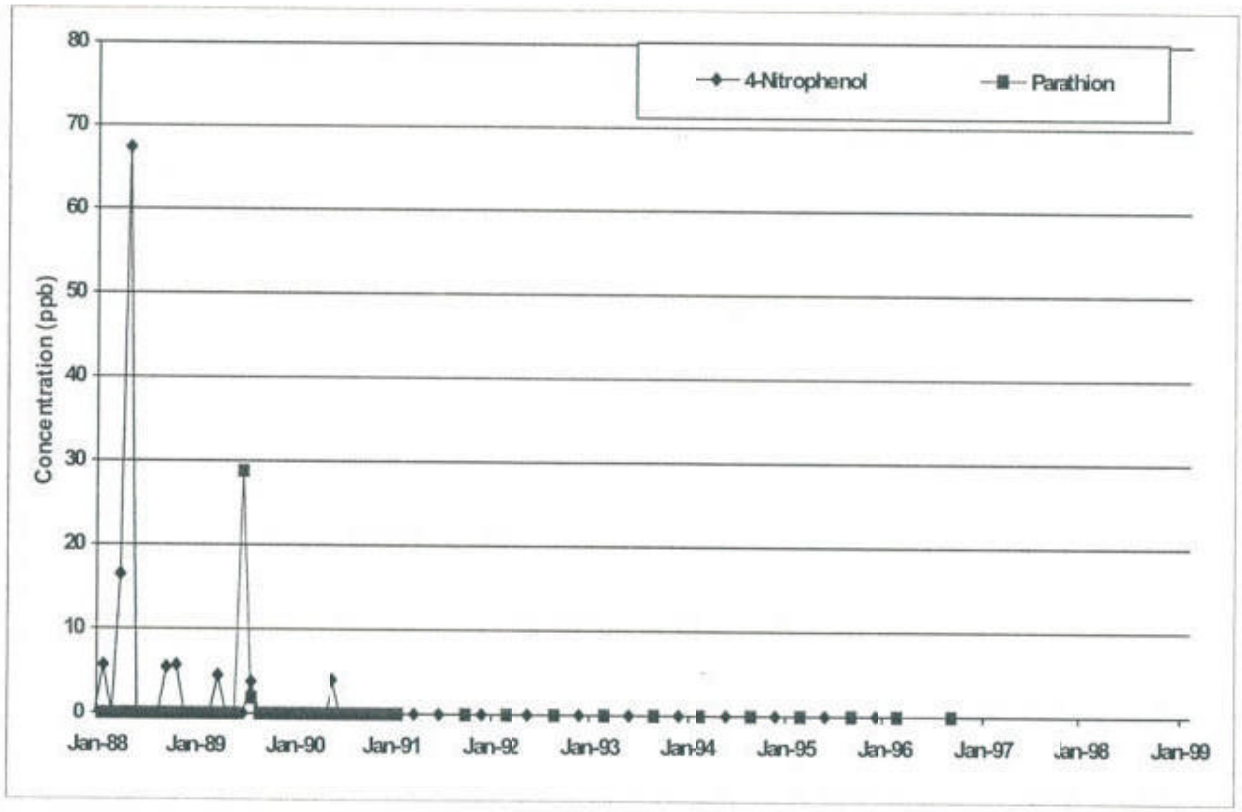
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

IW-02



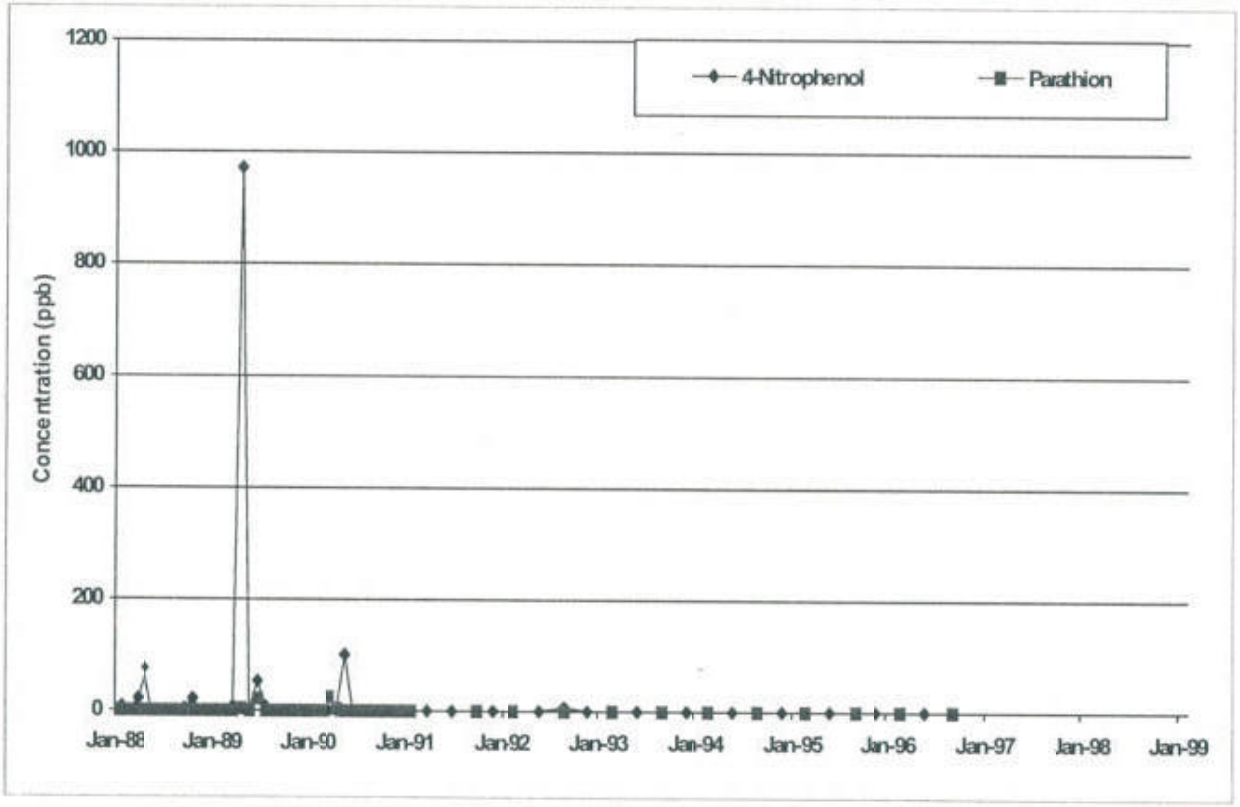
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

IW-03



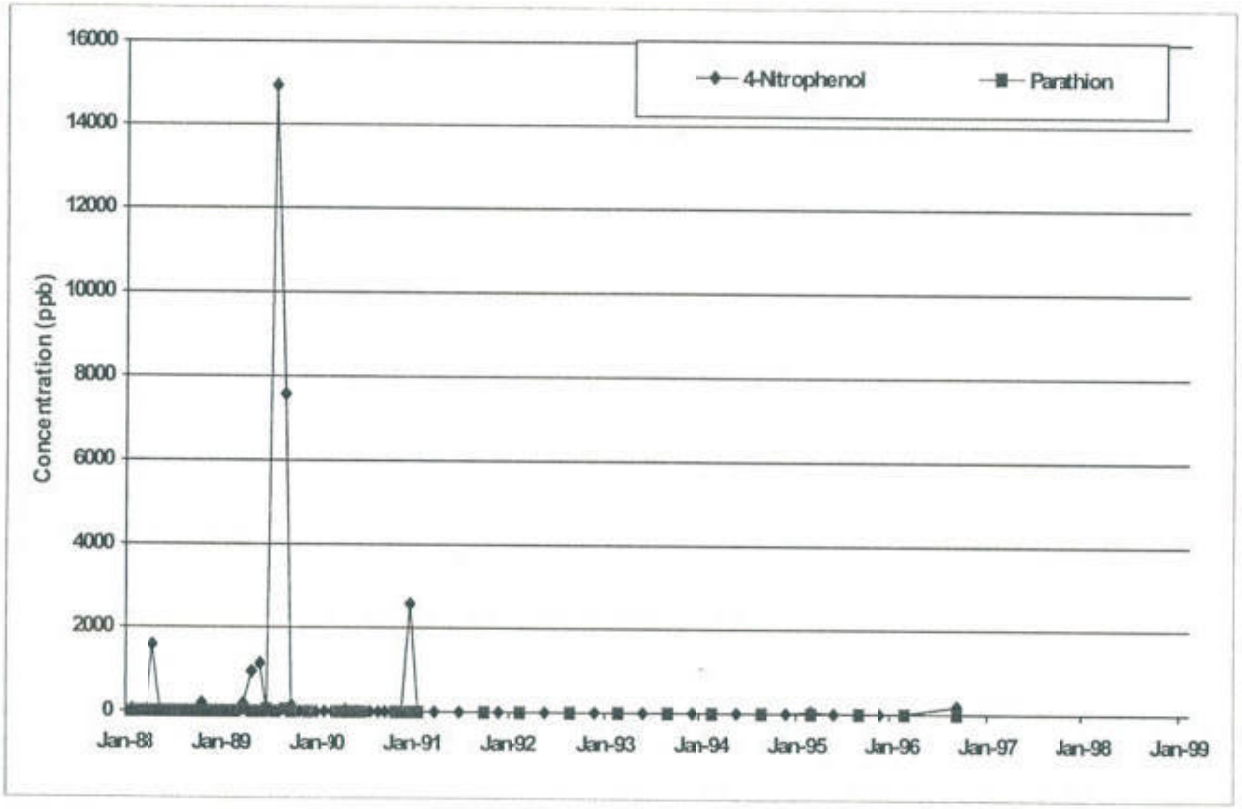
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

IW-04



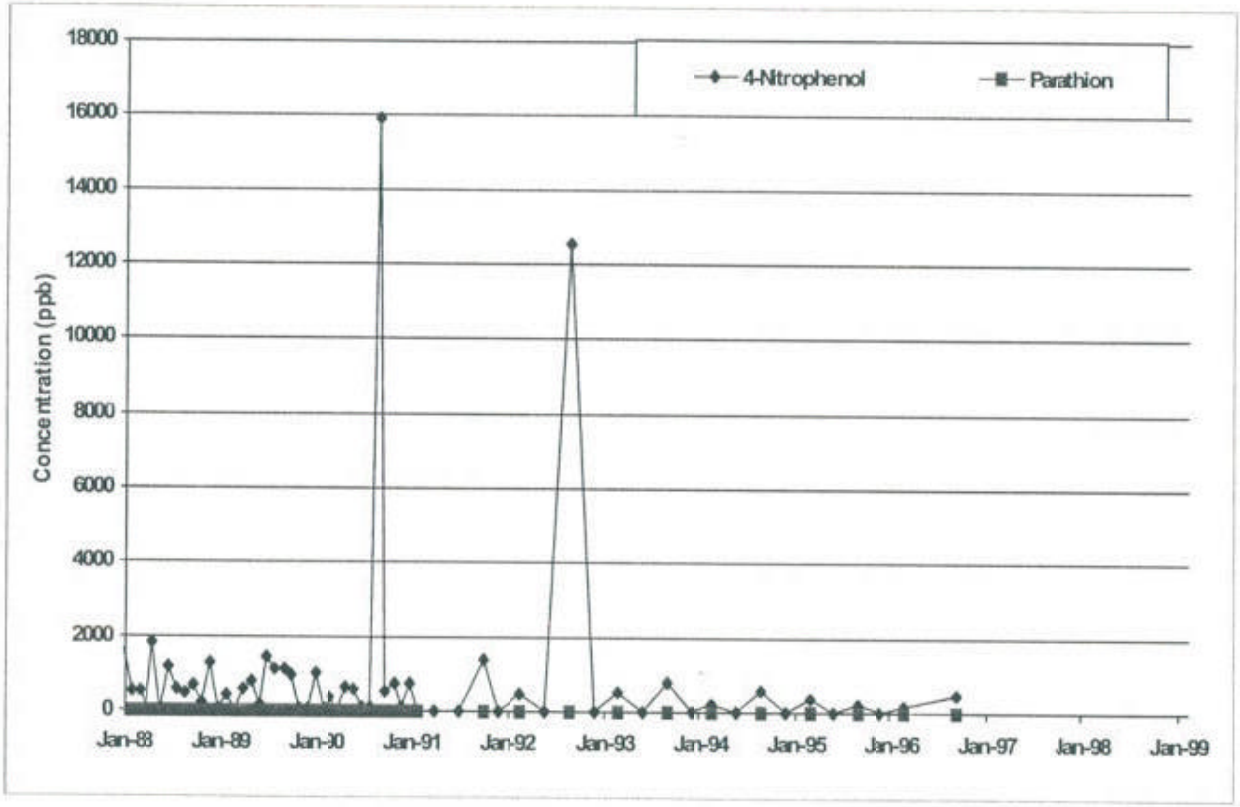
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

IW-05



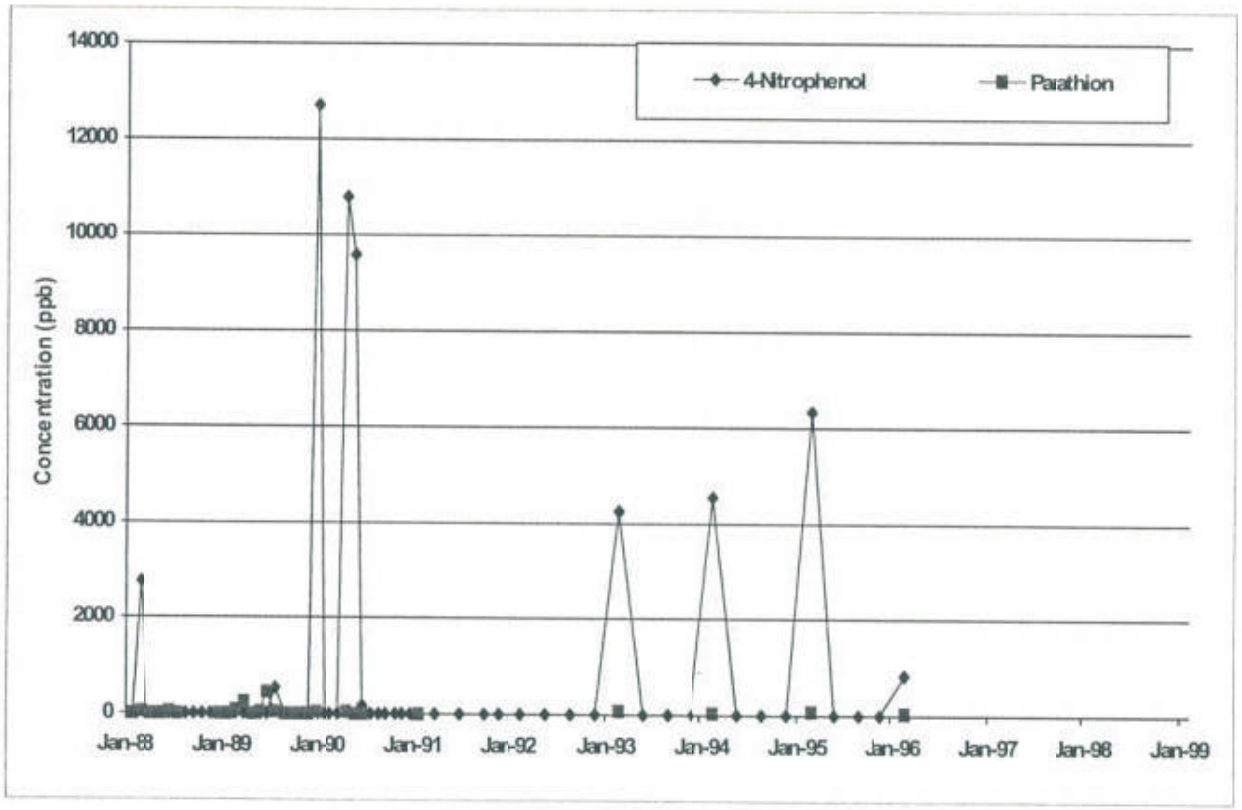
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

IW-06



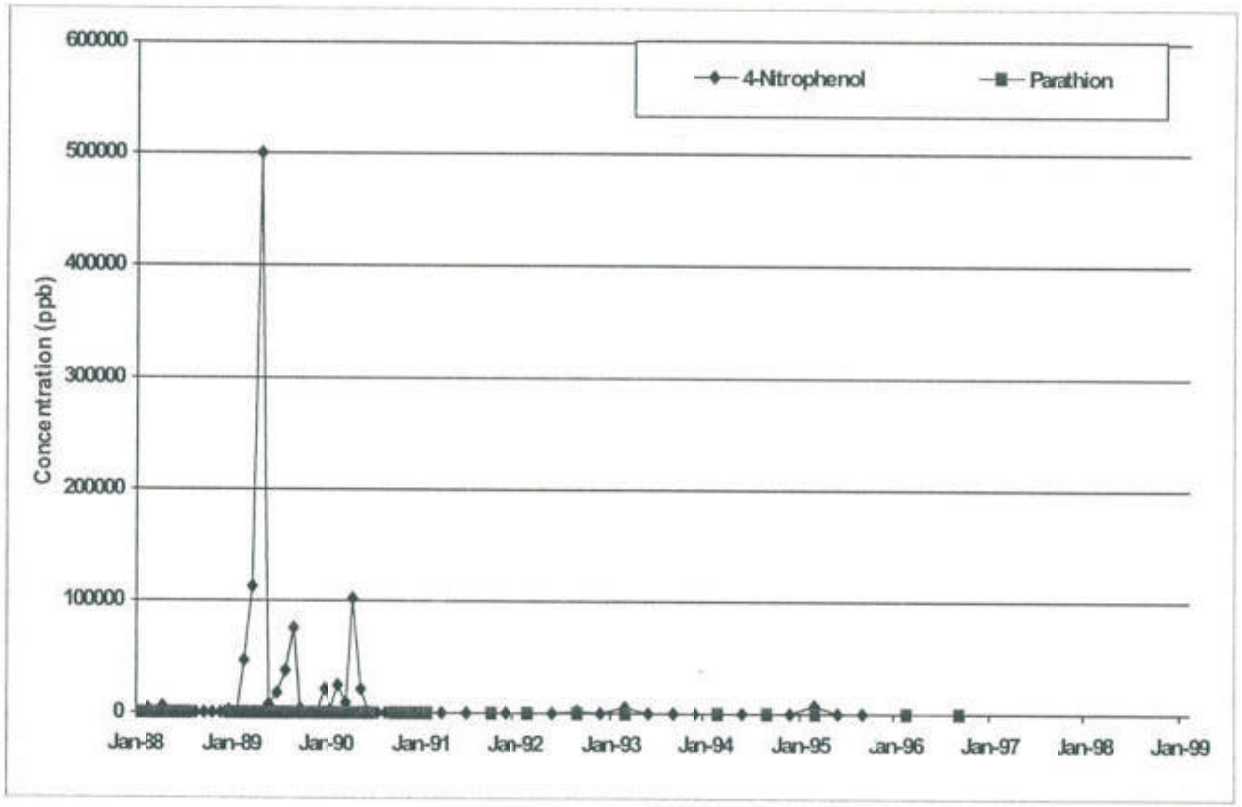
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

IW-07



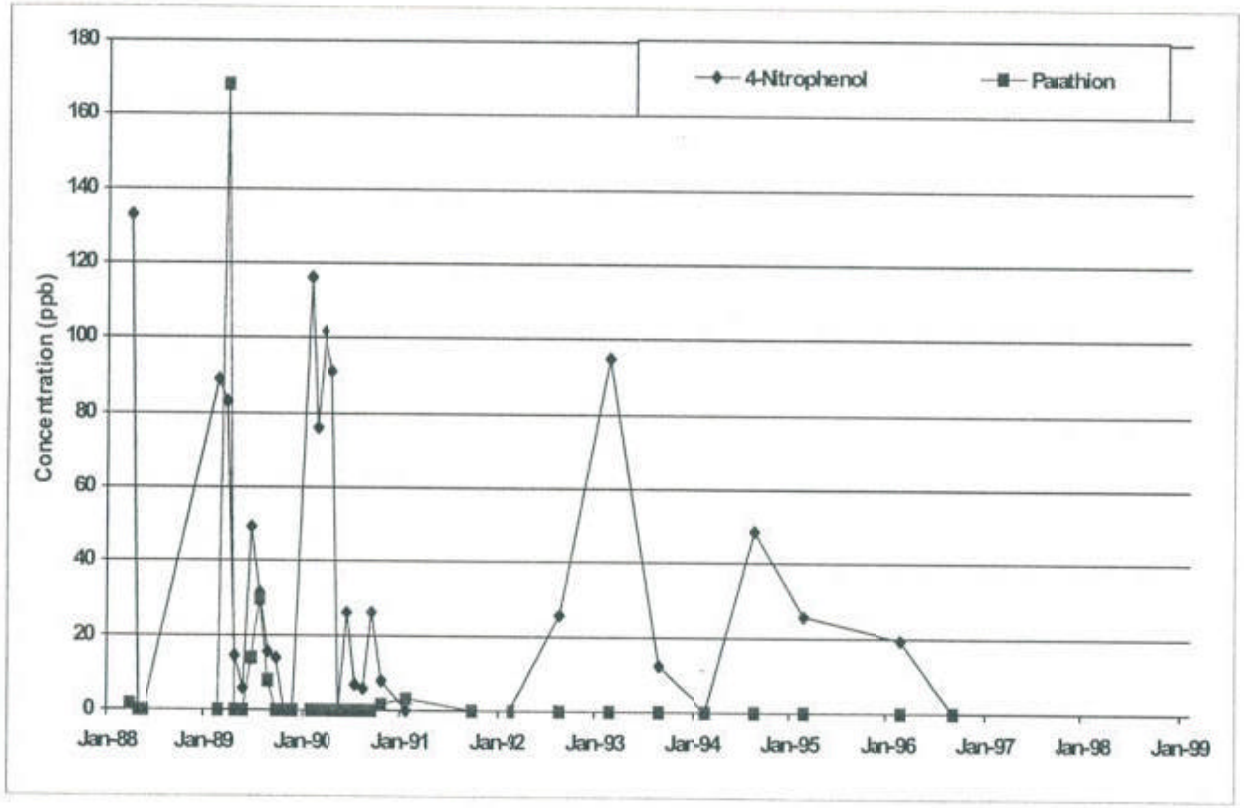
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

IW-08



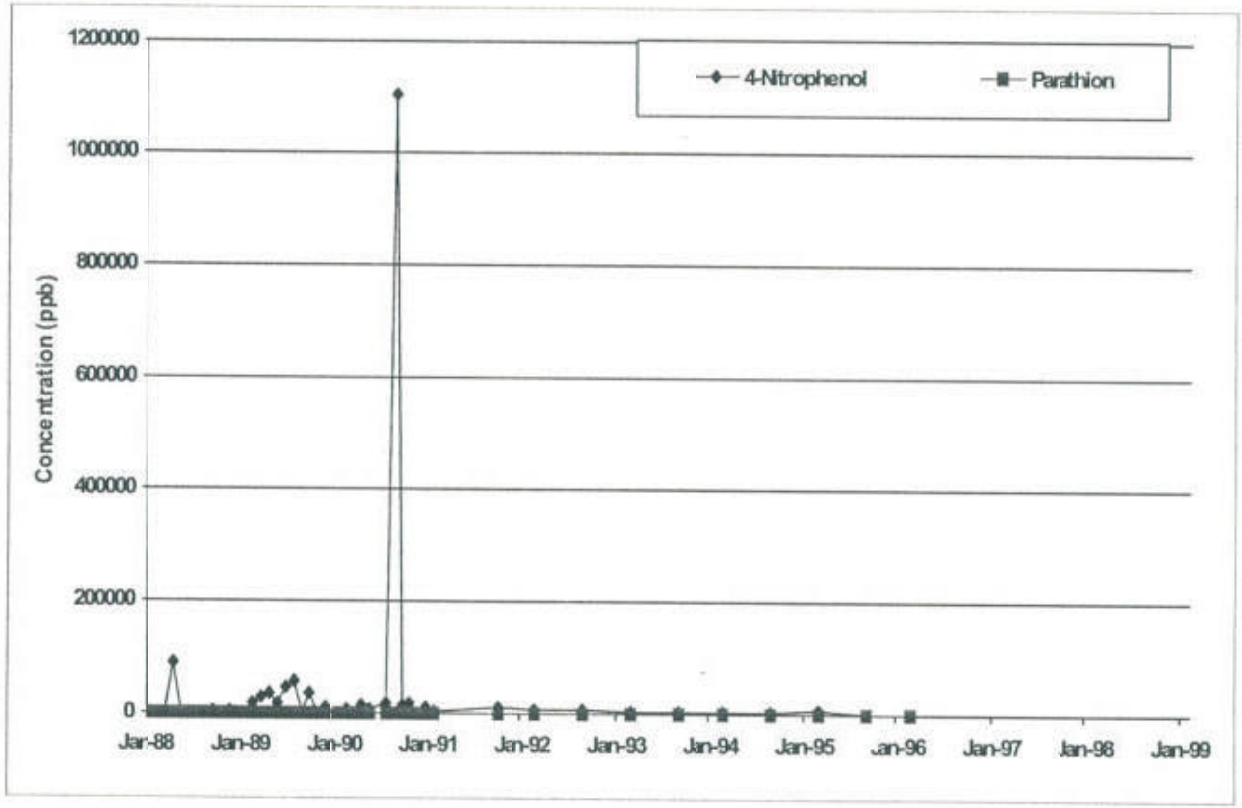
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

IW-09



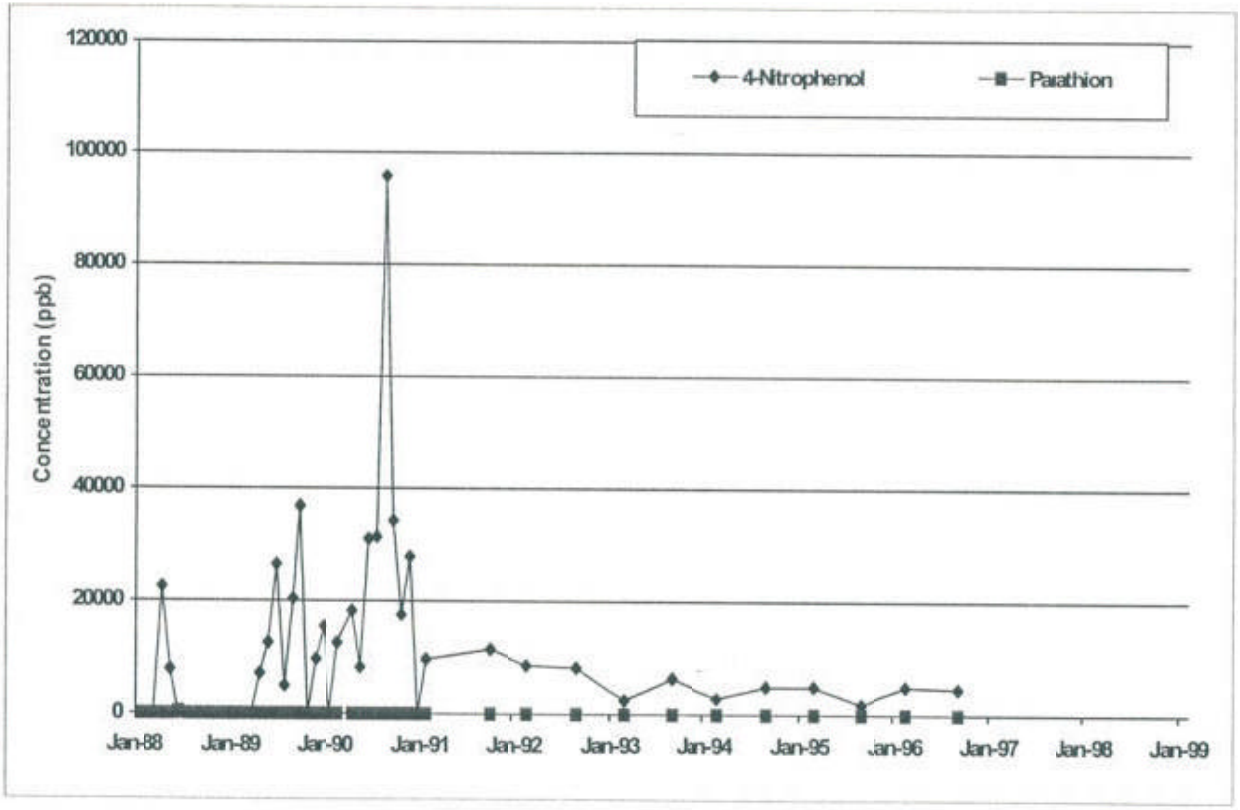
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

IW-10



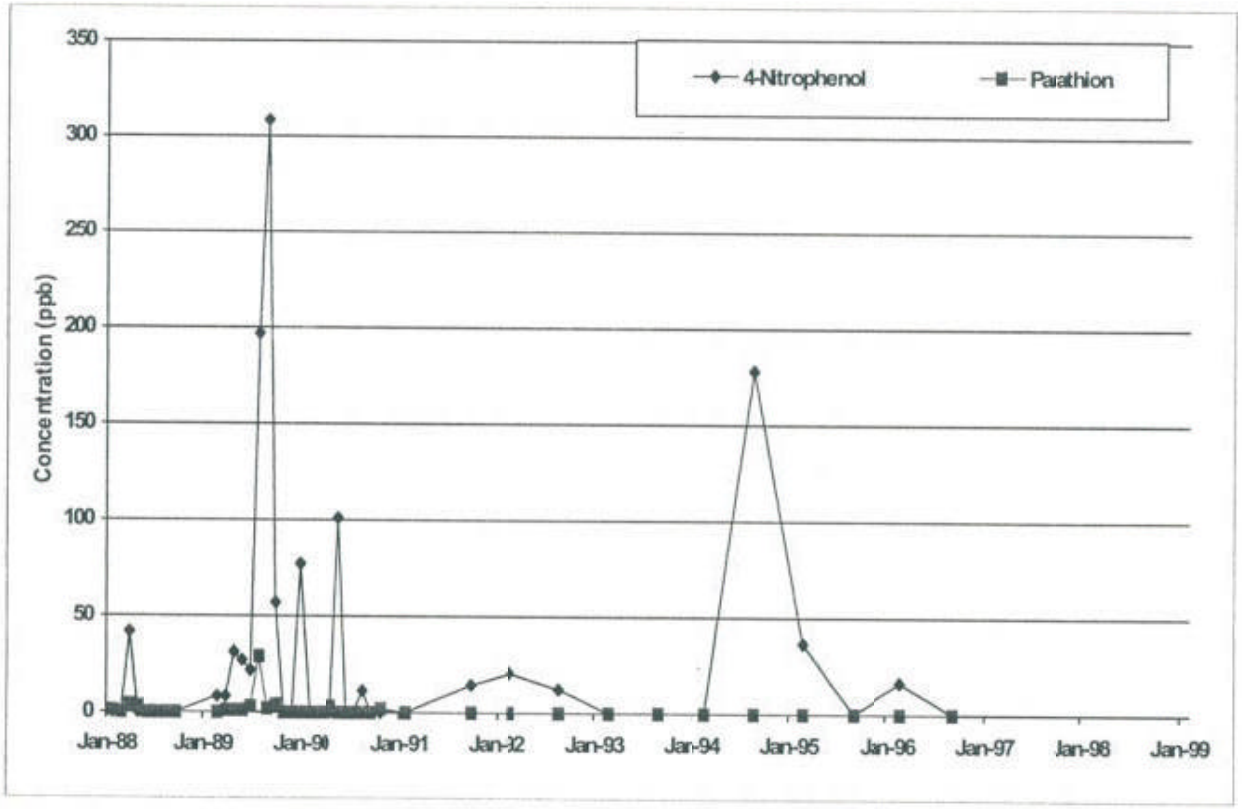
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

IW-11



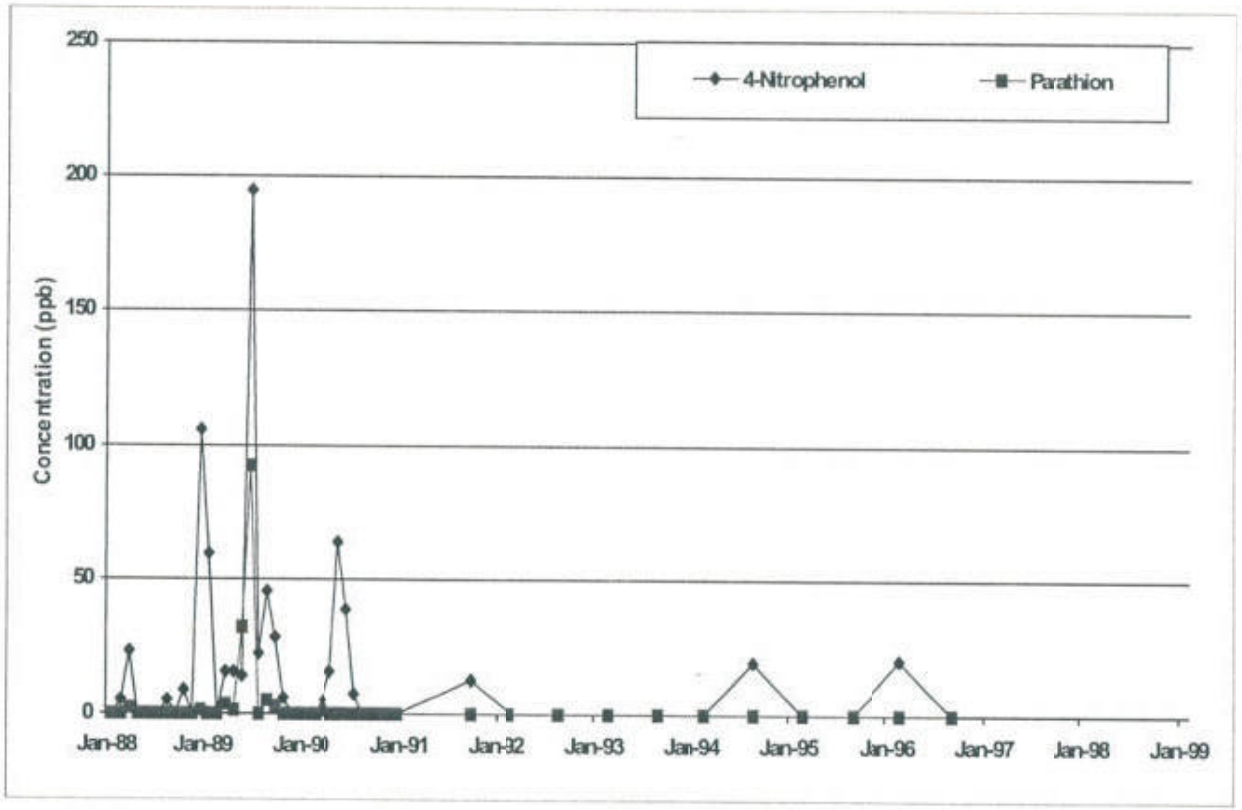
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

IW-12



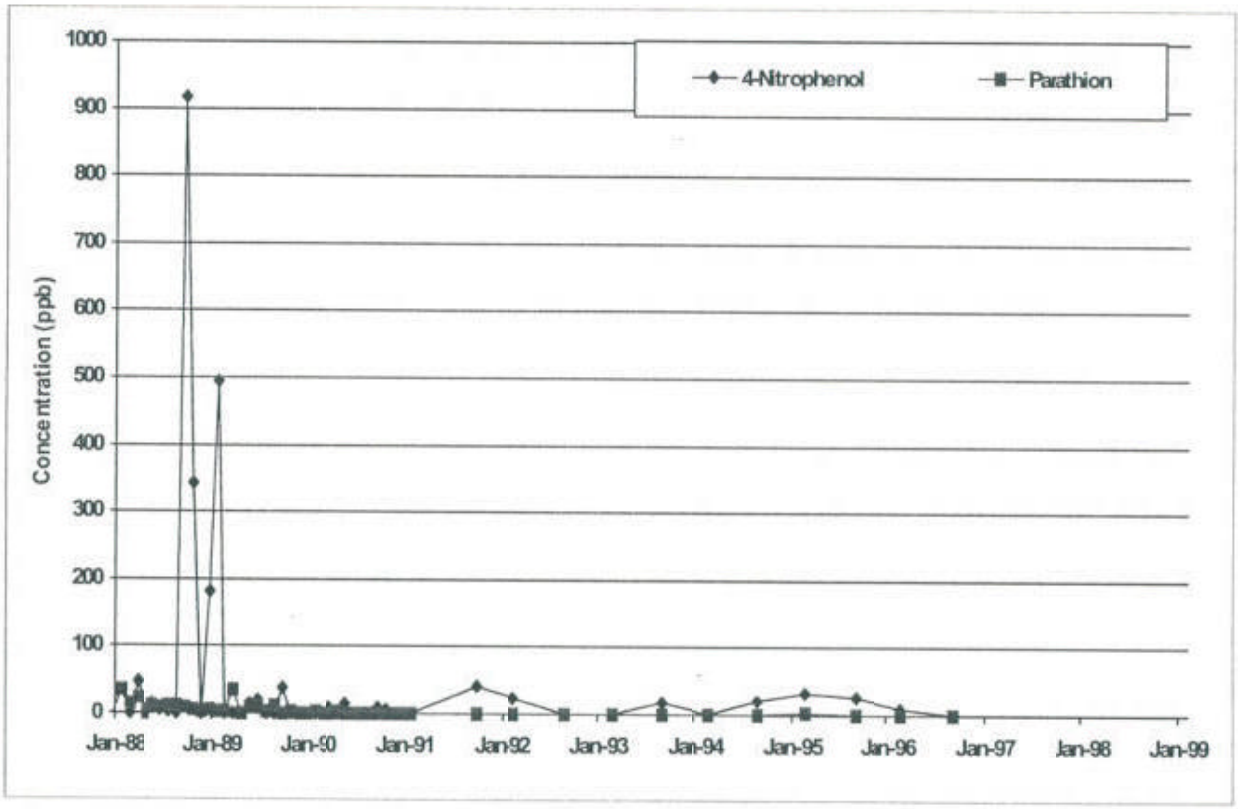
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

IW-13



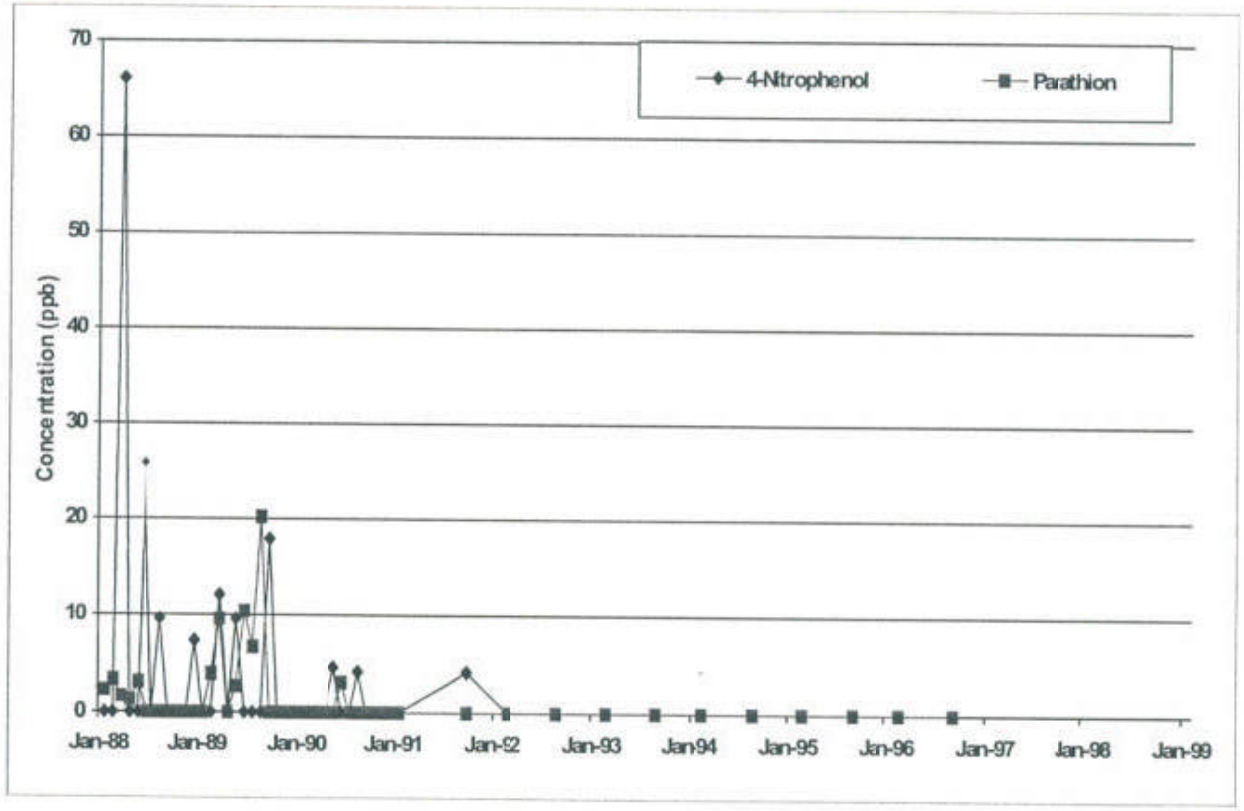
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

IW-14



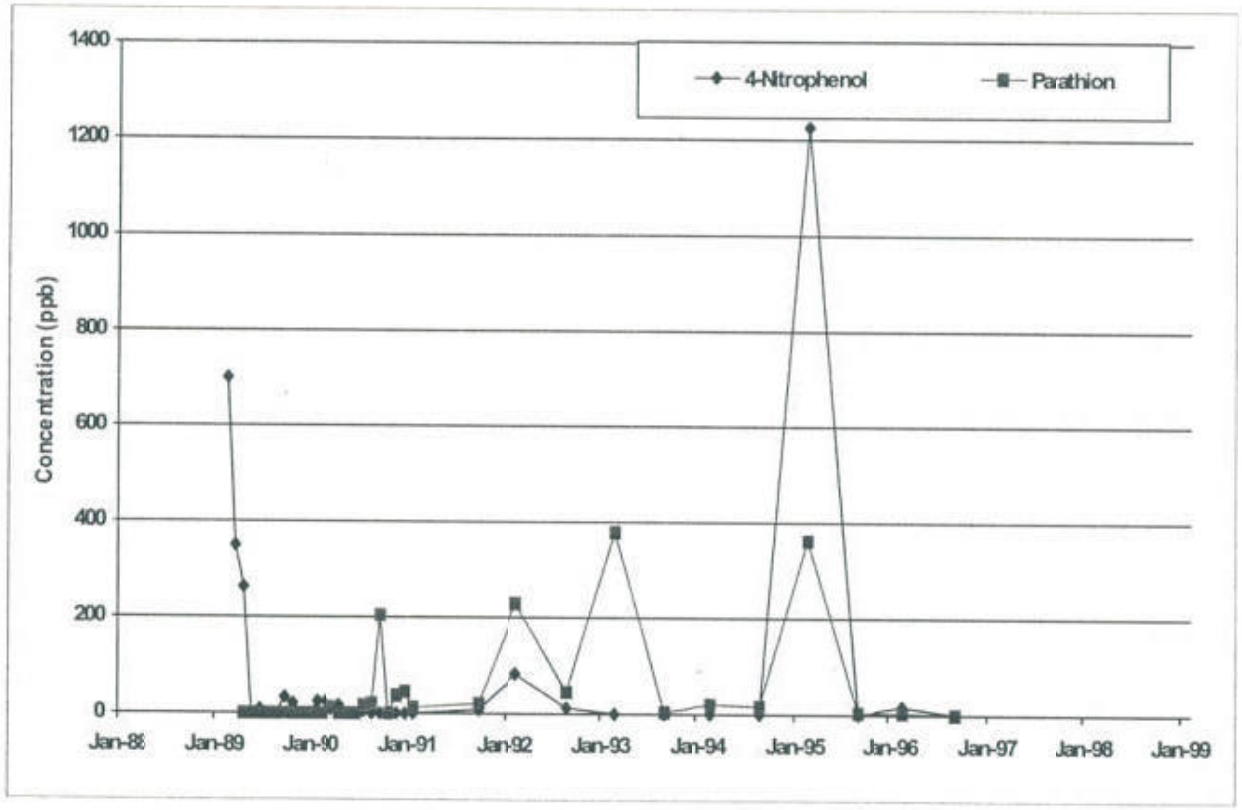
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

IW-15



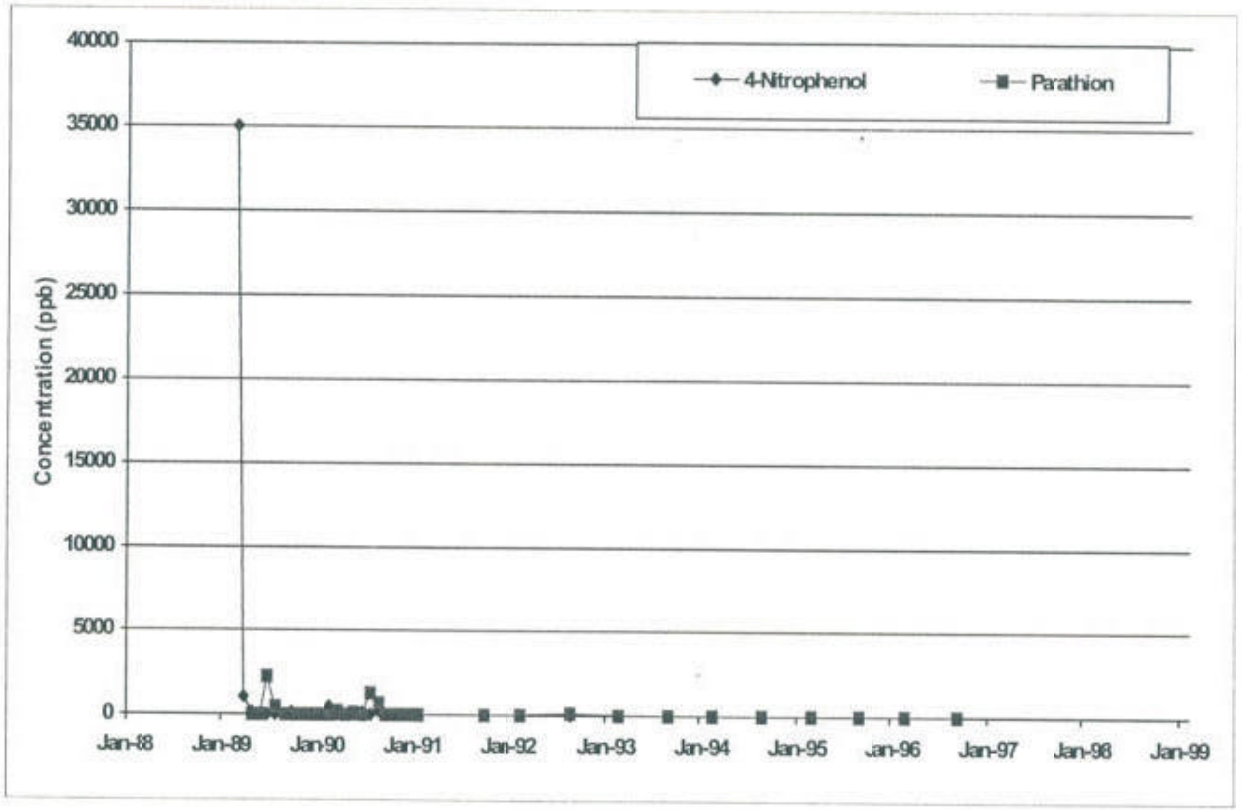
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

IW-16



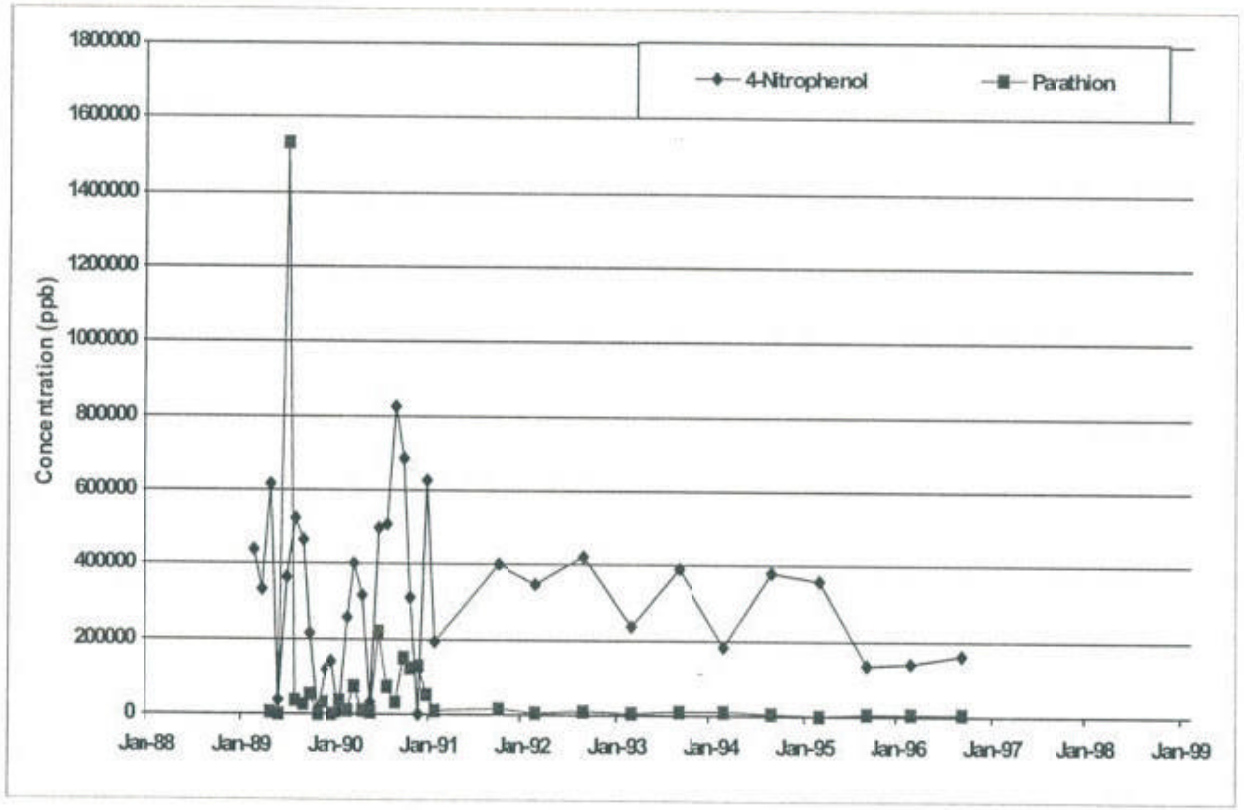
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

IW-17



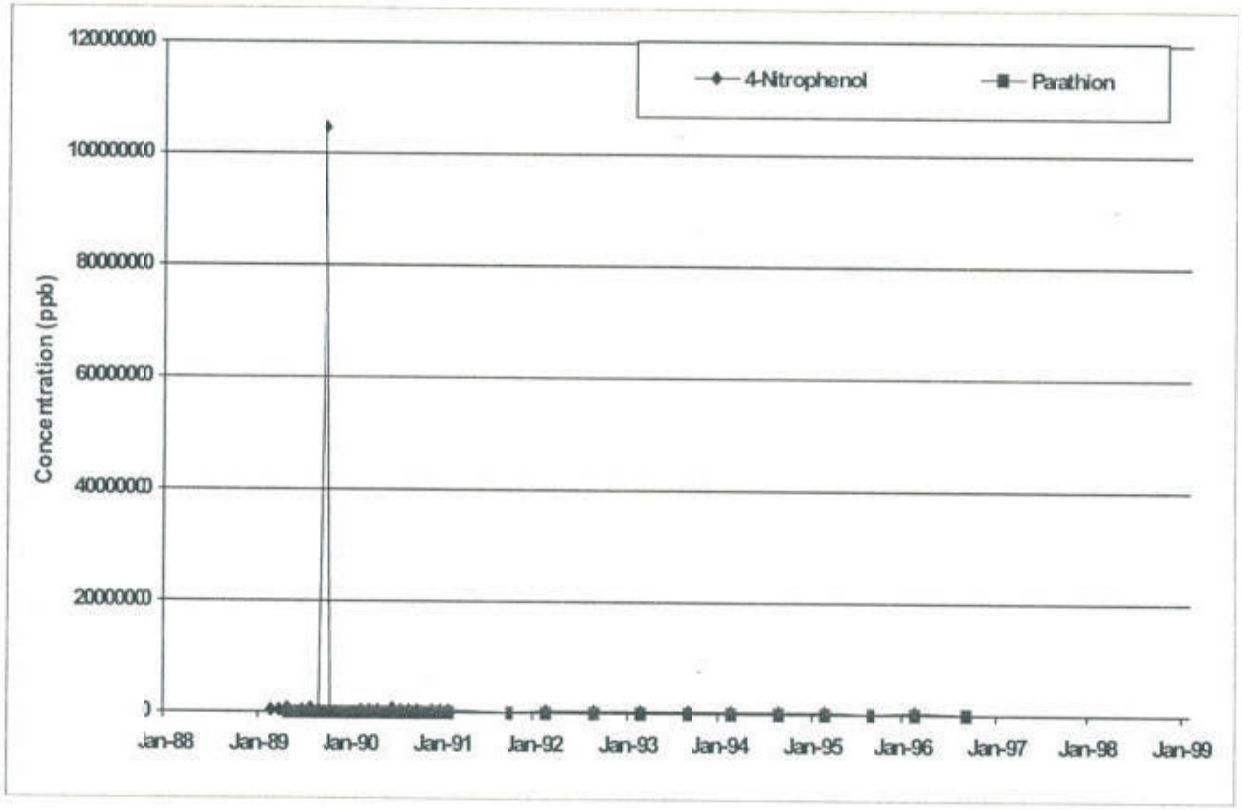
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

IW-18



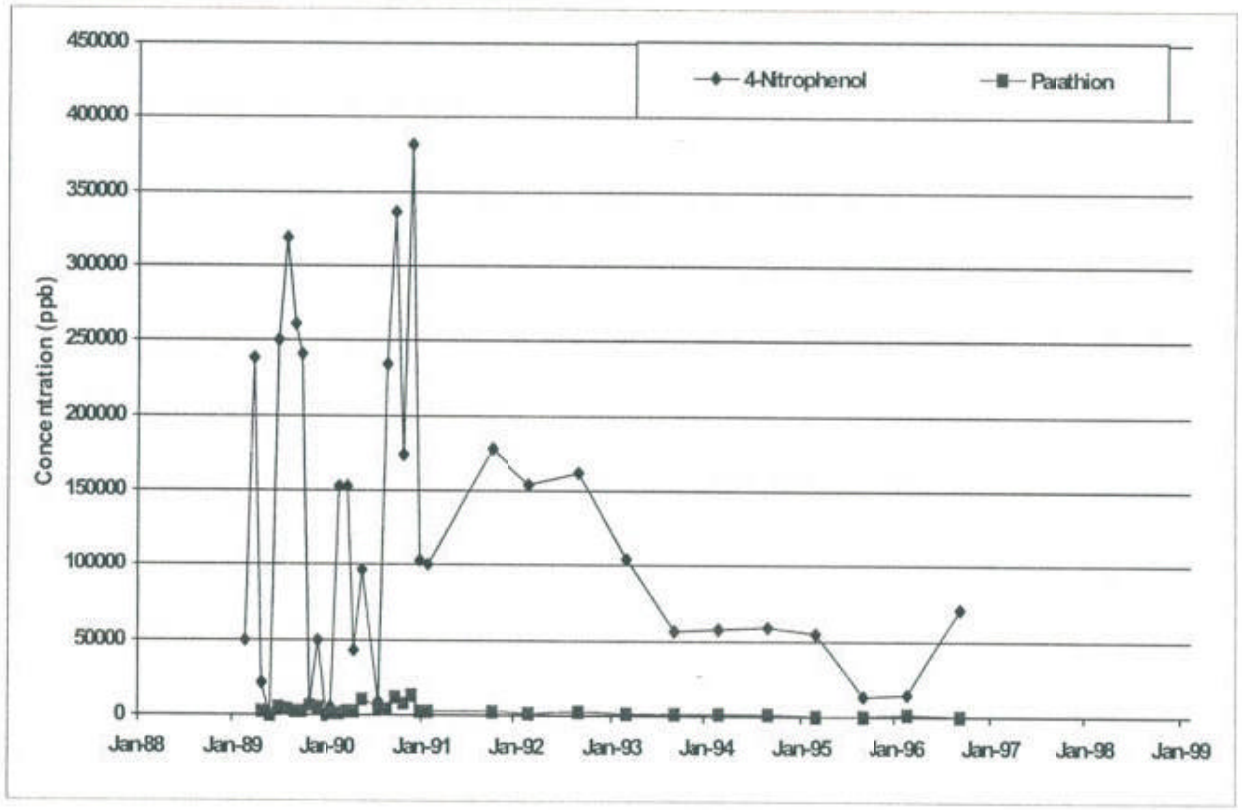
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

IW-19



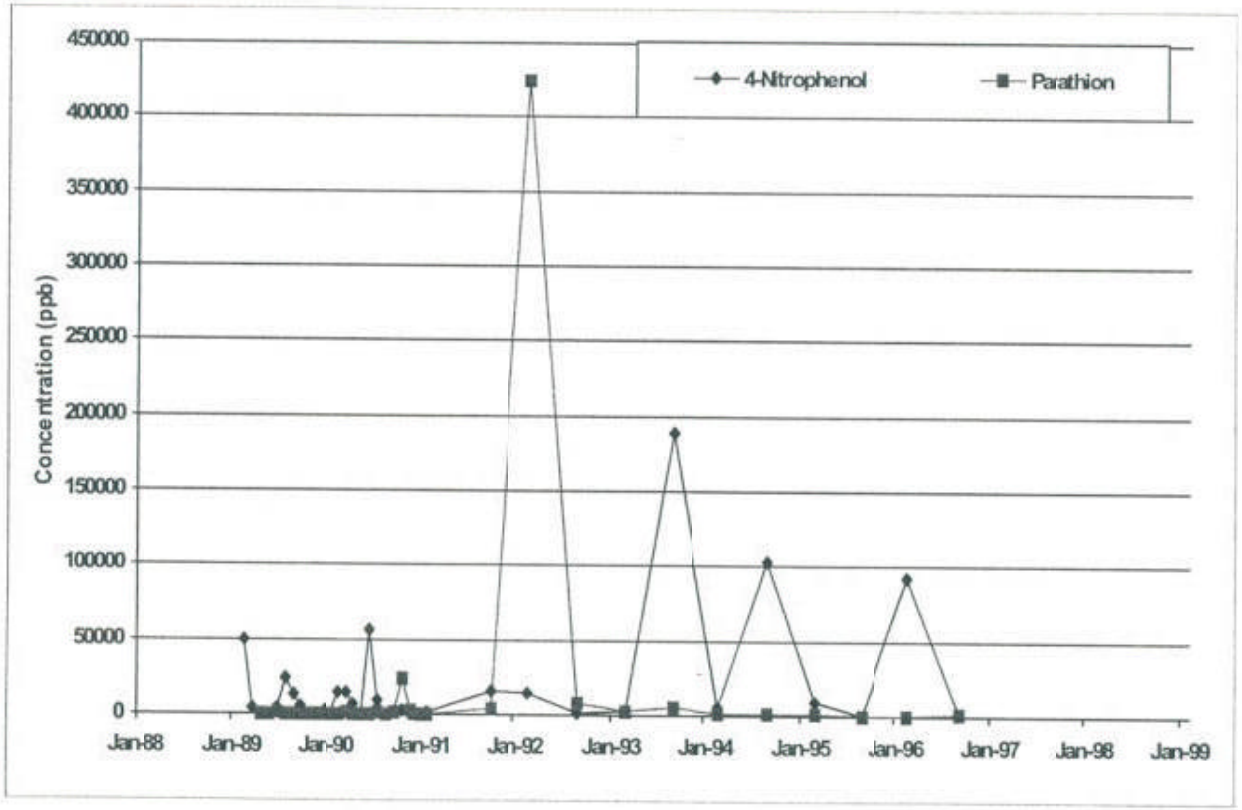
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

IW-20



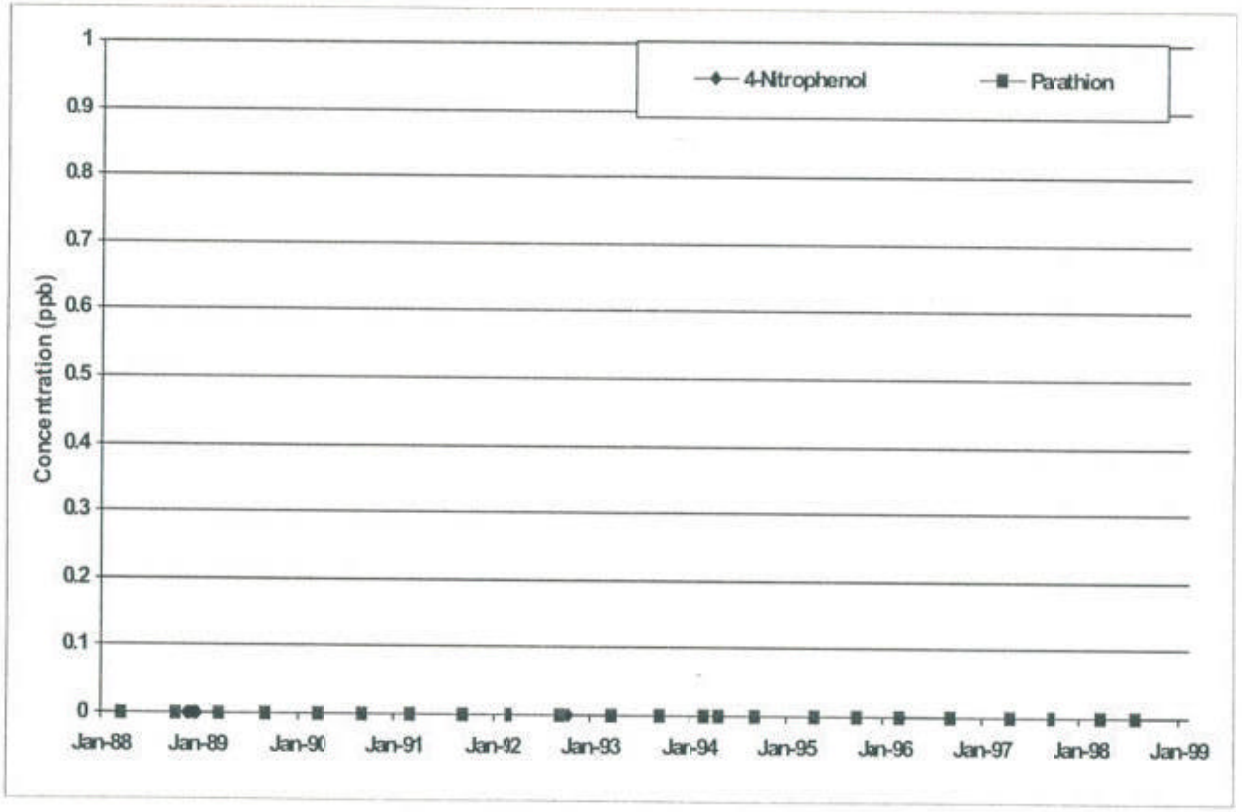
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

IW-21



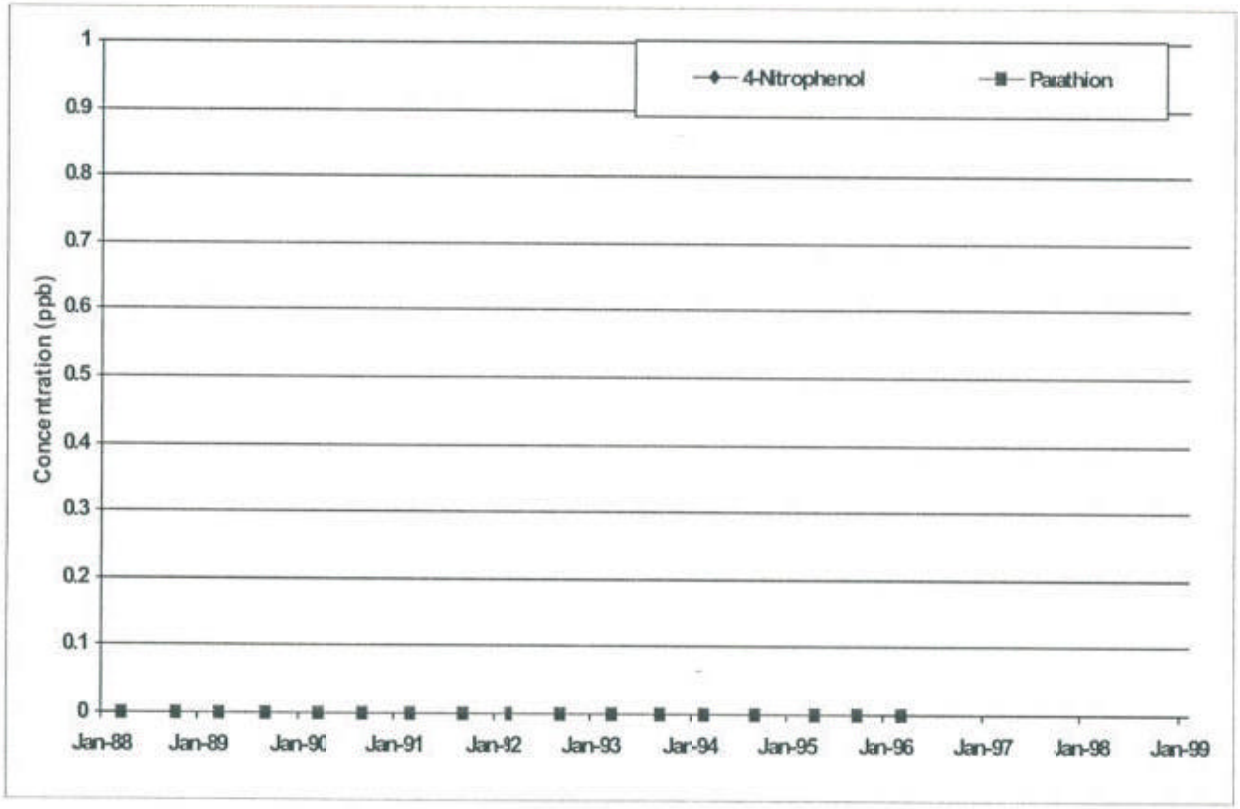
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

MW-01B



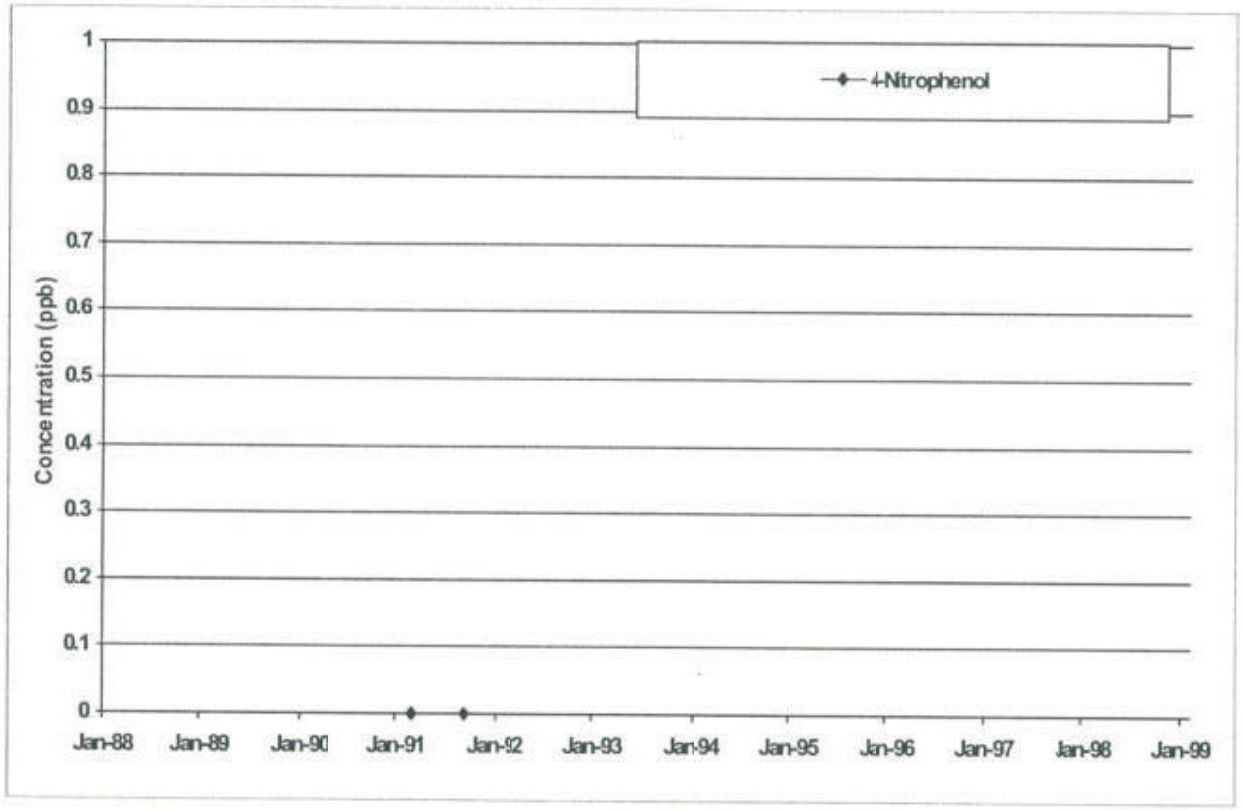
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

MW-02



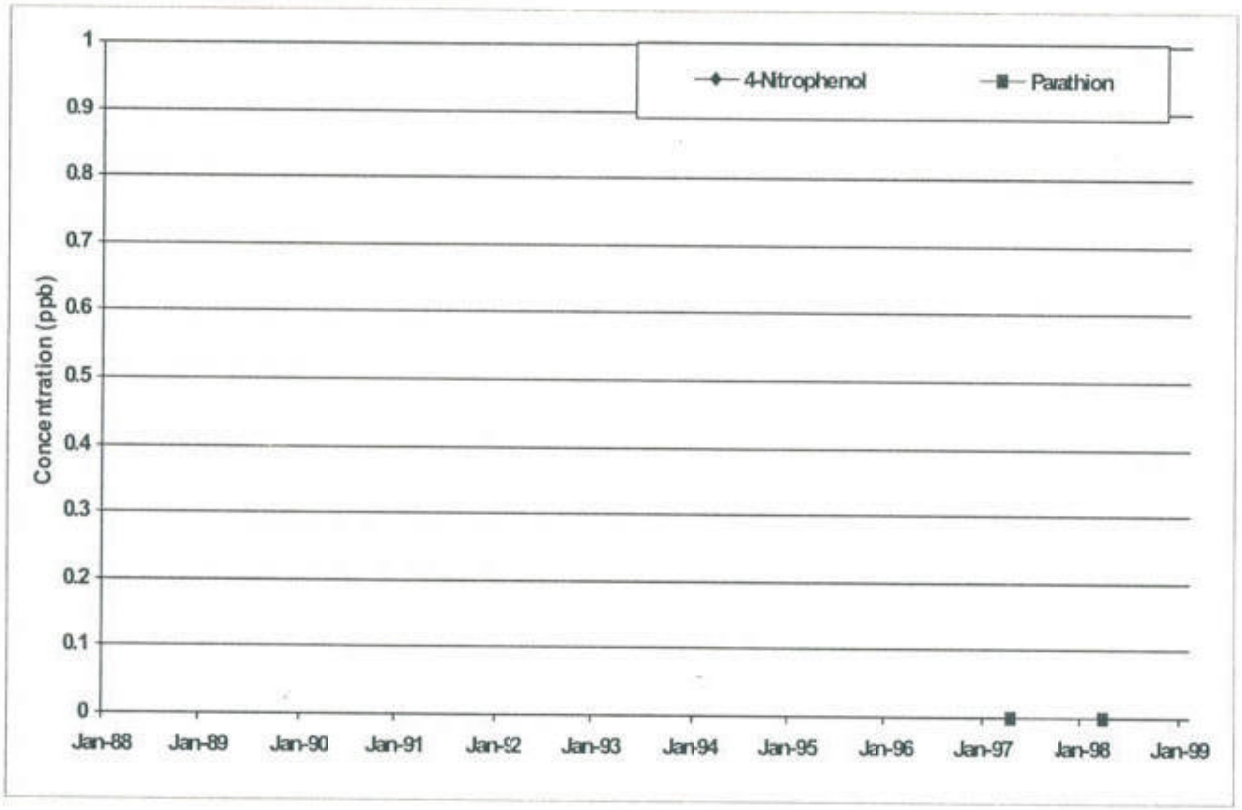
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

MW-03



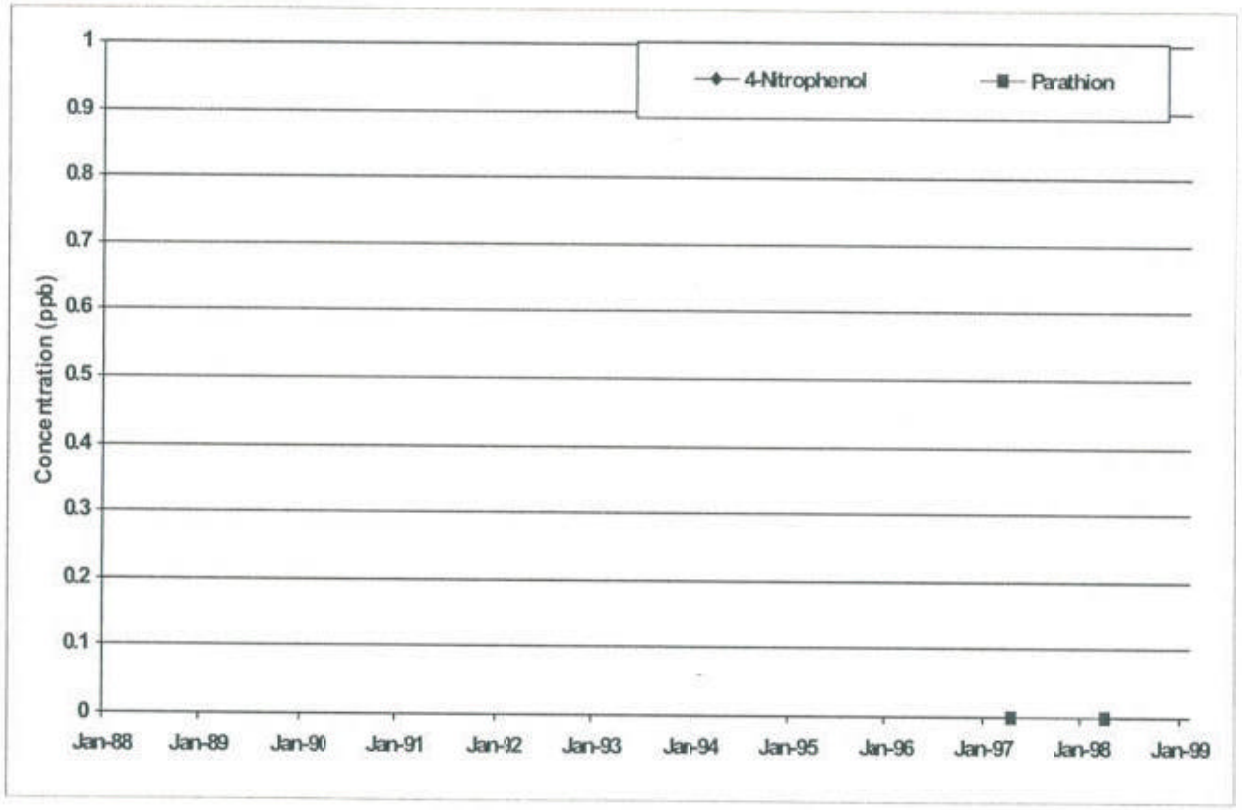
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

MW-08



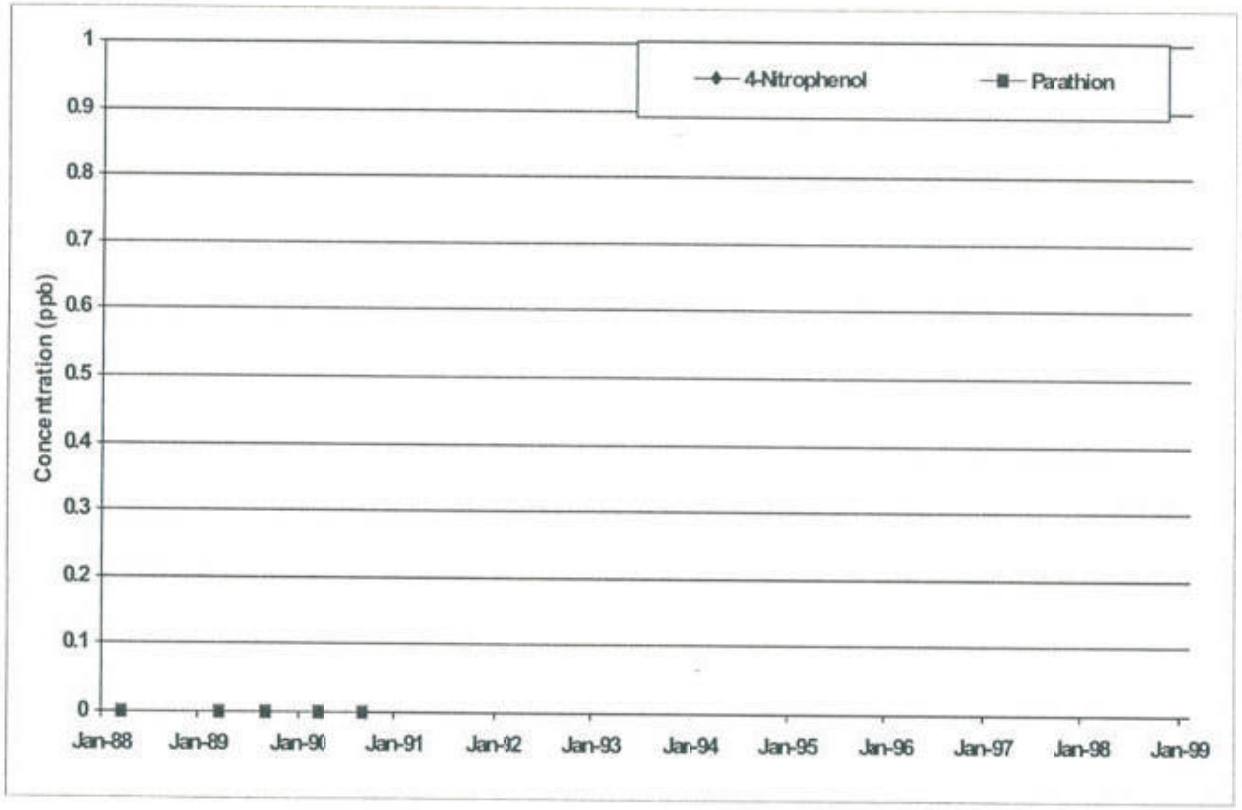
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

MW-09



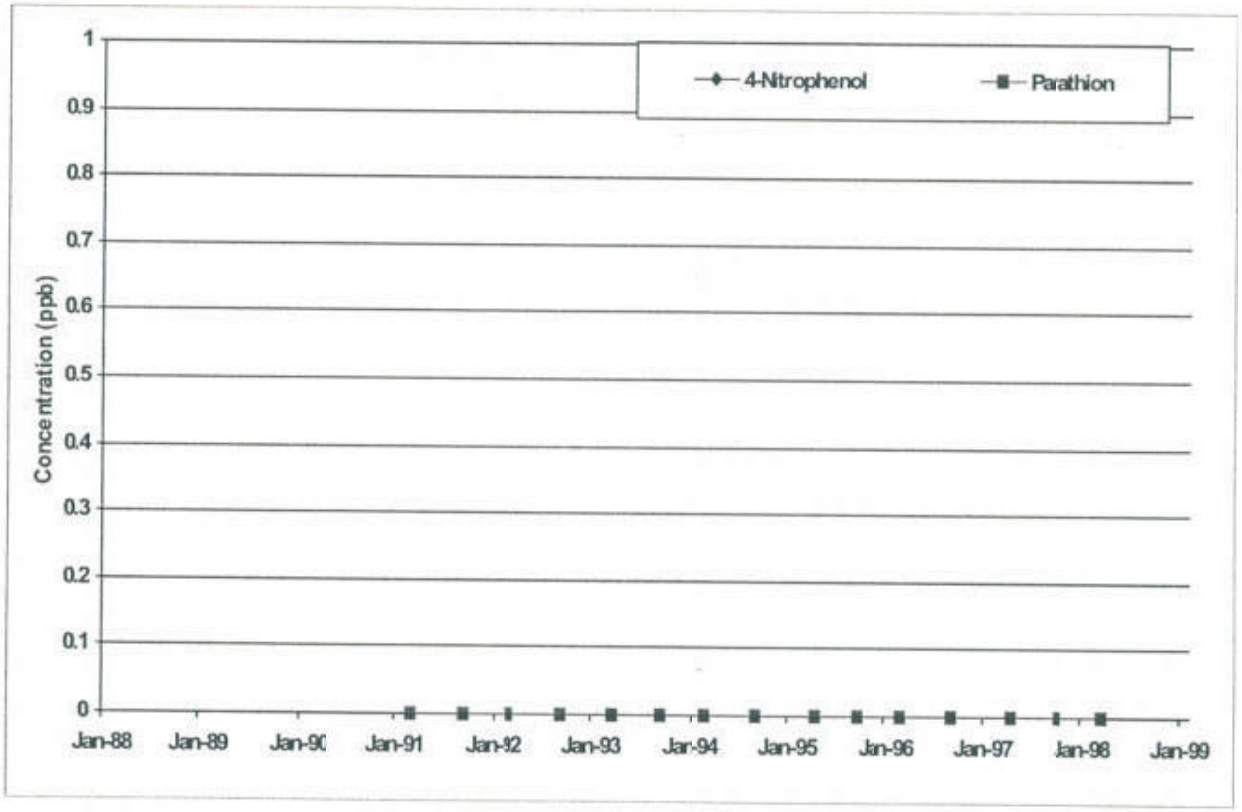
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

MW-11



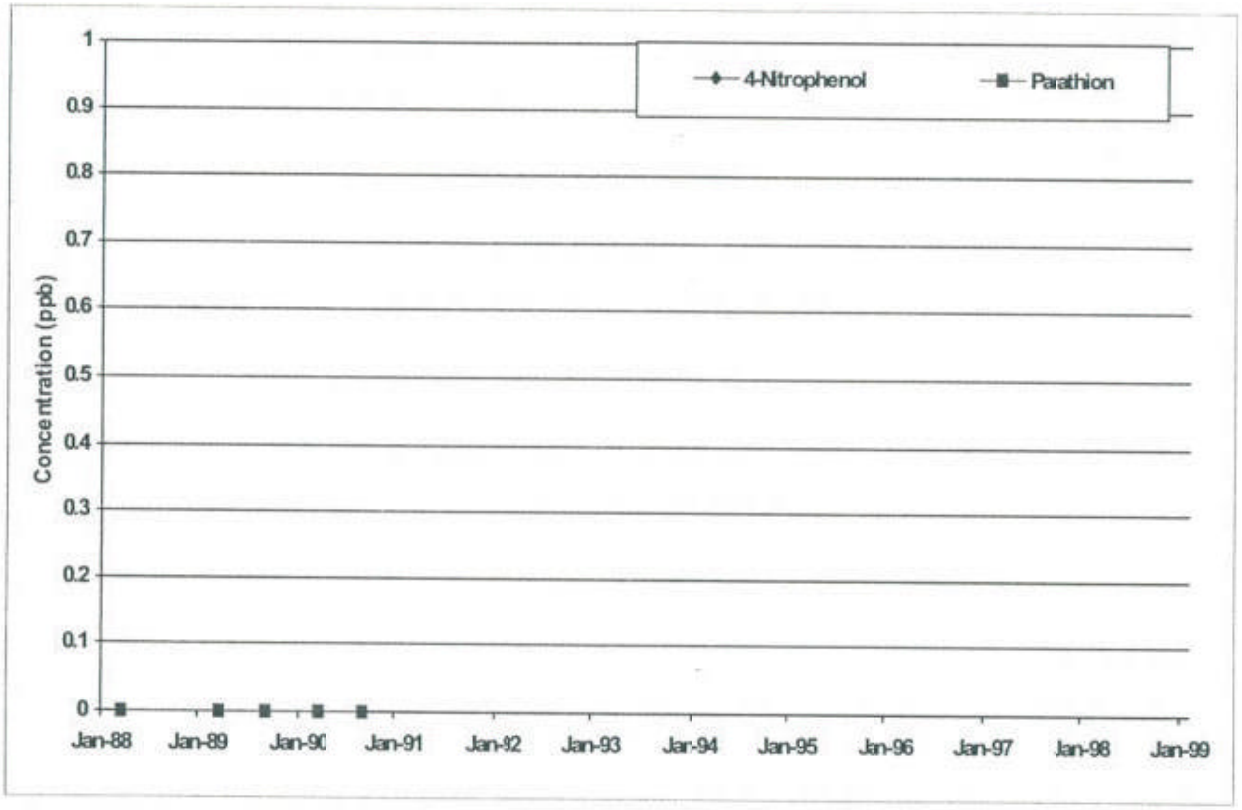
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

MW-11A



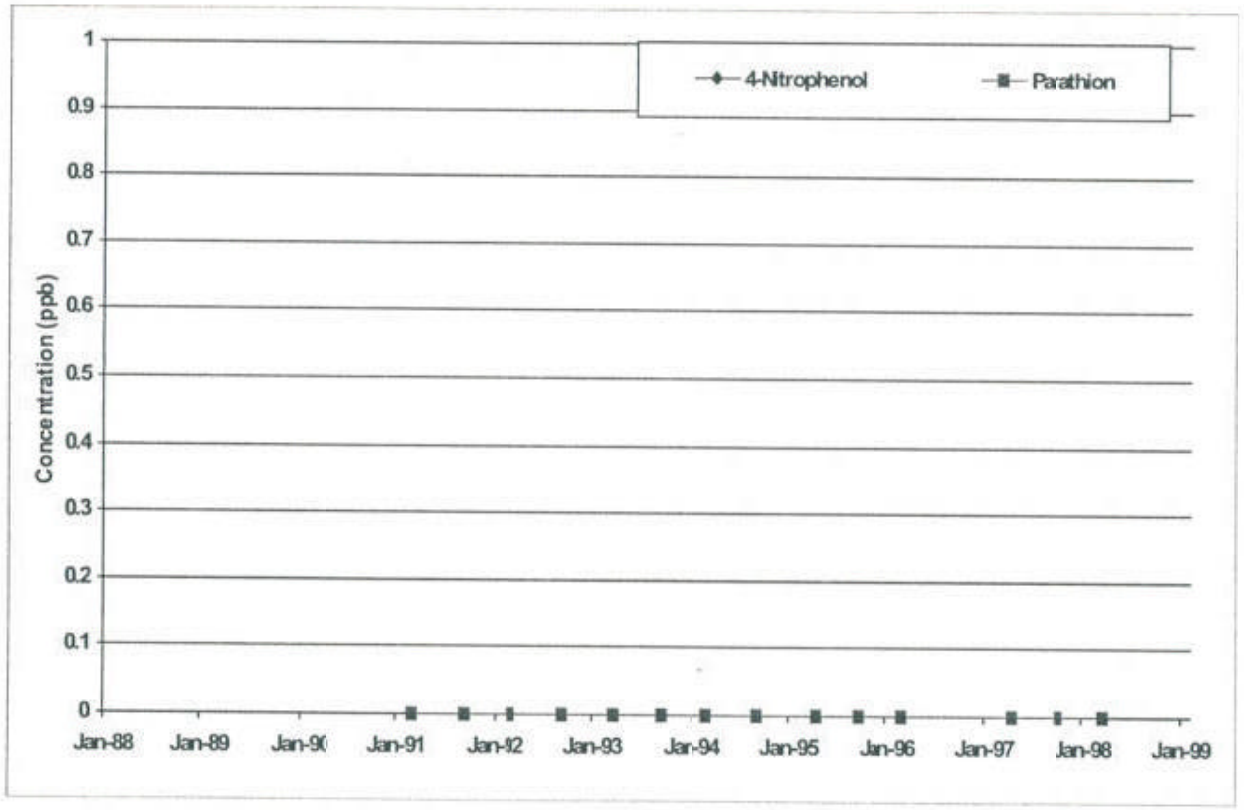
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

MW-12



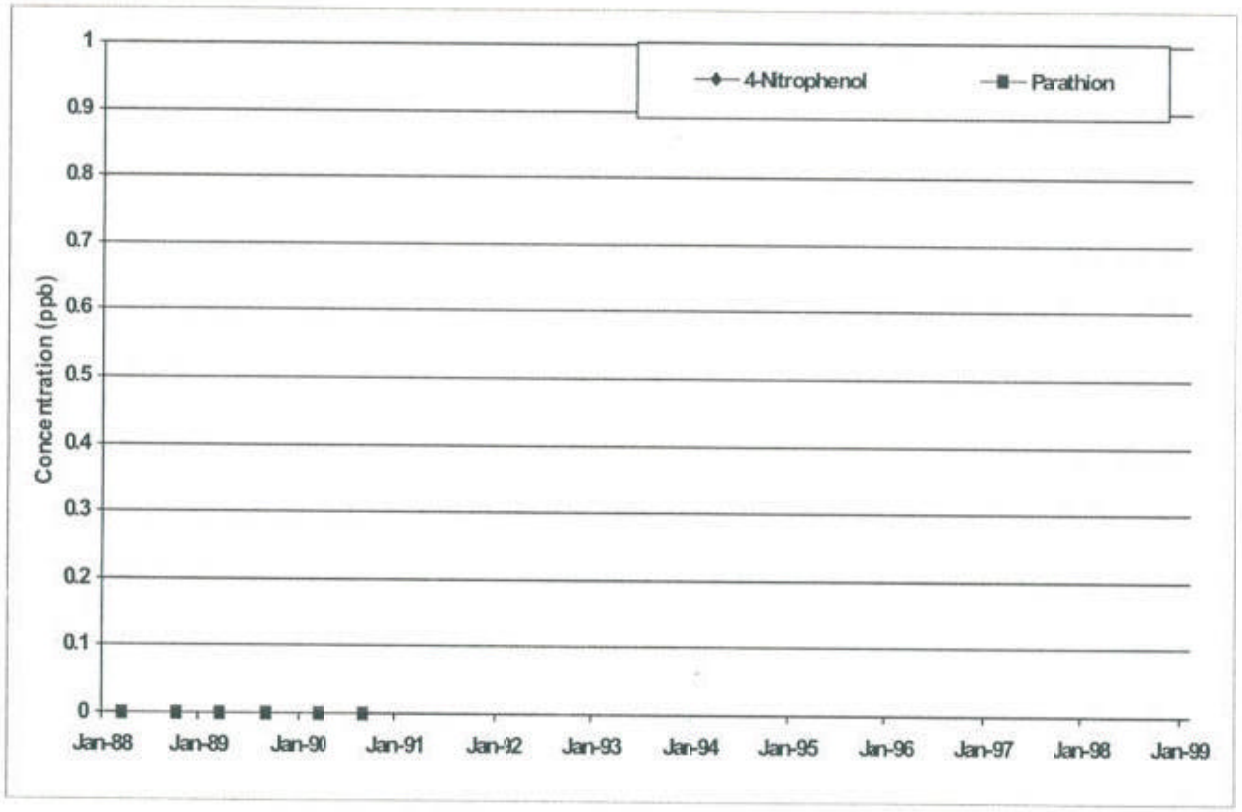
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

MW-12A



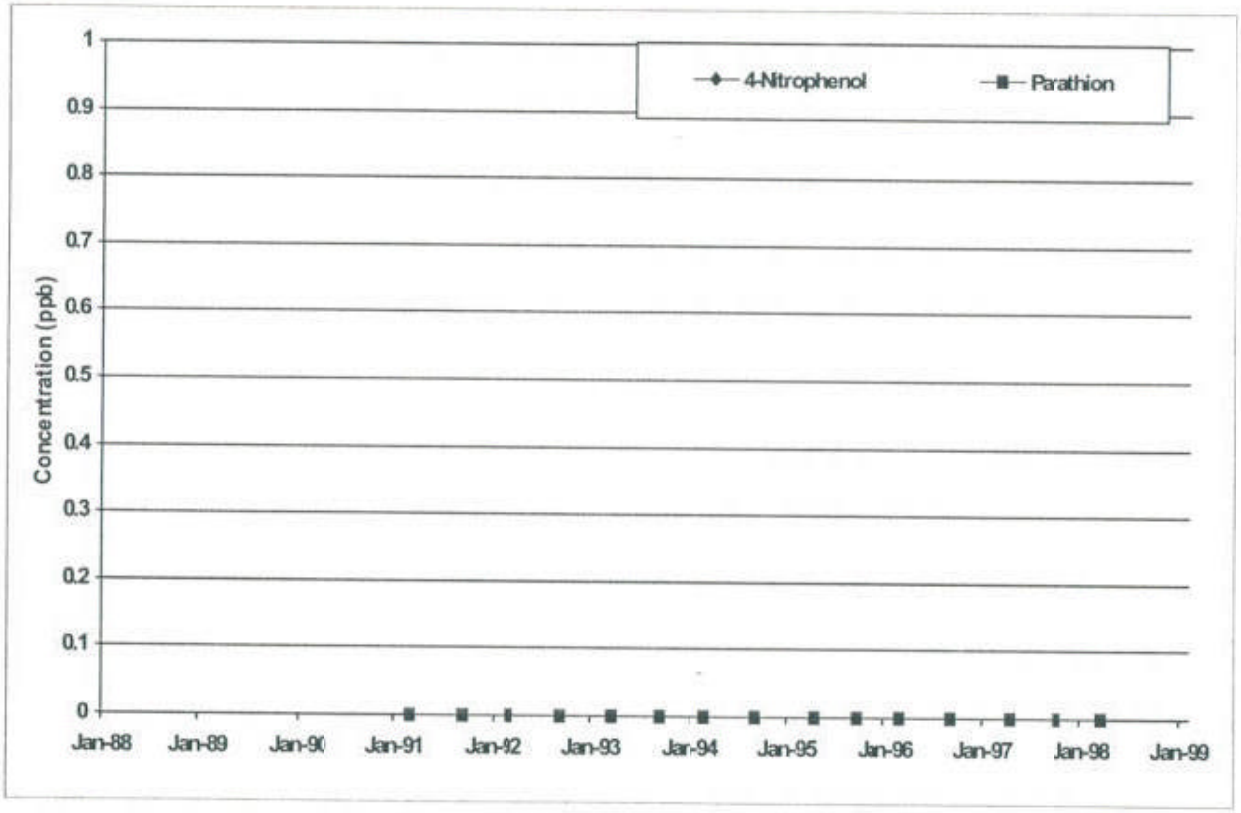
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

MW-13



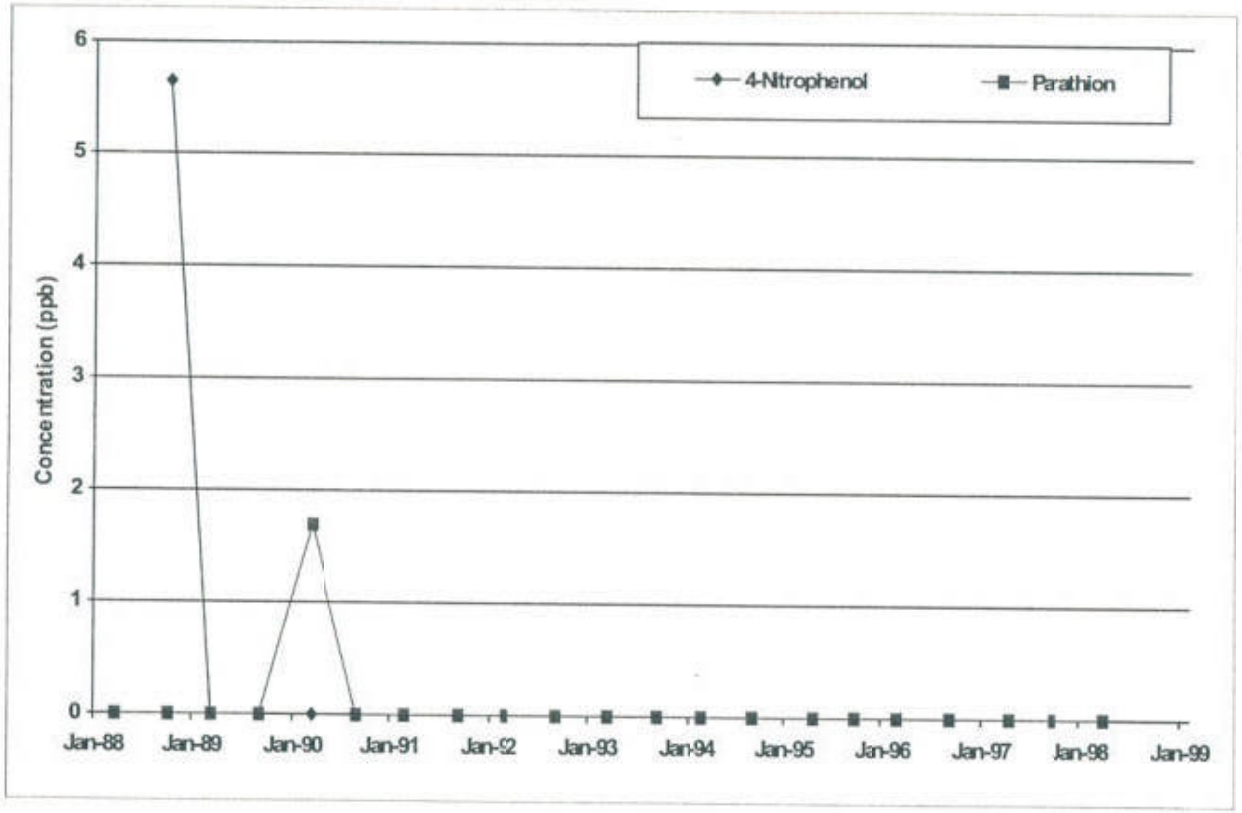
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

MW-13A



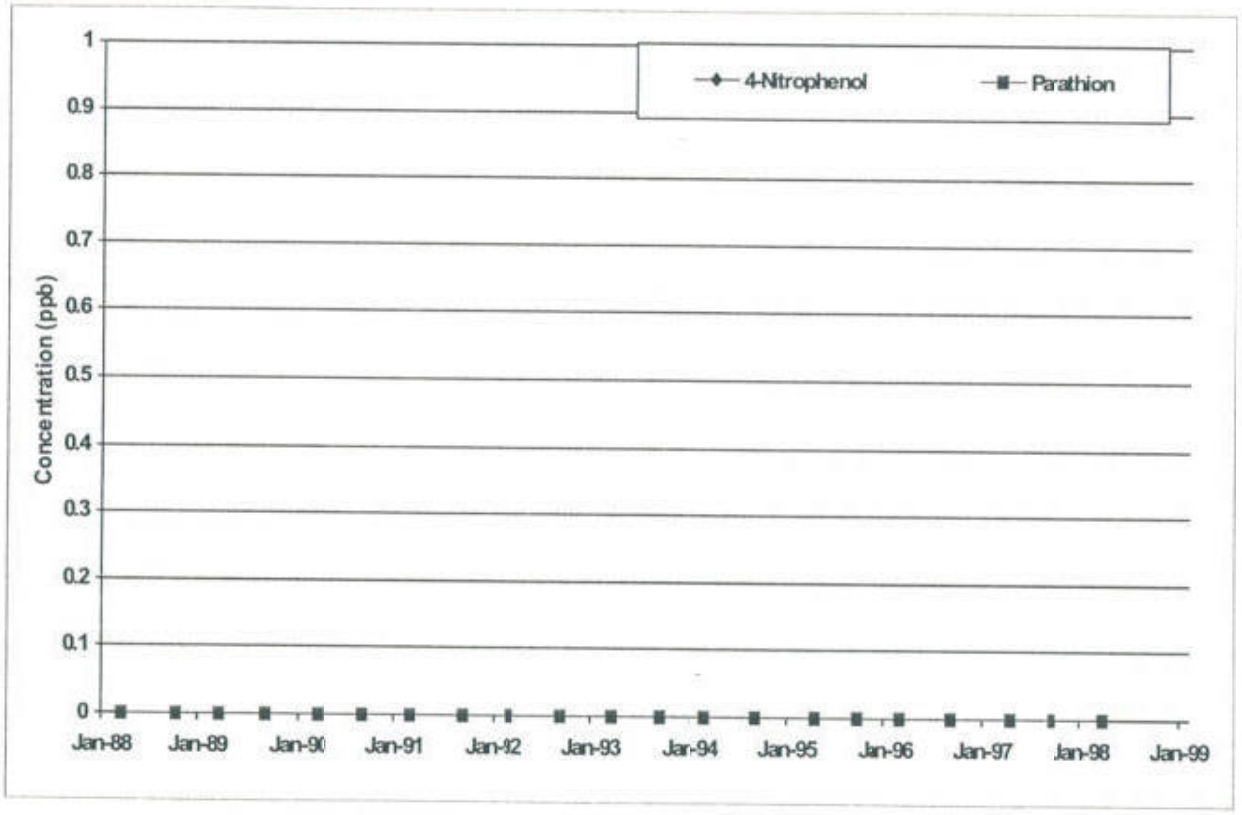
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

MW-15



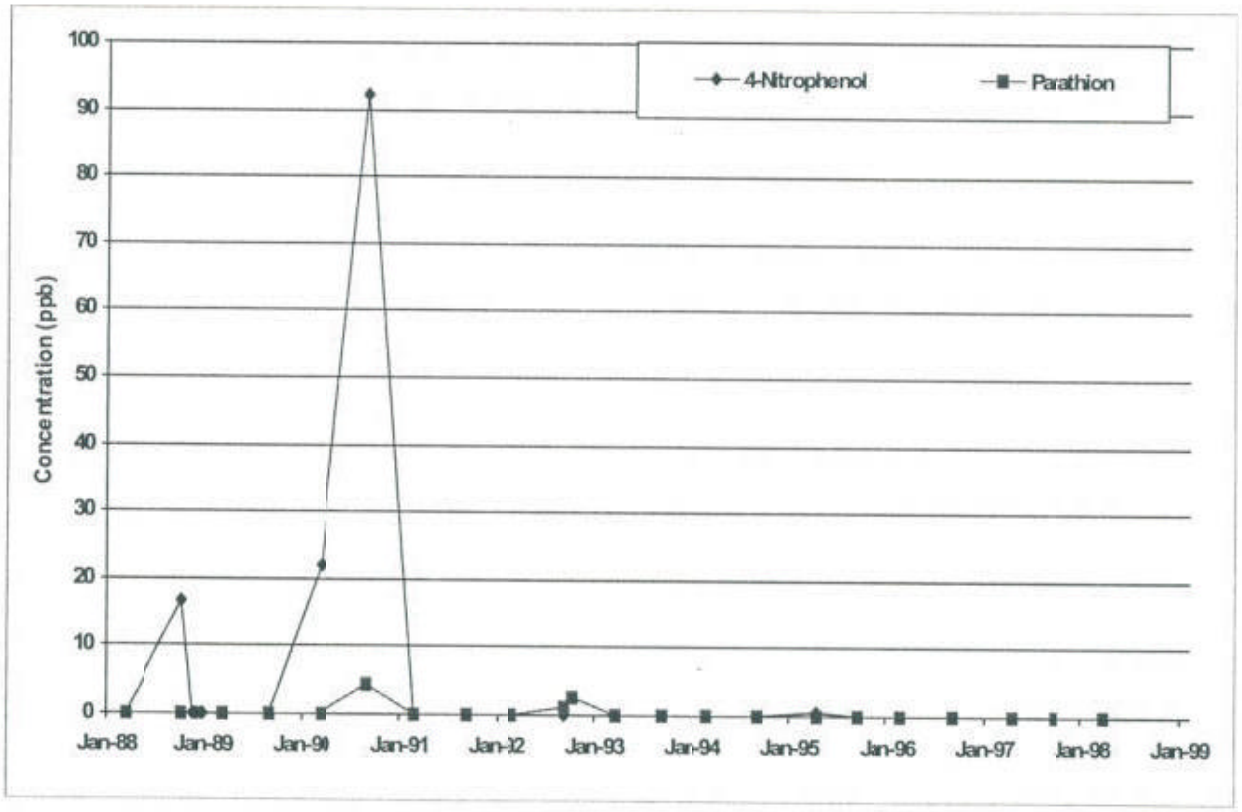
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

MW-16



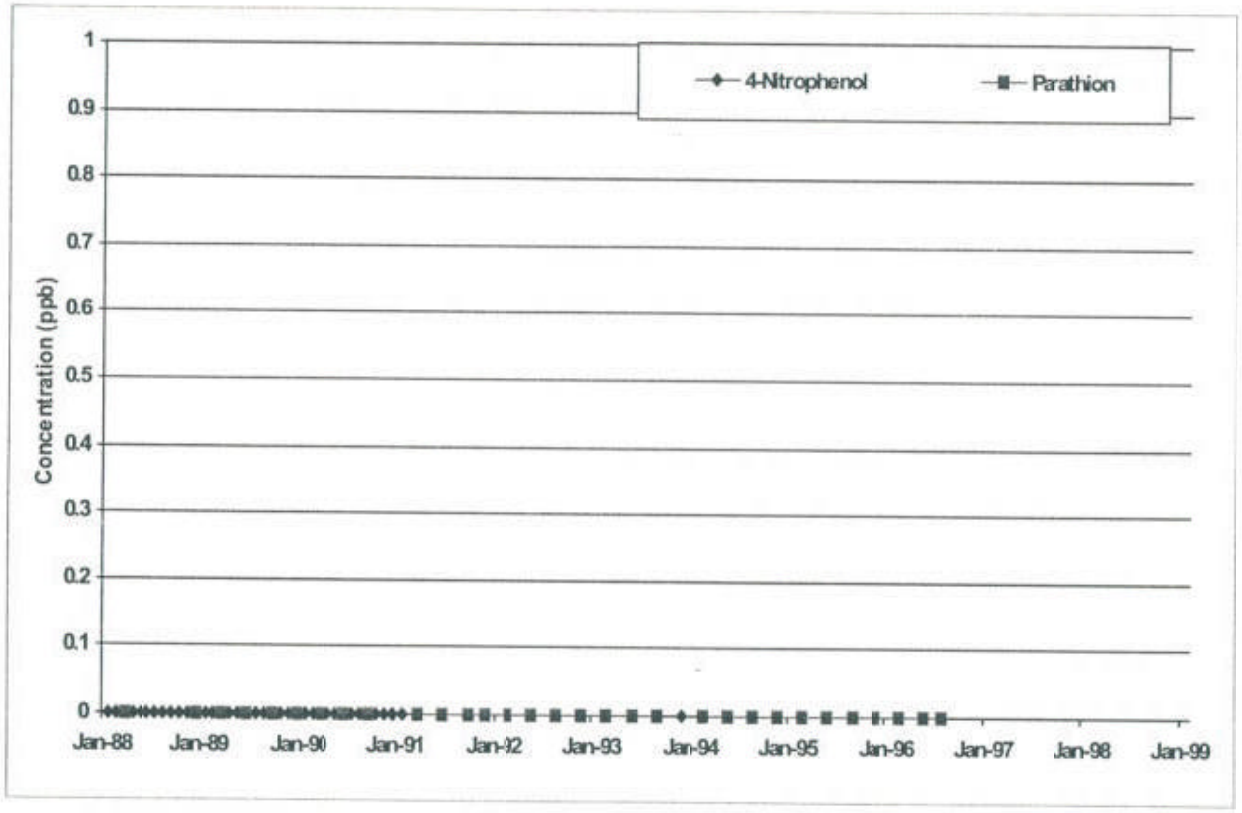
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

MW-20A



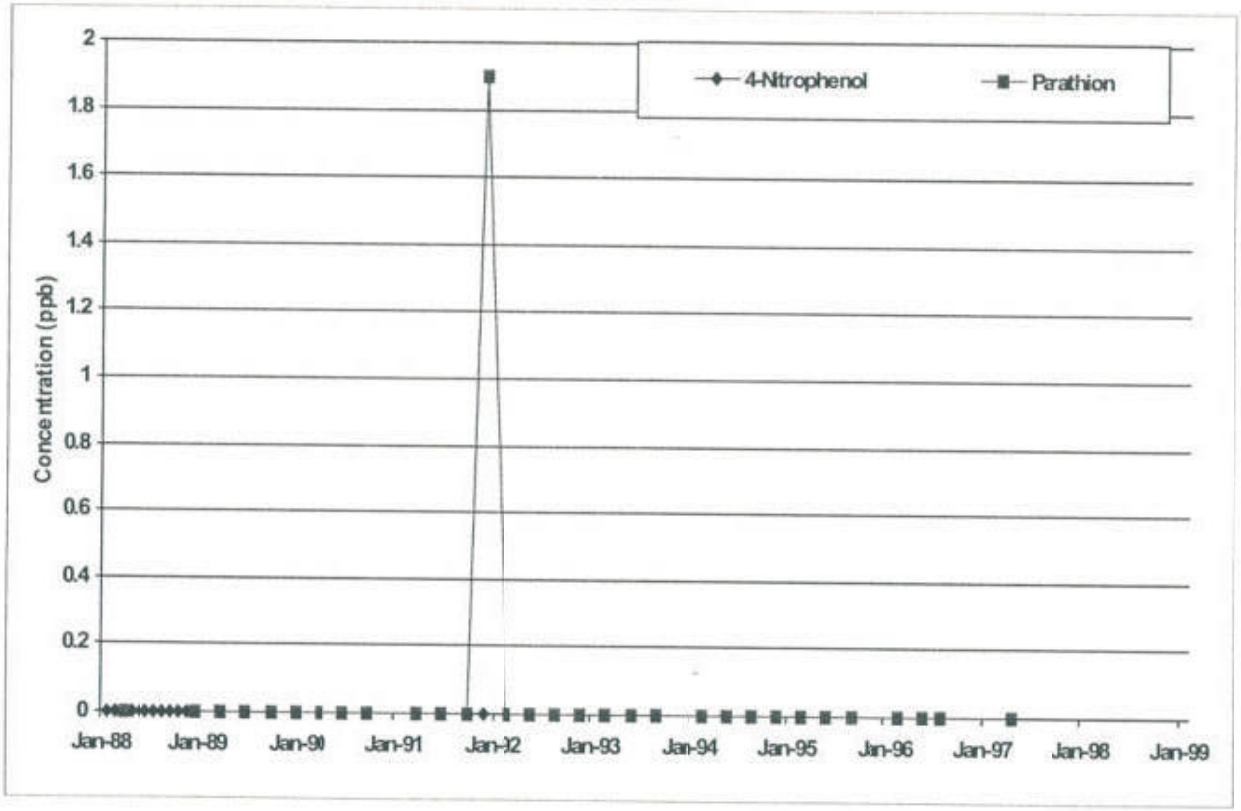
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

OW-01



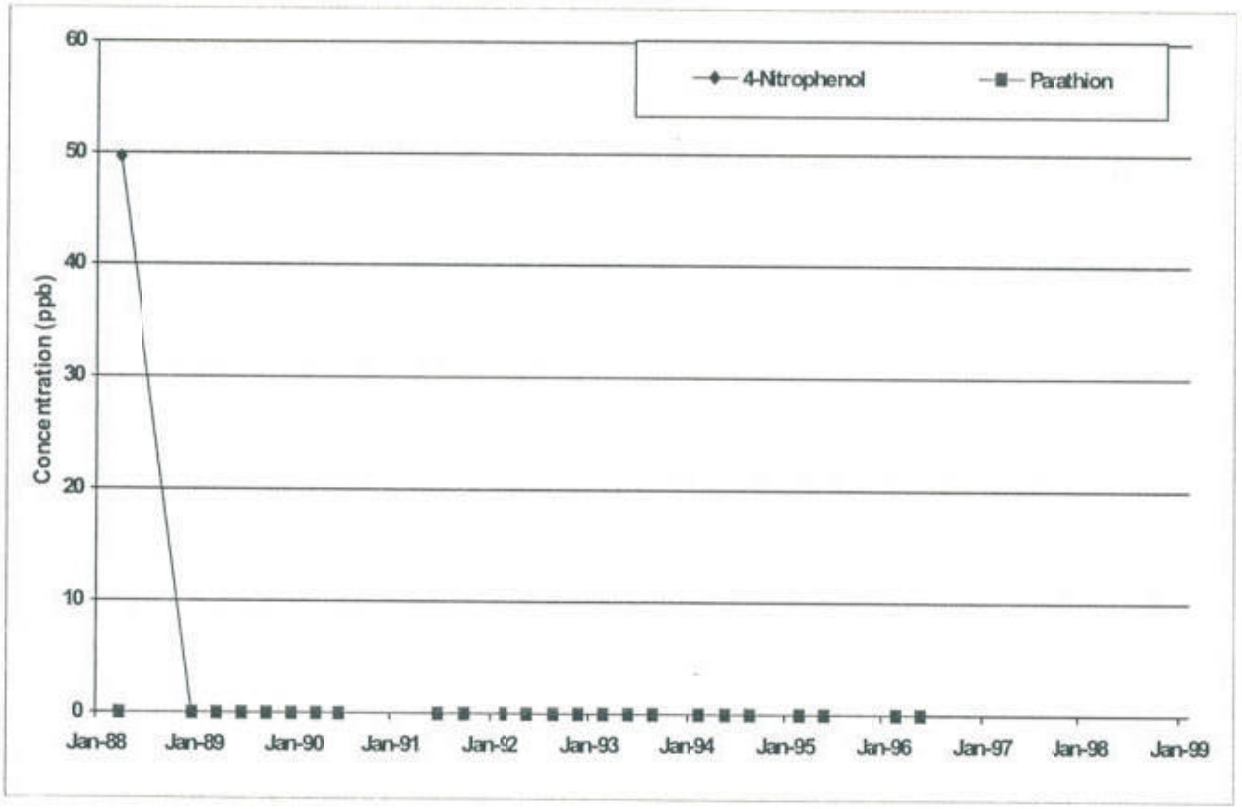
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

OW-02



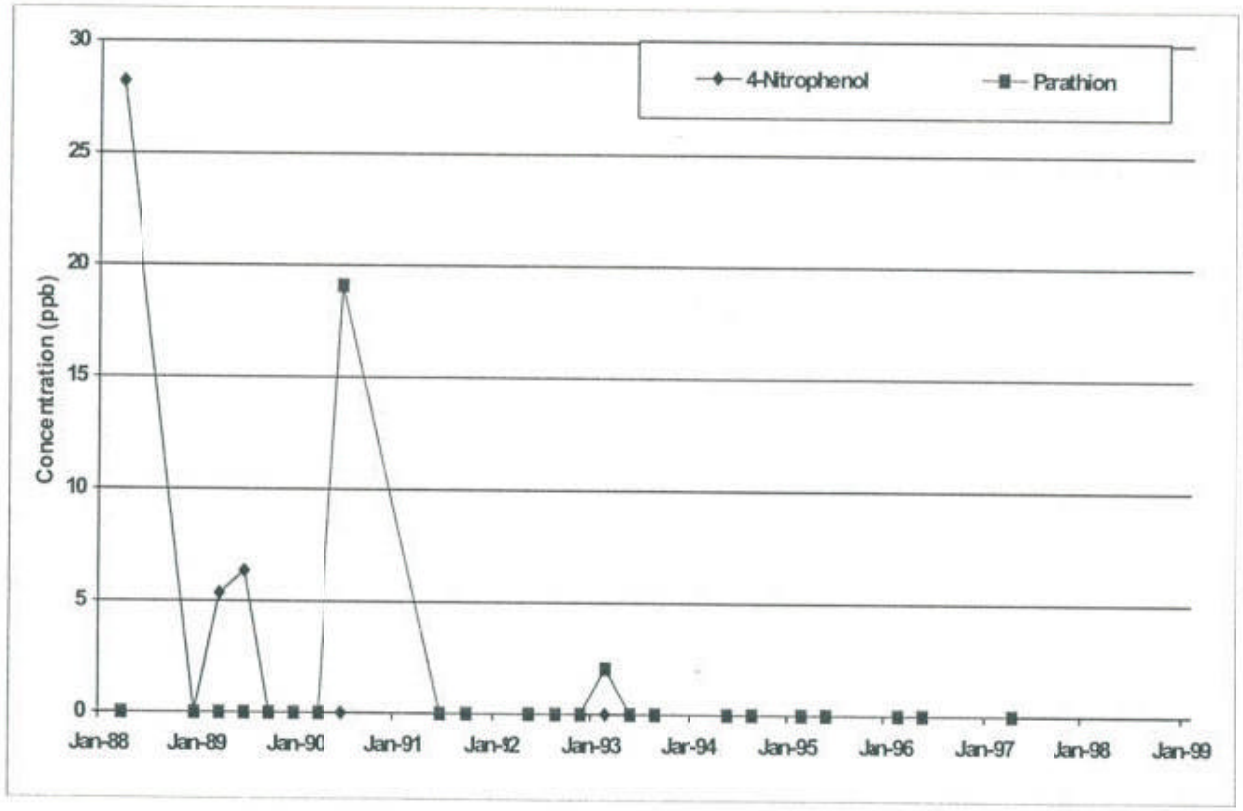
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

OW-03



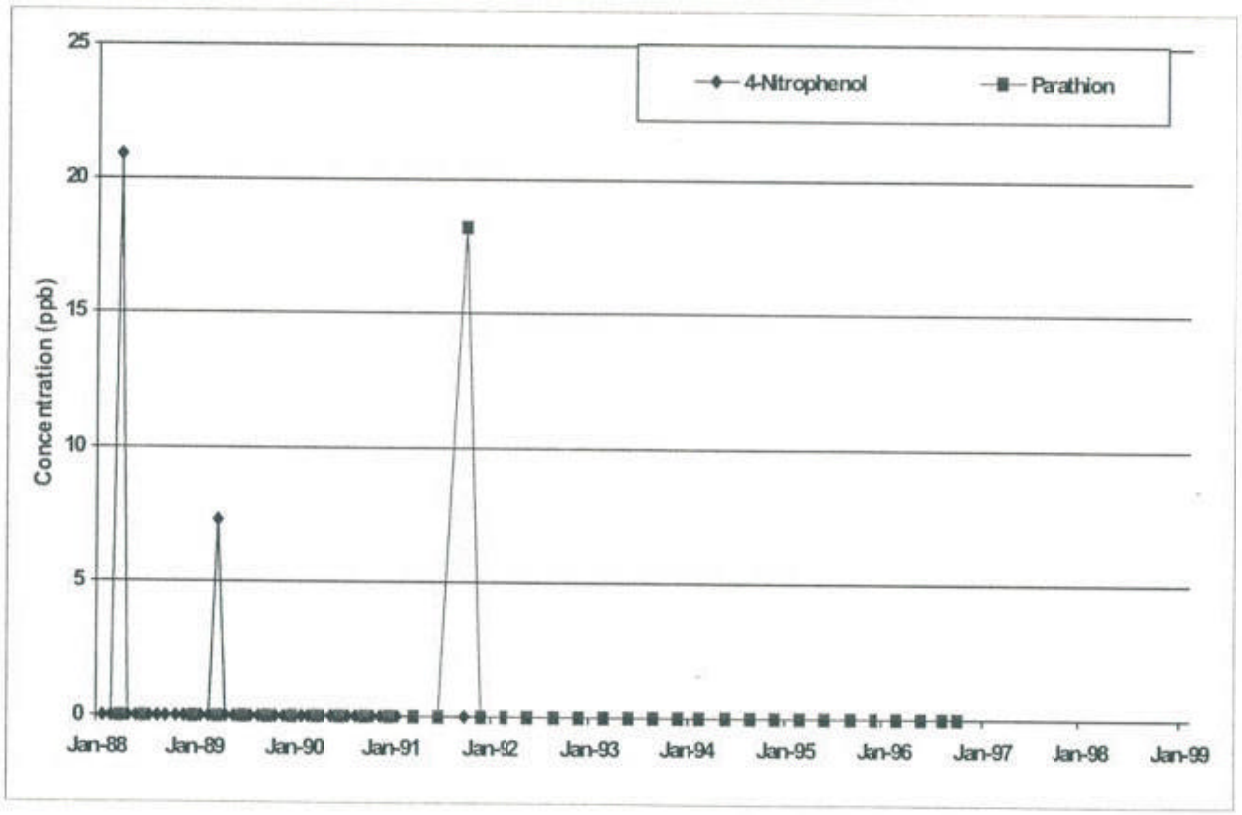
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

OW-04



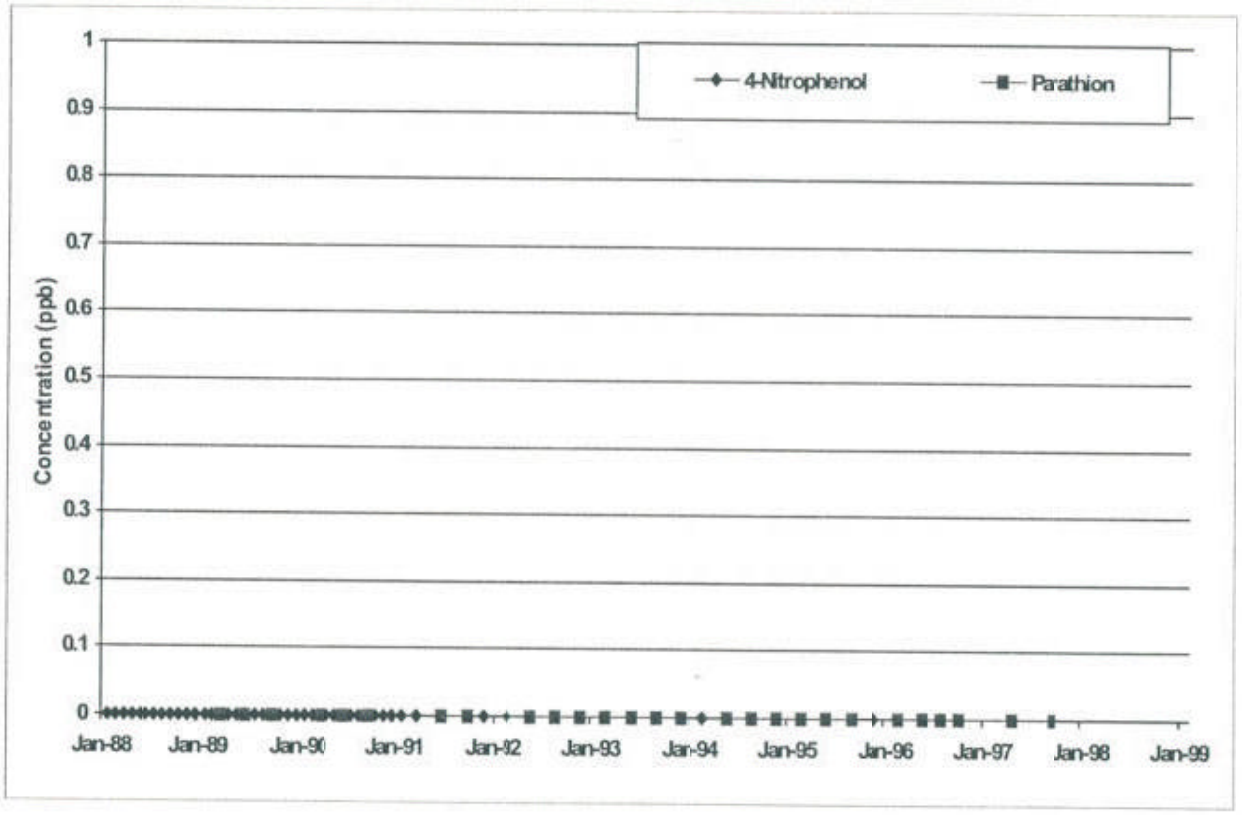
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

OW-05



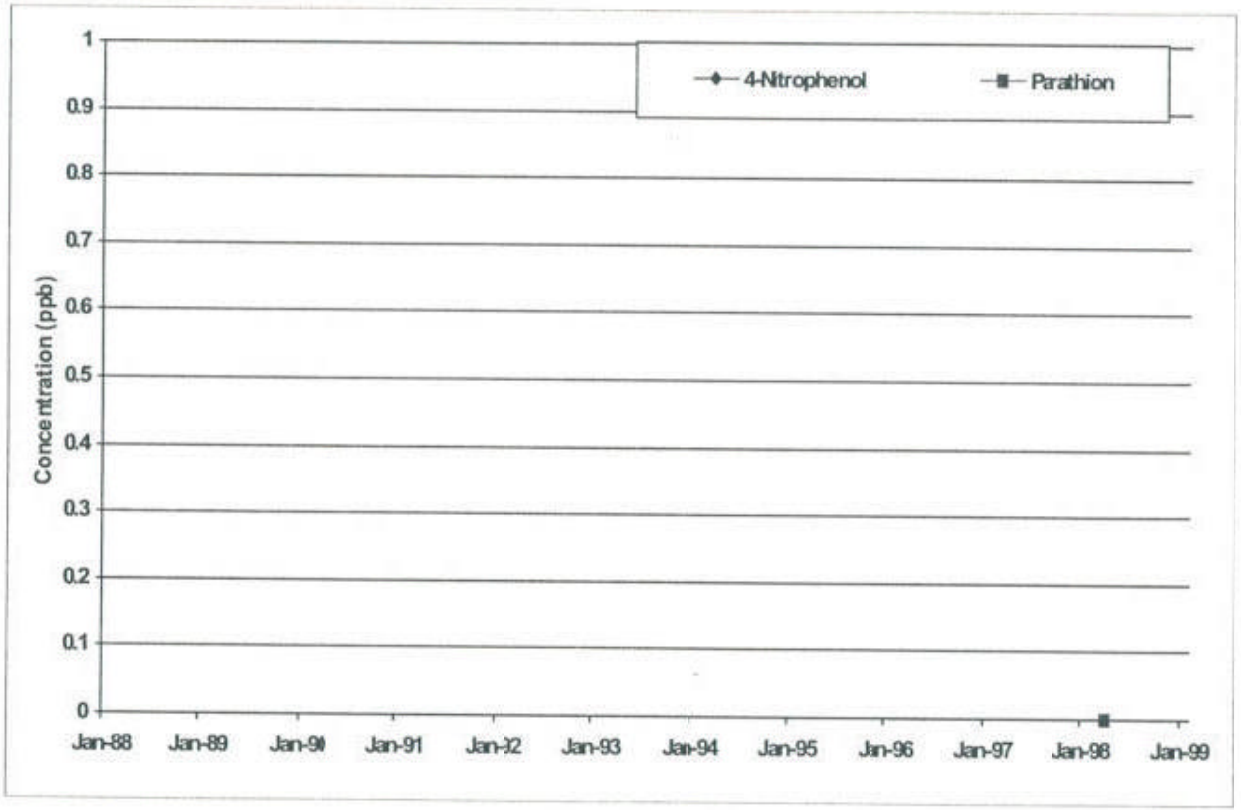
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

OW-06



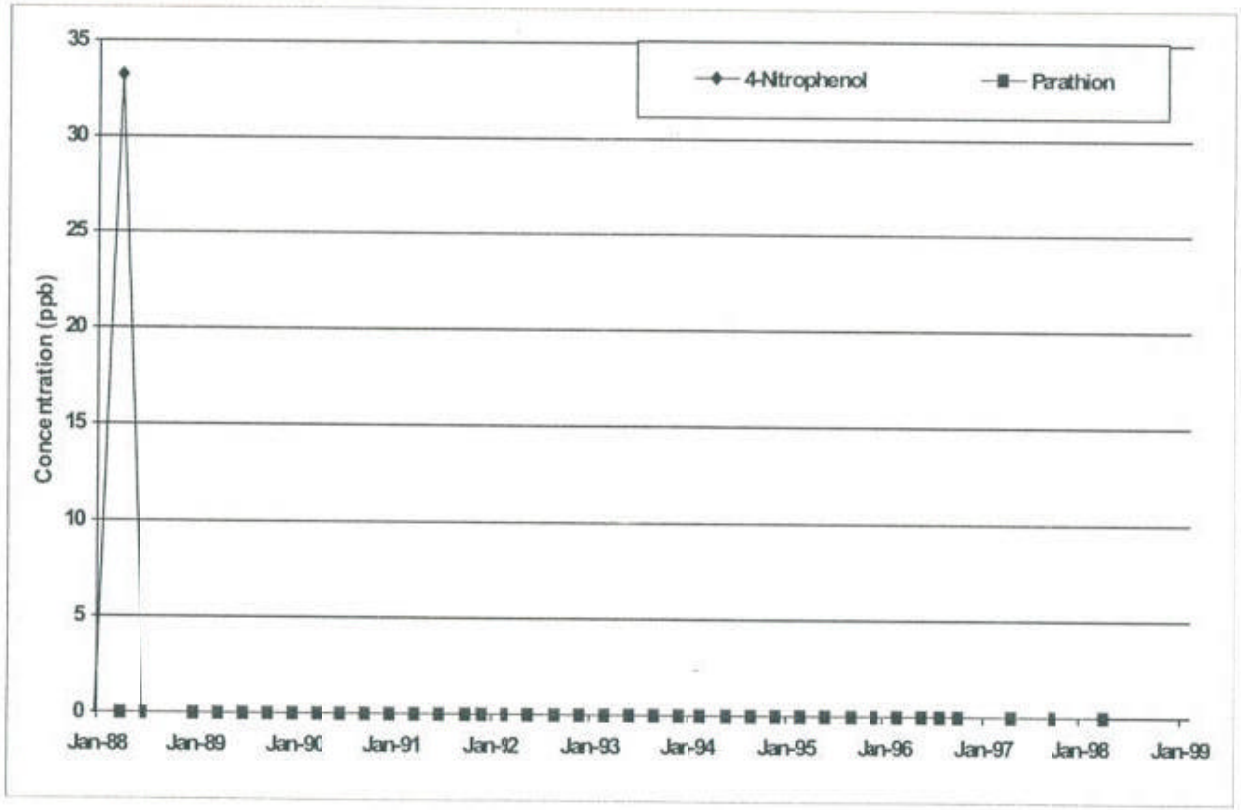
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

OW-06A



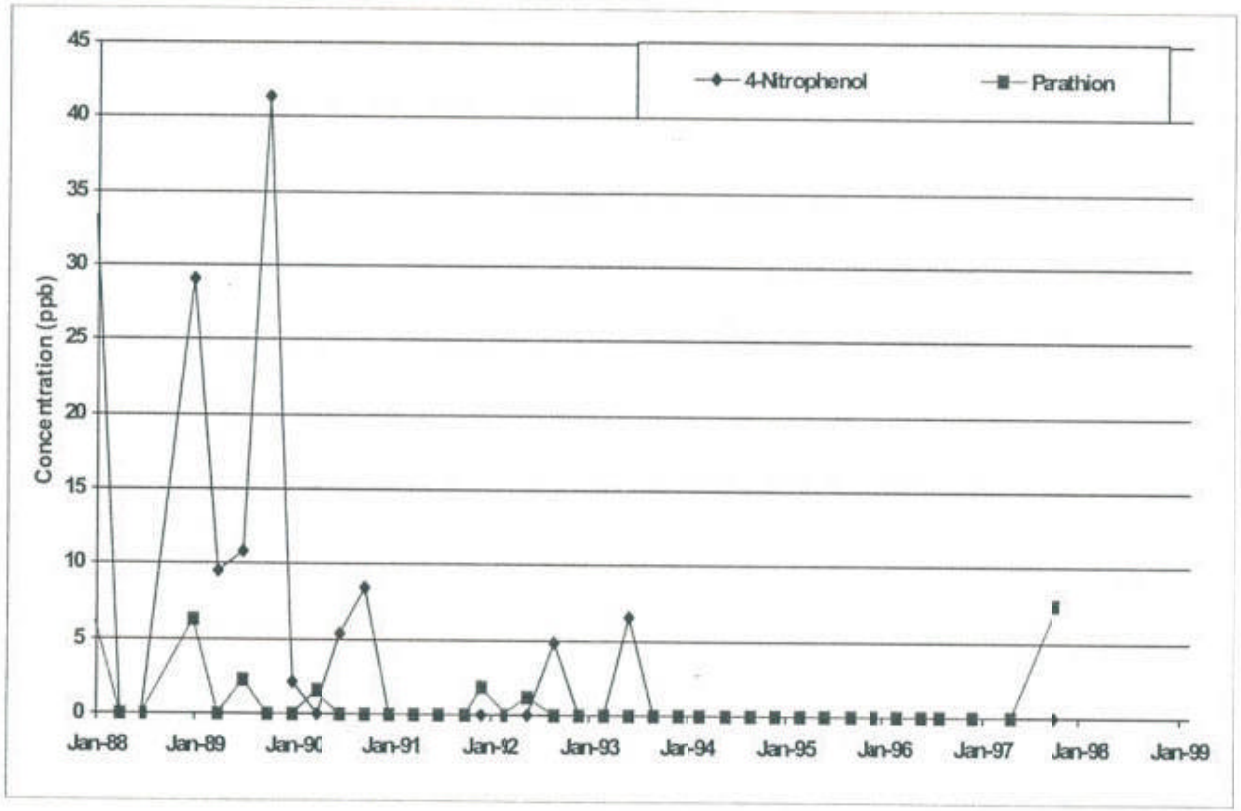
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

OW-07



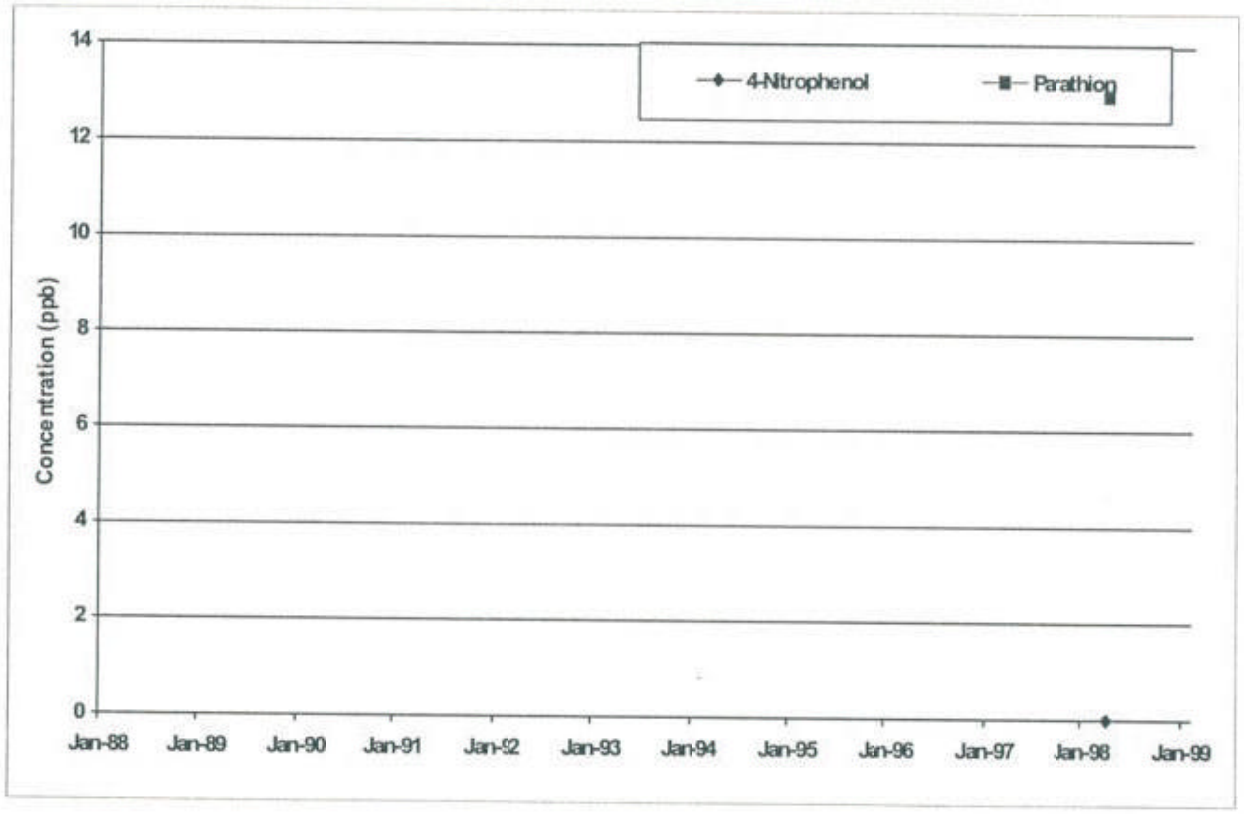
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

OW-08



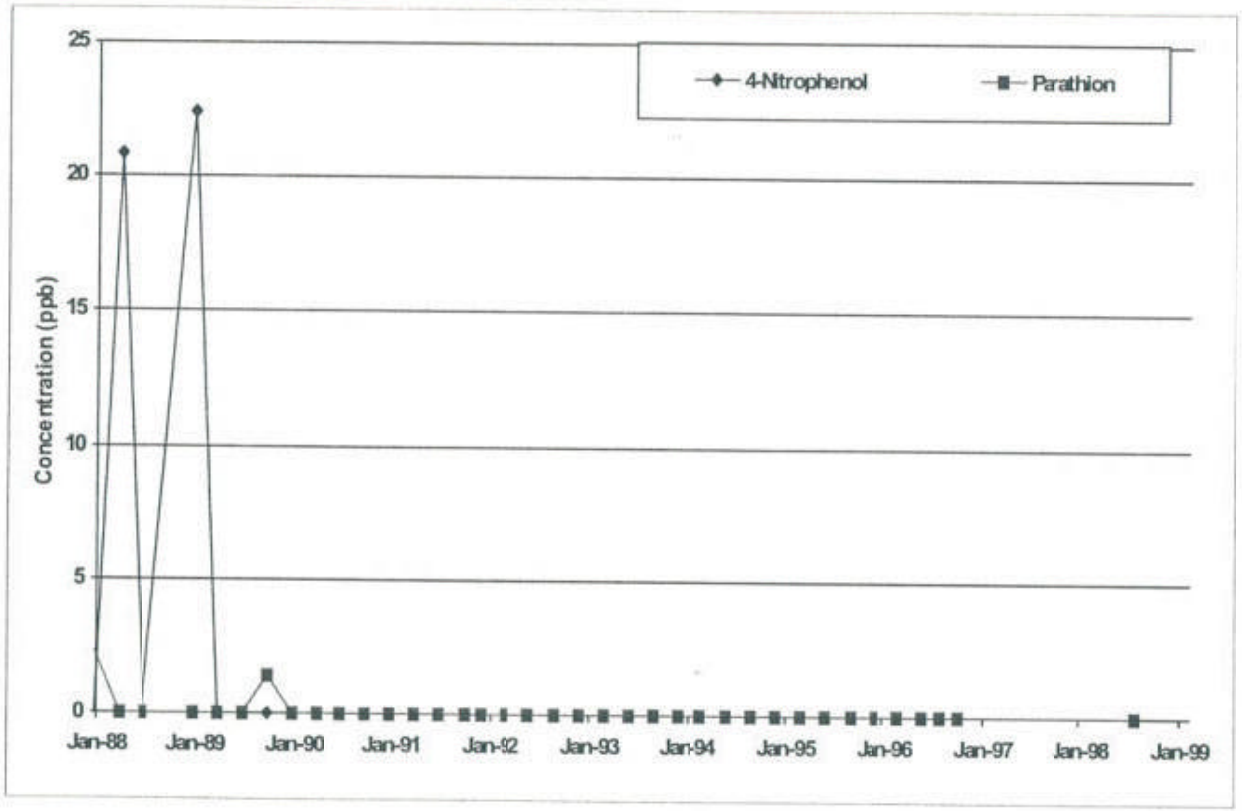
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

OW-08A



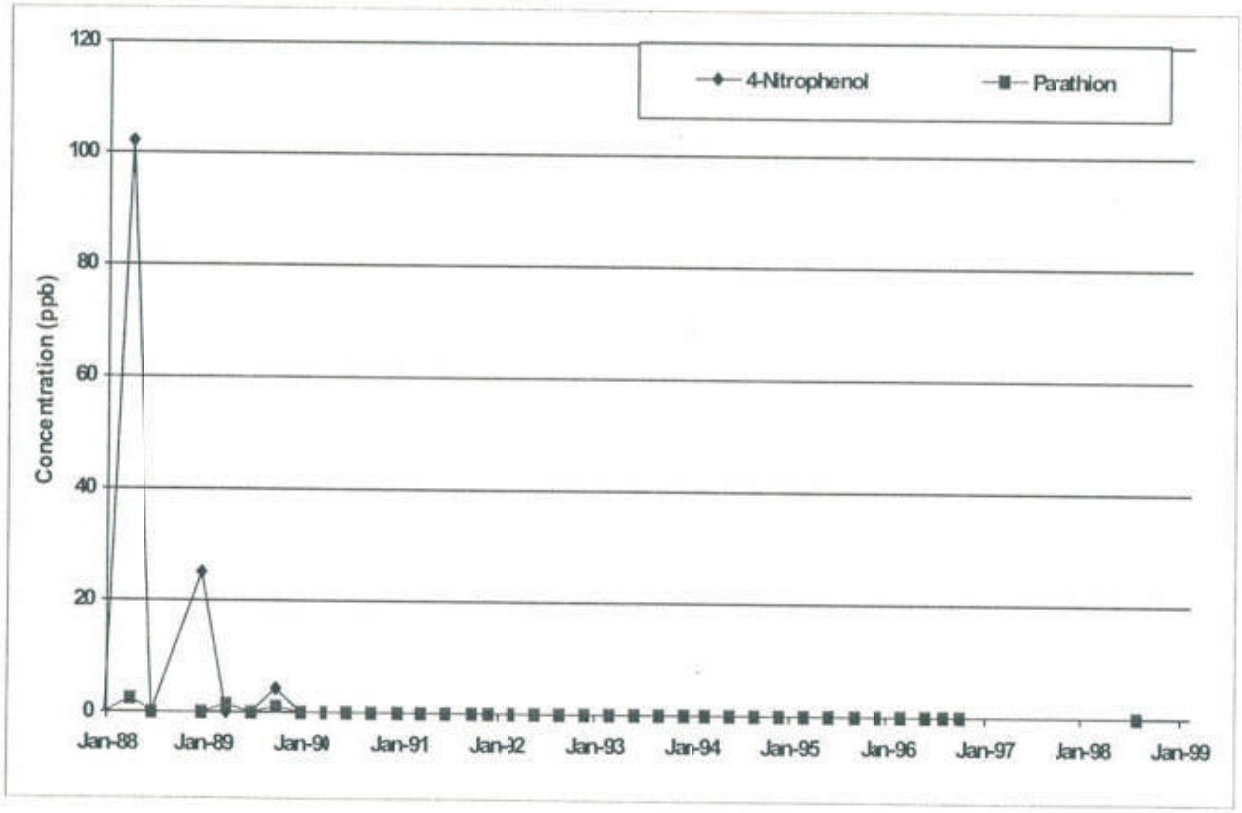
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

OW-09



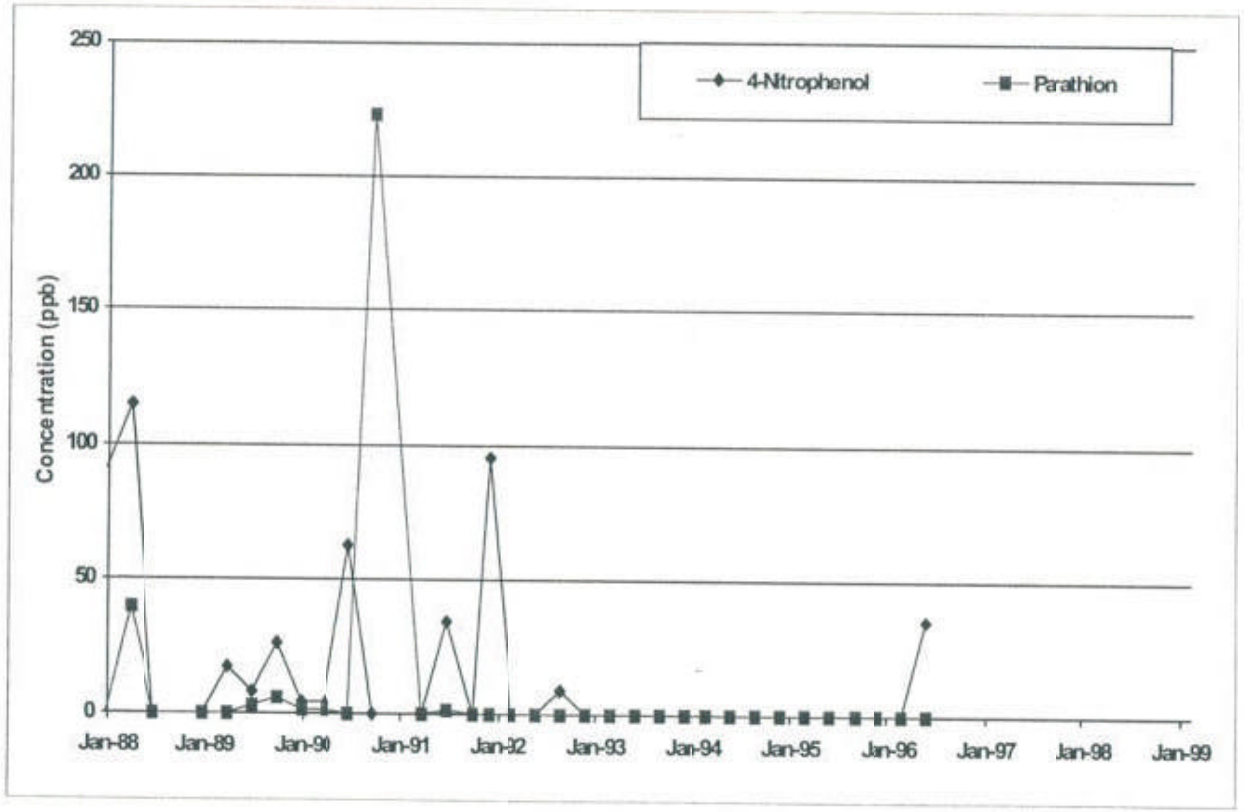
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

OW-10



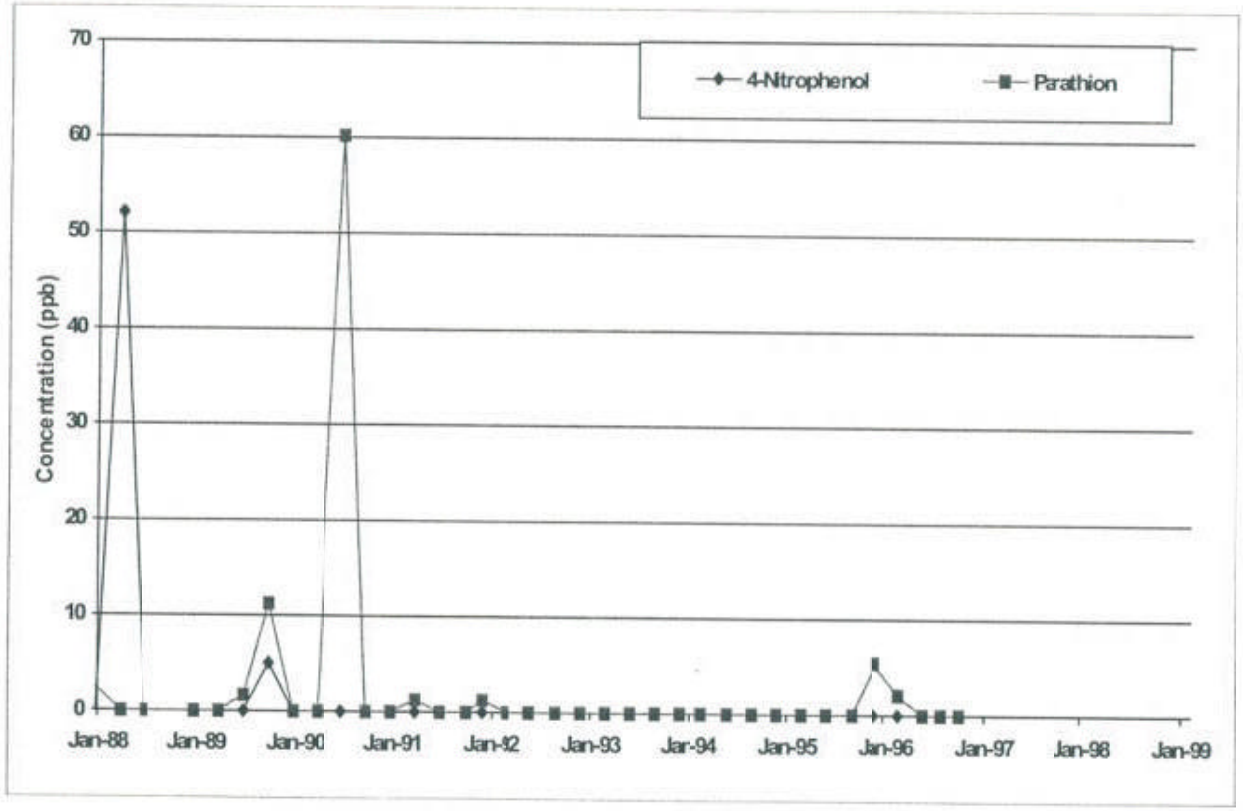
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

OW-11



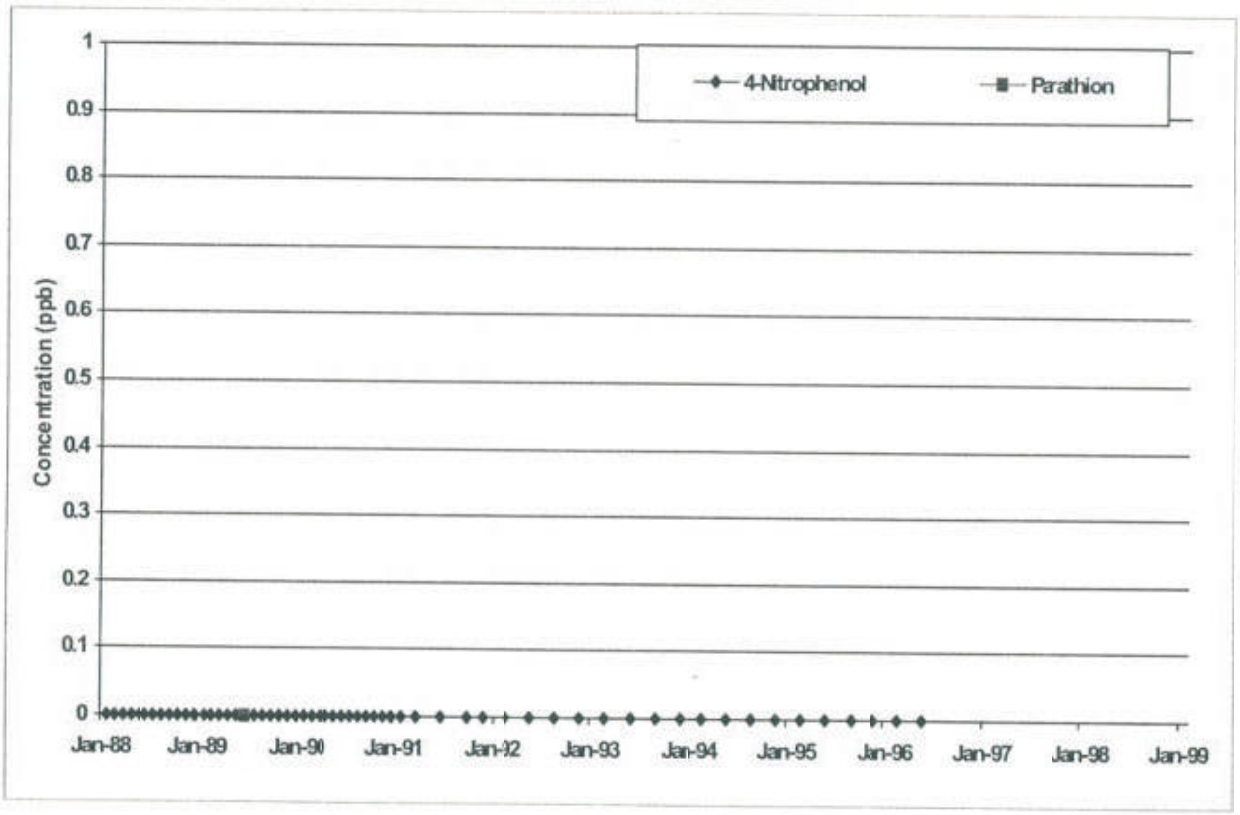
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

OW-12



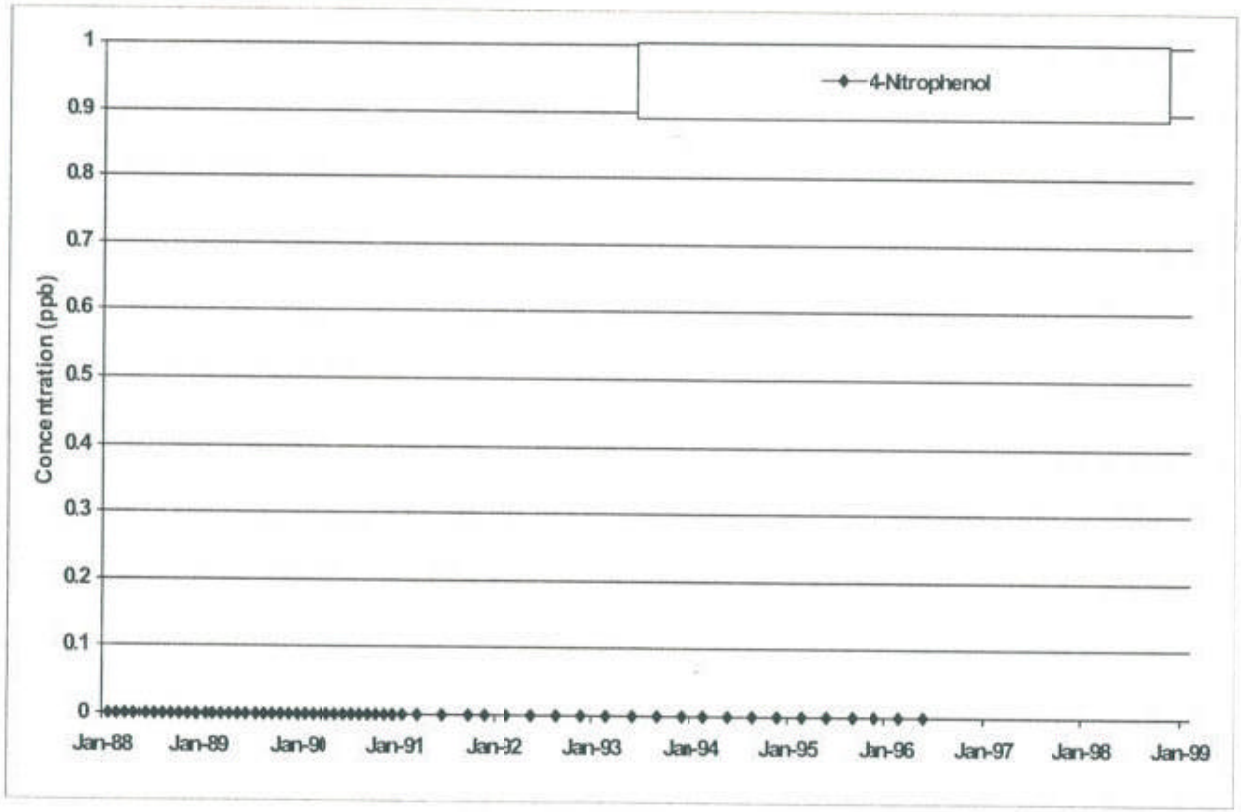
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

OW-13



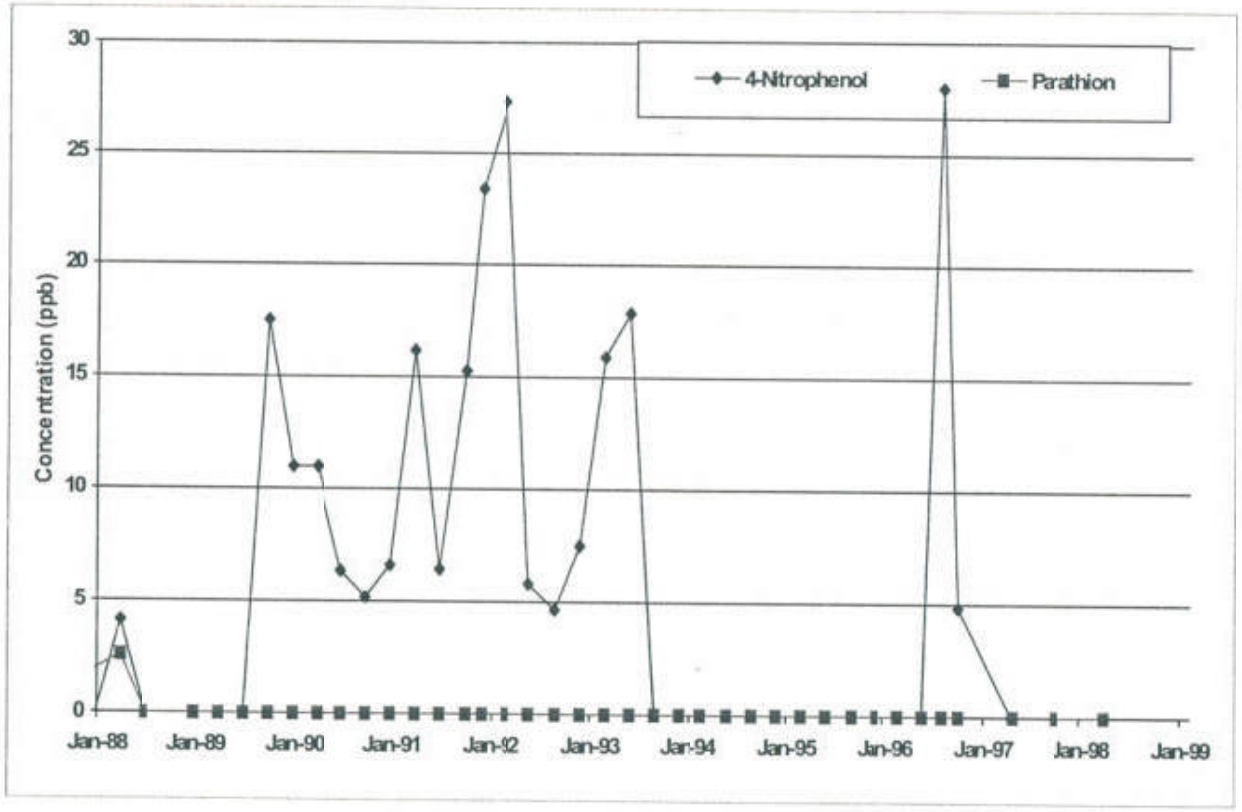
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

OW-14



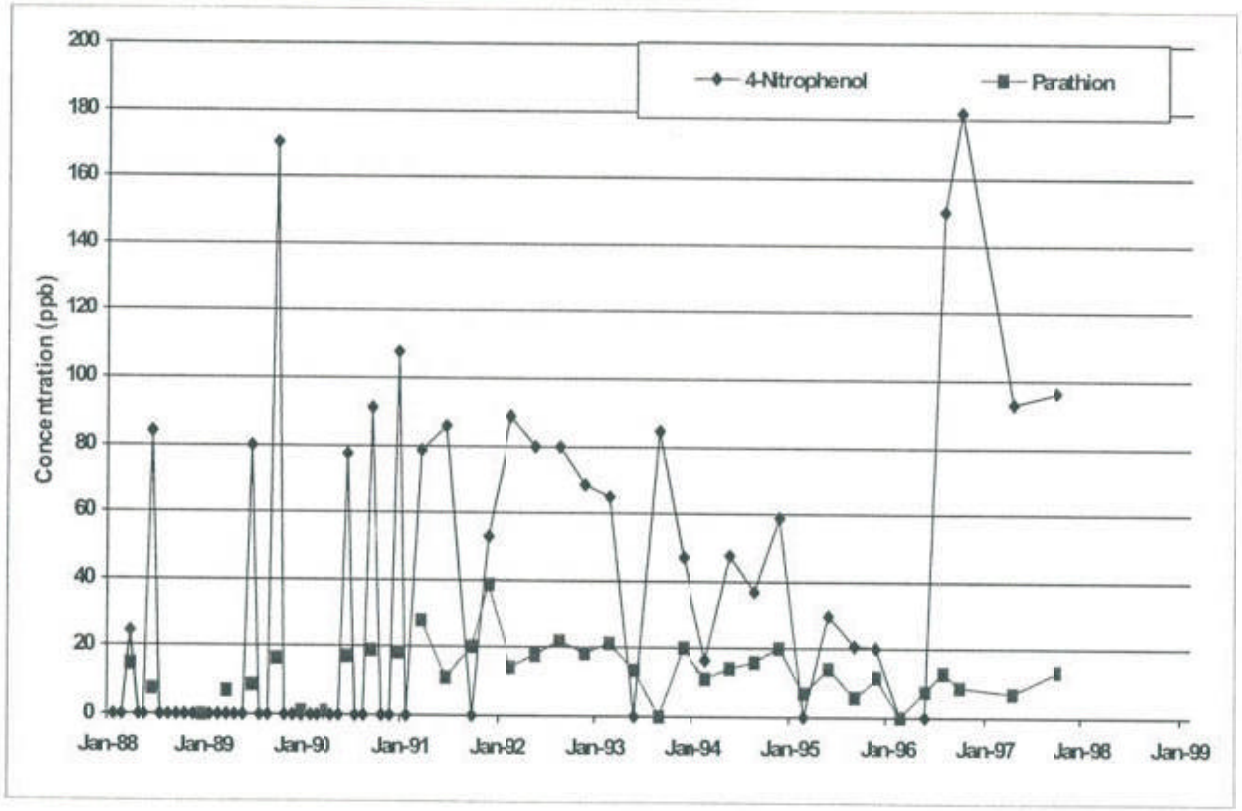
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

OW-15



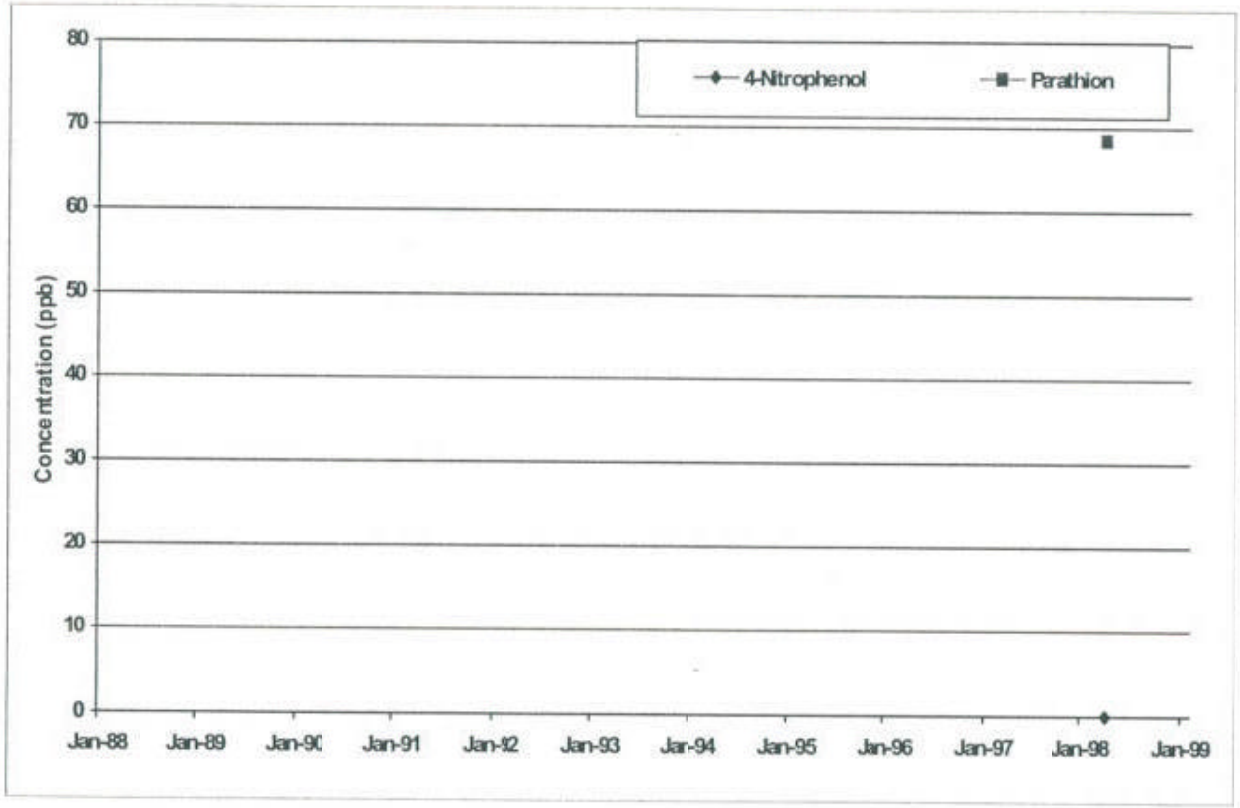
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

OW-16



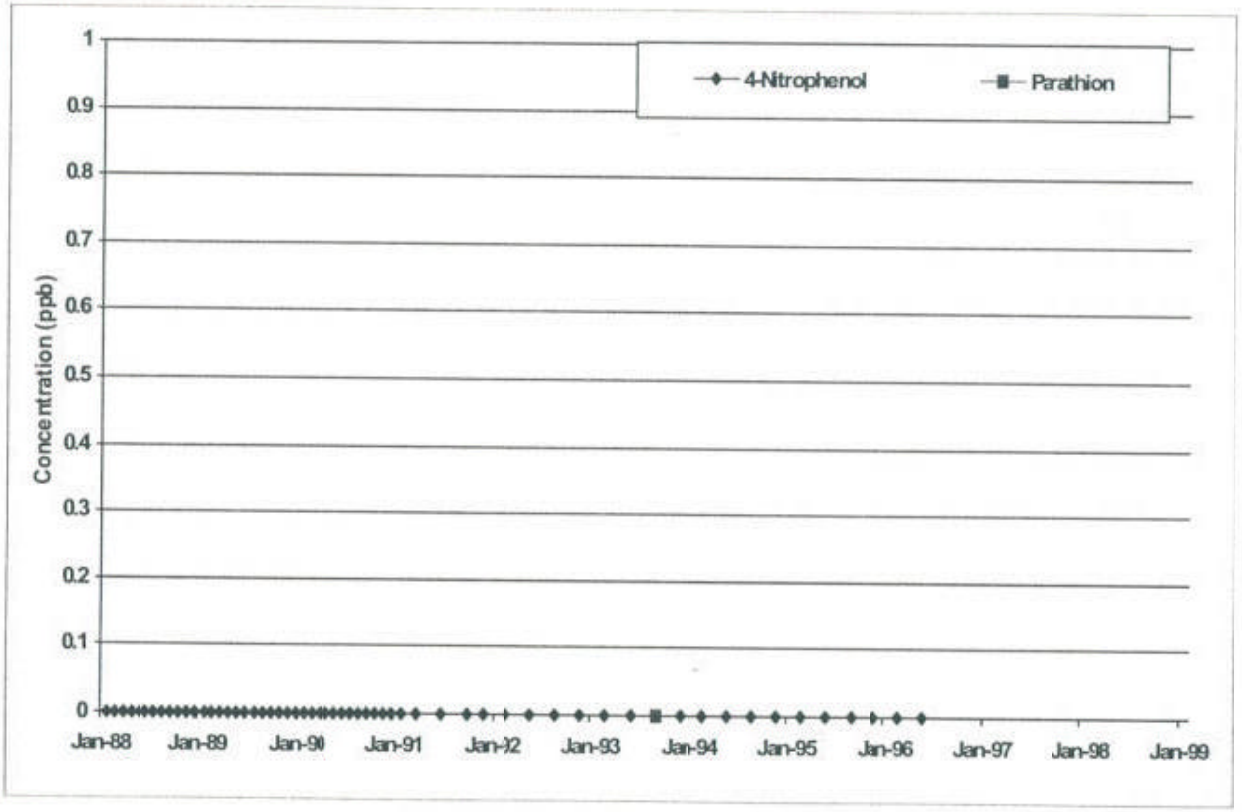
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

OW-16A



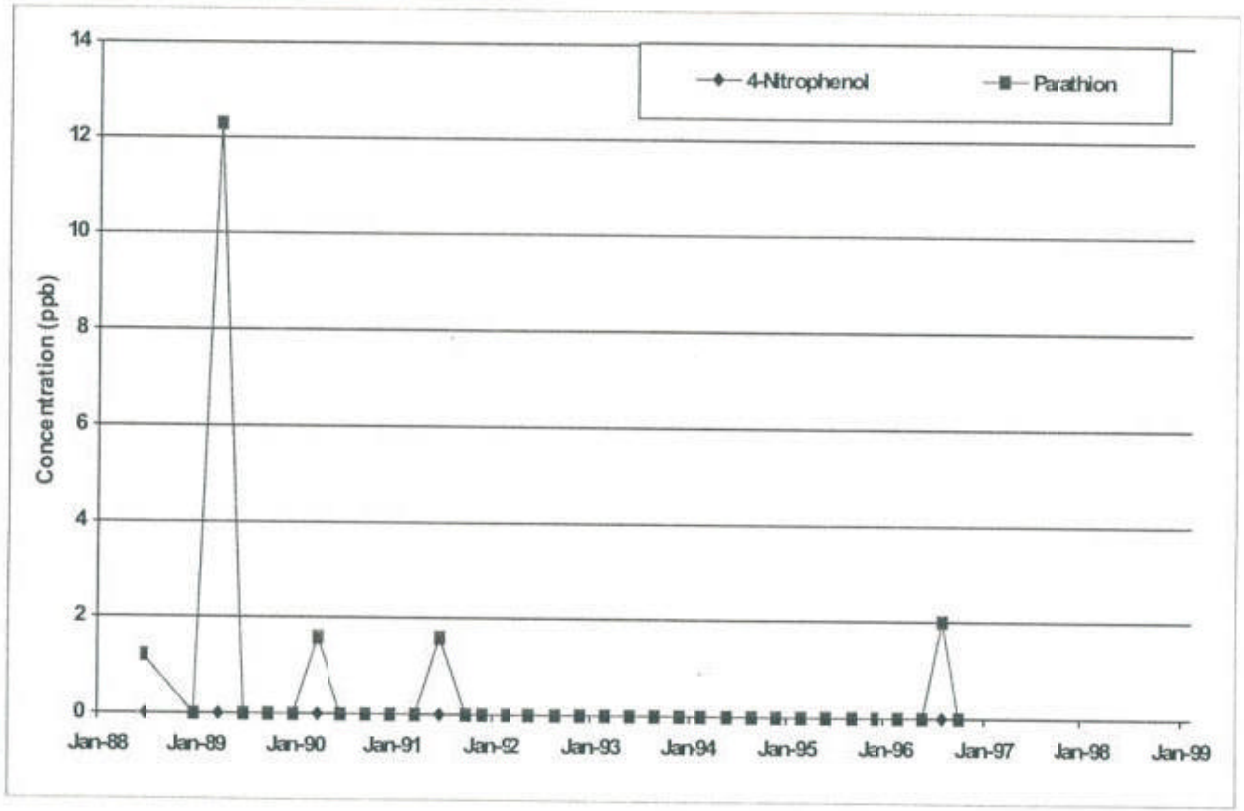
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

OW-17



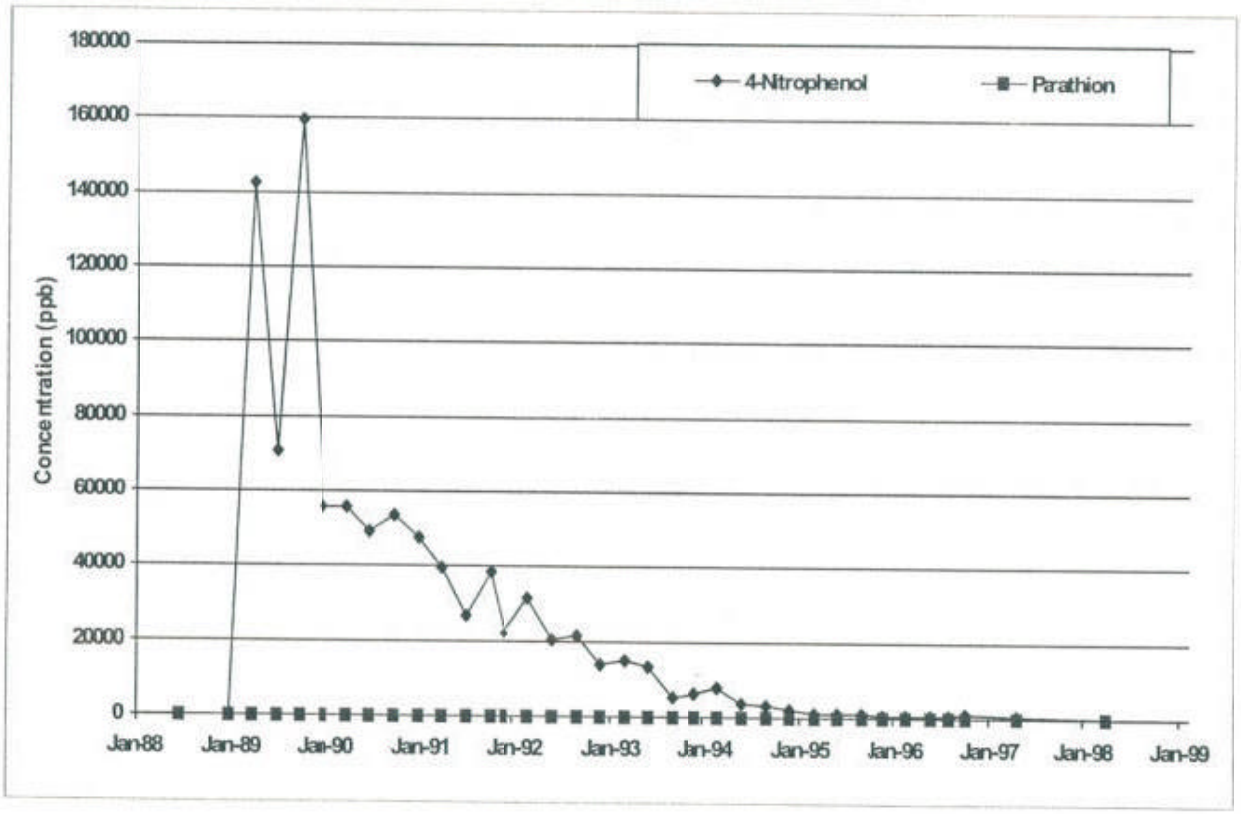
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

OW-18



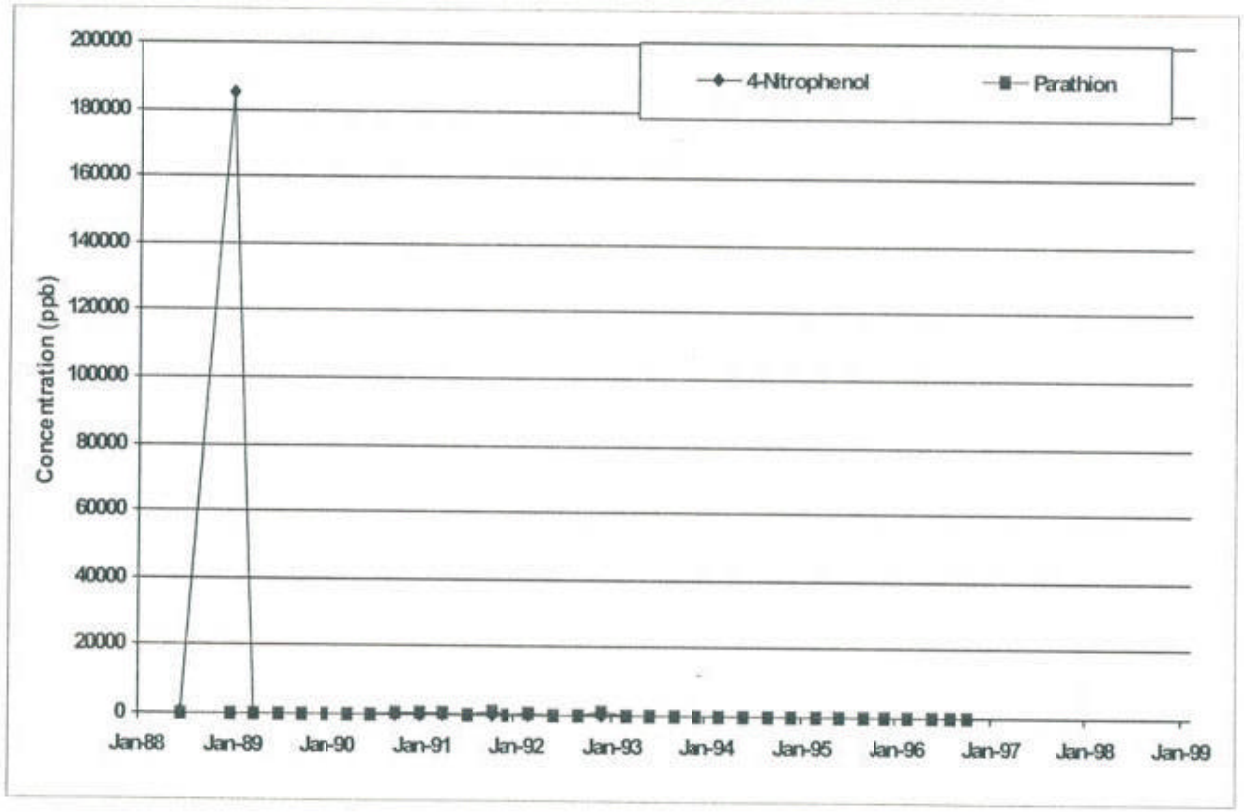
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

OW-19



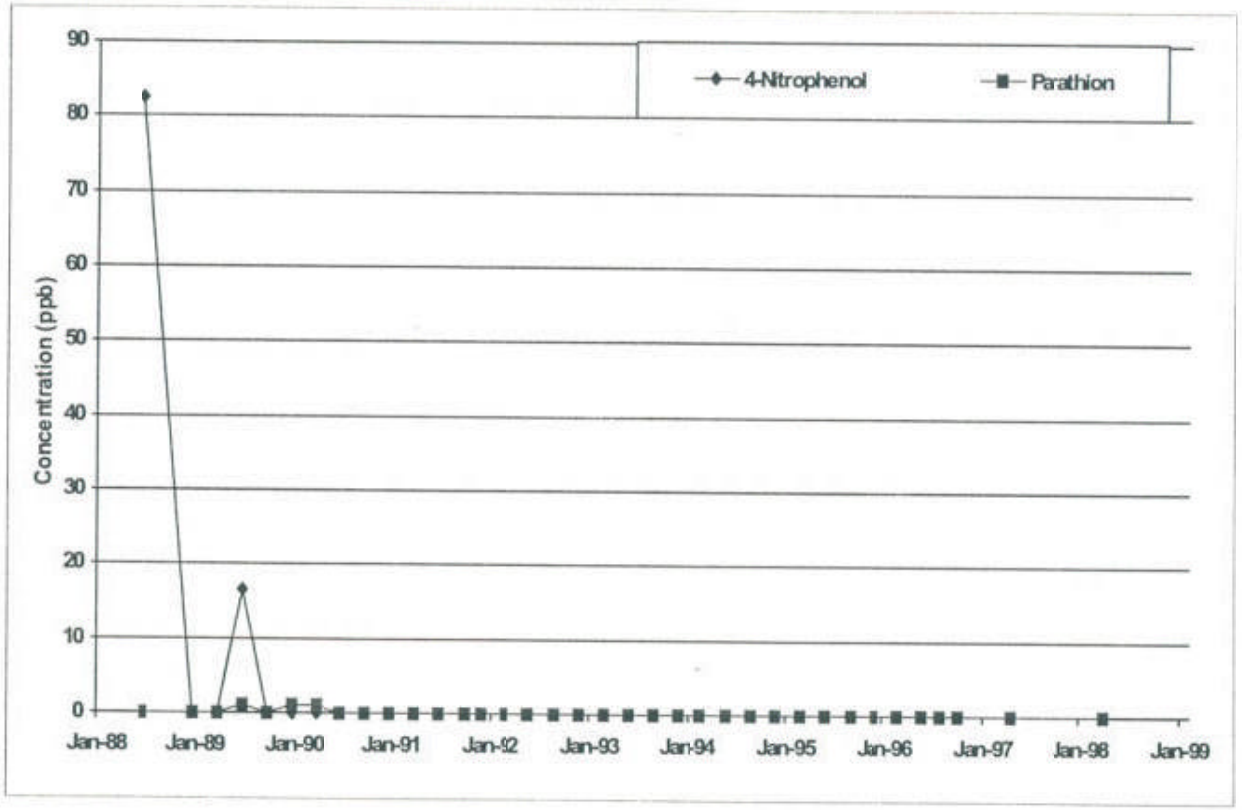
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

OW-20



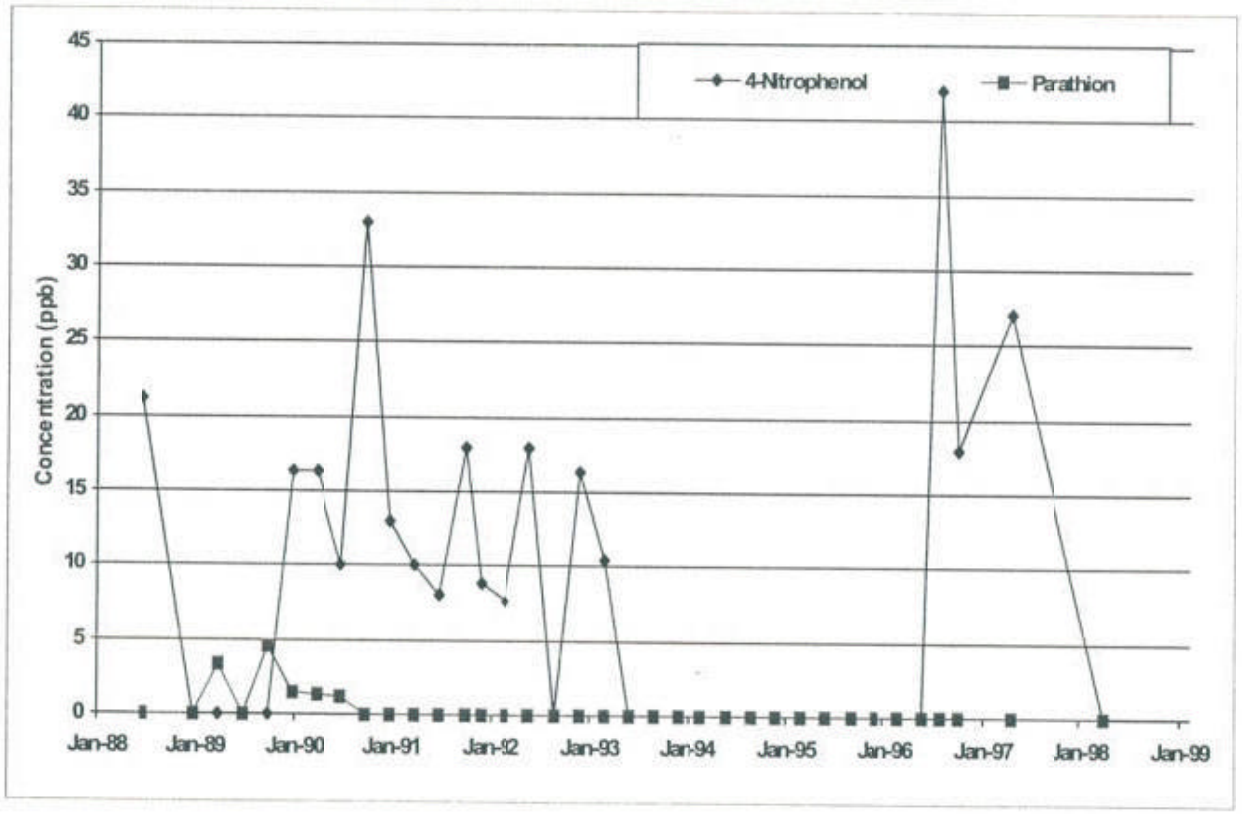
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

OW-21



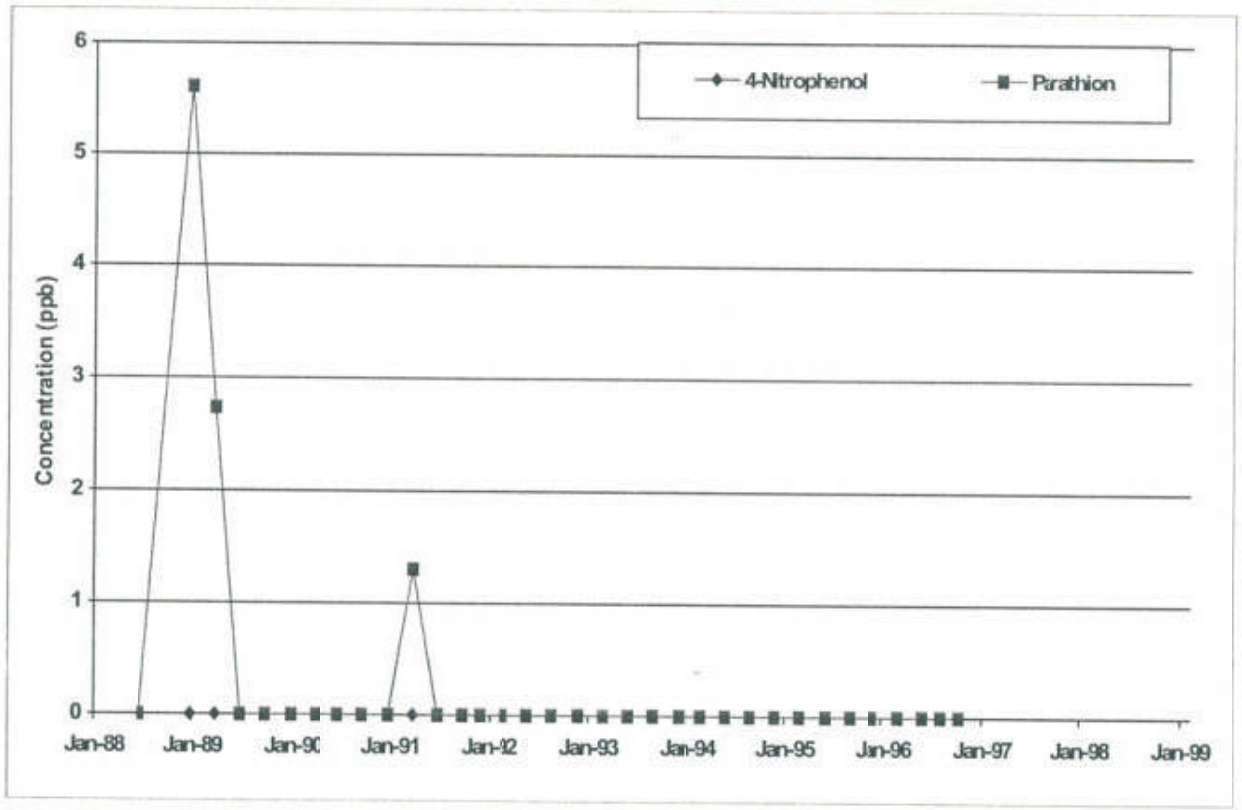
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

OW-22



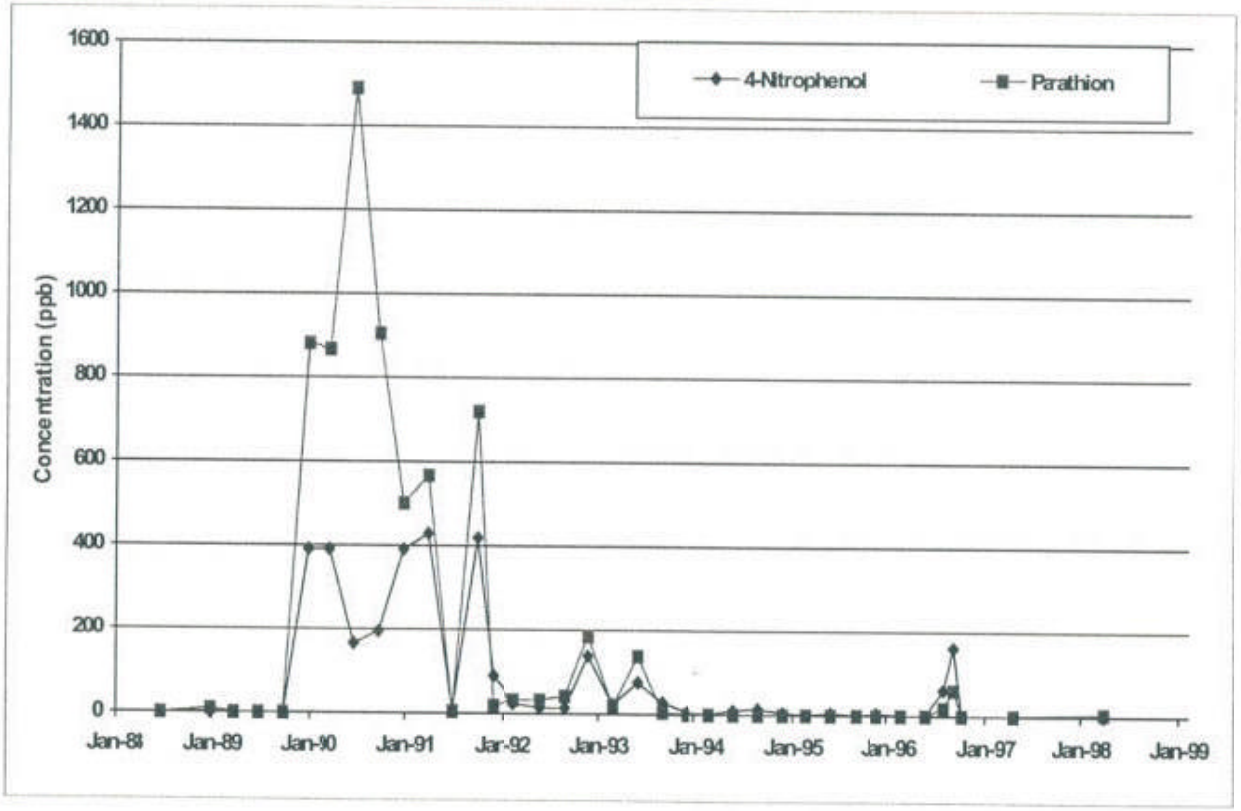
APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

OW-23



APPENDIX K
Parathion and 4-Nitrophenol Data Plots
Concentration vs. Time

OW-24



APPENDIX L

Historical Chemistry Data

TABLE L-1
Historic Chemistry Data
(without Parathion or 4-Nitrophenol)

Location	Parameter	Date Samp	Lab	Qor F?	Result	Unit	PQL	Desc	Qual
02/24	Aroclor 1016	03-Feb-98	S		U	ug/L			
		24-Feb-98	S		U	ug/L			
		05-Mar-98	S		3.0	ug/L			X
		05-Jun-98	S		U	ug/L			
02/24	Aroclor 1221	03-Feb-98	S		U	ug/L			
		24-Feb-98	S		U	ug/L			
		05-Mar-98	S		U	ug/L			
		05-Jun-98	S		U	ug/L			
02/24	Aroclor 1232	03-Feb-98	S		U	ug/L			
		24-Feb-98	S		U	ug/L			
		05-Mar-98	S		U	ug/L			
		05-Jun-98	S		U	ug/L			
02/24	Aroclor 1242	03-Feb-98	S		3.1	ug/L			
		24-Feb-98	S		U	ug/L			
		05-Mar-98	S		U	ug/L			
		05-Jun-98	S		U	ug/L			
02/24	Aroclor 1248	03-Feb-98	S		U	ug/L			
		24-Feb-98	S		U	ug/L			
		05-Mar-98	S		U	ug/L			
		05-Jun-98	S		U	ug/L			
02/24	Aroclor 1254	03-Feb-98	S		2.0	ug/L			
		24-Feb-98	S		0.50	ug/L			X
		05-Mar-98	S		2.8	ug/L			X
		05-Jun-98	S		3.7	ug/L			
02/24	Aroclor 1260	03-Feb-98	S		1.5	ug/L			
		24-Feb-98	S		U	ug/L			
		05-Mar-98	S		1.7	ug/L			
		05-Jun-98	S		1.6	ug/L			
02/24	Total PCBs	03-Feb-98	S		6.6	ug/L			
		24-Feb-98	S		0.50	ug/L			
		05-Mar-98	S		7.5	ug/L			
		05-Jun-98	S		5.3	ug/L			
02/36	Aroclor 1016	03-Feb-98	S		U	ug/L			
		24-Feb-98	S		U	ug/L			
		05-Mar-98	S		8.1	ug/L			X
		05-Jun-98	S		U	ug/L			

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
02/36	Aroclor 1221	03-Feb-98	S		U	ug/L			
		24-Feb-98	S		U	ug/L			
		05-Mar-98	S		U	ug/L			
		05-Jun-98	S		U	ug/L			
02/36	Aroclor 1232	03-Feb-98	S		U	ug/L			
		24-Feb-98	S		U	ug/L			
		05-Mar-98	S		U	ug/L			
		05-Jun-98	S		U	ug/L			
02/36	Aroclor 1242	03-Feb-98	S		4.1	ug/L			
		24-Feb-98	S		U	ug/L			
		05-Mar-98	S		U	ug/L			
		05-Jun-98	S		30	ug/L			
02/36	Aroclor 1248	03-Feb-98	S		U	ug/L			
		24-Feb-98	S		U	ug/L			
		05-Mar-98	S		U	ug/L			
		05-Jun-98	S		U	ug/L			
02/36	Aroclor 1254	03-Feb-98	S		3.0	ug/L			
		24-Feb-98	S		0.54	ug/L			
		05-Mar-98	S		6.8	ug/L			X
		05-Jun-98	S		16	ug/L			
02/36	Aroclor 1260	03-Feb-98	S		2.1	ug/L			
		24-Feb-98	S		U	ug/L			
		05-Mar-98	S		4.5	ug/L			
		05-Jun-98	S		12	ug/L			
02/36	Total PCBs	03-Feb-98	S		9.2	ug/L			
		24-Feb-98	S		0.54	ug/L			
		05-Mar-98	S		19	ug/L			
		05-Jun-98	S		58	ug/L			
04/06	Aroclor 1016	03-Feb-98	S		U	ug/L			
04/06	Aroclor 1221	03-Feb-98	S		U	ug/L			
04/06	Aroclor 1232	03-Feb-98	S		U	ug/L			
04/06	Aroclor 1242	03-Feb-98	S		U	ug/L			
04/06	Aroclor 1248	03-Feb-98	S		1.6	ug/L			
04/06	Aroclor 1254	03-Feb-98	S		1.5	ug/L			
04/06	Aroclor 1260	03-Feb-98	S		1.5	ug/L			
04/06	Total PCBs	03-Feb-98	S		4.6	ug/L			

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
05	Aroclor 1016	24-Feb-98	S		2.6	ug/L		X	
		05-Mar-98	S		U	ug/L			
05	Aroclor 1221	24-Feb-98	S		U	ug/L			
		05-Mar-98	S		U	ug/L			
05	Aroclor 1232	24-Feb-98	S		U	ug/L			
		05-Mar-98	S		U	ug/L			
05	Aroclor 1242	24-Feb-98	S		U	ug/L			
		05-Mar-98	S		U	ug/L			
05	Aroclor 1248	24-Feb-98	S		U	ug/L			
		05-Mar-98	S		6.2	ug/L		X	
05	Aroclor 1254	24-Feb-98	S		U	ug/L			
		05-Mar-98	S		10	ug/L		X	
05	Aroclor 1260	24-Feb-98	S		U	ug/L			
		05-Mar-98	S		5.7	ug/L		X	
05	Total PCBs	24-Feb-98	S		2.6	ug/L			
		05-Mar-98	S		22	ug/L			
16a	Aroclor 1016	25-Feb-98	S		1.1	ug/L		X	
16a	Aroclor 1221	25-Feb-98	S		4.6	ug/L			
16a	Aroclor 1232	25-Feb-98	S		U	ug/L			
16a	Aroclor 1242	25-Feb-98	S		U	ug/L			
16a	Aroclor 1248	25-Feb-98	S		U	ug/L			
16a	Aroclor 1254	25-Feb-98	S		0.47	ug/L			
16a	Aroclor 1260	25-Feb-98	S		U	ug/L			
16a	Total PCBs	25-Feb-98	S		6.2	ug/L			
27	Aroclor 1016	24-Feb-98	S		0.78	ug/L		X	
		05-Mar-98	S		6.4	ug/L		X	
27	Aroclor 1221	24-Feb-98	S		U	ug/L			
		05-Mar-98	S		U	ug/L			
27	Aroclor 1232	24-Feb-98	S		U	ug/L			
		05-Mar-98	S		U	ug/L			
27	Aroclor 1242	24-Feb-98	S		U	ug/L			
		05-Mar-98	S		U	ug/L			
27	Aroclor 1248	24-Feb-98	S		U	ug/L			
		05-Mar-98	S		U	ug/L			

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
27	Aroclor 1254	24-Feb-98	S		U	ug/L			
		05-Mar-98	S		7.9	ug/L		X	
27	Aroclor 1260	24-Feb-98	S		U	ug/L			
		05-Mar-98	S		6.1	ug/L			
27	Total PCBs	24-Feb-98	S		0.78	ug/L			
		05-Mar-98	S		20	ug/L			
34a	Aroclor 1016	03-Feb-98	S		U	ug/L			
34a	Aroclor 1221	03-Feb-98	S		U	ug/L			
34a	Aroclor 1232	03-Feb-98	S		U	ug/L			
34a	Aroclor 1242	03-Feb-98	S		U	ug/L			
34a	Aroclor 1248	03-Feb-98	S		U	ug/L			
34a	Aroclor 1254	03-Feb-98	S		0.23	ug/L			
34a	Aroclor 1260	03-Feb-98	S		U	ug/L			
34a	Total PCBs	03-Feb-98	S		0.23	ug/L			
CB-85	1,1,2,2-Tetrachloroethane	28-Jul-98	S		U	ug/L	5		
CB-85	1,2-Dichlorobenzene	28-Jul-98	S		U	ug/L	10		
CB-85	1,4-Dichlorobenzene	28-Jul-98	S		U	ug/L	10		
CB-85	2,4,5-Trichlorophenol	28-Jul-98	S		U	ug/L	10		
CB-85	2,4,6-Trichlorophenol	28-Jul-98	S		U	ug/L	10		
CB-85	2,4-Dichlorophenol	28-Jul-98	S		U	ug/L	10		
CB-85	Alkalinity (to pH 4.5) as CaCO3	29-Jul-98	S		U	mg/L	1		
CB-85	Aroclor 1016	28-Jul-98	S		U	ug/L	1		
		29-Jul-98	S	F	U	ug/L	1		
CB-85	Aroclor 1221	28-Jul-98	S		U	ug/L	1		
		29-Jul-98	S	F	U	ug/L	1		
CB-85	Aroclor 1232	28-Jul-98	S		U	ug/L	1		
		29-Jul-98	S	F	U	ug/L	1		
CB-85	Aroclor 1242	28-Jul-98	S		U	ug/L	1		
		29-Jul-98	S	F	U	ug/L	1		
CB-85	Aroclor 1248	28-Jul-98	S		U	ug/L	1		
		29-Jul-98	S	F	U	ug/L	1		
CB-85	Aroclor 1254	28-Jul-98	S		U	ug/L	1		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
CB-85	Arcclor 1254	29-Jul-98	S	F	U	ug/L	1		
CB-85	Arcclor 1260	28-Jul-98	S		U	ug/L	1		
		29-Jul-98	S	F	U	ug/L	1		
CB-85	Arsenic	28-Jul-98	S		U	mg/L	0.01		
		29-Jul-98	S	F	U	mg/L	0.01		
CB-85	Baium	28-Jul-98	S		U	mg/L	0.01		
		29-Jul-98	S	F	U	mg/L	0.01		
CB-85	Beryllium	28-Jul-98	S		U	mg/L	0.004		
		29-Jul-98	S	F	U	mg/L	0.004		
CB-85	Calmium	28-Jul-98	S		U	mg/L	0.005		
		29-Jul-98	S	F	U	mg/L	0.005		
CB-85	Chbrobenzene	28-Jul-98	S		U	ug/L	5		
CB-85	Chomium	28-Jul-98	S		U	mg/L	0.01		
		29-Jul-98	S	F	U	mg/L	0.01		
CB-85	Colalt	28-Jul-98	S		U	mg/L	0.01		
		29-Jul-98	S	F	U	mg/L	0.01		
CB-85	Disiolved Oxygen	10-Nov-98			0.89	mg/L			
CB-85	Iror, Ferrous (2+)	29-Jul-98	S		U	mg/L	0.05		
CB-85	Isoxopylbenzene	28-Jul-98	S		U	ug/L	5		
CB-85	Lead	28-Jul-98	S		U	mg/L	0.005		
		29-Jul-98	S	F	0.011	mg/L	0.005		J
CB-85	Maganese	28-Jul-98	S		0.025	mg/L	0.01		
		29-Jul-98	S	F	0.017	mg/L	0.01		J
CB-85	Mercury	28-Jul-98	S		U	mg/L	0.0002		
		29-Jul-98	S	F	U	mg/L	0.0002		
CB-85	Methyl parathion	28-Jul-98	S		U	ug/L	0.5		
CB-85	Methylene chloride (dichloromethane)	28-Jul-98	S		U	ug/L	5		
CB-85	Niclel	28-Jul-98	S		U	mg/L	0.004		
		29-Jul-98	S	F	U	mg/L	0.004		
CB-85	Nitrate-N	29-Jul-98	S		1.2	mg/L	0.05		J
CB-85	o,o,)-Triethylphosphorothioate	28-Jul-98	S		U	ug/L	10		
CB-85	Pertachlorophenol	28-Jul-98	S		U	ug/L	1		
CB-85	pH	28-Jul-98	S		5.9				

See Table L-3 for Abbreviations and Qualifiers.

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
CB-85	pH	28-Jul-98	S		6.1				
		28-Jul-98	S		5.7				
		28-Jul-98	S		6.4				
		29-Jul-98	S		6.0				
		29-Jul-98	S		6.0				
		29-Jul-98	S		6.0				
		29-Jul-98	S		5.8				
CB-85	Phenol	28-Jul-98	S		U	ug/L	10		
CB-85	Phenolics, Total Recoverables	28-Jul-98	S		U	mg/L	0.05		
CB-85	Phosphorus, Total	28-Jul-98	S		U	mg/L	0.044		
CB-85	Redox	10-Nov-98				mV			
CB-85	Specific Conductance	28-Jul-98	S		3.8	ms/cm			
		28-Jul-98	S		3.8	ms/cm			
		28-Jul-98	S		3.8	ms/cm			
		28-Jul-98	S		3.6	ms/cm			
		29-Jul-98	S		4.2	ms/cm			
		29-Jul-98	S		3.8	ms/cm			
		29-Jul-98	S		4.0	ms/cm			
		29-Jul-98	S		4.0	ms/cm			
CB-85	Standard Plate Count	29-Jul-98	S		33	CFU/m	1		J
CB-85	Sulfate as SO4	29-Jul-98	S		U	mg/L	5		
CB-85	Sulfide	28-Jul-98	S		U	mg/L	0.1		
CB-85	Temperature	28-Jul-98	S		26	°C			
		28-Jul-98	S		26	°C			
		28-Jul-98	S		26	°C			
		28-Jul-98	S		27	°C			
		29-Jul-98	S		25	°C			
		29-Jul-98	S		25	°C			
		29-Jul-98	S		25	°C			
		29-Jul-98	S		25	°C			
CB-85	Tetraethyldithiopyrophosphate (Sulfotepp)	28-Jul-98	S		U	ug/L	0.5		
CB-85	Total Dissolved Solids	29-Jul-98	S		33	mg/L	5		J
CB-85	Total Kjeldahl Nitrogen-N	28-Jul-98	S		0.36	mg/L	0.2		
CB-85	Total Organic Carbon	28-Jul-98	S		U	mg/L	1		
CB-85	Total Organic Halogen	28-Jul-98	S		U	mg/L	0.01		
CB-85	Total PCBs	28-Jul-98	S		U	ug/L			

See Table L-3 for Abbreviations and Qualifiers.

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
CB-85	Total PCBs	29-Jul-98	S	F	U	ug/L	1		
CB-85	Total Suspended Solids	29-Jul-98	S		U	mg/L	5		J
CB-85	Tubidity	28-Jul-98	S		2.6	NTU			
		28-Jul-98	S		5.4	NTU			
		28-Jul-98	S		1.6	NTU			
		28-Jul-98	S		2.1	NTU			
		29-Jul-98	S		1.8	NTU			
		29-Jul-98	S		1.2	NTU			
		29-Jul-98	S		1.1	NTU			
		29-Jul-98	S		1.6	NTU			
CB-85	Vanadium	28-Jul-98	S		U	mg/L	0.01		
		29-Jul-98	S	F	U	mg/L	0.01		
DOP-01	Mehyl parathion				U	ug/L	1.2		
DOP-01	Paation, Total				U	ug/L	1.1		
DSN-004	1,12,2-Tetrachloroethane	05-Jun-98	S		U	ug/L	5		
DSN-004	1,2Dichlorobenzene	05-Jun-98	S		U	ug/L	10		
DSN-004	1,4Dichlorobenzene	05-Jun-98	S		U	ug/L	10		
DSN-004	2,45-Trichlorophenol	05-Jun-98	S		U	ug/L	10		
DSN-004	2,46-Trichlorophenol	05-Jun-98	S		U	ug/L	10		
DSN-004	2,4Dichlorophenol	05-Jun-98	S		U	ug/L	10		
DSN-004	Arcclor 1016	05-Jun-98	S		U	ug/L			
		27-Jul-98	S		U	ug/L			
DSN-004	Arcclor 1221	05-Jun-98	S		U	ug/L			
		27-Jul-98	S		U	ug/L			
DSN-004	Arcclor 1232	05-Jun-98	S		U	ug/L			
		27-Jul-98	S		U	ug/L			
DSN-004	Arcclor 1242	05-Jun-98	S		U	ug/L			
		27-Jul-98	S		U	ug/L			
DSN-004	Arcclor 1248	05-Jun-98	S		U	ug/L			
		27-Jul-98	S		U	ug/L			
DSN-004	Arcclor 1254	05-Jun-98	S		0.57	ug/L			
		27-Jul-98	S		U	ug/L			
DSN-004	Arcclor 1260	05-Jun-98	S		0.52	ug/L			
		27-Jul-98	S		U	ug/L			
DSN-004	Arsenic	05-Jun-98	S		0.011	mg/L			

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
DSN-004	Barium	05-Jun-98	S		0.036	mg/L			
DSN-004	Benzene	05-Jun-98	S		U	ug/L	5		
DSN-004	Beryllium	05-Jun-98	S		U	mg/L	0.005		
DSN-004	Cadmium	05-Jun-98	S		U	mg/L	0.005		
DSN-004	Chlorobenzene	05-Jun-98	S		U	ug/L	5		
DSN-004	Chromium	05-Jun-98	S		U	mg/L	0.01		
DSN-004	Cobalt	05-Jun-98	S		U	mg/L	0.01		
DSN-004	Ethylbenzene	05-Jun-98	S		U	ug/L	5		
DSN-004	Isopropylbenzene	05-Jun-98	S		U	ug/L	5		
DSN-004	Lead	05-Jun-98	S		U	mg/L	0.005		
DSN-004	Manganese	05-Jun-98	S		U	mg/L	0.01		
DSN-004	Mercury	05-Jun-98	S		U	mg/L	0.0002		
DSN-004	Methyl parathion	05-Jun-98	S		U	ug/L	0.5		
DSN-004	Methylene chloride (dichloromethane)	05-Jun-98	S		U	ug/L	5		
DSN-004	Nickel	05-Jun-98	S		U	mg/L	0.04		
DSN-004	o,o,o-Triethylphosphorothicate	05-Jun-98	S		U	ug/L	10		J
DSN-004	Oil & Grease	05-Jun-98	S		U	mg/L	5		
DSN-004	Pentachlorophenol	05-Jun-98	S		U	ug/L	50		
DSN-004	Phenol	05-Jun-98	S		U	ug/L	10		
DSN-004	Tetraethyldithiopyrophosphate (Sulfotepp)	05-Jun-98	S		U	ug/L	0.5		
DSN-004	Toluene	05-Jun-98	S		U	ug/L	5		
DSN-004	Total PCBs	05-Jun-98	S		1.1	ug/L			
		27-Jul-98	S		U	ug/L			
DSN-004	Vanadium	05-Jun-98	S		U	mg/L	0.01		
DSN-004	Xylenes	05-Jun-98	S		U	ug/L	5		
DSN-005	1,1,2,2-Tetrachloroethane	05-Jun-98	S		U	ug/L	5		
DSN-005	1,2-Dichlorobenzene	05-Jun-98	S		U	ug/L	10		
DSN-005	1,4-Dichlorobenzene	05-Jun-98	S		U	ug/L	10		
DSN-005	2,4,5-Trichlorophenol	05-Jun-98	S		U	ug/L	10		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
DSN-005	2,4,6-Trichlorophenol	05-Jun-98	S		U	ug/L	10	
DSN-005	2,4-Dichlorophenol	05-Jun-98	S		U	ug/L	10	
DSN-005	Aroclor 1016	05-Jun-98	S		U	ug/L		
DSN-005	Aroclor 1221	05-Jun-98	S		U	ug/L		
DSN-005	Aroclor 1232	05-Jun-98	S		U	ug/L		
DSN-005	Aroclor 1242	05-Jun-98	S		U	ug/L		
DSN-005	Aroclor 1248	05-Jun-98	S		U	ug/L		
DSN-005	Aroclor 1254	05-Jun-98	S		U	ug/L		
DSN-005	Aroclor 1260	05-Jun-98	S		U	ug/L		
DSN-005	Arsenic	05-Jun-98	S		U	mg/L	0.01	
DSN-005	Barium	05-Jun-98	S		0.013	mg/L		
DSN-005	Benzene	05-Jun-98	S		U	ug/L	5	
		27-Jul-98	S		U	ug/L	5	
DSN-005	Beryllium	05-Jun-98	S		U	mg/L	0.005	
DSN-005	Cadmium	05-Jun-98	S		U	mg/L	0.005	
DSN-005	Chorobenzene	05-Jun-98	S		U	ug/L	5	
DSN-005	Chromium	05-Jun-98	S		U	mg/L	0.01	
DSN-005	Cobalt	05-Jun-98	S		U	mg/L	0.01	
DSN-005	Ethylbenzene	05-Jun-98	S		U	ug/L	5	
		27-Jul-98	S		U	ug/L	5	
DSN-005	Isopropylbenzene	05-Jun-98	S		U	ug/L	5	
DSN-005	Lead	05-Jun-98	S		U	mg/L	0.005	
DSN-005	Manganese	05-Jun-98	S		U	mg/L	0.01	
DSN-005	Mercury	05-Jun-98	S		U	mg/L	0.0002	
DSN-005	Mehyl parathion	05-Jun-98	S		U	ug/L	0.5	
DSN-005	Mehylene chloride (dichloromethane)	05-Jun-98	S		U	ug/L	5	
DSN-005	Nickel	05-Jun-98	S		U	mg/L	0.04	
DSN-005	o,oo-Trithylphosphorothioate	05-Jun-98	S		U	ug/L	10	J
DSN-005	Pestachlorophenol	05-Jun-98	S		U	ug/L	50	
DSN-005	Phenol	05-Jun-98	S		U	ug/L	10	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
DSN-015	Tetraethyldithiopyrophosphate (Sulfotepp)	05-Jun-98	S		U	ug/L	0.5	
DSN-015	Toluene	05-Jun-98	S		U	ug/L	5	
		27-Jul-98	S		U	ug/L	5	
DSN-015	Total PCBs	05-Jun-98	S		U	ug/L		
DSN-015	Vanadium	05-Jun-98	S		U	mg/L	0.01	
DSN-015	Xylenes	05-Jun-98	S		U	ug/L	5	
		27-Jul-98	S		U	ug/L	5	
DSN-016	Aroclor 1016	25-Jun-97	U		U	ug/L		
		25-Sep-97	U		U	ug/L		
		22-Dec-97	U		U	ug/L		
		07-Jan-98	U		U	ug/L		
		05-Jun-98	S		U	ug/L		
		28-Jul-98	S		U	ug/L		
DSN-016	Aroclor 1221	25-Jun-97	U		U	ug/L		
		25-Sep-97	U		U	ug/L		
		22-Dec-97	U		U	ug/L		
		07-Jan-98	U		U	ug/L		
		05-Jun-98	S		U	ug/L		
		28-Jul-98	S		U	ug/L		
DSN-016	Aroclor 1232	25-Jun-97	U		U	ug/L		
		25-Sep-97	U		U	ug/L		
		22-Dec-97	U		U	ug/L		
		07-Jan-98	U		U	ug/L		
		05-Jun-98	S		U	ug/L		
		28-Jul-98	S		U	ug/L		
DSN-016	Aroclor 1242	25-Jun-97	U		U	ug/L		
		25-Sep-97	U		U	ug/L		
		22-Dec-97	U		U	ug/L		
		07-Jan-98	U		U	ug/L		
		05-Jun-98	S		U	ug/L		
		28-Jul-98	S		U	ug/L		
DSN-016	Aroclor 1248	25-Jun-97	U		U	ug/L		
		25-Sep-97	U		U	ug/L		
		22-Dec-97	U		U	ug/L		
		07-Jan-98	U		U	ug/L		
		05-Jun-98	S		U	ug/L		
		28-Jul-98	S		U	ug/L		
DSN-016	Aroclor 1254	25-Jun-97	U		0.29	ug/L		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
DSN-006	Aroclor 1254	25-Sep-97	U		0.46	ug/L		
		22-Dec-97	U		U	ug/L		
		07-Jan-98	U		U	ug/L		
		05-Jun-98	S		U	ug/L		
		28-Jul-98	S		U	ug/L		
DSN-006	Aroclor 1260	25-Jun-97	U		U	ug/L		
		25-Sep-97	U		U	ug/L		
		22-Dec-97	U		U	ug/L		
		07-Jan-98	U		U	ug/L		
		05-Jun-98	S		U	ug/L		
		28-Jul-98	S		U	ug/L		
DSN-006	Oil& Grease	05-Jun-98	S		U	mg/L	5	
DSN-006	Total PCBs	29-Mar-97	U		U	ug/L	1	
		25-Jun-97	U		0.29	ug/L		
		25-Sep-97	U		0.46	ug/L		
		22-Dec-97	U		U	ug/L		
		07-Jan-98	U		U	ug/L		
		05-Jun-98	S		U	ug/L		
DSN-012	Aroclor 1016	29-Mar-97	U		U	ug/L	1	
		25-Jun-97	U		U	ug/L		
		25-Sep-97	U		U	ug/L		
		22-Dec-97	U		U	ug/L		
		07-Jan-98	U		U	ug/L		
		05-Jun-98	S		U	ug/L		
		27-Jul-98	S		U	ug/L		
DSN-012	Aroclor 1221	29-Mar-97	U		U	ug/L	2	
		25-Jun-97	U		U	ug/L		
		25-Sep-97	U		U	ug/L		
		22-Dec-97	U		U	ug/L		
		07-Jan-98	U		U	ug/L		
		05-Jun-98	S		U	ug/L		
		27-Jul-98	S		U	ug/L		
DSN-012	Aroclor 1232	29-Mar-97	U		U	ug/L	1	
		25-Jun-97	U		U	ug/L		
		25-Sep-97	U		U	ug/L		
		22-Dec-97	U		U	ug/L		
		07-Jan-98	U		U	ug/L		
		05-Jun-98	S		U	ug/L		
		27-Jul-98	S		U	ug/L		
DSN-012	Aroclor 1242	29-Mar-97	U		U	ug/L	1	

See Table L-3 for Abbreviations and Qualifiers.

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
DSN-012	Aroclor 1242	25-Jun-97	U		1.4	ug/L		
		25-Sep-97	U		U	ug/L		
		22-Dec-97	U		2.6	ug/L		
		07-Jan-98	U		1.5	ug/L		
		05-Jun-98	S		U	ug/L		
		27-Jul-98	S		U	ug/L		
DSN-012	Aroclor 1248	29-Mar-97	U		2.4	ug/L		
		25-Jun-97	U		U	ug/L		
		25-Sep-97	U		7.0	ug/L		
		22-Dec-97	U		U	ug/L		
		07-Jan-98	U		U	ug/L		
		05-Jun-98	S		0.90	ug/L		
		27-Jul-98	S		U	ug/L		
DSN-012	Aroclor 1254	29-Mar-97	U		U	ug/L	1	
		25-Jun-97	U		1.1	ug/L		
		25-Sep-97	U		9.1	ug/L		
		22-Dec-97	U		0.83	ug/L		
		07-Jan-98	U		0.62	ug/L		
		05-Jun-98	S		0.64	ug/L		
		27-Jul-98	S		U	ug/L		
DSN-012	Aroclor 1260	29-Mar-97	U		U	ug/L	1	
		25-Jun-97	U		0.66	ug/L		
		25-Sep-97	U		5.8	ug/L		
		22-Dec-97	U		U	ug/L		
		07-Jan-98	U		U	ug/L		
		05-Jun-98	S		U	ug/L		
		27-Jul-98	S		U	ug/L		
DSN-012	Oil & Grease	05-Jun-98	S		U	mg/L	5	
DSN-012	Total PCBs	29-Mar-97	U		2.7	ug/L		
		25-Jun-97	U		3.2	ug/L		
		25-Sep-97	U		22	ug/L		
		22-Dec-97	U		3.4	ug/L		
		07-Jan-98	U		2.1	ug/L		
		05-Jun-98	S		1.5	ug/L		
		27-Jul-98	S		U	ug/L		
DW-01	Methyl parathion				4,200	ug/L	1.2	
					100	ug/L	1.2	
DW-01	Paration, Total				230,000	ug/L	1.1	
					1,500	ug/L	1.1	

See Table L-3 for Abbreviations and Qualifiers.

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
ES-01	Aroclor 1016	03-Feb-98	S		U	ug/L			
ES-01	Aroclor 1221	03-Feb-98	S		U	ug/L			
ES-01	Aroclor 1232	03-Feb-98	S		U	ug/L			
ES-01	Aroclor 1242	03-Feb-98	S		2.1	ug/L			
ES-01	Aroclor 1248	03-Feb-98	S		U	ug/L			
ES-01	Aroclor 1254	03-Feb-98	S		1.3	ug/L			
ES-01	Aroclor 1260	03-Feb-98	S		0.90	ug/L		X	
ES-01	Total PCBs	03-Feb-98	S		4.3	ug/L			
ES-02	Aroclor 1016	03-Feb-98	S		U	ug/L			
ES-02	Aroclor 1221	03-Feb-98	S		U	ug/L			
ES-02	Aroclor 1232	03-Feb-98	S		U	ug/L			
ES-02	Aroclor 1242	03-Feb-98	S		1.9	ug/L			
ES-02	Aroclor 1248	03-Feb-98	S		U	ug/L			
ES-02	Aroclor 1254	03-Feb-98	S		1.2	ug/L			
ES-02	Aroclor 1260	03-Feb-98	S		0.85	ug/L			
ES-02	Total PCBs	03-Feb-98	S		4.0	ug/L			
ES-04	Aroclor 1016	03-Feb-98	S		U	ug/L			
ES-04	Aroclor 1221	03-Feb-98	S		U	ug/L			
ES-04	Aroclor 1232	03-Feb-98	S		U	ug/L			
ES-04	Aroclor 1242	03-Feb-98	S		U	ug/L			
ES-04	Aroclor 1248	03-Feb-98	S		U	ug/L			
ES-04	Aroclor 1254	03-Feb-98	S		U	ug/L			
ES-04	Aroclor 1260	03-Feb-98	S		U	ug/L			
ES-04	Total PCBs	03-Feb-98	S		U	ug/L			
ES-05	Aroclor 1016	03-Feb-98	S		U	ug/L			
ES-05	Aroclor 1221	03-Feb-98	S		U	ug/L			
ES-05	Aroclor 1232	03-Feb-98	S		U	ug/L			
ES-05	Aroclor 1242	03-Feb-98	S		U	ug/L			
ES-05	Aroclor 1248	03-Feb-98	S		U	ug/L			
ES-05	Aroclor 1254	03-Feb-98	S		0.33	ug/L			

See Table L-3 for Abbreviations and Qualifiers.

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
ES-05	Aroclor 1260	03-Feb-98	S		U	ug/L			
ES-05	Total PCBs	03-Feb-98	S		0.33	ug/L			
ES-06	Aroclor 1016	03-Feb-98	S		U	ug/L			
ES-06	Aroclor 1221	03-Feb-98	S		U	ug/L			
ES-06	Aroclor 1232	03-Feb-98	S		U	ug/L			
ES-06	Aroclor 1242	03-Feb-98	S		0.78	ug/L			
ES-06	Aroclor 1248	03-Feb-98	S		U	ug/L			
ES-06	Aroclor 1254	03-Feb-98	S		1.9	ug/L			
ES-06	Aroclor 1260	03-Feb-98	S		1.2	ug/L			
ES-06	Total PCBs	03-Feb-98	S		3.9	ug/L			
ES-CB	Aroclor 1016	03-Feb-98	S		U	ug/L			
ES-CB	Aroclor 1221	03-Feb-98	S		U	ug/L			
ES-CB	Aroclor 1232	03-Feb-98	S		U	ug/L			
ES-CB	Aroclor 1242	03-Feb-98	S		1.4	ug/L		X	
ES-CB	Aroclor 1248	03-Feb-98	S		U	ug/L			
ES-CB	Aroclor 1254	03-Feb-98	S		0.58	ug/L		X	
ES-CB	Aroclor 1260	03-Feb-98	S		U	ug/L			
ES-CB	Total PCBs	03-Feb-98	S		2.0	ug/L			
ESH	Aroclor 1016	03-Feb-98	S		U	ug/L			
ESH	Aroclor 1221	03-Feb-98	S		U	ug/L			
ESH	Aroclor 1232	03-Feb-98	S		U	ug/L			
ESH	Aroclor 1242	03-Feb-98	S		U	ug/L			
ESH	Aroclor 1248	03-Feb-98	S		U	ug/L			
ESH	Aroclor 1254	03-Feb-98	S		0.37	ug/L			
ESH	Aroclor 1260	03-Feb-98	S		U	ug/L			
ESH	Total PCBs	03-Feb-98	S		0.37	ug/L			
ESP	Aroclor 1016	29-Oct-97	S		U	ug/L			
		30-Oct-97	S		U	ug/L			
ESP	Aroclor 1221	29-Oct-97	S		U	ug/L			
		30-Oct-97	S		U	ug/L			

See Table L-3 for Abbreviations and Qualifiers.

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
ESP	Aroclor 1232	29-Oct-97	S		U	ug/L			
		30-Oct-97	S		U	ug/L			
ESP	Aroclor 1242	29-Oct-97	S		U	ug/L			
		30-Oct-97	S		U	ug/L			
ESP	Aroclor 1248	29-Oct-97	S		U	ug/L			
		30-Oct-97	S		U	ug/L			
ESP	Aroclor 1254	29-Oct-97	S		U	ug/L			
		30-Oct-97	S		U	ug/L			
ESP	Aroclor 1260	29-Oct-97	S		U	ug/L			
		30-Oct-97	S		U	ug/L			
ESP	Total PCBs	29-Oct-97	S		U	ug/L			
		30-Oct-97	S		U	ug/L			
IW-21	Hexa CDD	19-Jun-96	S	F	U	ug/L	0.005		
		19-Jun-96	S	F	U	ug/L	0.005	S	
IW-21	Penta CDD	19-Jun-96	S	F	U	ug/L	0.005		
		19-Jun-96	S	F	U	ug/L	0.005	S	
LG	Aroclor 1016	03-Feb-98	S		U	ug/L			
		05-Mar-98	S		U	ug/L			
LG	Aroclor 1221	03-Feb-98	S		U	ug/L			
		05-Mar-98	S		U	ug/L			
LG	Aroclor 1232	03-Feb-98	S		U	ug/L			
		05-Mar-98	S		U	ug/L			
LG	Aroclor 1242	03-Feb-98	S		1.6	ug/L			
		05-Mar-98	S		U	ug/L			
LG	Aroclor 1248	03-Feb-98	S		U	ug/L			
		05-Mar-98	S		U	ug/L			
LG	Aroclor 1254	03-Feb-98	S		1.5	ug/L			
		05-Mar-98	S		3.6	ug/L		X	
LG	Aroclor 1260	03-Feb-98	S		1.5	ug/L			
		05-Mar-98	S		2.4	ug/L			
LG	Total PCBs	03-Feb-98	S		4.6	ug/L			
		05-Mar-98	S		6.0	ug/L			
MW-01	1,1,1-Trichloroethane		G		U	ug/L	3		
MW-01	1,1,2,2-Tetrachloroethane		G		11	ug/L	3		
MW-01	1,1,2-Trichloroethane		G		U	ug/L	3		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-01	1,1-Dichloroethane		G		U	ug/L	3		
MW-01	1,1-Dichloroethene		G		U	ug/L	3		
MW-01	1,2,4-Trichlorobenzene		G		U	ug/L	6		
			N		U	ug/L	10		
MW-01	1,2-Dichlorobenzene		G		U	ug/L	6		
			G		U	ug/L	3		
			N		U	ug/L	10		
MW-01	1,2-Dichloroethane		G		U	ug/L	3		
MW-01	1,2-Dichloropropane		G		U	ug/L	3		
MW-01	1,2-Diphenylhydrazine		G		U	ug/L	6		
			M		U	ug/L	10		
MW-01	1,3-Dichlorobenzene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-01	1,4-Dichlorobenzene		G		U	ug/L	3		
			G		U	ug/L	6		
			G		U	ug/L	3		
			M		U	ug/L	10		
MW-01	2,3,7,8-Tetrachlorodibenzo-p-dioxin		G		U	ug/L	20		
			M		U	ug/L	10		
MW-01	2,4,5-TP (Silvex)	02-Dec-81			U	ug/L	10		
		16-Mar-82			U	ug/L	10		
		28-Jun-82			U	ug/L	10		
		13-Sep-82			U	ug/L	10		
MW-01	2,4,6-Trichlorophenol		G		U	ug/L	10		
			M		U	ug/L	10		
MW-01	2,4-D	02-Dec-81			U	ug/L	10		
		16-Mar-82			U	ug/L	10		
		28-Jun-82			U	ug/L	10		
		13-Sep-82			U	ug/L	10		
MW-01	2,4-Dichlorophenol		G		U	ug/L	10		
			M		U	ug/L	10		
MW-01	2,4-Dimethylphenol		G		U	ug/L	10		
			M		U	ug/L	10		
MW-01	2,4-Dinitrophenol		G		U	ug/L	10		
			M		U	ug/L	10		
MW-01	2,4-Dinitrotoluene		G		U	ug/L	6		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
MW-01	2,4-Dinitrotoluene		M		U	ug/L	10	
MW-01	2,6-Dinitrotoluene		M		U	ug/L	10	
			G		U	ug/L	6	
MW-01	2-Chloroethylvinyl ether		G		U	ug/L	3	
MW-01	2-Chloronaphthalene		M		U	ug/L	10	
			G		U	ug/L	6	
MW-01	2-Chlorophenol		M		U	ug/L	10	
			G		U	ug/L	10	
MW-01	3,3-Dichlorobenzidine		M		U	ug/L	10	
			G		U	ug/L	6	
MW-01	4,6-Dinitro-o-cresol		M		U	ug/L	10	
			G		U	ug/L	10	
MW-01	4-Bromophenyl-phenyl ether		M		U	ug/L	10	
			G		U	ug/L	6	
MW-01	4-Chlorophenylphenyl ether		M		U	ug/L	10	
			G		U	ug/L	6	
MW-01	Acenaphthene		G		U	ug/L	6	
			M		U	ug/L	10	
MW-01	Acenaphthylene		G		U	ug/L	6	
			M		U	ug/L	10	
MW-01	Anthracene		G		U	ug/L	6	
			M		U	ug/L	10	
MW-01	Arsenic	02-Dec-81			U	ug/L	3	
		16-Mar-82			U	ug/L	3	
		28-Jun-82			U	ug/L	3	
		13-Sep-82			U	ug/L	3	
MW-01	Barium	02-Dec-81			53	ug/L	20	
		16-Mar-82			71	ug/L	20	
		28-Jun-82			U	ug/L	20	
		13-Sep-82			U	ug/L	20	
MW-01	Benzene		G		U	ug/L	3	
MW-01	Benzidine		M		U	ug/L	10	
			G		U	ug/L	20	
MW-01	Benzo(a)anthracene		G		U	ug/L	6	
			M		U	ug/L	10	
MW-01	Benzo(a)pyrene		G		U	ug/L	6	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
MW-01	Benzo(a)pyrene		M		U	ug/L	10	
MW-01	Benzo(b)fluoranthene		M		U	ug/L	10	
			G		U	ug/L	6	
MW-01	Benzo(g,h,i)perylene		G		U	ug/L	20	
			M		U	ug/L	10	
MW-01	Benzo(k)fluoranthene		G		U	ug/L	6	
			M		U	ug/L	10	
MW-01	bis(2-Chloroethoxy)methane		M		U	ug/L	10	
			G		U	ug/L	6	
MW-01	bis(2-Chloroethyl)ether		M		U	ug/L	10	
			G		U	ug/L	6	
MW-01	bis(2-Chloroisopropyl)ether		M		U	ug/L	10	
			G		U	ug/L	6	
MW-01	bis(2-Ethylhexyl)phthalate		G		U	ug/L	6	
			M		U	ug/L	10	
MW-01	bis(Chloromethyl)ether		G		U	ug/L	6	
MW-01	Bromide		G		U	ug/L	500	
			G		0.45	mg/L		
MW-01	Bromodichloromethane		G		U	ug/L	3	
MW-01	Bromoform		G		U	ug/L	3	
MW-01	Bromomethane (methyl bromide)		G		U	ug/L	3	
MW-01	Butylbenzylphthalate		G		U	ug/L	6	
			M		U	ug/L	10	
MW-01	Cadmium	02-Dec-81			U	ug/L	3	
		16-Mar-82			U	ug/L	3	
		28-Jun-82			U	ug/L	3	
		13-Sep-82			U	ug/L	3	
MW-01	Carbon tetrachloride		G		U	ug/L	3	
MW-01	Chloride		G		770	ug/L		
			G		1.0	mg/L		
		02-Dec-81			6,600	ug/L	7000	
		16-Mar-82			3,000	ug/L	7000	
		28-Jun-82			U	ug/L	7000	
		13-Sep-82			U	ug/L	7000	
		08-Mar-83			U	ug/L	7000	
		17-Apr-84			1,800	ug/L		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-01	Chorobenzene		G		U	ug/L	10		J
MW-01	Choroethane		G		U	ug/L	3		
MW-01	Choroform		G		U	ug/L	3		
MW-01	Choromethane (methyl chloride)		G		U	ug/L	3		
MW-01	Chromium	02-Dec-81			U	ug/L	10		
		16-Mar-82			5.0	ug/L	10		
		28-Jun-82			5.0	ug/L	10		
		13-Sep-82			6.0	ug/L	10		
MW-01	Chrysene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-01	cis-1,3-Dichloropropene		G		U	ug/L	3		
MW-01	Colform bacteria	02-Dec-81			U	/100 n	1		
		16-Mar-82			U	/100 n	1		
MW-01	di-fi-Butylphthalate		G		U	ug/L	6		
			M		U	ug/L	10		
MW-01	di-fi-Octylphthalate		M		U	ug/L	10		
			G		U	ug/L	6		
MW-01	Dibenz(a,h)anthracene		G		U	ug/L	20		
			M		U	ug/L	10		
MW-01	Dibomochlorormethane		G		U	ug/L	3		
MW-01	Diehylphthalate		G		U	ug/L	6		
			M		U	ug/L	10		
MW-01	Dimethylphthalate		M		U	ug/L	10		
			G		U	ug/L	6		
MW-01	Endrin	02-Dec-81			U	ug/L	0.2		
		16-Mar-82			U	ug/L	0.2		
		28-Jun-82			U	ug/L	0.2		
		13-Sep-82			U	ug/L	0.2		
MW-01	Ethtbenzene		G		U	ug/L	3		
MW-01	Fluranthene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-01	Fluorene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-01	Fluoride		G		U	mg/L	0.05		
			G		U	ug/L	100		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-01	Fluoride	02-Dec-81			200	ug/L	500		
		16-Mar-82			300	ug/L	500		
		28-Jun-82			U	ug/L	500		
		13-Sep-82			U	ug/L	500		
MW-01	gamma-BHC (Lindane)	02-Dec-81			U	ug/L	4		
		16-Mar-82			U	ug/L	4		
		28-Jun-82			U	ug/L	4		
		13-Sep-82			U	ug/L	4		
MW-01	Gross Alpha	02-Dec-81			U	pCi/L	2		
		16-Mar-82			U	pCi/L	2		
MW-01	Gross Beta	02-Dec-81			30	pCi/L	3	+3	
		16-Mar-82			30	pCi/L	3	+3	
MW-01	Hexachlorobenzene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-01	Hexachlorobutadiene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-01	Hexachlorocyclopentadiene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-01	Hexachloroethane		M		U	ug/L	10		
			G		U	ug/L	6		
MW-01	Indeno(1,2,3-cd)pyrese		M		U	ug/L	10		
			G		U	ug/L	20		
MW-01	Iron	02-Dec-81			7,200	ug/L	30		
		16-Mar-82			4,200	ug/L	30		
		28-Jun-82			560	ug/L	30		
		13-Sep-82			130	ug/L	30		
		08-Mar-83			150	ug/L			
		17-Apr-84			U	ug/L			
MW-01	Isophorone		M		U	ug/L	10		
			G		U	ug/L	6		
MW-01	Lead	02-Dec-81			U	ug/L	10		
		16-Mar-82			6.0	ug/L	10		
		28-Jun-82			13	ug/L	10		
		13-Sep-82			10	ug/L	10		
MW-01	Manganese	02-Dec-81			6.0	ug/L	5		
		16-Mar-82			13	ug/L	5		
		28-Jun-82			5.0	ug/L	5		
		13-Sep-82			U	ug/L	5		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-01	Manganese	08-Mar-83			U	ug/L			
		17-Apr-84			10	ug/L			
MW-01	Mercury	02-Dec-81			U	ug/L	0.8		
		16-Mar-82			U	ug/L	0.8		
		28-Jun-82			U	ug/L	1		
		13-Sep-82			U	ug/L	0.8		
MW-01	Methoxychlor	02-Dec-81			U	ug/L	5		
		16-Mar-82			U	ug/L	5		
		28-Jun-82			U	ug/L	5		
		13-Sep-82			U	ug/L	5		
MW-01	Methylene chloride (dichloromethane)		G		U	ug/L	10		J
MW-01	N-Nitroso-di-n-propylamine		G		U	ug/L	6		
			M		U	ug/L	10		
MW-01	N-Nitrosodimethylamine		M		U	ug/L	10		
			G		U	ug/L	6		
MW-01	N-Nitrosodiphenylamine		G		U	ug/L	6		
			M		U	ug/L	10		
MW-01	Naphthalene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-01	Nitrate	02-Dec-81			8,900	ug/L	1000		
		16-Mar-82			U	ug/L	1000		
		28-Jun-82			8,800	ug/L	1000		
		13-Sep-82			U	ug/L	1000		
MW-01	Nitrobenzene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-01	o-Nitrophenol (2-Nitrophenol)		M		U	ug/L	10		
			G		U	ug/L	10		
MW-01	p-Chloro-m-cresol		G		U	ug/L	10		
			M		U	ug/L	10		
MW-01	Pentachlorophenol		G		U	ug/L	10		
			M		U	ug/L	10		
MW-01	pH	02-Dec-81			11				
		16-Mar-82			11				
		28-Jun-82			11				
		13-Sep-82			11				
		22-Mar-83			10				
		22-Mar-83			9.9				

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-01	pH	22-Mar-83			9.6				
		04-Oct-83			11				
		04-Oct-83			11				
MW-01	Phenanthrene		C		U	ug/L	6		
			N		U	ug/L	10		
MW-01	Phenol		C		U	ug/L	10		
			N		U	ug/L	10		
MW-01	Phenols, Total	02-Dec-81			U	ug/L	5		
		16-Mar-82			U	ug/L	5		
		28-Jun-82			U	ug/L	5		
		13-Sep-82			U	ug/L	5		
		08-Mar-83			U	ug/L	5		
		17-Apr-84			14	ug/L	5		
MW-01	Pyrene		N		U	ug/L	10		
			C		U	ug/L	6		
MW-01	Selenium	02-Dec-81			U	ug/L	4		
		16-Mar-82			U	ug/L	4		
		28-Jun-82			U	ug/L	4		
		13-Sep-82			U	ug/L	4		
MW-01	Silver	02-Dec-81			U	ug/L	7		
		16-Mar-82			U	ug/L	7		
		28-Jun-82			U	ug/L	7		
		13-Sep-82			U	ug/L	7		
MW-01	Sodium	02-Dec-81			22,000	ug/L			
		16-Mar-82			5,900	ug/L			
		28-Jun-82			7,800	ug/L			
		13-Sep-82			4,700	ug/L			
		08-Mar-83			6,700	ug/L			
		17-Apr-84			3,800	ug/L			
MW-01	Specific Conductance	02-Dec-81			140	rhos/c			
		16-Mar-82			420	rhos/c			
		28-Jun-82			630	rhos/c			
		13-Sep-82			730	rhos/c			
		29-Mar-83			1,100	rhos/c			
		29-Mar-83			1,000	rhos/c			
		29-Mar-83			790	rhos/c			
		04-Oct-83			460	rhos/c			
		04-Oct-83			460	rhos/c			
MW-01	Sulfate	02-Dec-81			29,000	ug/L	1000		
		16-Mar-82			2,200	ug/L	1000		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-01	Sulfate	28-Jun-82			3,000	ug/L	1000		
		13-Sep-82			2,800	ug/L	1000		
		08-Mar-83			5,700	ug/L			
		17-Apr-84			1,200	ug/L			
MW-01	Terachloroethene		G		U	ug/L	3		
MW-01	Touene		G		U	ug/L	10	J	
MW-01	Toal Organic Carbon		G	Q	2,700	ug/L		Q4	
			G	Q	2,700	ug/L		Q3	
			G	Q	2,300	ug/L		Q2	
			G	Q	2,200	ug/L		Q1	
		02-Dec-81			5,400	ug/L	3000		
		16-Mar-82			U	ug/L	3000		
		28-Jun-82			6,000	ug/L	3000		
		28-Jun-82			5,700	ug/L	3000		
		28-Jun-82			5,800	ug/L	3000		
		28-Jun-82			5,900	ug/L	3000		
		13-Sep-82			U	ug/L	3000		
		13-Sep-82			4,000	ug/L	3000		
		14-Apr-83			7,000	ug/L			
		14-Apr-83			6,000	ug/L			
		04-Oct-83			U	ug/L			
		04-Oct-83			1,000	ug/L			
		04-Oct-83			1,300	ug/L			
		17-Apr-84			2,700	ug/L			
		17-Apr-84			2,300	ug/L			
		17-Apr-84			2,200	ug/L			
MW-01	Total Organic Halide		M	Q	U	ug/L	20	Q1	
			M	Q	U	ug/L	20	Q2	
			M	Q	U	ug/L	20	Q3	
			M	Q	33	ug/L	20	Q4	
			G	Q	U	ug/L	1	Q1	
			G	Q	3.1	ug/L	1	Q2	
			G	Q	3.5	ug/L	1	Q3	
			G	Q	1.7	ug/L	1	Q4	
		02-Dec-81			0.70	ug/L	5		
		02-Dec-81			2.2	ug/L	5		
		02-Dec-81			0.40	ug/L	5		
		16-Mar-82			U	ug/L	5		
		16-Mar-82			0.40	ug/L	5		
		16-Mar-82			1.0	ug/L	5		
		16-Mar-82			0.10	ug/L	5		
		28-Jun-82			3.0	ug/L	5		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-01	Total Organic Halide	28-Jun-82			5.0	ug/L	5		
		28-Jun-82			1.0	ug/L	5		
		28-Jun-82			4.0	ug/L	5		
		13-Sep-82			U	ug/L	5		
		13-Sep-82			1.0	ug/L	5		
		13-Sep-82			3.0	ug/L	5		
		13-Sep-82			4.0	ug/L	5		
		14-Apr-83			U	ug/L	1		
		04-Oct-83			4.3	ug/L	1		
		04-Oct-83			4.5	ug/L	1		
		04-Oct-83			1.9	ug/L	1		
		04-Oct-83			4.1	ug/L	1		
		17-Apr-84			1.7	ug/L	1		
		17-Apr-84			3.5	ug/L	1		
		17-Apr-84			3.1	ug/L	1		
		17-Apr-84			U	ug/L	1		
MW-01	Toxaphene	02-Dec-81			U	ug/L	5		
		16-Mar-82			U	ug/L	5		
		28-Jun-82			U	ug/L	5		
		13-Sep-82			U	ug/L	5		
MW-01	trans-1,2-Dichloroethene		G		U	ug/L	3		
MW-01	trans-1,3-Dichloropropene		G		U	ug/L	3		
MW-01	Trichloroethene		G		U	ug/L	3		
MW-01	Trichlorofluoromethane		G		U	ug/L	3		
MW-01	Vinyl chloride		G		U	ug/L	3		
MW-013	1,1,1,2-Tetrachloroethane	03-May-94	S		U	ug/L	5		
		05-Mar-96	S		U	ug/L	5		
MW-013	1,1,1-Trichloroethane	03-May-94	S		U	ug/L	5		
		05-Mar-96	S		U	ug/L	5		
MW-013	1,1,2,2-Tetrachloroethane	03-May-94	S		U	ug/L	5		
		05-Mar-96	S		U	ug/L	5		
		28-Jul-98	S		U	ug/L	5		
MW-018	1,1,2-Trichloroethane	03-May-94	S		U	ug/L	5		
		05-Mar-96	S		U	ug/L	5		
MW-018	1,1-Dichloroethane	03-May-94	S		U	ug/L	5		
		05-Mar-96	S		U	ug/L	5		
MW-018	1,1-Dichloroethene	03-May-94	S		U	ug/L	5		
		05-Mar-96	S		U	ug/L	5		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-01B	1,2,3-Trichloropropane	03-May-94	S		U	ug/L	5		
		05-Mar-96	S		U	ug/L	5		
MW-01B	1,2,4,5-Tetrachlorobenzene	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-01B	1,2,4-Trichlorobenzene	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-01B	1,2-Dibromo-3-chbropropane	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-01B	1,2-Dibromoethane (EDB)	03-May-94	S		U	ug/L	5		
		05-Mar-96	S		U	ug/L	5		
MW-01B	1,2Dichlorobenzene	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
		15-Apr-97	S		U	ug/L	10		
		26-Mar-98	G		U	ug/L	10		
		28-Jul-98	S		U	ug/L	10		
MW-01B	1,2Dichloroethane	03-May-94	S		U	ug/L	5		
		05-Mar-96	S		U	ug/L	5		
MW-01B	1,2Dichloropropane	03-May-94	S		U	ug/L	5		
		05-Mar-96	S		U	ug/L	5		
MW-01B	1,35-Trinitrobenzene	03-May-94	S		U	ug/L	200		
		05-Mar-96	S		U	ug/L	200		
MW-01B	1,3Dichlorobenzene	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-01B	1,4Dichlorobenzene	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
		15-Apr-97	S		U	ug/L	10		
		26-Mar-98	G		U	ug/L	10		
		28-Jul-98	S		U	ug/L	10		
MW-01B	1,4Dioxane	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-01B	1,4Naphthoquinone	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-01B	1-Napthylamine	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-01B	2,3,4,6-Tetrachlorophenol	03-May-94	S		U	ug/L	50		
		05-Mar-96	S		U	ug/L	50		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-01B	2,4,5-T	03-May-94	S		U	ug/L	0.5		
		05-Mar-96	S		U	ug/L	0.5		
MW-01B	2,4,5-TP (Silvex)	03-May-94	S		U	ug/L	0.5		
		05-Mar-96	S		U	ug/L	0.5		
MW-01B	2,4,5-Trichloropheno	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
		15-Apr-97	S		U	ug/L	10		
		18-Sep-97	G		U	ug/L	10		
		26-Mar-98	G		U	ug/L	10		
		28-Jul-98	S		U	ug/L	10		
MW-01B	2,4,6-Trichloropheno	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
		15-Apr-97	S		U	ug/L	10		
		18-Sep-97	G		U	ug/L	10		
		26-Mar-98	G		U	ug/L	10		
		28-Jul-98	S		U	ug/L	10		
MW-01B	2,4-D	03-May-94	S		U	ug/L	0.5		
		05-Mar-96	S		U	ug/L	0.5		
MW-01B	2,4-Dichlorophenol	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
		15-Apr-97	S		U	ug/L	10		
		18-Sep-97	G		U	ug/L	10		
		26-Mar-98	G		U	ug/L	10		
		28-Jul-98	S		U	ug/L	10		
MW-01B	2,4-Dimethylphenol	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-01B	2,4-Dinitrophenol	03-May-94	S		U	ug/L	50		
		05-Mar-96	S		U	ug/L	50		
MW-01B	2,4-Dinitrotoluene	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-01B	2,6-Dichlorophenol	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-01B	2,6-Dinitrotoluene	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-01B	2-Acetylaminofluorene	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-01B	2-Chloroethylvinyl ether	03-May-94	S		U	ug/L	50		
		05-Mar-96	S		U	ug/L	50		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
MW-01B	2-Chloronaphthalene	03-May-94	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-01B	2-Chlorophenol	03-May-94	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-01B	2-Hexanone	03-May-94	S		U	ug/L	50	
		05-Mar-96	S		U	ug/L	25	
MW-01B	2-Methylnaphthalene	03-May-94	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-01B	2-Naphtylamine	03-May-94	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-01B	2-Picoline	03-May-94	S		U	ug/L	200	
		05-Mar-96	S		U	ug/L	200	
MW-01B	2-sec-Butyl-4,6-dinitrophend	03-May-94	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-01B	3,3-Dichlorobenzidine	03-May-94	S		U	ug/L	20	
		05-Mar-96	S		U	ug/L	20	
MW-01B	3,3-Dimethylbenzidine	03-May-94	S		U	ug/L	200	
		05-Mar-96	S		U	ug/L	200	
MW-01B	3-Methylcholanthrene	03-May-94	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-01B	4,4-DDD	03-May-94	S		U	ug/L	0.1	
		05-Mar-96	S		U	ug/L	0.1	
MW-01B	4,4-DDE	03-May-94	S		U	ug/L	0.1	
		05-Mar-96	S		U	ug/L	0.1	
MW-01B	4,4-DDT	03-May-94	S		U	ug/L	0.1	
		05-Mar-96	S		U	ug/L	0.1	
MW-01B	4,6-Dinitro-o-cresol	03-May-94	S		U	ug/L	50	
		05-Mar-96	S		U	ug/L	50	
MW-01B	4-Aminobiphenyl	03-May-94	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-01B	4-Bromophenyl-phenyl ether	03-May-94	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-01B	4-Chlorophenylphenyl ether	03-May-94	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-01B	4-Methyl-2-pentanone (MIBK)	03-May-94	S		U	ug/L	50	
		05-Mar-96	S		U	ug/L	25	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
MW-01B	4-Nitroquinoline 1-oxde	03-May-94	S		U	ug/L	100	
		05-Mar-96	S		U	ug/L	100	
MW-01B	5-Nitro-o-toluidine	03-May-94	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-01B	7,12-Dimethylbenz(a)anthracene	03-May-94	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-01B	a-a-Dimethylphenethylamine	03-May-94	S		U	ug/L	2000	
		05-Mar-96	S		U	ug/L	2000	
MW-01B	Acenaphthene	03-May-94	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-01B	Acenaphthylene	03-May-94	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-01B	Acetone	03-May-94	S		U	ug/L	50	
		05-Mar-96	S		U	ug/L	25	
MW-01B	Acetonitrile	03-May-94	S		U	ug/L	1000	
		05-Mar-96	S		U	ug/L	1000	
MW-01B	Acetophenone	03-May-94	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-01B	Acrolein	03-May-94	S		U	ug/L	100	
		05-Mar-96	S		U	ug/L	100	
MW-01B	Acrylonitrile	03-May-94	S		U	ug/L	100	
		05-Mar-96	S		U	ug/L	100	
MW-01B	Aldrin	03-May-94	S		U	ug/L	0.05	
		05-Mar-96	S		U	ug/L	0.05	
MW-01B	Alkalinity (to pH 4.5) as CaCO3	28-Jul-98	S		4.2	mg/L	1	
		29-Jul-98	S		4.2	mg/L	1	
MW-01B	Allychloride (3-chloropropene)	03-May-94	S		U	ug/L	5	
		05-Mar-96	S		U	ug/L	5	
MW-01B	alpha-BHC	03-May-94	S		U	ug/L	0.05	
		05-Mar-96	S		U	ug/L	0.05	
MW-01B	Aniline	03-May-94	S		U	ug/L	50	
		05-Mar-96	S		U	ug/L	50	
MW-01B	Anthracene	03-May-94	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
MW-01B	Antimony	03-May-94	S		U	ug/L	50	
		05-Mar-96	S		U	ug/L	50	
MW-01B	Aramite	03-May-94	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-01B	Aroclor 1016	03-May-94	S		U	ug/L	1	
		05-Mar-96	S		U	ug/L	1	
		15-Apr-97	S		U	ug/L	0.5	
		18-Sep-97	G		U	ug/L	0.5	
		18-Sep-97	G	F	U	ug/L	0.5	S
		19-Sep-97	S		U	ug/L	0.5	
		19-Sep-97	S		U	ug/L	0.5	
		19-Sep-97	S	F	U	ug/L	0.5	S
		27-Mar-98	S		U	ug/L	0.5	
		27-Mar-98	S	F	U	ug/L	0.5	
		28-Jul-98	S		U	ug/L	1	
		29-Jul-98	S	F	U	ug/L	1	
MW-01B	Aroclor 1221	03-May-94	S		U	ug/L	2	
		05-Mar-96	S		U	ug/L	2	
		15-Apr-97	S		U	ug/L	1	
		18-Sep-97	G		U	ug/L	0.5	
		18-Sep-97	G	F	U	ug/L	0.5	S
		19-Sep-97	S		U	ug/L	1	
		19-Sep-97	S		U	ug/L	1	
		19-Sep-97	S	F	U	ug/L	1	S
		27-Mar-98	S		U	ug/L	0.5	
		27-Mar-98	S	F	U	ug/L	0.5	
		28-Jul-98	S		U	ug/L	1	
		29-Jul-98	S	F	U	ug/L	1	
MW-01B	Aroclor 1232	03-May-94	S		U	ug/L	1	
		05-Mar-96	S		U	ug/L	1	
		15-Apr-97	S		U	ug/L	0.5	
		18-Sep-97	G		U	ug/L	0.5	
		18-Sep-97	G	F	U	ug/L	0.5	S
		19-Sep-97	S		U	ug/L	0.5	
		19-Sep-97	S		U	ug/L	0.5	
		19-Sep-97	S	F	U	ug/L	0.5	S
		27-Mar-98	S		U	ug/L	0.5	
		27-Mar-98	S	F	U	ug/L	0.5	
		28-Jul-98	S		U	ug/L	1	
		29-Jul-98	S	F	U	ug/L	1	
MW-01B	Aroclor 1242	03-May-94	S		U	ug/L	1	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
MW-01B	Aroclor 1242	05-Mar-96	S		U	ug/L	1	
		15-Apr-97	S		U	ug/L	0.5	
		18-Sep-97	G		U	ug/L	0.5	
		18-Sep-97	G	F	U	ug/L	0.5	S
		19-Sep-97	S		U	ug/L	0.5	
		19-Sep-97	S		U	ug/L	0.5	
		19-Sep-97	S	F	U	ug/L	0.5	S
		27-Mar-98	S		U	ug/L	0.5	
		27-Mar-98	S	F	U	ug/L	0.5	
		28-Jul-98	S		U	ug/L	1	
		29-Jul-98	S	F	U	ug/L	1	
MW-01B	Aroclor 1248	03-May-94	S		U	ug/L	1	
		05-Mar-96	S		U	ug/L	1	
		15-Apr-97	S		U	ug/L	0.5	
		18-Sep-97	G		U	ug/L	0.5	
		18-Sep-97	G	F	U	ug/L	0.5	S
		19-Sep-97	S		U	ug/L	0.5	
		19-Sep-97	S		U	ug/L	0.5	
		19-Sep-97	S	F	U	ug/L	0.5	S
		27-Mar-98	S		U	ug/L	0.5	
		27-Mar-98	S	F	U	ug/L	0.5	
		28-Jul-98	S		U	ug/L	1	
		29-Jul-98	S	F	U	ug/L	1	
MW-01B	Aroclor 1254	03-May-94	S		U	ug/L	1	
		05-Mar-96	S		U	ug/L	1	
		15-Apr-97	S		U	ug/L	0.5	
		18-Sep-97	G		U	ug/L	0.5	
		18-Sep-97	G	F	U	ug/L	0.5	S
		19-Sep-97	S		U	ug/L	0.5	
		19-Sep-97	S		U	ug/L	0.5	
		19-Sep-97	S	F	U	ug/L	0.5	S
		27-Mar-98	S		U	ug/L	0.5	
		27-Mar-98	S	F	U	ug/L	0.5	
		28-Jul-98	S		U	ug/L	1	
		29-Jul-98	S	F	U	ug/L	1	
MW-01B	Aroclor 1260	03-May-94	S		U	ug/L	1	
		05-Mar-96	S		U	ug/L	1	
		15-Apr-97	S		U	ug/L	0.5	
		18-Sep-97	G		U	ug/L	0.5	
		18-Sep-97	G	F	U	ug/L	0.5	S
		19-Sep-97	S		U	ug/L	0.5	
		19-Sep-97	S		U	ug/L	0.5	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
MW-01B	Aroclor 1260	19-Sep-97	S	F	U	ug/L	0.5	S
		27-Mar-98	S		U	ug/L	0.5	
		27-Mar-98	S	F	U	ug/L	0.5	
		28-Jul-98	S		U	ug/L	1	
		29-Jul-98	S	F	U	ug/L	1	
MW-01B	Aroclor 1268	05-Mar-96	S		U	ug/L	1	
MW-01B	Arsenic	03-May-94	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
		28-Jul-98	S		U	mg/L	0.01	
		29-Jul-98	S	F	U	mg/L	0.01	
MW-01B	Barium	03-May-94	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
		28-Jul-98	S		U	mg/L	0.01	
		29-Jul-98	S	F	U	mg/L	0.01	
MW-01B	Benzene	26-Mar-87			U	ug/L		
		26-Mar-87			U	ug/L		
		26-Mar-87			U	ug/L		
		26-Mar-87			U	ug/L		
		21-Sep-87			U	ug/L		
		21-Sep-87			U	ug/L		
		21-Sep-87			U	ug/L		
		21-Sep-87			U	ug/L		
		23-Mar-88			U	ug/L		
		23-Mar-88			U	ug/L		
		23-Mar-88			U	ug/L		
		23-Mar-88			U	ug/L		
		17-Oct-88			U	ug/L		
		17-Oct-88			U	ug/L		
		17-Oct-88			U	ug/L		
		17-Oct-88			U	ug/L		
		21-Mar-89			U	ug/L		
		21-Mar-89			U	ug/L		
		21-Mar-89			U	ug/L		
		21-Mar-89			U	ug/L		
		08-Sep-89			U	ug/L		
		08-Sep-89			U	ug/L		
		08-Sep-89			U	ug/L		
		21-Mar-90			U	ug/L		
		21-Mar-90			U	ug/L		
		11-Sep-90			U	ug/L	10	
		11-Sep-90			U	ug/L	10	
		11-Sep-90			U	ug/L	10	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
MW-01B	Benzene	05-Mar-91			U	ug/L	10	
		05-Mar-91			U	ug/L	10	
		05-Mar-91			U	ug/L	10	
		05-Mar-91			U	ug/L	10	
		16-Sep-91			U	ug/L	10	
		16-Sep-91			U	ug/L	10	
		16-Sep-91			U	ug/L	10	
		16-Sep-91			U	ug/L	10	
		11-Mar-92			U	ug/L	10	
		16-Sep-92			U	ug/L	1	
		24-Mar-93			U	ug/L	1	
		14-Sep-93			U	ug/L	1	
		07-Mar-94			U	ug/L	10	
		03-May-94	S		U	ug/L	5	
		13-Sep-94			U	ug/L	1	
		19-Apr-95			U	ug/L	0.11	
		19-Apr-95			U	ug/L	0.11	
		19-Apr-95			U	ug/L	0.11	
		05-Mar-96	S		U	ug/L	5	
		11-Sep-96	S	Q	U	ug/L	1	Q4
		11-Sep-96	S	Q	U	ug/L	1	Q2
		11-Sep-96	S	Q	U	ug/L	1	
		11-Sep-96	S	Q	U	ug/L	1	Q3
MW-01B	Benzo(a)anthracene	03-May-94	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-01B	Benzo(a)pyrene	03-May-94	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-01B	Benzo(b)fluoranthene	03-May-94	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-01B	Benzo(g,h,i)perylene	03-May-94	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-01B	Benzo(k)fluoranthene	03-May-94	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-01B	Benzyl alcohol	03-May-94	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-01B	Beryllium	03-May-94	S		U	ug/L	5	
		05-Mar-96	S		U	ug/L	5	
		28-Jul-98	S		U	mg/L	0.004	
		29-Jul-98	S	F	U	mg/L	0.004	
MW-01B	beta-BHC	03-May-94	S		U	ug/L	0.05	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
MW-01B	bea-BHC	05-Mar-96	S		U	ug/L	0.05	
MW-01B	bis(2-Chloroethoxy)methane	03-May-94	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-01B	bis(2-Chloroethyl)ether	03-May-94	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-01B	bis(2-Chloroisopropyl)ether	03-May-94	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-01B	bis(2-Ethylhexyl)phthalate	03-May-94	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-01B	Bromodichloromethane	03-May-94	S		U	ug/L	5	
		05-Mar-96	S		U	ug/L	5	
MW-01B	Bromoform	03-May-94	S		U	ug/L	5	
		05-Mar-96	S		U	ug/L	5	
MW-01B	Bromomethane (methyl bromide)	03-May-94	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-01B	Buylbenzylphthalate	03-May-94	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-01B	Cadmium	03-May-94	S		U	ug/L	5	
		05-Mar-96	S		U	ug/L	5	
		28-Jul-98	S		U	mg/L	0.005	
		29-Jul-98	S	F	U	mg/L	0.005	
MW-01B	Carbon disulfide	03-May-94	S		U	ug/L	5	
		05-Mar-96	S		U	ug/L	5	
MW-01B	Carbon tetrachloride	03-May-94	S		U	ug/L	5	
		05-Mar-96	S		U	ug/L	5	
MW-01B	Chordane	03-May-94	S		U	ug/L	0.5	
		05-Mar-96	S		U	ug/L	0.5	
MW-01B	Chorobenzene	03-May-94	S		U	ug/L	5	
		05-Mar-96	S		U	ug/L	5	
		15-Apr-97	S		U	ug/L	1	
		18-Sep-97	G		U	ug/L	1	
		26-Mar-98	G		U	ug/L	1	
		28-Jul-98	S		U	ug/L	5	
MW-01B	Chlorobenzilate	03-May-94	S		U	ug/L	0.5	
		05-Mar-96	S		U	ug/L	0.5	
MW-01B	Chloroethane	03-May-94	S		U	ug/L	10	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
MW-01B	Chloroethane	05-Mar-96	S		U	ug/L	10	
MW-01B	Chloroform	03-May-94	S		U	ug/L	5	
		05-Mar-96	S		U	ug/L	5	
MW-01B	Chloromethane (methyl chloride)	03-May-94	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-01B	Chloroprene	03-May-94	S		U	ug/L	5	
		05-Mar-96	S		U	ug/L	5	
MW-01B	Chromium	03-May-94	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
		28-Jul-98	S		U	mg/L	0.01	
		29-Jul-98	S	F	U	mg/L	0.01	
MW-01B	Chrysene	03-May-94	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-01B	cis-1,3-Dichloropropene	03-May-94	S		U	ug/L	5	
		05-Mar-96	S		U	ug/L	5	
MW-01B	Cobalt	03-May-94	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
		15-Apr-97	S		U	mg/L	0.01	
		18-Sep-97	G		U	mg/L	0.01	
		18-Sep-97	G	F	U	mg/L	0.01	S
		26-Mar-98	G		U	mg/L	0.01	
		26-Mar-98	G	F	U	mg/L	0.01	
		28-Jul-98	S		U	mg/L	0.01	
		29-Jul-98	S	F	U	mg/L	0.01	
MW-01B	Copper	03-May-94	S		U	ug/L	25	
		05-Mar-96	S		U	ug/L	25	
MW-01B	Cresol, m&p	03-May-94	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-01B	delta-BHC	03-May-94	S		U	ug/L	0.05	
		05-Mar-96	S		U	ug/L	0.05	
MW-01B	di-N-Butylphthalate	03-May-94	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-01B	di-N-Octylphthalate	03-May-94	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-01B	Diallate	03-May-94	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-01B	Dibenz(a,h)anthracere	03-May-94	S		U	ug/L	10	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-01B	Dibenz(a,h)anthracene	05-Mar-96	S		U	ug/L	10		
MW-01B	Dibenzofuran	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-01B	Dibromochloromethane	03-May-94	S		U	ug/L	5		
		05-Mar-96	S		U	ug/L	5		
MW-01B	Dichlorodifluoromethane	03-May-94	S		U	ug/L	5		
		05-Mar-96	S		U	ug/L	5		
MW-01B	Dieldrin	03-May-94	S		U	ug/L	0.1		
		05-Mar-96	S		U	ug/L	0.1		
MW-01B	Diethylphthalate	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-01B	Dimethoate	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	2		
MW-01B	Dimethylphthalate	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-01B	Dioxin-2,3,7,8-TCDD	03-May-94	S		U	ug/L	0.005		
		05-Mar-96	S		U	ug/L	0.005		
MW-01B	Dissolved Oxygen	10-Nov-98			6.5	mg/L			
MW-01B	Disulfoton	03-May-94	S		U	ug/L	2		
		05-Mar-96	S		U	ug/L	2		
MW-01B	Endosulfan I	03-May-94	S		U	ug/L	0.05		
		05-Mar-96	S		U	ug/L	0.05		
MW-01B	Endosulfan II	03-May-94	S		U	ug/L	0.1		
		05-Mar-96	S		U	ug/L	0.1		
MW-01B	Endosulfan sulfate	03-May-94	S		U	ug/L	0.1		
		05-Mar-96	S		U	ug/L	0.1		
MW-01B	Endrin	03-May-94	S		U	ug/L	0.1		
		05-Mar-96	S		U	ug/L	0.1		
MW-01B	Endrin Aldehyde	03-May-94	S		U	ug/L	0.1		
		05-Mar-96	S		U	ug/L	0.1		
MW-01B	Ethyl methacrylate	03-May-94	S		U	ug/L	5		
		05-Mar-96	S		U	ug/L	5		
MW-01B	Ethyl methanesulfonate	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-01B	Ethylbenzene	03-May-94	S		U	ug/L	5		
		05-Mar-96	S		U	ug/L	5		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-01B	Famphur	03-May-94	S		U	ug/L	2		
		05-Mar-96	S		U	ug/L	2		
MW-01B	Fluoranthene	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-01B	Fluorene	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-01B	gamma-BHC (Lindane)	03-May-94	S		U	ug/L	0.05		
		05-Mar-96	S		U	ug/L	0.05		
MW-01B	Heptachlor	03-May-94	S		U	ug/L	0.05		
		05-Mar-96	S		U	ug/L	0.05		
MW-01B	Heptachlor epoxide	03-May-94	S		U	ug/L	0.05		
		05-Mar-96	S		U	ug/L	0.05		
MW-01B	Hexa CDD	03-May-94	S		U	ug/L	0.005		
		05-Mar-96	S		U	ug/L	0.005		
MW-01B	Hexa CDF	03-May-94	S		U	ug/L	0.005		
		05-Mar-96	S		U	ug/L	0.005		
MW-01B	Hexachlorobenzene	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-01B	Hexachlorobutadiene	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-01B	Hexachlorocyclopentadiene	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-01B	Hexachloroethane	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-01B	Hexachloropropene	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-01B	Indeno(1,2,3-cd)pyrene	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-01B	Iron, Ferrous (2+)	28-Jul-98	S		U	mg/L	0.05		
MW-01B	Isobutyl alcohol	03-May-94	S		U	ug/L	1000		
		05-Mar-96	S		U	ug/L	1000		
MW-01B	Isodrin	03-May-94	S		U	ug/L	0.05		
		05-Mar-96	S		U	ug/L	0.05		
MW-01B	Isophorone	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-01B	Isopropylbenzene	28-Jul-98	S		U	ug/L	5		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-01B	Ketone	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-01B	Lead	03-May-94	S		14	ug/L	5		
		05-Mar-96	S		44	ug/L	5		
		28-Jul-98	S		U	mg/L	0.005		
		29-Jul-98	S	F	U	mg/L	0.005		J
MW-01B	m-Dinitrobenzene	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-01B	m-Nitroaniline	03-May-94	S		U	ug/L	50		
		05-Mar-96	S		U	ug/L	50		
MW-01B	Manganese	28-Jul-98	S		U	mg/L	0.01		
		29-Jul-98	S	F	0.025	mg/L	0.01		J
MW-01B	Mecury	03-May-94	S		U	ug/L	0.2		
		05-Mar-96	S		U	ug/L	0.2		
		15-Apr-97	S		0.000050	mg/L	0.0002	J	
		26-Mar-98	G		U	mg/L	0.0002		
		26-Mar-98	G	F	U	mg/L	0.0002		
		28-Jul-98	S		U	mg/L	0.0002		
		29-Jul-98	S	F	U	mg/L	0.0002		
MW-01B	Methacrylonitrile	03-May-94	S		U	ug/L	100		
		05-Mar-96	S		U	ug/L	100		
MW-01B	Methapyrilene	03-May-94	S		U	ug/L	2000		
		05-Mar-96	S		U	ug/L	2000		
MW-01B	Methoxychlor	03-May-94	S		U	ug/L	0.5		
		05-Mar-96	S		U	ug/L	0.5		
MW-01B	Methyl ethyl ketone (MEK)	03-May-94	S		U	ug/L	50		
		05-Mar-96	S		U	ug/L	25		
MW-01B	Methyl iodide	03-May-94	S		U	ug/L	5		
		05-Mar-96	S		U	ug/L	5		
MW-01B	Methyl methacrylate	03-May-94	S		U	ug/L	5		
		05-Mar-96	S		U	ug/L	5		
MW-01B	Methyl methanesulfonate	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-01B	Methyl parathion	11-Sep-90			U	ug/L	1.2		
		11-Sep-90			U	ug/L	1.2		
		11-Sep-90			U	ug/L	1.2		
		05-Mar-91			U	ug/L	1.2		
		16-Sep-91			U	ug/L	1.2		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-013	Methyl parathion	11-Mar-92			U	ug/L	1.2		
		16-Sep-92			U	ug/L	0.5		
		24-Mar-93			U	ug/L	0.5		
		03-May-94	S		U	ug/L	0.5		
		05-Mar-96	S		U	ug/L	0.5		
		28-Jul-98	S		U	ug/L	0.5		
MW-013	Methylene bromide	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	5		
MW-013	Methylene chloride (dichloromethane)	03-May-94	S		U	ug/L	5		
		05-Mar-96	S		U	ug/L	5		
		15-Apr-97	S		U	ug/L	5		
		18-Sep-97	G		U	ug/L	5		
		26-Mar-98	G		U	ug/L	5		
		28-Jul-98	S		U	ug/L	5		
MW-013	N-Nitroso-di-n-butylamine	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-013	N-Nitroso-di-n-propylamine	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-013	N-Nitrosodiethylamine	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-013	N-Nitrosodimethylamine	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-013	N-Nitrosodiphenylamine	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-013	N-Nitrosomethylethylamine	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-013	N-Nitrosomorpholine	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-013	N-Nitrosopiperidine	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-013	N-Nitrosopyrrolidine	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-013	Naphthalene	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-013	Nickel	03-May-94	S		U	ug/L	40		
		05-Mar-96	S		U	ug/L	40		
		28-Jul-98	S		U	mg/L	0.004		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-01B	Nickel	29-Jul-98	S	F	U	mg/L	0.004		
MW-01B	Nitrate-N	28-Jul-98	S		0.15	mg/L	0.05		J
		29-Jul-98	S		0.15	mg/L	0.05		J
MW-01B	Nitrobenzene	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-01B	o,oo-Triethylphosphorothioate	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
		15-Apr-97	S		U	ug/L	10		
		18-Sep-97	G		U	ug/L	10		
		26-Mar-98	G		U	ug/L	10		
		28-Jul-98	S		U	ug/L	10		
MW-01B	o,oDiethyl-o-2-pyrazinylphosphorothioate	03-May-94	S		U	ug/L	1		
		05-Mar-96	S		U	ug/L	1		
MW-01B	o-Cresol	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-01B	o-Nitroaniline	03-May-94	S		U	ug/L	50		
		05-Mar-96	S		U	ug/L	50		
MW-01B	o-Nitrophenol (2-Nitrophenol)	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-01B	o-Toluidine	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-01B	p-(Dimethylamino)azobenzene	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-01B	p-Chloro-m-cresol	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-01B	p-Chloroaniline	03-May-94	S		U	ug/L	20		
		05-Mar-96	S		U	ug/L	20		
MW-01B	p-Nitroaniline	03-May-94	S		U	ug/L	50		
		05-Mar-96	S		U	ug/L	50		
MW-01B	p-Phenylenediamine	03-May-94	S		U	ug/L	2000		
		05-Mar-96	S		U	ug/L	2000		
MW-01B	Perta CDD	03-May-94	S		U	ug/L	0.005		
		05-Mar-96	S		U	ug/L	0.005		
MW-01B	Perta CDF	03-May-94	S		U	ug/L	0.005		
		05-Mar-96	S		U	ug/L	0.005		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-01B	Pentachlorobenzene	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-01B	Pentachloroethane	03-May-94	S		U	ug/L	25		
		05-Mar-96	S		U	ug/L	25		
MW-01B	Pentachloronitrobenzene	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-01B	Pentachlorophenol	03-May-94	S		U	ug/L	50		
		05-Mar-96	S		U	ug/L	50		
		15-Apr-97	S		U	ug/L	1		
		18-Sep-97	G		U	ug/L	1		
		26-Mar-98	G		U	ug/L	1		
		28-Jul-98	S		U	ug/L	1		
MW-01B	pH	28-Jul-98	S		5.6				
		28-Jul-98	S		6.6				
		28-Jul-98	S		6.6				
		28-Jul-98	S		6.7				
		29-Jul-98	S		5.7				
		29-Jul-98	S		5.7				
		29-Jul-98	S		6.0				
		29-Jul-98	S		5.9				
		10-Nov-98			5.3				
MW-01B	Phenacetin	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-01B	Phenanthrene	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-01B	Phenol	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
		15-Apr-97	S		U	ug/L	10		
		18-Sep-97	G		U	ug/L	10		
		26-Mar-98	G		U	ug/L	10		
		28-Jul-98	S		U	ug/L	10		
MW-01B	Phenolics, Total Recoverables	28-Jul-98	S		U	mg/L	0.05		
MW-01B	Phorate	03-May-94	S		U	ug/L	1		
		05-Mar-96	S		U	ug/L	1		
MW-01B	Phosphorus, Total	28-Jul-98	S		U	mg/L	0.044		
MW-01B	Pronamide	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-01B	Propionitrile	03-May-94	S		U	ug/L	100		
		05-Mar-96	S		U	ug/L	100		
MW-01B	Pyrene	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-01B	Pyridine	03-May-94	S		U	ug/L	200		
		05-Mar-96	S		U	ug/L	200		
MW-01B	Recox	10-Nov-98			110	mV			
MW-01B	Safole	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-01B	Selenium	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-01B	Silver	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-01B	Specific Conductance	28-Jul-98	S		2.0	ms/cm			
		28-Jul-98	S		2.2	ms/cm			
		28-Jul-98	S		3.4	ms/cm			
		28-Jul-98	S		2.0	ms/cm			
		29-Jul-98	S		2.2	ms/cm			
		29-Jul-98	S		2.0	ms/cm			
		29-Jul-98	S		2.0	ms/cm			
		29-Jul-98	S		2.4	ms/cm			
		10-Nov-98			0.033	ms/cm			
MW-01B	Standard Plate Count	28-Jul-98	S		440	CFU/m	1		J
MW-01B	Styrene	03-May-94	S		U	ug/L	5		
		05-Mar-96	S		U	ug/L	5		
MW-01B	Sulfate as SO4	28-Jul-98	S		5.9	mg/L	5		
		29-Jul-98	S		5.9	mg/L	5		
MW-01B	Sulfide	03-May-94	S		U	ug/L	400		
		05-Mar-96	S		U	ug/L	1000		
		28-Jul-98	S		U	mg/L	0.1		
MW-01B	Temperature	28-Jul-98	S		25	°C			
		28-Jul-98	S		25	°C			
		28-Jul-98	S		25	°C			
		28-Jul-98	S		25	°C			
		29-Jul-98	S		25	°C			
		29-Jul-98	S		25	°C			
		29-Jul-98	S		25	°C			
		29-Jul-98	S		25	°C			

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-01B	Temperature	10-Nov-98			16	°C			
MW-01B	Tetra CDD	03-May-94	S		U	ug/L	0.005		
		05-Mar-96	S		U	ug/L	0.005		
MW-01B	Tetra CDF	03-May-94	S		U	ug/L	0.005		
		05-Mar-96	S		U	ug/L	0.005		
MW-01B	Tetrachloroethene	05-Mar-96	S		U	ug/L	5		
MW-01B	Tetraethyldithiopyrophosphate (Sulfotepp)	03-May-94	S		U	ug/L	0.5		
		05-Mar-96	S		U	ug/L	0.5		
		15-Apr-97	S		U	ug/L	0.5		
		18-Sep-97	G		U	ug/L	0.5		
		26-Mar-98	G		U	ug/L	0.5		
		28-Jul-98	S		U	ug/L	0.5		
MW-01B	Thallium	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-01B	Tin	03-May-94	S		U	ug/L	50		
		05-Mar-96	S		U	ug/L	50		
MW-01B	Toluene	03-May-94	S		U	ug/L	5		
		05-Mar-96	S		U	ug/L	5		
MW-01B	Total Cyanide	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-01B	Total Dissolved Solids	28-Jul-98	S		16	mg/L	5		J
		29-Jul-98	S		14	mg/L	5		J
MW-01B	Total Kjeldahl Nitrogen-N	28-Jul-98	S		0.66	mg/L	0.2		
MW-01B	Total Organic Carbon	28-Jul-98	S		U	mg/L	1		
MW-01B	Total Organic Halogen	28-Jul-98	S		U	mg/L	0.01		
MW-01B	Total PCBs	28-Jul-98	S		U	ug/L			
		29-Jul-98	S	F	U	ug/L	1		
MW-01B	Total Suspended Solids	28-Jul-98	S		20	mg/L	5		J
		29-Jul-98	S		20	mg/L	5		J
MW-01B	Toxaphene	03-May-94	S		U	ug/L	5		
		05-Mar-96	S		U	ug/L	5		
MW-01B	trans-1,2-Dichloroethene	03-May-94	S		U	ug/L	5		
		05-Mar-96	S		U	ug/L	5		
MW-01B	trans-1,3-Dichloropropene	03-May-94	S		U	ug/L	5		
		05-Mar-96	S		U	ug/L	5		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-01B	trans-1,4-Dichloro-2-butene	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-01B	Trichloroethene	03-May-94	S		U	ug/L	5		
		05-Mar-96	S		U	ug/L	5		
MW-01B	Trichlorofluoromethane	03-May-94	S		U	ug/L	5		
		05-Mar-96	S		U	ug/L	5		
MW-01B	Turbidity	28-Jul-98	S		16	NTU			
		28-Jul-98	S		14	NTU			
		28-Jul-98	S		11	NTU			
		28-Jul-98	S		12	NTU			
		29-Jul-98	S		8.7	NTU			
		29-Jul-98	S		7.4	NTU			
		29-Jul-98	S		8.2	NTU			
		29-Jul-98	S		9.3	NTU			
		10-Nov-98			140	NTU			
MW-01B	Vanadium	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
		28-Jul-98	S		U	mg/L	0.01		
		29-Jul-98	S	F	U	mg/L	0.01		
MW-01B	Vinyl acetate	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-01B	Vinyl chloride	03-May-94	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-01B	Xylenes	03-May-94	S		U	ug/L	5		
		05-Mar-96	S		U	ug/L	5		
MW-01B	Zinc	03-May-94	S		U	ug/L	20		
		05-Mar-96	S		U	ug/L	20		
MW-02	1,24-Trichlorobenzene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-02	1,2Dichlorobenzene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-02	1,2Diphenylhydrazine		M		U	ug/L	10		
			G		U	ug/L	6		
MW-02	1,3Dichlorobenzene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-02	1,4Dichlorobenzene		G		U	ug/L	6		
			M		U	ug/L	10		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-02	2,3,7,8-Tetrachlorodbenzo-p-dioxin		M		U	ug/L	10		
			G		U	ug/L	20		
MW-02	2,4,5-TP (Silvex)	02-Dec-81			U	ug/L	10		
		16-Mar-82			U	ug/L	10		
		28-Jun-82			U	ug/L	10		
		13-Sep-82			U	ug/L	10		
MW-02	2,4,6-Trichlorophenol		M		U	ug/L	10		
			G		U	ug/L	10		
MW-02	2,4-D	02-Dec-81			U	ug/L	10		
		16-Mar-82			U	ug/L	10		
		28-Jun-82			U	ug/L	10		
		13-Sep-82			U	ug/L	10		
MW-02	2,4-Dichlorophenol		G		U	ug/L	10		
			M		U	ug/L	10		
MW-02	2,4-Dimethylphenol		M		U	ug/L	10		
			G		U	ug/L	10		
MW-02	2,4-Dinitrophenol		M		U	ug/L	10		
			G		U	ug/L	10		
MW-02	2,4-Dinitrotoluene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-02	2,6-Dinitrotoluene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-02	2-Chloronaphthalene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-02	2-Chlorophenol		G		U	ug/L	10		
			M		U	ug/L	10		
MW-02	3,3'-Dichlorobenzidine		G		U	ug/L	6		
			M		U	ug/L	10		
MW-02	4,6-Dinitro-o-cresol		M		U	ug/L	10		
			G		U	ug/L	10		
MW-02	4-Bromophenyl-phenyl ether		G		U	ug/L	6		
			M		U	ug/L	10		
MW-02	4-Chlorophenylphenyl ether		G		U	ug/L	6		
			M		U	ug/L	10		
MW-02	Acenaphthene		G		U	ug/L	6		
			M		U	ug/L	10		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-02	Acenaphthylene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-02	Anthracene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-02	Arsenic	02-Dec-81			U	ug/L	3		
		16-Mar-82			U	ug/L	3		
		28-Jun-82			U	ug/L	3		
		13-Sep-82			U	ug/L	3		
MW-02	Barium	02-Dec-81			U	ug/L	20		
		16-Mar-82			96	ug/L	20		
		28-Jun-82			38	ug/L	20		
		13-Sep-82			U	ug/L	20		
MW-02	Benzene	26-Mar-87			U	ug/L			
		26-Mar-87			U	ug/L			
		26-Mar-87			U	ug/L			
		26-Mar-87			U	ug/L			
		21-Sep-87			U	ug/L			
		21-Sep-87			U	ug/L			
		21-Sep-87			U	ug/L			
		21-Sep-87			U	ug/L			
		23-Mar-88			U	ug/L			
		23-Mar-88			U	ug/L			
		23-Mar-88			U	ug/L			
		23-Mar-88			U	ug/L			
		17-Oct-88			U	ug/L			
		17-Oct-88			U	ug/L			
		17-Oct-88			U	ug/L			
		17-Oct-88			U	ug/L			
		21-Mar-89			U	ug/L			
		21-Mar-89			U	ug/L			
		21-Mar-89			U	ug/L			
		21-Mar-89			U	ug/L			
		08-Sep-89			U	ug/L			
		08-Sep-89			U	ug/L			
		08-Sep-89			U	ug/L			
		08-Sep-89			U	ug/L			
		21-Mar-90			U	ug/L			
		21-Mar-90			U	ug/L			
		21-Mar-90			U	ug/L			
		21-Mar-90			U	ug/L			
		11-Sep-90			U	ug/L	10		
		11-Sep-90			U	ug/L	10		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-02	Benzene	11-Sep-90			U	ug/L	10		
		11-Sep-90			U	ug/L	10		
		05-Mar-91			U	ug/L	10		
		05-Mar-91			U	ug/L	10		
		05-Mar-91			U	ug/L	10		
		05-Mar-91			U	ug/L	10		
		16-Sep-91			U	ug/L	10		
		16-Sep-91			U	ug/L	10		
		16-Sep-91			U	ug/L	10		
		16-Sep-91			U	ug/L	10		
		11-Mar-92			U	ug/L	10		
		16-Sep-92			U	ug/L	1		
		24-Mar-93			U	ug/L	1		
		14-Sep-93			U	ug/L	1		
		07-Mar-94			U	ug/L	10		
		13-Sep-94			U	ug/L	1		
		19-Apr-95			U	ug/L	0.11		
		19-Apr-95			U	ug/L	0.11		
		19-Apr-95			U	ug/L	0.11		
		19-Apr-95			U	ug/L	0.11		
		11-Sep-96	S	Q	U	ug/L	1		Q4
		11-Sep-96	S	Q	U	ug/L	1		
		11-Sep-96	S	Q	U	ug/L	1		Q2
		11-Sep-96	S	Q	U	ug/L	1		Q3
MW-02	Benzidine		G		U	ug/L	20		
			M		U	ug/L	10		
MW-02	Benzo(a)anthracene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-02	Benzo(a)pyrene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-02	Benzo(b)fluoranthene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-02	Benzo(g,h,i)perylene		G		U	ug/L	20		
			M		U	ug/L	10		
MW-02	Benzo(k)fluoranthene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-02	bis(2-Chloroethoxy)methane		M		U	ug/L	10		
			G		U	ug/L	6		
MW-02	bis(2-Chloroethyl)ether		G		U	ug/L	6		
			M		U	ug/L	10		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-02	bis 2-Chloroisopropyl)ether		M		U	ug/L	10		
			G		U	ug/L	6		
MW-02	bis 2-Ethylhexyl)phthalate		M		U	ug/L	10		J
			G		U	ug/L	6		
MW-02	bisChloromethyl)ether		G		U	ug/L	6		
MW-02	Bromide		G		0.58	mg/L			
			G		U	ug/L	500		
MW-02	Butylbenzylphthalate		G		U	ug/L	6		
			M		U	ug/L	10		
MW-02	Cadmium	02-Dec-81			U	ug/L	3		
		16-Mar-82			U	ug/L	3		
		28-Jun-82			14	ug/L	3		
		13-Sep-82			U	ug/L	3		
MW-02	Chloride		G		490	ug/L			
			G		2.0	mg/L			
		02-Dec-81			4,600	ug/L	7000		
		16-Mar-82			3,300	ug/L	7000		
		28-Jun-82			U	ug/L	7000		
		13-Sep-82			U	ug/L	7000		
		08-Mar-83			U	ug/L	7000		
		17-Apr-84			1,000	ug/L			
MW-02	Chromium	02-Dec-81			U	ug/L	10		
		16-Mar-82			5.0	ug/L	10		
		28-Jun-82			4.0	ug/L	10		
		13-Sep-82			9.0	ug/L	10		
MW-02	Chrysene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-02	Coliform bacteria	02-Dec-81			U	/100 n	1		
MW-02	di-N-Butylphthalate		M		U	ug/L	10		
			G		U	ug/L	6		
MW-02	di-N-Octylphthalate		G		U	ug/L	6		
			M		U	ug/L	10		
MW-02	Dibenz(a,h)anthracene		M		U	ug/L	10		
			G		U	ug/L	20		
MW-02	Diethylphthalate		M		U	ug/L	10		
			G		U	ug/L	6		
MW-02	Dimethylphthalate		M		U	ug/L	10		
			G		U	ug/L	6		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-02	Endrin	02-Dec-81			U	ug/L	0.2		
		16-Mar-82			U	ug/L	0.2		
		28-Jun-82			U	ug/L	0.2		
		13-Sep-82			U	ug/L	0.2		
MW-02	Fluoranthene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-02	Fluorene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-02	Fluoride		G		0.50	mg/L	0.05		
			G		220	ug/L	100		
		02-Dec-81			500	ug/L	500		
		16-Mar-82			720	ug/L	500		
		28-Jun-82			990	ug/L	500		
		13-Sep-82			1,000	ug/L	500		
MW-02	gamma-BHC (Lindane)	02-Dec-81			U	ug/L	4		
		16-Mar-82			U	ug/L	4		
		28-Jun-82			U	ug/L	4		
		13-Sep-82			U	ug/L	4		
MW-02	Gross Alpha	02-Dec-81			U	pCi/L	2		
MW-02	Gross Beta	02-Dec-81			30	pCi/L	3		+3
MW-02	Hexachlorobenzene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-02	Hexachlorobutadiene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-02	Hexachlorocyclopentadiene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-02	Hexachloroethane		M		U	ug/L	10		
			G		U	ug/L	6		
MW-02	Indeno(1,2,3-cd)pyrene		G		U	ug/L	20		
			M		U	ug/L	10		
MW-02	Iron	02-Dec-81			3,800	ug/L	30		
		16-Mar-82			90	ug/L	30		
		28-Jun-82			130	ug/L	30		
		13-Sep-82			60	ug/L	30		
		08-Mar-83			150	ug/L			
		17-Apr-84			U	ug/L	30		
MW-02	Isophorone		M		U	ug/L	10		
			G		U	ug/L	6		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-02	Lead	02-Dec-81			U	ug/L	10		
		16-Mar-82			13	ug/L	10		
		28-Jun-82			8.0	ug/L	10		
		13-Sep-82			9.0	ug/L	10		
MW-02	Manganese	02-Dec-81			7.0	ug/L	5		
		16-Mar-82			U	ug/L	5		
		28-Jun-82			U	ug/L	5		
		13-Sep-82			U	ug/L	5		
		08-Mar-83			U	ug/L	30		
		17-Apr-84			U	ug/L	10		
MW-02	Mercury	02-Dec-81			U	ug/L	0.8		
		16-Mar-82			U	ug/L	0.8		
		28-Jun-82			U	ug/L	0.8		
		13-Sep-82			U	ug/L	0.8		
MW-02	Methoxychlor	02-Dec-81			U	ug/L	5		
		16-Mar-82			U	ug/L	5		
		28-Jun-82			U	ug/L	5		
		13-Sep-82			U	ug/L	5		
MW-02	Methyl parathion	11-Sep-90			U	ug/L	1.2		
		11-Sep-90			U	ug/L	1.2		
		11-Sep-90			U	ug/L	1.2		
		11-Sep-90			U	ug/L	1.2		
		05-Mar-91			U	ug/L	1.2		
		16-Sep-91			U	ug/L	1.2		
		11-Mar-92			U	ug/L	1.2		
		16-Sep-92			U	ug/L	0.5		
		24-Mar-93			U	ug/L	0.5		
MW-02	N-Nitroso-di-n-propylamine		G		U	ug/L	6		
			M		U	ug/L	10		
MW-02	N-Nitrosodimethylamine		M		U	ug/L	10		
			G		U	ug/L	6		
MW-02	N-Nitrosodiphenylamine		M		U	ug/L	10		
			G		U	ug/L	6		
MW-02	Naphthalene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-02	Nitrate	02-Dec-81			6,400	ug/L	1000		
		16-Mar-82			U	ug/L	1000		
		28-Jun-82			13,000	ug/L	1000		
		13-Sep-82			U	ug/L	1000		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-02	Nitrobenzene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-02	o-Nitrophenol (2-Nitrophenol)		G		U	ug/L	10		
			M		U	ug/L	10		
MW-02	p-Chloro-m-cresol		G		U	ug/L	10		
			M		U	ug/L	10		
MW-02	Pentachlorophenol		G		U	ug/L	10		
			N		U	ug/L	10		
MW-02	pH	02-Dec-81			11				
		16-Mar-82			11				
		28-Jun-82			11				
		13-Sep-82			10				
		22-Mar-83			11				
		22-Mar-83			11				
		04-Oct-83			11				
MW-02	Phenanthrene		G		U	ug/L	6		
			N		U	ug/L	10		
MW-02	Phenol		G		U	ug/L	10		
			N		U	ug/L	10		
MW-02	Phenols, Total	02-Dec-81			40	ug/L	5		
		16-Mar-82			U	ug/L	5		
		28-Jun-82			U	ug/L	5		
		13-Sep-82			U	ug/L	5		
		08-Mar-83			U	ug/L	5		
		17-Apr-84			11	ug/L	5		
MW-02	Pyrene		N		U	ug/L	10		
			G		U	ug/L	6		
MW-02	Selenium	02-Dec-81			U	ug/L	4		
		16-Mar-82			U	ug/L	4		
		28-Jun-82			U	ug/L	4		
		13-Sep-82			U	ug/L	4		
MW-02	Silver	02-Dec-81			23	ug/L	7		
		16-Mar-82			13	ug/L	7		
		28-Jun-82			U	ug/L	7		
		13-Sep-82			U	ug/L	7		
MW-02	Sodium	02-Dec-81			3,700	ug/L			
		16-Mar-82			1,600	ug/L			
		28-Jun-82			11,000	ug/L			
		13-Sep-82			5,700	ug/L			

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-02	Sodium	08-Mar-83			6,300	ug/L			
		17-Apr-84			4,800	ug/L			
MW-02	Specific Conductance	02-Dec-81			130	mhos/c			
		16-Mar-82			900	mhos/c			
		28-Jun-82			2,300	mhos/c			
		13-Sep-82			600	mhos/c			
		29-Mar-83			2,100	mhos/c			
		29-Mar-83			2,200	mhos/c			
		29-Mar-83			2,800	mhos/c			
		29-Mar-83			2,500	mhos/c			
		04-Oct-83			1,300	mhos/c			
		04-Oct-83			1,300	mhos/c			
MW-02	Sulfate	02-Dec-81			6,600	ug/L	1000		
		16-Mar-82			5,200	ug/L	1000		
		28-Jun-82			5,100	ug/L	1000		
		13-Sep-82			6,500	ug/L	1000		
		08-Mar-83			1,300	ug/L			
		17-Apr-84			4,000	ug/L			
MW-02	Total Organic Carbon		G	Q	1,900	ug/L			Q1
			G	Q	1,800	ug/L			Q2
			G	Q	1,500	ug/L			Q3
			G	Q	1,400	ug/L			Q4
		02-Dec-81			U	ug/L	3000		
		16-Mar-82			U	ug/L	3000		
		16-Mar-82			7,000	ug/L	3000		
		28-Jun-82			4,100	ug/L	3000		
		28-Jun-82			2,000	ug/L	3000		
		13-Sep-82			2,000	ug/L	3000		
		13-Sep-82			U	ug/L	3000		
		14-Apr-83			3,000	ug/L			
		14-Apr-83			10,000	ug/L			
		04-Oct-83			1,500	ug/L			
		04-Oct-83			1,700	ug/L			
		04-Oct-83			1,300	ug/L			
		17-Apr-84			1,400	ug/L			
		17-Apr-84			1,500	ug/L			
		17-Apr-84			1,800	ug/L			
		17-Apr-84			1,900	ug/L			
MW-02	Total Organic Halide		M	Q	U	ug/L	20		Q4
			M	Q	U	ug/L	20		Q3
			M	Q	24	ug/L	20		Q2
			M	Q	U	ug/L	20		Q1

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-02	Total Organic Halide		G	Q	19	ug/L	1		Q4
			G	Q	11	ug/L	1		Q3
			G	Q	19	ug/L	1		Q2
			G	Q	16	ug/L	1		Q1
		02-Dec-81			5.0	ug/L	5		
		16-Mar-82			1.0	ug/L	5		
		28-Jun-82			21	ug/L	5		
		13-Sep-82			6.0	ug/L	5		
		14-Apr-83			U	ug/L	1		
		04-Oct-83			9.3	ug/L	1		
		04-Oct-83			6.5	ug/L	1		
		04-Oct-83			6.1	ug/L	1		
		04-Oct-83			8.4	ug/L	1		
		17-Apr-84			16	ug/L	1		
		17-Apr-84			11	ug/L	1		
		17-Apr-84			19	ug/L	1		
		17-Apr-84			19	ug/L	1		
MW-02	Toxaphene	02-Dec-81			U	ug/L	5		
		16-Mar-82			U	ug/L	5		
		28-Jun-82			U	ug/L	5		
		13-Sep-82			U	ug/L	5		
MW-03	1,2,4-Trichlorobenzene		N		U	ug/L	10		
MW-03	1,2-Dichlorobenzene		N		U	ug/L	10		
MW-03	1,2-Diphenylhydrazine		N		U	ug/L	10		
MW-03	1,3-Dichlorobenzene		N		U	ug/L	10		
MW-03	1,4-Dichlorobenzene		N		U	ug/L	10		
MW-03	2,3,7,8-Tetrachlorodibenzo-p-dioxin		N		U	ug/L	10		
MW-03	2,4,5-TP (Silvex)	02-Dec-81			U	ug/L	10		
		16-Mar-82			U	ug/L	10		
		28-Jun-82			U	ug/L	10		
MW-03	2,4,6-Trichlorophenol		N		U	ug/L	10		
MW-03	2,4-D	02-Dec-81			U	ug/L	10		
		16-Mar-82			U	ug/L	10		
		28-Jun-82			U	ug/L	10		
MW-03	2,4-Dichlorophenol		N		U	ug/L	10		
MW-03	2,4-Dimethylphenol		N		U	ug/L	10		
MW-03	2,4-Dinitrophenol		N		U	ug/L	10		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
MW-03	2,4-Dinitrotoluene		M		U	ug/L	10	
MW-03	2,6-Dinitrotoluene		M		U	ug/L	10	
MW-03	2-Chloronaphthalene		M		U	ug/L	10	
MW-03	2-Chlorophenol		M		U	ug/L	10	
MW-03	3,3-Dichlorobenzidine		M		U	ug/L	10	
MW-03	4,6-Dinitro-o-cresol		M		U	ug/L	10	
MW-03	4-Bromophenyl-phenyl ether		M		U	ug/L	10	
MW-03	4-Chlorophenylphenyl ether		M		U	ug/L	10	
MW-03	Acenaphthene		M		U	ug/L	10	
MW-03	Acenaphthylene		M		U	ug/L	10	
MW-03	Anthracene		M		U	ug/L	10	
MW-03	Arsenic	02-Dec-81			U	ug/L	3	
		16-Mar-82			U	ug/L	3	
		28-Jun-82			U	ug/L	3	
MW-03	Barum	02-Dec-81			38	ug/L	20	
		16-Mar-82			220	ug/L	20	
		28-Jun-82			38	ug/L	20	
MW-03	Berzidine		M		U	ug/L	10	
MW-03	Berzo(a)anthracene		M		U	ug/L	10	
MW-03	Berzo(a)pyrene		M		U	ug/L	10	
MW-03	Berzo(b)fluoranthene		M		U	ug/L	10	
MW-03	Berzo(g,h,i)perylene		M		U	ug/L	10	
MW-03	Berzo(k)fluoranthene		M		U	ug/L	10	
MW-03	bis(?-Chloroethoxy)methane		M		U	ug/L	10	
MW-03	bis(?-Chloroethyl)ether		M		U	ug/L	10	
MW-03	bis(?-Chloroisopropyl)ether		M		U	ug/L	10	
MW-03	bis(?-Ethylhexyl)phthalate		M		U	ug/L	10	
MW-03	Bronide		G		1.9	mg/L		
MW-03	Butylbenzylphthalate		M		U	ug/L	10	
MW-03	Cadmium	02-Dec-81			7.0	ug/L	3	
		16-Mar-82			7.0	ug/L	3	
		28-Jun-82			16	ug/L	3	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
MW-03	Chloride		G		7.2	mg/L		
		02-Dec-81			9,100	ug/L	7000	
		16-Mar-82			2,800	ug/L	7000	
		28-Jun-82			U	ug/L	7000	
MW-03	Chromium	02-Dec-81			28	ug/L	10	
		16-Mar-82			11	ug/L	10	
		28-Jun-82			9.0	ug/L	10	
MW-03	Chrysene		M		U	ug/L	10	
MW-03	Coliform bacteria	02-Dec-81			U	/100 n	1	
MW-03	di-N-Butylphthalate		M		U	ug/L	10	
MW-03	di-N-Octylphthalate		M		U	ug/L	10	
MW-03	Dibenz(a,h)anthracere		M		U	ug/L	10	
MW-03	Diethylphthalate		M		U	ug/L	10	
MW-03	Dimethylphthalate		M		U	ug/L	10	
MW-03	Endrin	02-Dec-81			U	ug/L	0.2	
		16-Mar-82			U	ug/L	0.2	
		28-Jun-82			U	ug/L	0.2	
MW-03	Fluoranthene		M		U	ug/L	10	
MW-03	Fluorene		M		U	ug/L	10	
MW-03	Fluoride		G		0.12	mg/L	0.05	
		02-Dec-81			U	ug/L	500	
		16-Mar-82			300	ug/L	500	
		28-Jun-82			U	ug/L	500	
MW-03	gamma-BHC (Lindane)	02-Dec-81			U	ug/L	4	
		16-Mar-82			U	ug/L	4	
		28-Jun-82			U	ug/L	4	
MW-03	Gross Alpha	02-Dec-81			U	pCi/L	2	
MW-03	Gross Beta	02-Dec-81			27	pCi/L	3	+3
MW-03	Hexachlorobenzene		M		U	ug/L	10	
MW-03	Hexachlorobutadiene		M		U	ug/L	10	
MW-03	Hexachlorocyclopentadiene		M		U	ug/L	10	
MW-03	Hexachloroethane		M		U	ug/L	10	
MW-03	Indeno(1,2,3-cd)pyrere		M		U	ug/L	10	
MW-03	Iron	02-Dec-81			25,000	ug/L	30	
		16-Mar-82			77,000	ug/L	30	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
MW-03	Iron	28-Jun-82			570	ug/L	30	
MW-03	Isophorone		M		U	ug/L	10	
MW-03	Lead	02-Dec-81			43	ug/L	10	
		16-Mar-82			29	ug/L	10	
		28-Jun-82			13	ug/L	10	
MW-03	Manganese	02-Dec-81			370	ug/L	5	
		16-Mar-82			2,000	ug/L	5	
		28-Jun-82			U	ug/L	5	
MW-03	Mercury	02-Dec-81			U	ug/L	0.8	
		16-Mar-82			U	ug/L	0.8	
		28-Jun-82			U	ug/L	1	
MW-03	Methoxychlor	02-Dec-81			U	ug/L	5	
		16-Mar-82			U	ug/L	5	
		28-Jun-82			U	ug/L	5	
MW-03	N-Nitroso-di-n-propylamine		M		U	ug/L	10	
MW-03	N-Nitrosodimethylamine		M		U	ug/L	10	
MW-03	N-Nitrosodiphenylamine		M		U	ug/L	10	
MW-03	Naphthalene		M		U	ug/L	10	
MW-03	Nitrate	02-Dec-81			1,100	ug/L	1000	
		16-Mar-82			1,200	ug/L	1000	
		28-Jun-82			8,100	ug/L	1000	
MW-03	Nitrobenzene		M		U	ug/L	10	
MW-03	o-Nitrophenol (2-Nitropheno)		M		U	ug/L	10	
MW-03	p-Chloro-m-cresol		M		U	ug/L	10	
MW-03	Pentachlorophenol		M		U	ug/L	10	
MW-03	pH	02-Dec-81			11			
		16-Mar-82			11			
		28-Jun-82			11			
		13-Sep-82			11			
		22-Mar-83			9.9			
		22-Mar-83			10			
		22-Mar-83			10			
		04-Oct-83			11			
MW-03	Phenanthrene		M		U	ug/L	10	
MW-03	Phenol		M		U	ug/L	10	
MW-03	Phenols, Total	02-Dec-81			U	ug/L	5	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
MW-03	Phenols, Total	16-Mar-82			U	ug/L	5	
		28-Jun-82			U	ug/L	5	
		08-Mar-83			U	ug/L	5	
MW-03	Pyrene		N		U	ug/L	10	
MW-03	Selenium	02-Dec-81			U	ug/L	4	
		16-Mar-82			U	ug/L	4	
		28-Jun-82			U	ug/L	4	
MW-03	Silver	02-Dec-81			U	ug/L	7	
		16-Mar-82			U	ug/L	7	
		28-Jun-82			U	ug/L	7	
MW-03	Sodium	02-Dec-81			5,300	ug/L		
		16-Mar-82			6,300	ug/L		
		28-Jun-82			3,000	ug/L		
MW-03	Specific Conductance	02-Dec-81			330	mhos/c		
		16-Mar-82			2,800	mhos/c		
		28-Jun-82			450	mhos/c		
		13-Sep-82			480	mhos/c		
		29-Mar-83			700	mhos/c		
		29-Mar-83			650	mhos/c		
		29-Mar-83			800	mhos/c		
		04-Oct-83			300	mhos/c		
		04-Oct-83			300	mhos/c		
		04-Oct-83			300	mhos/c		
MW-03	Sulfate	02-Dec-81			11,000	ug/L	1000	
		16-Mar-82			U	ug/L	1000	
		28-Jun-82			U	ug/L	1000	
MW-03	Total Organic Carbon		G	Q	3,600	ug/L		Q2
			G	Q	3,600	ug/L		Q3
			G	Q	3,600	ug/L		Q1
			G	Q	3,400	ug/L		Q4
		02-Dec-81			10,000	ug/L	3000	
		16-Mar-82			6,200	ug/L	3000	
		16-Mar-82			11,000	ug/L	3000	
		28-Jun-82			4,200	ug/L	3000	
		28-Jun-82			2,000	ug/L	3000	
		13-Sep-82			5,000	ug/L	3000	
		14-Apr-83			9,000	ug/L		
		14-Apr-83			3,000	ug/L		
		14-Apr-83			8,000	ug/L		
		04-Oct-83			1,500	ug/L		
		04-Oct-83			1,800	ug/L		

Location	Parameter	Date Samp	Lab	Qor F?	Result	Unit	PQL	Desc Qual
MW-03	Total Organic Carbon	04-Oct-83			1,600	ug/L		
		04-Oct-83			1,900	ug/L		
		17-Apr-84			3,600	ug/L		
		17-Apr-84			3,400	ug/L		
MW-03	Total Organic Halide		M	Q	U	ug/L	20	Q3
			M	Q	U	ug/L	20	Q4
			M	Q	23	ug/L	20	Q2
			M	Q	U	ug/L	20	Q1
			G	Q	12	ug/L	1	Q4
			G	Q	7.3	ug/L	1	Q3
			G	Q	20	ug/L	1	Q2
			G	Q	23	ug/L	1	Q1
		02-Dec-81			7.0	ug/L	5	
		16-Mar-82			U	ug/L	5	
		28-Jun-82			5.0	ug/L	5	
		14-Apr-83			U	ug/L	1	
		04-Oct-83			4.4	ug/L	1	
		04-Oct-83			1.6	ug/L	1	
		04-Oct-83			5.7	ug/L	1	
		04-Oct-83			13	ug/L	1	
		17-Apr-84			20	ug/L	1	
		17-Apr-84			7.3	ug/L	1	
		17-Apr-84			12	ug/L	1	
		17-Apr-84			23	ug/L	1	
MW-03	Toxaphene	02-Dec-81			U	ug/L	5	
		16-Mar-82			U	ug/L	5	
		28-Jun-82			U	ug/L	5	
MW-04	1,2,4-Trichlorobenzene		M		U	ug/L	10	
			G		U	ug/L	6	
MW-04	1,2-Dichlorobenzene		G		U	ug/L	6	
			M		U	ug/L	10	
MW-04	1,2-Diphenylhydrazine		G		U	ug/L	6	
			M		U	ug/L	10	
MW-04	1,3-Dichlorobenzene		M		U	ug/L	10	
			G		U	ug/L	6	
MW-04	1,4-Dichlorobenzene		M		U	ug/L	10	
			G		U	ug/L	6	
MW-04	2,3,7,8-Tetrachlorodibenzo-p-doxin		M		U	ug/L	10	
			G		U	ug/L	20	

Locaton	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
MW-04	2,4,6-Trichlorophenol		M		U	ug/L	10	
			G		U	ug/L	10	
MW-04	2,4-Dichlorophenol		M		U	ug/L	10	
			G		U	ug/L	10	
MW-04	2,4-Dimethylphenol		M		U	ug/L	10	
			G		U	ug/L	10	
MW-04	2,4-Dinitrophenol		M		U	ug/L	10	
			G		U	ug/L	10	
MW-04	2,4-Dinitrotoluene		G		U	ug/L	6	
			M		U	ug/L	10	
MW-04	2,6-Dinitrotoluene		G		U	ug/L	6	
			M		U	ug/L	10	
MW-04	2-Chloronaphthalene		G		U	ug/L	6	
			M		U	ug/L	10	
MW-04	2-Chlorophenol		G		U	ug/L	10	
			M		U	ug/L	10	
MW-04	3,3'-Dichlorobenzidine		G		U	ug/L	6	
			M		U	ug/L	10	
MW-04	4,6-Dinitro-o-cresol		M		U	ug/L	10	
			G		U	ug/L	10	
MW-04	4-Bromophenyl-pheryl ether		G		U	ug/L	6	
			M		U	ug/L	10	
MW-04	4-Chlorophenylphenyl ether		G		U	ug/L	6	
			M		U	ug/L	10	
MW-04	Acenaphthene		G		U	ug/L	6	
			M		U	ug/L	10	
MW-04	Acenaphthylene		M		U	ug/L	10	
			G		U	ug/L	6	
MW-04	Anthracene		G		U	ug/L	6	
			M		U	ug/L	10	
MW-04	Benzidine		G		U	ug/L	20	
			M		U	ug/L	10	
MW-04	Benzo(a)anthracene		M		U	ug/L	10	
			G		U	ug/L	6	
MW-04	Benzo(a)pyrene		M		U	ug/L	10	
			G		U	ug/L	6	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-04	Benzo(b)fluoranthene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-04	Benzo(g,h,i)perylene		G		U	ug/L	20		
			M		U	ug/L	10		
MW-04	Benzo(k)fluoranthene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-04	bis(2-Chloroethoxy)methane		G		U	ug/L	6		
			M		U	ug/L	10		
MW-04	bis(2-Chloroethyl)ether		G		U	ug/L	6		
			M		U	ug/L	10		
MW-04	bis(2-Chloroisopropyl)ether		G		U	ug/L	6		
			M		U	ug/L	10		
MW-04	bis(2-Ethylhexyl)phthalate		M		U	ug/L	10		
			G		U	ug/L	6		
MW-04	bis(Chloromethyl)ether		G		U	ug/L	6		
MW-04	Bromide		G		U	ug/L	500		
			G		0.30	mg/L			
MW-04	Butylbenzylphthalate		M		U	ug/L	10		
			G		U	ug/L	6		
MW-04	Chloride		G		3.0	mg/L			
			G		2,600	ug/L			
MW-04	Chrysene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-04	di-N-Butylphthalate		G		U	ug/L	6		
			M		U	ug/L	10		
MW-04	di-N-Octylphthalate		G		U	ug/L	6		
			M		U	ug/L	10		
MW-04	Dibenz(a,h)anthracene		G		U	ug/L	20		
			M		U	ug/L	10		
MW-04	Diethylphthalate		G		U	ug/L	6		
			M		U	ug/L	10		
MW-04	Dimethylphthalate		G		U	ug/L	6		
			M		U	ug/L	10		
MW-04	Fluoranthene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-04	Fluorene		M		U	ug/L	10		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-04	Fluorene		G		U	ug/L	6		
MW-04	Fluoride		G		U	ug/L	100		
			G		0.060	mg/L	0.05		
MW-04	Hexachlorobenzene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-04	Hexachlorobutadiene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-04	Hexachlorocyclopentadiene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-04	Hexachloroethane		G		U	ug/L	6		
			M		U	ug/L	10		
MW-04	Indeno(1,2,3-cd)pyrene		G		U	ug/L	20		
			M		U	ug/L	10		
MW-04	Isophorone		M		U	ug/L	10		
			G		U	ug/L	6		
MW-04	N-Nitroso-di-n-propylamine		M		U	ug/L	10		
			G		U	ug/L	6		
MW-04	N-Nitrosodimethylamine		M		U	ug/L	10		
			G		U	ug/L	6		
MW-04	N-Nitrosodiphenylamine		M		U	ug/L	10		
			G		U	ug/L	6		
MW-04	Naphthalene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-04	Nitrobenzene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-04	o-Nitrophenol (2-Nitrophenol)		G		U	ug/L	10		
			M		U	ug/L	10		
MW-04	p-Chloro-m-cresol		G		U	ug/L	10		
			M		U	ug/L	10		
MW-04	Pentachlorophenol		G		U	ug/L	10		
			M		U	ug/L	10		
MW-04	Phenanthrene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-04	Phenol		G		U	ug/L	10		
			M		U	ug/L	10		
MW-04	Pyrene		G		U	ug/L	6		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
MW-04	Pyrene		M		U	ug/L	10	
MW-04	Tdal Organic Carbon		G	Q	1,300	ug/L		Q3
			G	Q	1,300	ug/L		Q4
			G	Q	900	ug/L		Q1
			G	Q	900	ug/L		Q2
MW-04	Tdal Organic Halide		M	Q	U	ug/L	20	Q1
			M	Q	U	ug/L	20	Q2
			M	Q	U	ug/L	20	Q3
			G	Q	U	ug/L	1	Q4
			M	Q	U	ug/L	20	Q4
			G	Q	U	ug/L	1	Q1
			G	Q	U	ug/L	1	Q3
			G	Q	U	ug/L	1	Q2
MW-05	1,',1-Trichloroethane		G		U	ug/L	3	
MW-05	1,1,2,2-Tetrachloroethane		G		U	ug/L	3	
MW-05	1,1,2-Trichloroethane		G		U	ug/L	3	
MW-05	1,1-Dichloroethane		G		U	ug/L	3	
MW-05	1,1-Dichloroethene		G		U	ug/L	3	
MW-05	1,2,4-Trichlorobenzene		G		U	ug/L	6	
			M		U	ug/L	10	
MW-05	1,2-Dichlorobenzene		G		U	ug/L	6	
			M		U	ug/L	10	
			G		U	ug/L	3	
MW-05	1,2-Dichloroethane		G		U	ug/L	3	
MW-05	1,2-Dichloropropane		G		U	ug/L	3	
MW-05	1,2-Diphenylhydrazine		G		U	ug/L	6	
			M		U	ug/L	10	
MW-05	1,3-Dichlorobenzene		M		U	ug/L	10	
			G		U	ug/L	6	
MW-05	1,4-Dichlorobenzene		G		U	ug/L	6	
			G		U	ug/L	3	
			G		U	ug/L	3	
			M		U	ug/L	10	
MW-05	2,3,7,8-Tetrachlorodibenzo-p-dioxin		G		U	ug/L	20	
			M		U	ug/L	10	
MW-05	2,4,6-Trichlorophenol		G		U	ug/L	10	

Locaton	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
MW-05	2,4,6-Trichlorophenol		M		U	ug/L	10	
MW-05	2,4-Dichlorophenol		G		U	ug/L	10	
			M		U	ug/L	10	
MW-05	2,4-Dimethylphenol		G		U	ug/L	10	
			M		U	ug/L	10	
MW-05	2,4-Dinitrophenol		G		U	ug/L	10	
			M		U	ug/L	10	
MW-05	2,4-Dinitrotoluene		G		U	ug/L	6	
			M		U	ug/L	10	
MW-05	2,6-Dinitrotoluene		G		U	ug/L	6	
			M		U	ug/L	10	
MW-05	2-Chloroethylvinyl ether		G		U	ug/L	3	
MW-05	2-Chloronaphthalene		M		U	ug/L	10	
			G		U	ug/L	6	
MW-05	2-Chlorophenol		M		U	ug/L	10	
			G		U	ug/L	10	
MW-05	3,3'-Dichlorobenzidire		M		U	ug/L	10	
			G		U	ug/L	6	
MW-05	4,6-Dinitro-o-cresol		G		U	ug/L	10	
			M		U	ug/L	10	
MW-05	4-Bromophenyl-pheryl ether		M		U	ug/L	10	
			G		U	ug/L	6	
MW-05	4-Chlorophenylphenyl ether		G		U	ug/L	6	
			M		U	ug/L	10	
MW-05	Acenaphthene		M		U	ug/L	10	
			G		U	ug/L	6	
MW-05	Acenaphthylene		G		U	ug/L	6	
			M		U	ug/L	10	
MW-05	Anthracene		G		U	ug/L	6	
			M		U	ug/L	10	
MW-05	Benzene		G		U	ug/L	3	
MW-05	Benzidine		G		U	ug/L	20	
			M		U	ug/L	10	
MW-05	Benzo(a)anthracene		M		U	ug/L	10	
			G		U	ug/L	6	
MW-05	Benzo(a)pyrene		M		U	ug/L	10	

Location	Parameter	Date Samp	Lab	Qor F?	Result	Unit	PQL	Desc	Qual
MW-05	Benzo(a)pyrene		G		U	ug/L	6		
MW-05	Benzo(b)fluoranthene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-05	Benzo(g,h,i)perylene		G		U	ug/L	20		
			M		U	ug/L	10		
MW-05	Benzo(k)fluoranthene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-05	bis(2-Chloroethoxy)methane		G		U	ug/L	6		
			M		U	ug/L	10		
MW-05	bis(2-Chloroethyl)ether		G		U	ug/L	6		
			M		U	ug/L	10		
MW-05	bis(2-Chloroisopropyl)ether		M		U	ug/L	10		
			G		U	ug/L	6		
MW-05	bis(2-Ethylhexyl)phthalate		G		U	ug/L	6		
			M		U	ug/L	10		
MW-05	bis(Chloromethyl)ether		G		U	ug/L	6		
MW-05	Bromide		G		0.67	mg/L			
			G		U	ug/L	500		
MW-05	Bromodichloromethane		G		U	ug/L	3		
MW-05	Bromoform		G		U	ug/L	3		
MW-05	Bromomethane (methyl bromide)		G		U	ug/L	3		
MW-05	Buylbenzylphthalate		G		U	ug/L	6		
			M		U	ug/L	10		
MW-05	Carbon tetrachloride		G		U	ug/L	3		
MW-05	Choride		G		3.0	mg/L			
			G		1,700	ug/L			
MW-05	Chorobenzene		G		U	ug/L	3		
MW-05	Choroethane		G		U	ug/L	3		
MW-05	Choroform		G		U	ug/L	3		
MW-05	Choromethane (methyl chloride)		G		U	ug/L	3		
MW-05	Chysene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-05	cis-1,3-Dichloropropene		G		U	ug/L	3		

Locaton	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-05	di-N-Butylphthalate		G		U	ug/L	6		
			M		U	ug/L	10		
MW-05	di-N-Octylphthalate		M		U	ug/L	10		
			G		U	ug/L	6		
MW-05	Dibenz(a,h)anthracene		M		U	ug/L	10		
			G		U	ug/L	20		
MW-05	Dibromochloromethane		G		U	ug/L	3		
MW-05	Diethylphthalate		M		U	ug/L	10		
			G		U	ug/L	6		
MW-05	Dimethylphthalate		M		U	ug/L	10		
			G		U	ug/L	6		
MW-05	Ethylbenzene		G		U	ug/L	3		
MW-05	Fluoranthene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-05	Fluorene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-05	Fluoride		G		720	ug/L	100		
			G		0.40	mg/L	0.05		
MW-05	Hexachlorobenzene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-05	Hexachlorobutadiene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-05	Hexachlorocyclopentadiene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-05	Hexachloroethane		G		U	ug/L	6		
			M		U	ug/L	10		
MW-05	Indeno(1,2,3-cd)pyrene		G		U	ug/L	20		
			M		U	ug/L	10		
MW-05	Isophorone		M		U	ug/L	10		
			G		U	ug/L	6		
MW-05	Methylene chloride (dichloromethane)		G		U	ug/L	3		
MW-05	N-Nitroso-di-n-propylamine		M		U	ug/L	10		
			G		U	ug/L	6		
MW-05	N-Nitrosodimethylamne		M		U	ug/L	10		
			G		U	ug/L	6		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-05	N-Nitrosodiphenylamine		M		U	ug/L	10		
			G		U	ug/L	6		
MW-05	Naphthalene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-05	Nirobenzene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-05	o-Nitrophenol (2-Nitrophenol)		M		U	ug/L	10		
			G		U	ug/L	10		
MW-05	p-Chloro-m-cresol		G		U	ug/L	10		
			M		U	ug/L	10		
MW-05	Pentachlorophenol		G		U	ug/L	10		
			M		U	ug/L	10		
MW-05	Phenanthrene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-05	Phenol		M		U	ug/L	10		
			G		U	ug/L	10		
MW-05	Pyrene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-05	Tetrachloroethene		G		U	ug/L	3		
MW-05	Toluene		G		U	ug/L	3		
MW-05	Total Organic Carbon		G	Q	2,600	ug/L		Q1	
			G	Q	2,600	ug/L		Q2	
			G	Q	2,500	ug/L		Q4	
			G	Q	2,500	ug/L		Q3	
MW-05	Total Organic Halide		M	Q	31	ug/L	20	Q3	
			M	Q	U	ug/L	20	Q2	
			G	Q	1.3	ug/L	1	Q4	
			G	Q	U	ug/L	1	Q2	
			G	Q	3.6	ug/L	1	Q3	
			M	Q	U	ug/L	20	Q4	
			G	Q	U	ug/L	1	Q1	
			M	Q	U	ug/L	20	Q1	
MW-05	trans-1,2-Dichloroethene		G		U	ug/L	3		
MW-05	trans-1,3-Dichloropropene		G		U	ug/L	3		
MW-05	Trichloroethene		G		U	ug/L	3		
MW-05	Trichlorofluoromethane		G		U	ug/L	3		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-05	Vinyl chloride		G		U	ug/L	3		
MW-06	1,1,1-Trichloroethane		G		U	ug/L	3		
MW-06	1,1,2,2-Tetrachloroethane		G		U	ug/L	3		
MW-06	1,1,2-Trichloroethane		G		U	ug/L	3		
MW-06	1,1-Dichloroethane		G		U	ug/L	3		
MW-06	1,1-Dichloroethene		G		U	ug/L	3		
MW-06	1,2,4-Trichlorobenzene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-06	1,2-Dichlorobenzene		M		U	ug/L	10		
			G		U	ug/L	3		
			G		U	ug/L	6		
MW-06	1,2-Dichloroethane		G		U	ug/L	3		
MW-06	1,2-Dichloropropane		G		U	ug/L	3		
MW-06	1,2-Diphenylhydrazine		M		U	ug/L	10		
			G		U	ug/L	6		
MW-06	1,3-Dichlorobenzene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-06	1,4-Dichlorobenzene		G		U	ug/L	3		
			G		U	ug/L	3		
			G		U	ug/L	6		
			M		U	ug/L	10		
MW-06	2,3,7,8-Tetrachlorodbenzo-p-dioxin		G		U	ug/L	20		
			M		U	ug/L	10		
MW-06	2,4,6-Trichlorophenol		G		U	ug/L	10		
			M		U	ug/L	10		
MW-06	2,4-Dichlorophenol		G		U	ug/L	10		
			M		U	ug/L	10		
MW-06	2,4-Dimethylphenol		M		U	ug/L	10		
			G		U	ug/L	10		
MW-06	2,4-Dinitrophenol		G		U	ug/L	10		
			M		U	ug/L	10		
MW-06	2,4-Dinitrotoluene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-06	2,6-Dinitrotoluene		G		U	ug/L	6		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-06	2,6-Dinitrotoluene		M		U	ug/L	10		
MW-06	2-Chloroethylvinyl ether		G		U	ug/L	3		
MW-06	2-Chloronaphthalene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-06	2-Chlorophenol		M		U	ug/L	10		
			G		U	ug/L	10		
MW-06	3,3-Dichlorobenzidine		M		U	ug/L	10		
			G		U	ug/L	6		
MW-06	4,6Dinitro-o-cresol		M		U	ug/L	10		
			G		U	ug/L	10		
MW-06	4-Bromophenyl-phenyl ethe		M		U	ug/L	10		
			G		U	ug/L	6		
MW-06	4-Chlorophenylphenyl ether		M		U	ug/L	10		
			G		U	ug/L	6		
MW-06	Acenaphthene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-06	Acenaphthylene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-06	Anthracene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-06	Benzene		G		U	ug/L	3		
MW-06	Benzidine		M		U	ug/L	10		
			G		U	ug/L	20		
MW-06	Benzo(a)anthracene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-06	Benzo(a)pyrene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-06	Benzo(b)fluoranthene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-06	Benzo(g,h,i)perylene		M		U	ug/L	10		
			G		U	ug/L	20		
MW-06	Benzo(k)fluoranthene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-06	bis(2-Chloroethoxy)methane		M		U	ug/L	10		
			G		U	ug/L	6		
MW-06	bis(2-Chloroethyl)ether		G		U	ug/L	6		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-06	bis(2-Chloroethyl)ether		M		U	ug/L	10		
MW-06	bis(2-Chloroisopropy)ether		G		U	ug/L	6		
			M		U	ug/L	10		
MW-06	bis(2-Ethylhexyl)phthalate		M		U	ug/L	10		
			G		9.0	ug/L	6		
MW-06	bis(Chloromethyl)ether		G		U	ug/L	6		
MW-06	Bromide		G		U	ug/L	500		
		29-Aug-84	M		0.43	mg/L			
MW-06	Bromodichloromethane		G		U	ug/L	3		
MW-06	Bromoform		G		U	ug/L	3		
MW-06	Bromomethane (methyl bromide)		G		U	ug/L	3		
MW-06	Butylbenzylphthalate		M		U	ug/L	10		
			G		U	ug/L	6		
MW-06	Carbon tetrachloride		G		U	ug/L	3		
MW-06	Chloride		G		1,200	ug/L			
		29-Aug-84	M		1.6	mg/L			
MW-06	Chlorobenzene		G		U	ug/L	3		
MW-06	Chloroethane		G		U	ug/L	3		
MW-06	Chloroform		G		U	ug/L	3		
MW-06	Chloromethane (methyl chloride)		G		U	ug/L	3		
MW-06	Chrysene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-06	cis-1,3-Dichloropropene		G		U	ug/L	3		
MW-06	di-N-Butylphthalate		M		U	ug/L	10		
			G		U	ug/L	6		
MW-06	di-N-Octylphthalate		G		U	ug/L	6		
			M		U	ug/L	10	J	
MW-06	Dibenz(a,h)anthracene		G		U	ug/L	20		
			M		U	ug/L	10		
MW-06	Dibromochloromethane		G		U	ug/L	3		
MW-06	Diethylphthalate		M		U	ug/L	10		
			G		U	ug/L	6		
MW-06	Dimethylphthalate		M		U	ug/L	10		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-06	Dinethylphthalate		G		U	ug/L	6		
MW-06	Ethylbenzene		G		U	ug/L	3		
MW-06	Fluoranthene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-06	Fluorene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-06	Fluoride		G		U	ug/L	100		
		29-Aug-84	M		0.080	mg/L	0.05		
MW-06	Hexachlorobenzene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-06	Hexachlorobutadiene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-06	Hexachlorocyciopentadiene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-06	Hexachloroethane		M		U	ug/L	10		
			G		U	ug/L	6		
MW-06	Indeno(1,2,3-cd)pyrene		G		U	ug/L	20		
			M		U	ug/L	10		
MW-06	Isophorone		M		U	ug/L	10		
			G		U	ug/L	6		
MW-06	Methylene chloride (dichloromethane)		G		U	ug/L	3		
MW-06	N-Nitroso-di-n-propylamine		G		U	ug/L	6		
			M		U	ug/L	10		
MW-06	N-Nitrosodimethylamine		M		U	ug/L	10		
			G		U	ug/L	6		
MW-06	N-Nitrosodiphenylamine		G		U	ug/L	6		
			M		U	ug/L	10		
MW-06	Naphthalene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-06	Nitobenzene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-06	o-Nitrophenol (2-Nitropheno)		M		U	ug/L	10		
			G		U	ug/L	10		
MW-06	p-Chloro-m-cresol		M		U	ug/L	10		
			G		U	ug/L	10		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-06	Pentachlorophenol		M		U	ug/L	10		
			G		U	ug/L	10		
MW-06	Phenanthrene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-06	Phenol		G		U	ug/L	10		
			M		U	ug/L	10		
MW-06	Pyrene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-06	Tetrachloroethene		G		U	ug/L	3		
MW-06	Toluene		G		U	ug/L	3		
MW-06	Total Organic Carbon		G	Q	1,100	ug/L		Q1	
			G	Q	1,100	ug/L		Q2	
			G	Q	2,400	ug/L		Q3	
			G	Q	2,300	ug/L		Q4	
MW-06	Total Organic Halide		G	Q	U	ug/L	1	Q4	
			M	Q	U	ug/L	20	Q1	
			G	Q	U	ug/L	1	Q1	
			M	Q	U	ug/L	20	Q3	
			G	Q	U	ug/L	1	Q3	
			M	Q	U	ug/L	20	Q2	
			G	Q	U	ug/L	1	Q2	
MW-06	trans-1,2-Dichloroethene		G		U	ug/L	3		
MW-06	trans-1,3-Dichloropropene		G		U	ug/L	3		
MW-06	Trichloroethene		G		U	ug/L	3		
MW-06	Trichlorofluoromethane		G		U	ug/L	3		
MW-06	Vinyl chloride		G		U	ug/L	3		
MW-07	1,1,1-Trichloroethane		G		U	ug/L	3		
MW-07	1,1,2,2-Tetrachloroehane		G		U	ug/L	3		
MW-07	1,1,2-Trichloroethane		G		U	ug/L	3		
MW-07	1,1-Dichloroethane		G		U	ug/L	3		
MW-07	1,1-Dichloroethene		G		U	ug/L	3		
MW-07	1,2,4-Trichlorobenzene		G		U	ug/L	6		
			N		U	ug/L	10		
MW-07	1,2-Dichlorobenzene		N		U	ug/L	10		
			G		U	ug/L	6		

Location	Parameter	Date Samp	Lab	C or F?	Result	Unit	PQL	Desc	Qual
MW-07	1,2-Dichlorobenzene		G		U	ug/L	3		
MW-07	1,2-Dichloroethane		G		U	ug/L	3		
MW-07	1,2-Dichloropropane		G		U	ug/L	3		
MW-07	1,2-Diphenylhydrazine		G		U	ug/L	6		
			M		U	ug/L	10		
MW-07	1,3-Dichlorobenzene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-07	1,4-Dichlorobenzene		M		U	ug/L	10		
			G		U	ug/L	3		
			G		U	ug/L	6		
			G		U	ug/L	3		
MW-07	2,3,7,8-Tetrachlorodibenzo p-dioxin		G		U	ug/L	20		
			M		U	ug/L	10		
MW-07	2,4,5-TP (Silvex)	02-Dec-81			U	ug/L	10		
		16-Mar-82			U	ug/L	10		
		28-Jun-82			U	ug/L	10		
		13-Sep-82			U	ug/L	10		
MW-07	2,4,6-Trichlorophenol		M		U	ug/L	10		
			G		U	ug/L	10		
MW-07	2,4-D	02-Dec-81			U	ug/L	10		
		16-Mar-82			U	ug/L	10		
		28-Jun-82			U	ug/L	10		
		13-Sep-82			U	ug/L	10		
MW-07	2,4-Dichlorophenol		G		U	ug/L	10		
			M		U	ug/L	10		
MW-07	2,4-Dimethylphenol		M		U	ug/L	10		
			G		U	ug/L	10		
MW-07	2,4-Dinitrophenol		M		U	ug/L	10		
			G		U	ug/L	10		
MW-07	2,4-Dinitrotoluene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-07	2,6-Dinitrotoluene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-07	2-Chloroethylvinyl ether		G		U	ug/L	3		
MW-07	2-Chloronaphthalene		M		U	ug/L	10		
			G		U	ug/L	6		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-07	2-Chlorophenol		G		U	ug/L	10		
			M		U	ug/L	10		
MW-07	3,3'-Dichlorobenzidine		G		U	ug/L	6		
			M		U	ug/L	10		
MW-07	4,6-Dinitro-o-cresol		M		U	ug/L	10		
			G		U	ug/L	10		
MW-07	4-Bromophenyl-phenyl ether		M		U	ug/L	10		
			G		U	ug/L	6		
MW-07	4-Chlorophenylpheryl ether		M		U	ug/L	10		
			G		U	ug/L	6		
MW-07	Acenaphthene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-07	Acenaphthylene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-07	Anthracene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-07	Arsenic	02-Dec-81			U	ug/L	3		
		16-Mar-82			4,800	ug/L	3		
		28-Jun-82			U	ug/L	3		
		13-Sep-82			U	ug/L	3		
MW-07	Barium	02-Dec-81			73	ug/L	20		
		16-Mar-82			170	ug/L	20		
		28-Jun-82			U	ug/L	20		
		13-Sep-82			U	ug/L	20		
MW-07	Benzene		G		U	ug/L	3		
MW-07	Benzidine		G		U	ug/L	20		
			M		U	ug/L	10		
MW-07	Benzo(a)anthracene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-07	Benzo(a)pyrene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-07	Benzo(b)fluoranthene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-07	Benzo(g,h,i)perylene		M		U	ug/L	10		
			G		U	ug/L	20		
MW-07	Benzo(k)fluoranthene		G		U	ug/L	6		
			M		U	ug/L	10		

Location	Parameter	Date Samp	Lab	Qor F?	Result	Unit	PQL	Desc	Qual
MW-07	bis(2-Chloroethoxy)methane		G		U	ug/L	6		
			M		U	ug/L	10		
MW-07	bis(2-Chloroethyl)ether		M		U	ug/L	10		
			G		U	ug/L	6		
MW-07	bis(2-Chloroisopropyl)ether		G		U	ug/L	6		
			M		U	ug/L	10		
MW-07	bis(2-Ethylhexyl)phthalate		M		U	ug/L	10		
			G		U	ug/L	6		
MW-07	bis(Chloromethyl)ether		G		U	ug/L	6		
MW-07	Bromide		G		U	ug/L	500		
		29-Aug-84	M		1.0	mg/L			
MW-07	Bromodichloromethane		G		U	ug/L	3		
MW-07	Bromoform		G		U	ug/L	3		
MW-07	Bromomethane (methyl bromide)		G		U	ug/L	3		
MW-07	Butylbenzylphthalate		G		U	ug/L	6		
			M		U	ug/L	10		
MW-07	Cadmium	02-Dec-81			U	ug/L	3		
		16-Mar-82			U	ug/L	3		
		28-Jun-82			U	ug/L	3		
		13-Sep-82			U	ug/L	3		
MW-07	Carbon tetrachloride		G		U	ug/L	3		
MW-07	Chloride		G		16,000	ug/L			
		02-Dec-81			55,000	ug/L	7000		
		16-Mar-82			35,000	ug/L	7000		
		28-Jun-82			21,000	ug/L	7000		
		13-Sep-82			56,000	ug/L	7000		
		08-Mar-83			35,000	ug/L	7000		
		17-Apr-84			23,000	ug/L			
		29-Aug-84	M		17	mg/L			
MW-07	Chorobenzene		G		U	ug/L	3		
MW-07	Choroethane		G		U	ug/L	3		
MW-07	Choroform		G		U	ug/L	3		
MW-07	Choromethane (methyl chbride)		G		U	ug/L	3		
MW-07	Chomium	02-Dec-81			U	ug/L	10		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-07	Chromium	16-Mar-82			6.0	ug/L	10		
		28-Jun-82			4.0	ug/L	10		
		13-Sep-82			U	ug/L	10		
MW-07	Chrysene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-07	cis-1,3-Dichloropropene		G		U	ug/L	3		
MW-07	Coliform bacteria	02-Dec-81			U	/100 n	1		
MW-07	di-N-Butylphthalate		M		U	ug/L	10		
			G		U	ug/L	6		
MW-07	di-N-Octylphthalate		G		U	ug/L	6		
			M		U	ug/L	10		
MW-07	Dibenz(a,h)anthracene		G		U	ug/L	20		
			M		U	ug/L	10		
MW-07	Dibromochloromethane		G		U	ug/L	3		
MW-07	Diethylphthalate		M		U	ug/L	10		
			G		U	ug/L	6		
MW-07	Dimethylphthalate		G		U	ug/L	6		
			M		U	ug/L	10		
MW-07	Endrin	02-Dec-81			U	ug/L	0.2		
		16-Mar-82			U	ug/L	0.2		
		28-Jun-82			U	ug/L	0.2		
		13-Sep-82			U	ug/L	0.2		
MW-07	Ethylbenzene		G		U	ug/L	3		
MW-07	Fluoranthene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-07	Fluorene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-07	Fluoride		G		U	ug/L	100		
		02-Dec-81			200	ug/L	500		
		16-Mar-82			100	ug/L	500		
		28-Jun-82			U	ug/L	500		
		13-Sep-82			U	ug/L	500		
		29-Aug-84	M		U	mg/L	0.05		
MW-07	gamma-BHC (Lindane)	02-Dec-81			U	ug/L	4		
		16-Mar-82			U	ug/L	4		
		28-Jun-82			U	ug/L	4		
		13-Sep-82			U	ug/L	4		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-07	Gross Alpha	02-Dec-81			U	pCi/L	2		
MW-07	Gross Beta	02-Dec-81			3.0	pCi/L	3	+2	
MW-07	Hexachlorobenzene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-07	Hexachlorobutadiene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-07	Hexachlorocyclopentadiene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-07	Hexachloroethane		G		U	ug/L	6		
			M		U	ug/L	10		
MW-07	Indeno(1,2,3-cd)pyrene		M		U	ug/L	10		
			G		U	ug/L	20		
MW-07	Iron	02-Dec-81			5,000	ug/L	30		
		16-Mar-82			49,000	ug/L	30		
		28-Jun-82			95	ug/L	30		
		13-Sep-82			1,000	ug/L	30		
		08-Mar-83			250	ug/L			
		17-Apr-84			40	ug/L	30		
MW-07	Isophorone		G		U	ug/L	6		
			M		U	ug/L	10		
MW-07	Lead	02-Dec-81			11	ug/L	10		
		16-Mar-82			32	ug/L	10		
		28-Jun-82			19	ug/L	10		
		13-Sep-82			19	ug/L	10		
MW-07	Manganese	02-Dec-81			830	ug/L	5		
		16-Mar-82			870	ug/L	5		
		28-Jun-82			380	ug/L	5		
		13-Sep-82			770	ug/L	5		
		08-Mar-83			440	ug/L	30		
		17-Apr-84			50	ug/L	10		
MW-07	Mercury	02-Dec-81			U	ug/L	0.8		
		16-Mar-82			U	ug/L	0.8		
		28-Jun-82			U	ug/L	1		
		13-Sep-82			U	ug/L	0.8		
MW-07	Methoxychlor	02-Dec-81			U	ug/L	5		
		16-Mar-82			U	ug/L	5		
		28-Jun-82			U	ug/L	5		
		13-Sep-82			U	ug/L	5		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-07	Methylene chloride (dichloromethane)		G		U	ug/L	3		
MW-07	N-Nitroso-di-n-propylamine		G		U	ug/L	6		
			M		U	ug/L	10		
MW-07	N-Nitrosodimethylamine		M		U	ug/L	10		
			G		U	ug/L	6		
MW-07	N-Nitrosodiphenylamine		G		U	ug/L	6		
			M		U	ug/L	10		
MW-07	Naphthalene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-07	Nitrate	02-Dec-81			1,100	ug/L	1000		
		16-Mar-82			4,200	ug/L	1000		
		28-Jun-82			12,000	ug/L	1000		
		13-Sep-82			U	ug/L	1000		
MW-07	Nitrobenzene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-07	o-Nitrophenol (2-Nitrophenol)		G		U	ug/L	10		
			M		U	ug/L	10		
MW-07	p-Chloro-m-cresol		G		U	ug/L	10		
			M		U	ug/L	10		
MW-07	Pentachlorophenol		G		U	ug/L	10		
			M		U	ug/L	10		
MW-07	pH	02-Dec-81			7.4				
		16-Mar-82			6.6				
		28-Jun-82			6.6				
		13-Sep-82			7.6				
		22-Mar-83			8.0				
		22-Mar-83			8.4				
		22-Mar-83			9.0				
		04-Oct-83			6.0				
		04-Oct-83			6.1				
		17-Apr-84			6.1				
		17-Apr-84			6.0				
		17-Apr-84			5.8				
		17-Apr-84			5.3				
MW-07	Phenanthrene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-07	Phenol		M		U	ug/L	10		
			G		U	ug/L	10		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-07	Phenols, Total	02-Dec-81			U	ug/L	5		
		16-Mar-82			U	ug/L	5		
		28-Jun-82			U	ug/L	5		
		13-Sep-82			U	ug/L	5		
		08-Mar-83			U	ug/L	5		
		17-Apr-84			U	ug/L	5		
MW-07	Pyrene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-07	Selenium	02-Dec-81			U	ug/L	4		
		16-Mar-82			5.0	ug/L	4		
		28-Jun-82			U	ug/L	4		
		13-Sep-82			U	ug/L	4		
MW-07	Silver	02-Dec-81			U	ug/L	7		
		16-Mar-82			U	ug/L	7		
		28-Jun-82			U	ug/L	7		
		13-Sep-82			U	ug/L	7		
MW-07	Sodium	02-Dec-81			52,000	ug/L			
		16-Mar-82			35,000	ug/L			
		28-Jun-82			24,000	ug/L			
		13-Sep-82			34,000	ug/L			
		08-Mar-83			30,000	ug/L			
		17-Apr-84			25,000	ug/L			
MW-07	Specific Conductance	02-Dec-81			430	mhos/c			
		16-Mar-82			350	mhos/c			
		28-Jun-82			240	mhos/c			
		13-Sep-82			350	mhos/c			
		29-Mar-83			730	mhos/c			
		29-Mar-83			740	mhos/c			
		29-Mar-83			800	mhos/c			
		29-Mar-83			610	mhos/c			
		04-Oct-83			380	mhos/c			
		04-Oct-83			380	mhos/c			
		04-Oct-83			380	mhos/c			
		17-Apr-84			280	mhos/c			
		17-Apr-84			560	mhos/c			
MW-07	Sulfate	02-Dec-81			97,000	ug/L	1000		
		16-Mar-82			51,000	ug/L	1000		
		28-Jun-82			29,000	ug/L	1000		
		13-Sep-82			54,000	ug/L	1000		
		08-Mar-83			64,000	ug/L			
		17-Apr-84			40,000	ug/L			

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-07	Tetrachloroethene		G		U	ug/L	3		
MW-07	Toluene		G		U	ug/L	3		
MW-07	Total Organic Carbon		G	Q	4,800	ug/L			Q1
			G	Q	4,600	ug/L			Q2
			G	Q	3,300	ug/L			Q3
			G	Q	3,200	ug/L			Q4
		02-Dec-81			7,200	ug/L	3000		
		16-Mar-82			3,900	ug/L	3000		
		16-Mar-82			9,000	ug/L	3000		
		28-Jun-82			14,000	ug/L	3000		
		28-Jun-82			17,000	ug/L	3000		
		13-Sep-82			12,000	ug/L	3000		
		13-Sep-82			11,000	ug/L	3000		
		14-Apr-83			6,000	ug/L			
		14-Apr-83			7,000	ug/L			
		04-Oct-83			4,800	ug/L			
		04-Oct-83			4,600	ug/L			
		04-Oct-83			4,400	ug/L			
		04-Oct-83			4,300	ug/L			
		17-Apr-84			4,800	ug/L			
		17-Apr-84			4,600	ug/L			
		17-Apr-84			3,300	ug/L			
		17-Apr-84			3,200	ug/L			
MW-07	Total Organic Halide		G	Q	26	ug/L	1		Q3
			G	Q	28	ug/L	1		Q1
			M	Q	83	ug/L	20		Q2
			G	Q	24	ug/L	1		Q2
			M	Q	55	ug/L	20		Q1
			G	Q	28	ug/L	1		Q4
			M	Q	35	ug/L	20		Q3
			M	Q	37	ug/L	20		Q4
		02-Dec-81			110	ug/L	5		
		16-Mar-82			45	ug/L	5		
		28-Jun-82			38	ug/L	5		
		13-Sep-82			65	ug/L	5		
		14-Apr-83			45	ug/L	1		
		14-Apr-83			38	ug/L	1		
		14-Apr-83			51	ug/L	1		
		14-Apr-83			43	ug/L	1		
		04-Oct-83			44	ug/L	1		
		04-Oct-83			47	ug/L	1		
		04-Oct-83			50	ug/L	1		

Location	Parameter	Date Samp	Lab	Qor F?	Result	Unit	PQL	Desc	Qual
MW-07	Total Organic Halide	04-Oct-83			48	ug/L	1		
		17-Apr-84			28	ug/L	1		
		17-Apr-84			26	ug/L	1		
		17-Apr-84			24	ug/L	1		
MW-07	Toxaphene	02-Dec-81			U	ug/L	5		
		16-Mar-82			U	ug/L	5		
		28-Jun-82			U	ug/L	5		
		13-Sep-82			U	ug/L	5		
MW-07	trans-1,2-Dichloroethene		G		U	ug/L	3		
MW-07	trans-1,3-Dichloropropene		G		U	ug/L	3		
MW-07	Trchloroethene		G		U	ug/L	3		
MW-07	Trchlorofluoromethane		G		U	ug/L	3		
MW-07	Vinyl chloride		G		U	ug/L	3		
MW-08	1,1,1-Trichloroethane		G		U	ug/L	3		
MW-08	1,1,2,2-Tetrachloroethane		G		U	ug/L	10	J	
MW-08	1,1,2-Trichloroethane		G		U	ug/L	3		
MW-08	1,1-Dichloroethane		G		U	ug/L	3		
MW-08	1,1-Dichloroethene		G		U	ug/L	3		
MW-08	1,2,4-Trichlorobenzene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-08	1,2-Dichlorobenzene		M		U	ug/L	10		
			G		U	ug/L	3		
			G		U	ug/L	6		
		17-Apr-97	S		U	ug/L	10		
		01-Apr-98	G		U	ug/L	10		
MW-08	1,2-Dichloroethane		G		U	ug/L	3		
MW-08	1,2-Dichloropropane		G		U	ug/L	3		
MW-08	1,2-Diphenylhydrazine		M		U	ug/L	10		
			G		U	ug/L	6		
MW-08	1,3-Dichlorobenzene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-08	1,4-Dichlorobenzene		M		U	ug/L	10		
			G		U	ug/L	6		
			G		U	ug/L	3		
			G		U	ug/L	3		
		17-Apr-97	S		U	ug/L	10		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-08	1,4-Dichlorobenzene	01-Apr-98	G		U	ug/L	10		
MW-08	2,3,7,8-Tetrachlorodibenzo-p-dioxin		M		U	ug/L	10		
			G		U	ug/L	20		
MW-08	2,4,5-TP (Silvex)	02-Dec-81			U	ug/L	10		
		16-Mar-82			U	ug/L	10		
		28-Jun-82			U	ug/L	10		
		13-Sep-82			U	ug/L	10		
MW-08	2,4,5-Trichlorophenol	17-Apr-97	G		U	ug/L	10		
		01-Apr-98	G		U	ug/L	10		
MW-08	2,4,6-Trichlorophenol		M		U	ug/L	10		
			G		U	ug/L	10		
		17-Apr-97	G		U	ug/L	10		
		01-Apr-98	G		U	ug/L	10		
MW-08	2,4-D	02-Dec-81			U	ug/L	10		
		16-Mar-82			U	ug/L	10		
		28-Jun-82			U	ug/L	10		
		13-Sep-82			U	ug/L	10		
MW-08	2,4-Dichlorophenol		M		U	ug/L	10		
			G		U	ug/L	10		
		17-Apr-97	G		U	ug/L	10		
		01-Apr-98	G		U	ug/L	10		
MW-08	2,4-Dimethylphenol		M		U	ug/L	10		
			G		U	ug/L	10		
MW-08	2,4-Dinitrophenol		M		U	ug/L	10		
			G		U	ug/L	10		
MW-08	2,4-Dinitrotoluene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-08	2,6-Dinitrotoluene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-08	2-Chloroethylvinyl ether		G		U	ug/L	3		
MW-08	2-Chloronaphthalene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-08	2-Chlorophenol		M		U	ug/L	10		
			G		U	ug/L	10		
MW-08	3,3'-Dichlorobenzidine		M		U	ug/L	10		
			G		U	ug/L	6		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-08	4,6-Dinitro-o-cresol		M		U	ug/L	10		
			G		U	ug/L	10		
MW-08	4-Bromophenyl-phenyl ether		M		U	ug/L	10		
			G		U	ug/L	6		
MW-08	4-Chlorophenylphenyl ether		M		U	ug/L	10		
			G		U	ug/L	6		
MW-08	Acenaphthene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-08	Acenaphthylene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-08	Anthracene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-08	Aroclor 1016	17-Apr-97	S		U	ug/L	0.5		
		01-Apr-98	S		U	ug/L	0.5		
		01-Apr-98	S	F	U	ug/L	0.5		
MW-08	Aroclor 1221	17-Apr-97	S		U	ug/L	1		
		01-Apr-98	S		U	ug/L	0.5		
		01-Apr-98	S	F	U	ug/L	0.5		
MW-08	Aroclor 1232	17-Apr-97	S		U	ug/L	0.5		
		01-Apr-98	S		U	ug/L	0.5		
		01-Apr-98	S	F	U	ug/L	0.5		
MW-08	Aroclor 1242	17-Apr-97	S		U	ug/L	0.5		
		01-Apr-98	S		U	ug/L	0.5		
		01-Apr-98	S	F	U	ug/L	0.5		
MW-08	Aroclor 1248	17-Apr-97	S		U	ug/L	0.5		
		01-Apr-98	S		U	ug/L	0.5		
		01-Apr-98	S	F	U	ug/L	0.5		
MW-08	Aroclor 1254	17-Apr-97	S		U	ug/L	0.5		
		01-Apr-98	S		U	ug/L	0.5		
		01-Apr-98	S	F	U	ug/L	0.5		
MW-08	Aroclor 1260	17-Apr-97	S		U	ug/L	0.5		
		01-Apr-98	S		U	ug/L	0.5		
		01-Apr-98	S	F	U	ug/L	0.5		
MW-08	Arsenic	02-Dec-81			U	ug/L	3		
		16-Mar-82			U	ug/L	3		
		28-Jun-82			U	ug/L	3		
		13-Sep-82			U	ug/L	3		
MW-08	Barium	02-Dec-81			39	ug/L	20		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-08	Barium	16-Mar-82			850	ug/L	20		
		28-Jun-82			U	ug/L	20		
		13-Sep-82			100	ug/L	20		
MW-08	Benzene		G		U	ug/L	3		
MW-08	Benzidine		N		U	ug/L	10		
			G		U	ug/L	20		
MW-08	Benzo(a)anthracene		N		U	ug/L	10		
			G		U	ug/L	6		
MW-08	Benzo(a)pyrene		N		U	ug/L	10		
			G		U	ug/L	6		
MW-08	Benzo(b)fluoranthene		N		U	ug/L	10		
			G		U	ug/L	6		
MW-08	Benzo(g,h,i)perylene		N		U	ug/L	10		
			G		U	ug/L	20		
MW-08	Benzo(k)fluoranthene		G		U	ug/L	6		
			N		U	ug/L	10		
MW-08	bis(2-Chloroethoxy)methane		G		U	ug/L	6		
			N		U	ug/L	10		
MW-08	bis(2-Chloroethyl)ether		N		U	ug/L	10		
			G		U	ug/L	6		
MW-08	bis(2-Chloroisopropyl)ether		N		U	ug/L	10		
			G		U	ug/L	6		
MW-08	bis(2-Ethylhexyl)phthalate		N		U	ug/L	10		
			G		U	ug/L	6		
MW-08	bis(Chloromethyl)ether		G		U	ug/L	6		
MW-08	Bromide		G		U	ug/L	500		
		29-Aug-84	N		0.48	mg/L			
MW-08	Bromodichloromethane		G		U	ug/L	3		
MW-08	Bromoform		G		U	ug/L	3		
MW-08	Bromomethane (methyl bromide)		G		U	ug/L	3		
MW-08	Butylbenzylphthalate		G		U	ug/L	6		
			N		U	ug/L	10		
MW-08	Cadmium	02-Dec-81			U	ug/L	3		
		16-Mar-82			U	ug/L	3		
		28-Jun-82			U	ug/L	3		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-08	Cadmium	13-Sep-82			U	ug/L	3		
MW-08	Carbon tetrachloride		G		U	ug/L	3		
MW-08	Chloride		G		14,000	ug/L			
		02-Dec-81			12,000	ug/L	7000		
		16-Mar-82			190,000	ug/L	7000		
		28-Jun-82			16,000	ug/L	7000		
		13-Sep-82			19,000	ug/L	7000		
		08-Mar-83			20,000	ug/L	7000		
		17-Apr-84			17,000	ug/L			
		29-Aug-84	M		15	mg/L			
MW-08	Chlorobenzene		G		U	ug/L	3		
		17-Apr-97	S		U	ug/L	1		
		22-Apr-97	S		U	ug/L	1		
		01-Apr-98	G		U	ug/L	1		
MW-08	Chloroethane		G		U	ug/L	3		
MW-08	Chloroform		G		U	ug/L	3		
MW-08	Chloromethane (methyl chloride)		G		U	ug/L	3		
MW-08	Chromium	02-Dec-81			U	ug/L	10		
		16-Mar-82			4.0	ug/L	10		
		28-Jun-82			6.0	ug/L	10		
		13-Sep-82			U	ug/L	10		
MW-08	Chrysene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-08	cis-1,3-Dichloropropene		G		U	ug/L	3		
MW-08	Cobalt	17-Apr-97	S		U	mg/L	0.01		
		01-Apr-98	G		U	mg/L	0.01		
		02-Apr-98	G	F	U	mg/L	0.01		
MW-08	Coliform bacteria	02-Dec-81			U	/100 n	1		
MW-08	di-N-Butylphthalate		G		U	ug/L	6		
			M		U	ug/L	10		
MW-08	di-N-Octylphthalate		G		U	ug/L	6		
			M		U	ug/L	10		
MW-08	Dibenz(a,h)anthracene		G		U	ug/L	20		
			M		U	ug/L	10		
MW-08	Dibromochloromethane		G		U	ug/L	3		
MW-08	Diethylphthalate		M		U	ug/L	10		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-08	Diethylphthalate		G		U	ug/L	6		
MW-08	Dimethylphthalate		M		U	ug/L	10		
			G		U	ug/L	6		
MW-08	Endrin	02-Dec-81			U	ug/L	0.2		
		16-Mar-82			U	ug/L	0.2		
		28-Jun-82			U	ug/L	0.2		
		13-Sep-82			U	ug/L	0.2		
MW-08	Ethylbenzene		G		U	ug/L	3		
MW-08	Fluoranthene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-08	Fluorene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-08	Fluoride		G		U	ug/L	100		
		02-Dec-81			100	ug/L	500		
		16-Mar-82			100	ug/L	500		
		28-Jun-82			U	ug/L	500		
		13-Sep-82			U	ug/L	500		
		29-Aug-84	M		0.11	mg/L	0.05		
MW-08	gamma-BHC (Lindane)	02-Dec-81			U	ug/L	4		
		16-Mar-82			U	ug/L	4		
		28-Jun-82			U	ug/L	4		
		13-Sep-82			U	ug/L	4		
MW-08	Gross Alpha	02-Dec-81			U	pCi/L	2		
MW-08	Gross Beta	02-Dec-81			6.0	pCi/L	3	+2	
MW-08	Hexachlorobenzene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-08	Hexachlorobutadiene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-08	Hexachlorocyclopentadiene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-08	Hexachloroethane		G		U	ug/L	6		
			M		U	ug/L	10		
MW-08	Indeno(1,2,3-cd)pyrene		M		U	ug/L	10		
			G		U	ug/L	20		
MW-08	Iron	02-Dec-81			89	ug/L	30		
		16-Mar-82			10,000	ug/L	30		
		28-Jun-82			130	ug/L	30		

Location	Parameter	Date Samp	Lab	Qor F?	Result	Unit	PQL	Desc Qual
MW-08	Iron	13-Sep-82			1,300	ug/L	30	
		08-Mar-83			1,300	ug/L		
		17-Apr-84			80	ug/L	30	
MW-08	Isophorone		M		U	ug/L	10	
			G		U	ug/L	6	
MW-08	Lead	02-Dec-81			11	ug/L	10	
		16-Mar-82			14	ug/L	10	
		28-Jun-82			12	ug/L	10	
		13-Sep-82			30	ug/L	10	
MW-08	Manganese	02-Dec-81			370	ug/L	5	
		16-Mar-82			390	ug/L	5	
		28-Jun-82			290	ug/L	5	
		13-Sep-82			490	ug/L	5	
		08-Mar-83			190	ug/L	30	
		17-Apr-84			200	ug/L	10	
MW-08	Mercury	02-Dec-81			U	ug/L	0.8	
		16-Mar-82			U	ug/L	0.8	
		28-Jun-82			U	ug/L	1	
		13-Sep-82			U	ug/L	0.8	
		17-Apr-97	S		0.000050	mg/L	0.0002	J
		01-Apr-98	G		U	mg/L	0.0002	
		02-Apr-98	G	F	U	mg/L	0.0002	
MW-08	Methoxychlor	02-Dec-81			U	ug/L	5	
		16-Mar-82			U	ug/L	5	
		28-Jun-82			U	ug/L	5	
		13-Sep-82			U	ug/L	5	
MW-08	Methylene chloride (dichloromethane)		G		U	ug/L	3	
		17-Apr-97	S		U	ug/L	5	
		22-Apr-97	S		U	ug/L	5	
		01-Apr-98	G		U	ug/L	5	
MW-08	N-Nitroso-di-n-propylamine		M		U	ug/L	10	
			G		U	ug/L	6	
MW-08	N-Nitrosodimethylamine		M		U	ug/L	10	
			G		U	ug/L	6	
MW-08	N-Nitrosodiphenylamine		G		U	ug/L	6	
			M		U	ug/L	10	
MW-08	Naphthalene		G		U	ug/L	6	
			M		U	ug/L	10	

Locaton	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
MW-08	Nitrate	02-Dec-81			8,600	ug/L	1000	
		16-Mar-82			U	ug/L	1000	
		28-Jun-82			17,000	ug/L	1000	
		13-Sep-82			U	ug/L	1000	
MW-08	Nitrobenzene		G		U	ug/L	6	
			M		U	ug/L	10	
MW-08	o,o,o-Triethylphosphorothioate	17-Apr-97	S		U	ug/L	10	
		01-Apr-98	G		U	ug/L	10	
MW-08	o-Nitrophenol (2-Nitrophenol)		M		U	ug/L	10	
			G		U	ug/L	10	
MW-08	p-Chloro-m-cresol		M		U	ug/L	10	
			G		U	ug/L	10	
MW-08	Pentachlorophenol		M		U	ug/L	10	
			G		U	ug/L	10	
		17-Apr-97	S		U	ug/L	1	
		01-Apr-98	G		U	ug/L	1	
MW-08	pH	02-Dec-81			7.1			
		16-Mar-82			5.2			
		28-Jun-82			6.8			
		13-Sep-82			6.9			
		22-Mar-83			7.6			
		22-Mar-83			6.5			
		22-Mar-83			6.4			
		04-Oct-83			5.1			
		17-Apr-84			4.6			
		17-Apr-84			4.8			
		17-Apr-84			5.1			
		17-Apr-84			5.2			
MW-08	Phenanthrene		G		U	ug/L	6	
			M		U	ug/L	10	
MW-08	Phenol		G		U	ug/L	10	
			M		U	ug/L	10	
		17-Apr-97	S		U	ug/L	10	
		01-Apr-98	G		U	ug/L	10	
MW-08	Phenols, Total	02-Dec-81			U	ug/L	5	
		16-Mar-82			U	ug/L	5	
		28-Jun-82			U	ug/L	5	
		13-Sep-82			U	ug/L	5	
		08-Mar-83			U	ug/L	5	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
MW-08	Phenols, Total	17-Apr-84			U	ug/L	5	
MW-08	Pyrene		M		U	ug/L	10	
			G		U	ug/L	6	
MW-08	Selenium	02-Dec-81			5.0	ug/L	4	
		16-Mar-82			U	ug/L	4	
		28-Jun-82			U	ug/L	4	
		13-Sep-82			U	ug/L	4	
MW-08	Silver	02-Dec-81			U	ug/L	7	
		16-Mar-82			U	ug/L	7	
		28-Jun-82			U	ug/L	7	
		13-Sep-82			U	ug/L	7	
MW-08	Sodium	02-Dec-81			15,000	ug/L		
		16-Mar-82			15,000	ug/L		
		28-Jun-82			17,000	ug/L		
		13-Sep-82			6,400	ug/L		
		08-Mar-83			11,000	ug/L		
		17-Apr-84			12,000	ug/L		
MW-08	Specific Conductance	02-Dec-81			100	mhos/c		
		16-Mar-82			100	mhos/c		
		28-Jun-82			72	mhos/c		
		13-Sep-82			90	mhos/c		
		29-Mar-83			210	mhos/c		
		29-Mar-83			200	mhos/c		
		29-Mar-83			210	mhos/c		
		04-Oct-83			130	mhos/c		
		04-Oct-83			130	mhos/c		
		17-Apr-84			110	mhos/c		
		17-Apr-84			200	mhos/c		
MW-08	Sulfate	02-Dec-81			8,700	ug/L	1000	
		16-Mar-82			3,900	ug/L	1000	
		28-Jun-82			U	ug/L	1000	
		13-Sep-82			9,600	ug/L	1000	
		08-Mar-83			2,200	ug/L		
		17-Apr-84			7,100	ug/L		
MW-08	Tetrachloroethene		G		U	ug/L	3	
MW-08	Tetraethyldithiopyrophosphate (Sulfotepp)	17-Apr-97	S		U	ug/L	0.5	
		01-Apr-98	G		U	ug/L	0.5	
MW-08	Toluene		G		U	ug/L	3	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
MW-08	Total Organic Carbon		G	Q	3,200	ug/L		Q4
			G	Q	4,200	ug/L		Q3
			G	Q	4,300	ug/L		Q1
			G	Q	4,400	ug/L		Q2
		02-Dec-81			5,500	ug/L	3000	
		16-Mar-82			U	ug/L	3000	
		16-Mar-82			12,000	ug/L	3000	
		28-Jun-82			38,000	ug/L	3000	
		28-Jun-82			9,000	ug/L	3000	
		13-Sep-82			7,800	ug/L	3000	
		13-Sep-82			20,000	ug/L	3000	
		14-Apr-83			12,000	ug/L		
		14-Apr-83			11,000	ug/L		
		14-Apr-83			45,000	ug/L		
		14-Apr-83			47,000	ug/L		
		04-Oct-83			3,100	ug/L		
		04-Oct-83			2,500	ug/L		
		04-Oct-83			2,900	ug/L		
		17-Apr-84			4,300	ug/L		
		17-Apr-84			4,400	ug/L		
		17-Apr-84			4,200	ug/L		
		17-Apr-84			3,200	ug/L		
MW-08	Total Organic Halide		N	Q	27	ug/L	20	Q1
			N	Q	29	ug/L	20	Q2
			N	Q	24	ug/L	20	Q3
			N	Q	42	ug/L	20	Q4
			C	Q	24	ug/L	1	Q2
			C	Q	23	ug/L	1	Q3
			C	Q	19	ug/L	1	Q4
			C	Q	16	ug/L	1	Q1
		02-Dec-81			68	ug/L	5	
		16-Mar-82			17	ug/L	5	
		28-Jun-82			31	ug/L	5	
		13-Sep-82			15	ug/L	5	
		14-Apr-83			27	ug/L	1	
		14-Apr-83			28	ug/L	1	
		14-Apr-83			24	ug/L	1	
		14-Apr-83			20	ug/L	1	
		04-Oct-83			35	ug/L	1	
		04-Oct-83			25	ug/L	1	
		04-Oct-83			34	ug/L	1	
		04-Oct-83			23	ug/L	1	
		17-Apr-84			16	ug/L	1	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-08	Total Organic Halide	17-Apr-84			24	ug/L	1		
		17-Apr-84			23	ug/L	1		
		17-Apr-84			19	ug/L	1		
MW-08	Toxaphene	02-Dec-81			U	ug/L	5		
		16-Mar-82			U	ug/L	5		
		28-Jun-82			U	ug/L	5		
		13-Sep-82			U	ug/L	5		
MW-08	trans-1,2-Dichloroethene		G		U	ug/L	3		
MW-08	trans-1,3-Dichloropropene		G		U	ug/L	3		
MW-08	Trichloroethene		G		U	ug/L	3		
MW-08	Trichlorofluoromethane		G		U	ug/L	3		
MW-08	Vinyl chloride		G		U	ug/L	3		
MW-09	1,1,1-Trichloroethane		G		U	ug/L	3		
MW-09	1,12,2-Tetrachloroethane		G		U	ug/L	3		
MW-09	1,12-Trichloroethane		G		U	ug/L	3		
MW-09	1,1Dichloroethane		G		U	ug/L	3		
MW-09	1,1Dichloroethene		G		U	ug/L	3		
MW-09	1,24-Trichlorobenzene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-09	1,2Dichlorobenzene		G		U	ug/L	3		
			G		U	ug/L	6		
			M		U	ug/L	10		
		17-Apr-97	S		U	ug/L	10		
		09-Apr-98	G		U	ug/L	10		
MW-09	1,2Dichloroethane		G		U	ug/L	3		
MW-09	1,2Dichloropropane		G		U	ug/L	3		
MW-09	1,2Diphenylhydrazine		G		U	ug/L	6		
			M		U	ug/L	10		
MW-09	1,3Dichlorobenzene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-09	1,4Dichlorobenzene		G		U	ug/L	6		
			G		U	ug/L	3		
			G		U	ug/L	3		
			M		U	ug/L	10		
		17-Apr-97	S		U	ug/L	10		
		09-Apr-98	G		U	ug/L	10		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-09	2,3,7,8-Tetrachlorodbenzo-p-dioxin		G		U	ug/L	20		
			M		U	ug/L	10		
MW-09	2,4,5-TP (Silvex)	02-Dec-81			U	ug/L	10		
		16-Mar-82			U	ug/L	10		
		28-Jun-82			U	ug/L	10		
		13-Sep-82			U	ug/L	10		
MW-09	2,4,5-Trichlorophenol	17-Apr-97	S		U	ug/L	10		
		09-Apr-98	G		U	ug/L	10		
MW-09	2,4,6-Trichlorophenol		M		U	ug/L	10		
			G		U	ug/L	10		
		17-Apr-97	S		U	ug/L	10		
		09-Apr-98	G		U	ug/L	10		
MW-09	2,4-D	02-Dec-81			U	ug/L	10		
		16-Mar-82			U	ug/L	10		
		28-Jun-82			U	ug/L	10		
		13-Sep-82			U	ug/L	10		
MW-09	2,4-Dichlorophenol		M		U	ug/L	10		
			G		U	ug/L	10		
		17-Apr-97	S		U	ug/L	10		
		09-Apr-98	G		U	ug/L	10		
MW-09	2,4-Dimethylphenol		M		U	ug/L	10		
			G		U	ug/L	10		
MW-09	2,4-Dinitrophenol		M		U	ug/L	10		
			G		U	ug/L	10		
MW-09	2,4-Dinitrotoluene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-09	2,6-Dinitrotoluene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-09	2-Chloroethylvinyl ether		G		U	ug/L	3		
MW-09	2-Chloronaphthalene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-09	2-Chlorophenol		M		U	ug/L	10		
			G		U	ug/L	10		
MW-09	3,3'-Dichlorobenzidine		M		U	ug/L	10		
			G		U	ug/L	6		
MW-09	4,6-Dinitro-o-cresol		G		U	ug/L	10		

Location	Parameter	Date Samp	Lab	C or F?	Result	Unit	PQL	Desc Qual
MW-09	46-Dinitro-o-cresol		M		U	ug/L	10	
MW-09	4Bromophenyl-phenyl ether		M		U	ug/L	10	
			G		U	ug/L	6	
MW-09	4Chlorophenylphenyl ether		M		U	ug/L	10	
			G		U	ug/L	6	
MW-09	Acenaphthene		M		U	ug/L	10	
			G		U	ug/L	6	
MW-09	Acenaphthylene		G		U	ug/L	6	
			M		U	ug/L	10	
MW-09	Anthracene		G		U	ug/L	6	
			M		U	ug/L	10	
MW-09	Aroclor 1016	17-Apr-97	S		U	ug/L	0.5	
		09-Apr-98	S		U	ug/L	0.5	
		09-Apr-98	S	F	U	ug/L	0.5	
MW-09	Aroclor 1221	17-Apr-97	S		U	ug/L	1	
		09-Apr-98	S		U	ug/L	0.5	
		09-Apr-98	S	F	U	ug/L	0.5	
MW-09	Aroclor 1232	17-Apr-97	S		U	ug/L	0.5	
		09-Apr-98	S		U	ug/L	0.5	
		09-Apr-98	S	F	U	ug/L	0.5	
MW-09	Aroclor 1242	17-Apr-97	S		U	ug/L	0.5	
		09-Apr-98	S		U	ug/L	0.5	
		09-Apr-98	S	F	U	ug/L	0.5	
MW-09	Aroclor 1248	17-Apr-97	S		U	ug/L	0.5	
		09-Apr-98	S		U	ug/L	0.5	
		09-Apr-98	S	F	U	ug/L	0.5	
MW-09	Aroclor 1254	17-Apr-97	S		U	ug/L	0.5	
		09-Apr-98	S		U	ug/L	0.5	
		09-Apr-98	S	F	U	ug/L	0.5	
MW-09	Aroclor 1260	17-Apr-97	S		U	ug/L	0.5	
		09-Apr-98	S		U	ug/L	0.5	
		09-Apr-98	S	F	U	ug/L	0.5	
MW-09	Arsenic	02-Dec-81			U	ug/L	3	
		16-Mar-82			U	ug/L	3	
		28-Jun-82			U	ug/L	3	
		13-Sep-82			U	ug/L	3	
MW-09	Barium	02-Dec-81			270	ug/L	20	
		16-Mar-82			230	ug/L	20	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
MW-09	Barium	28-Jun-82			U	ug/L	20	
		13-Sep-82			170	ug/L	20	
MW-09	Benzene		G		U	ug/L	3	
MW-09	Benzidine		G		U	ug/L	20	
			M		U	ug/L	10	
MW-09	Benzo(a)anthracene		G		U	ug/L	6	
			M		U	ug/L	10	
MW-09	Benzo(a)pyrene		M		U	ug/L	10	
			G		U	ug/L	6	
MW-09	Benzo(b)fluoranthene		G		U	ug/L	6	
			M		U	ug/L	10	
MW-09	Benzo(g,h,i)perylene		G		U	ug/L	20	
			M		U	ug/L	10	
MW-09	Benzo(k)fluoranthene		G		U	ug/L	6	
			M		U	ug/L	10	
MW-09	bis(2-Chloroethoxy)methane		G		U	ug/L	6	
			M		U	ug/L	10	
MW-09	bis(2-Chloroethyl)ether		G		U	ug/L	6	
			M		U	ug/L	10	
MW-09	bis(2-Chloroisopropyl)ether		M		U	ug/L	10	
			G		U	ug/L	6	
MW-09	bis(2-Ethylhexyl)phthalate		G		U	ug/L	6	
			M		U	ug/L	10	
MW-09	bis(Chloromethyl)ether		G		U	ug/L	6	
MW-09	Bromide		G		U	ug/L	500	
		29-Aug-84	M		0.43	mg/L		
MW-09	Bromodichloromethane		G		U	ug/L	3	
MW-09	Bromoform		G		U	ug/L	3	
MW-09	Bromomethane (methyl bromide)		G		U	ug/L	3	
MW-09	Butylbenzylphthalate		G		U	ug/L	6	
			M		U	ug/L	10	
MW-09	Cadmium	02-Dec-81			U	ug/L	3	
		16-Mar-82			18	ug/L	3	
		28-Jun-82			7.0	ug/L	3	
		13-Sep-82			U	ug/L	3	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-09	Carbon tetrachloride		G		U	ug/L	3		
MW-09	Choride		G		10,000	ug/L			
		02-Dec-81			9,300	ug/L	7000		
		16-Mar-82			12,000	ug/L	7000		
		28-Jun-82			9,600	ug/L	7000		
		13-Sep-82			15,000	ug/L	7000		
		08-Mar-83			14,000	ug/L	7000		
		17-Apr-84			11,000	ug/L			
		29-Aug-84	M		13	mg/L			
MW-09	Chorobenzene		G		U	ug/L	3		
		17-Apr-97	S		U	ug/L	1		
		09-Apr-98	G		U	ug/L	1		
MW-09	Choroethane		G		U	ug/L	3		
MW-09	Choroform		G		U	ug/L	3		
MW-09	Choromethane (methyl chloride)		G		U	ug/L	3		
MW-09	Chornium	02-Dec-81			U	ug/L	10		
		16-Mar-82			6.0	ug/L	10		
		28-Jun-82			5.0	ug/L	10		
		13-Sep-82			6.0	ug/L	10		
MW-09	Chysene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-09	cis1,3-Dichloropropene		G		U	ug/L	3		
MW-09	Coiait	17-Apr-97	S		U	mg/L	0.01		
		09-Apr-98	G		U	mg/L	0.01		
		09-Apr-98	G	F	U	mg/L	0.01		
MW-09	Colform bacteria	02-Dec-81			U	/100 n	1		
MW-09	di-ñ-Butylphthalate		M		U	ug/L	10		
			G		U	ug/L	6		
MW-09	di-ñ-Octylphthalate		M		U	ug/L	10		
			G		U	ug/L	6		
MW-09	Ditanz(a,h)anthracene		G		U	ug/L	20		
			M		U	ug/L	10		
MW-09	Dibromochloromethane		G		U	ug/L	3		
MW-09	Diehylphthalate		G		U	ug/L	6		
			M		U	ug/L	10		
MW-09	Dimethylphthalate		M		U	ug/L	10		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-09	Dimethylphthalate		G		U	ug/L	6		
MW-09	Endrin	02-Dec-81			U	ug/L	0.2		
		16-Mar-82			U	ug/L	0.2		
		28-Jun-82			U	ug/L	0.2		
		13-Sep-82			U	ug/L	0.2		
MW-09	Ethylbenzene		G		U	ug/L	3		
MW-09	Fluoranthene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-09	Fluorene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-09	Fluoride		G		U	ug/L	100		
		02-Dec-81			200	ug/L	500		
		16-Mar-82			100	ug/L	500		
		28-Jun-82			U	ug/L	500		
		13-Sep-82			U	ug/L	500		
		29-Aug-84	M		0.050	mg/L	0.05		
MW-09	gamma-BHC (Lindare)	02-Dec-81			U	ug/L	4		
		16-Mar-82			U	ug/L	4		
		28-Jun-82			U	ug/L	4		
		13-Sep-82			U	ug/L	4		
MW-09	Gross Alpha	02-Dec-81			U	pCi/L	2		
MW-09	Gross Beta	02-Dec-81			U	pCi/L	3		
MW-09	Hexachlorobenzene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-09	Hexachlorobutadiene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-09	Hexachlorocyclopentadiene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-09	Hexachloroethane		M		U	ug/L	10		
			G		U	ug/L	6		
MW-09	Indeno(1,2,3-cd)pyrene		M		U	ug/L	10		
			G		U	ug/L	20		
MW-09	Iron	02-Dec-81			22	ug/L	30		
		16-Mar-82			32,000	ug/L	30		
		28-Jun-82			510	ug/L	30		
		13-Sep-82			450	ug/L	30		
		08-Mar-83			200	ug/L	30		
		17-Apr-84			U	ug/L	30		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-09	Isophorone		M		U	ug/L	10		
			G		U	ug/L	6		
MW-09	Lead	02-Dec-81			39	ug/L	10		
		16-Mar-82			67	ug/L	10		
		28-Jun-82			9.0	ug/L	10		
		13-Sep-82			20	ug/L	10		
MW-09	Manganese	02-Dec-81			780	ug/L	5		
		16-Mar-82			1,000	ug/L	5		
		28-Jun-82			150	ug/L	5		
		13-Sep-82			200	ug/L	5		
		08-Mar-83			U	ug/L	5		
		17-Apr-84			190	ug/L	5		
MW-09	Mercury	02-Dec-81			U	ug/L	0.8		
		16-Mar-82			U	ug/L	0.8		
		28-Jun-82			U	ug/L	0.8		
		13-Sep-82			U	ug/L	0.8		
		17-Apr-97	S		U	mg/L	0.0002		
		09-Apr-98	G		U	mg/L	0.0002		
		09-Apr-98	G	F	U	mg/L	0.0002		
MW-09	Methoxychlor	02-Dec-81			U	ug/L	5		
		16-Mar-82			U	ug/L	5		
		28-Jun-82			U	ug/L	5		
		13-Sep-82			U	ug/L	5		
MW-09	Methylene chloride (dichloromethane)		G		U	ug/L	10		J
		17-Apr-97	S		U	ug/L	5		
		09-Apr-98	G		U	ug/L	5		
MW-09	N-Nitroso-di-n-propylamine		M		U	ug/L	10		
			G		U	ug/L	6		
MW-09	N-Nitrosodimethylamine		G		U	ug/L	6		
			M		U	ug/L	10		
MW-09	N-Nitrosodiphenylamine		G		U	ug/L	6		
			M		U	ug/L	10		
MW-09	Naphthalene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-09	Nitrate	02-Dec-81			6,700	ug/L	1000		
		16-Mar-82			4,400	ug/L	1000		
		28-Jun-82			17,000	ug/L	1000		
		13-Sep-82			3,100	ug/L	1000		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-09	Nitrobenzene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-09	o,o,o-Triethylphosphorothioate	17-Apr-97	S		U	ug/L	10		
		09-Apr-98	G		U	ug/L	10		
MW-09	o-Nitrophenol (2-Nitrophenol)		G		U	ug/L	10		
			M		U	ug/L	10		
MW-09	p-Chloro-m-cresol		G		U	ug/L	10		
			M		U	ug/L	10		
MW-09	Pentachlorophenol		G		U	ug/L	10		
			M		U	ug/L	10		
		17-Apr-97	S		U	ug/L	1		
		09-Apr-98	G		U	ug/L	1		
MW-09	pH	02-Dec-81			7.1				
		16-Mar-82			5.5				
		28-Jun-82			6.6				
		13-Sep-82			6.9				
		22-Mar-83			7.6				
		22-Mar-83			7.7				
		22-Mar-83			7.8				
		22-Mar-83			7.4				
		04-Oct-83			4.8				
		17-Apr-84			4.4				
		17-Apr-84			4.5				
		17-Apr-84			4.8				
		17-Apr-84			4.9				
MW-09	Phenanthrene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-09	Phenol		G		U	ug/L	10		
			M		U	ug/L	10		
		17-Apr-97	S		U	ug/L	10		
		09-Apr-98	G		U	ug/L	10		
MW-09	Phenols, Total	02-Dec-81			U	ug/L	5		
		16-Mar-82			U	ug/L	5		
		28-Jun-82			U	ug/L	5		
		13-Sep-82			U	ug/L	5		
		08-Mar-83			U	ug/L	5		
		17-Apr-84			U	ug/L	5		
MW-09	Pyrene		M		U	ug/L	10		
			G		U	ug/L	6		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
MW-09	Selenium	02-Dec-81			U	ug/L	4	
		16-Mar-82			U	ug/L	4	
		28-Jun-82			U	ug/L	4	
		13-Sep-82			U	ug/L	4	
MW-09	Silver	02-Dec-81			U	ug/L	7	
		16-Mar-82			U	ug/L	7	
		28-Jun-82			U	ug/L	7	
		13-Sep-82			U	ug/L	7	
MW-09	Sodium	02-Dec-81			16,000	ug/L		
		16-Mar-82			15,000	ug/L		
		28-Jun-82			6,000	ug/L		
		13-Sep-82			8,700	ug/L		
		08-Mar-83			13,000	ug/L		
		17-Apr-84			16,000	ug/L		
MW-09	Specific Conductance	02-Dec-81			310	nhos/c		
		16-Mar-82			160	nhos/c		
		28-Jun-82			95	nhos/c		
		13-Sep-82			90	nhos/c		
		29-Mar-83			230	nhos/c		
		29-Mar-83			240	nhos/c		
		29-Mar-83			230	nhos/c		
		04-Oct-83			130	nhos/c		
		04-Oct-83			130	nhos/c		
		04-Oct-83			130	nhos/c		
		04-Oct-83			130	nhos/c		
		17-Apr-84			120	nhos/c		
		17-Apr-84			200	nhos/c		
		17-Apr-84			210	nhos/c		
		17-Apr-84			220	nhos/c		
MW-09	Sulfate	02-Dec-81			42,000	ug/L	1000	
		16-Mar-82			11,000	ug/L	1000	
		28-Jun-82			1,500	ug/L	1000	
		13-Sep-82			20,000	ug/L	1000	
		08-Mar-83			17,000	ug/L	1000	
		17-Apr-84			14,000	ug/L	1000	
MW-09	Tetrachloroethene		G		U	ug/L	3	
MW-09	Tetraethyldithiopyrophosphate (Sulfotepp)	17-Apr-97	S		U	ug/L	0.5	
		09-Apr-98	G		U	ug/L	0.5	
MW-09	Toluene		G		U	ug/L	3	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
MW-09	Total Organic Carbon		G	Q	2,700	ug/L		Q3
			G	Q	2,300	ug/L		Q2
			G	Q	2,700	ug/L		Q4
			G	Q	2,400	ug/L		Q1
		02-Dec-81			14,000	ug/L	3000	
		16-Mar-82			7,000	ug/L	3000	
		16-Mar-82			U	ug/L	3000	
		28-Jun-82			16,000	ug/L	3000	
		28-Jun-82			4,300	ug/L	3000	
		13-Sep-82			U	ug/L	3000	
		13-Sep-82			14,000	ug/L	3000	
		14-Apr-83			9,000	ug/L		
		14-Apr-83			6,000	ug/L		
		04-Oct-83			1,600	ug/L		
		04-Oct-83			1,900	ug/L		
		04-Oct-83			1,700	ug/L		
		04-Oct-83			1,500	ug/L		
		17-Apr-84			2,300	ug/L		
		17-Apr-84			2,700	ug/L		
		17-Apr-84			2,400	ug/L		
MW-09	Total Organic Halide		N	Q	U	ug/L	20	Q4
			C	Q	1.7	ug/L	1	Q1
			C	Q	4.9	ug/L	1	Q2
			C	Q	3.9	ug/L	1	Q3
			C	Q	3.3	ug/L	1	Q4
			N	Q	U	ug/L	20	Q3
			N	Q	U	ug/L	20	Q2
			N	Q	U	ug/L	20	Q1
		02-Dec-81			95	ug/L	5	
		16-Mar-82			3.0	ug/L	5	
		28-Jun-82			11	ug/L	5	
		13-Sep-82			6.0	ug/L	5	
		14-Apr-83			U	ug/L	1	
		14-Apr-83			11	ug/L	1	
		14-Apr-83			6.7	ug/L	1	
		04-Oct-83			14	ug/L	1	
		04-Oct-83			20	ug/L	1	
		04-Oct-83			8.8	ug/L	1	
		04-Oct-83			6.7	ug/L	1	
		17-Apr-84			1.7	ug/L	1	
		17-Apr-84			4.9	ug/L	1	
		17-Apr-84			3.9	ug/L	1	
		17-Apr-84			3.3	ug/L	1	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-09	Toxaphene	02-Dec-81			U	ug/L	5		
		16-Mar-82			U	ug/L	5		
		28-Jun-82			U	ug/L	5		
		13-Sep-82			U	ug/L	5		
MW-09	trans-1,2-Dichloroethene		G		U	ug/L	3		
MW-09	trans-1,3-Dichloropropene		G		U	ug/L	3		
MW-09	Trichloroethene		G		U	ug/L	3		
MW-09	Trichlorofluoromethane		G		U	ug/L	3		
MW-09	Vinyl chloride		G		U	ug/L	3		
MW-10	1,1,1-Trichloroethane		G		U	ug/L	3		
MW-10	1,1,2,2-Tetrachloroethane		G		U	ug/L	3		
MW-10	1,1,2-Trichloroethane		G		U	ug/L	3		
MW-10	1,1-Dichloroethane		G		U	ug/L	3		
MW-10	1,1-Dichloroethene		G		U	ug/L	3		
MW-10	1,2,4-Trichlorobenzene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-10	1,2-Dichlorobenzene		G		U	ug/L	6		
			G		U	ug/L	3		
			M		U	ug/L	10		
MW-10	1,2-Dichloroethane		G		U	ug/L	3		
MW-10	1,2-Dichloropropane		G		U	ug/L	3		
MW-10	1,2-Diphenylhydrazine		M		U	ug/L	10		
			G		U	ug/L	6		
MW-10	1,3-Dichlorobenzene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-10	1,4-Dichlorobenzene		M		U	ug/L	10		
			G		U	ug/L	3		
			G		U	ug/L	6		
			G		U	ug/L	3		
MW-10	2,3,7,8-Tetrachlorodibenzo-p-doxin		M		U	ug/L	10		
			G		U	ug/L	20		
MW-10	2,4,6-Trichlorophenol		G		U	ug/L	10		
			M		U	ug/L	10		
MW-10	2,4-Dichlorophenol		G		U	ug/L	10		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-10	2,4-Dichlorophenol		M		U	ug/L	10		
MW-10	2,4-Dimethylphenol		G		U	ug/L	10		
			M		U	ug/L	10		
MW-10	2,4-Dinitrophenol		G		U	ug/L	10		
			M		U	ug/L	10		
MW-10	2,4-Dinitrotoluene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-10	2,6-Dinitrotoluene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-10	2-Chloroethylvinyl ether		G		U	ug/L	3		
MW-10	2-Chloronaphthalene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-10	2-Chlorophenol		M		U	ug/L	10		
			G		U	ug/L	10		
MW-10	3,3'-Dichlorobenzidine		M		U	ug/L	10		
			G		U	ug/L	6		
MW-10	4,6-Dinitro-o-cresol		M		U	ug/L	10		
			G		U	ug/L	10		
MW-10	4-Bromophenyl-phenyl ether		M		U	ug/L	10		
			G		U	ug/L	6		
MW-10	4-Chlorophenylphenyl ether		M		U	ug/L	10		
			G		U	ug/L	6		
MW-10	Acenaphthene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-10	Acenaphthylene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-10	Anthracene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-10	Benzene		G		U	ug/L	3		
MW-10	Benzidine		M		U	ug/L	10		
			G		U	ug/L	20		
MW-10	Benzo(a)anthracene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-10	Benzo(a)pyrene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-10	Benzo(b)fluoranthene		G		U	ug/L	6		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
MW-10	Benzo(b)fluoranthene		M		U	ug/L	10	
MW-10	Benzo(g,h,i)perylene		G		U	ug/L	20	
			M		U	ug/L	10	
MW-10	Benzo(k)fluoranthene		G		U	ug/L	6	
			M		U	ug/L	10	
MW-10	bis(2-Chloroethoxy)methane		G		U	ug/L	6	
			M		U	ug/L	10	
MW-10	bis(2-Chloroethyl)ether		G		U	ug/L	6	
			M		U	ug/L	10	
MW-10	bis(2-Chloroisopropyl)ether		G		U	ug/L	6	
			M		U	ug/L	10	
MW-10	bis(2-Ethylhexyl)phthalate		M		U	ug/L	10	
			G		U	ug/L	6	
MW-10	bis(Chloromethyl)ether		G		U	ug/L	6	
MW-10	Bromide		G		U	ug/L	500	
		29-Aug-84	M		0.59	mg/L		
MW-10	Bromodichloromethane		G		U	ug/L	3	
MW-10	Bromoform		G		U	ug/L	3	
MW-10	Bromomethane (methyl bromide)		G		U	ug/L	3	
MW-10	Butylbenzylphthalate		M		U	ug/L	10	
			G		U	ug/L	6	
MW-10	Carbon tetrachloride		G		U	ug/L	3	
MW-10	Chloride		G		1,700	ug/L		
		29-Aug-84	M		2.5	mg/L		
MW-10	Chlorobenzene		G		U	ug/L	3	
MW-10	Chloroethane		G		U	ug/L	3	
MW-10	Chloroform		G		U	ug/L	3	
MW-10	Chloromethane (methyl chloride)		G		U	ug/L	3	
MW-10	Chrysene		M		U	ug/L	10	
			G		U	ug/L	6	
MW-10	cis-1,3-Dichloropropene		G		U	ug/L	3	
MW-10	di-N-Butylphthalate		G		U	ug/L	6	
			M		U	ug/L	10	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
MW-10	di-N-Octylphthalate		G		U	ug/L	6	
			M		U	ug/L	10	
MW-10	Dibenz(a,h)anthracene		M		U	ug/L	10	
			G		U	ug/L	20	
MW-10	Dibromochloromethane		G		U	ug/L	3	
MW-10	Diethylphthalate		G		U	ug/L	6	
			M		U	ug/L	10	
MW-10	Dimethylphthalate		M		U	ug/L	10	
			G		U	ug/L	6	
MW-10	Ethylbenzene		G		U	ug/L	3	
MW-10	Fluoranthene		G		U	ug/L	6	
			M		U	ug/L	10	
MW-10	Fluorene		M		U	ug/L	10	
			G		U	ug/L	6	
MW-10	Fluoride		G		980	ug/L	100	
		29-Aug-84	M		0.86	mg/L	0.05	
MW-10	Hexachlorobenzene		M		U	ug/L	10	
			G		U	ug/L	6	
MW-10	Hexachlorobutadiene		G		U	ug/L	6	
			M		U	ug/L	10	
MW-10	Hexachlorocyclopentadiene		M		U	ug/L	10	
			G		U	ug/L	6	
MW-10	Hexachloroethane		G		U	ug/L	6	
			M		U	ug/L	10	
MW-10	Indeno(1,2,3-cd)pyrene		G		U	ug/L	20	
			M		U	ug/L	10	
MW-10	Isophorone		M		U	ug/L	10	
			G		U	ug/L	6	
MW-10	Methylene chloride (dichloromethane)		G		U	ug/L	3	
MW-10	N-Nitroso-di-n-propylamine		M		U	ug/L	10	
			G		U	ug/L	6	
MW-10	N-Nitrosodimethylamine		G		U	ug/L	6	
			M		U	ug/L	10	
MW-10	N-Nitrosodiphenylamine		G		U	ug/L	6	
			M		U	ug/L	10	

Location	Parameter	Date Samp	Lab	Qor F?	Result	Unit	PQL	Desc	Qual
MW-10	Naphthalene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-10	Nirobenzene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-10	o-Nitrophenol (2-Nitrophenol)		M		U	ug/L	10		
			G		U	ug/L	10		
MW-10	p-Chloro-m-cresol		G		U	ug/L	10		
			M		U	ug/L	10		
MW-10	Pentachlorophenol		M		U	ug/L	10		
			G		U	ug/L	10		
MW-10	Phenanthrene		M		U	ug/L	10		
			G		U	ug/L	6		
MW-10	Phenol		G		U	ug/L	10		
			M		U	ug/L	10		
MW-10	Pyene		G		U	ug/L	6		
			M		U	ug/L	10		
MW-10	Terachloroethene		G		U	ug/L	3		
MW-10	Touene		G		U	ug/L	3		
MW-10	Toal Organic Carbon		G	Q	1,600	ug/L		Q4	
			G	Q	1,600	ug/L		Q3	
			G	Q	1,700	ug/L		Q2	
			G	Q	1,700	ug/L		Q1	
MW-10	Toal Organic Halide		G	Q	22	ug/L	1	Q1	
			M	Q	24	ug/L	20	Q2	
			M	Q	U	ug/L	20	Q4	
			G	Q	16	ug/L	1	Q4	
			M	Q	U	ug/L	20	Q1	
			G	Q	19	ug/L	1	Q3	
			G	Q	13	ug/L	1	Q2	
			M	Q	32	ug/L	20	Q3	
MW-10	trans-1,2-Dichloroethene		G		U	ug/L	3		
MW-10	trans-1,3-Dichloropropene		G		U	ug/L	3		
MW-10	Trichloroethene		G		U	ug/L	3		
MW-10	Trichlorofluoromethane		G		U	ug/L	3		
MW-10	Vinyl chloride		G		U	ug/L	3		
MW-11	Benzene	26-Mar-87			U	ug/L	1.1		

Locaton	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-1'	Benzene	26-Mar-87			U	ug/L	1		
		26-Mar-87			U	ug/L	1.1		
		26-Mar-87			U	ug/L	1.1		
		21-Sep-87			U	ug/L			
		21-Sep-87			U	ug/L			
		21-Sep-87			U	ug/L	1		
		21-Sep-87			U	ug/L	1		
		23-Mar-88			U	ug/L			
		23-Mar-88			U	ug/L			
		23-Mar-88			U	ug/L			
		23-Mar-88			U	ug/L			
		21-Mar-89			U	ug/L			
		21-Mar-89			U	ug/L			
		21-Mar-89			U	ug/L			
		21-Mar-89			U	ug/L			
		08-Sep-89			U	ug/L			
		08-Sep-89			U	ug/L			
		08-Sep-89			U	ug/L			
		08-Sep-89			U	ug/L			
		21-Mar-90			U	ug/L			
		21-Mar-90			U	ug/L			
		21-Mar-90			U	ug/L			
		21-Mar-90			U	ug/L			
		11-Sep-90			U	ug/L	10		
		11-Sep-90			U	ug/L	10		
		11-Sep-90			U	ug/L	10		
		11-Sep-90			U	ug/L	10		
MW-11	Methyl parathion	11-Sep-90			U	ug/L	1.2		
		11-Sep-90			U	ug/L	1.2		
		11-Sep-90			U	ug/L	1.2		
		11-Sep-90			U	ug/L	1.2		
MW-11A	1,1,1,2-Tetrachloroehane	05-Mar-96	S		U	ug/L	5		
		05-Mar-96	S		U	ug/L	5		
MW-11A	1,1,1-Trichloroethane	05-Mar-96	S		U	ug/L	5		
		05-Mar-96	S		U	ug/L	5		
MW-11A	1,1,2,2-Tetrachloroehane	05-Mar-96	S		U	ug/L	5		
		05-Mar-96	S		U	ug/L	5		
MW-11A	1,1,2-Trichloroethane	05-Mar-96	S		U	ug/L	5		
		05-Mar-96	S		U	ug/L	5		
MW-11A	1,1-Dichloroethane	05-Mar-96	S		U	ug/L	5		
		05-Mar-96	S		U	ug/L	5		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
MW-11A	1,1-Dichloroethene	05-Mar-96	S		U	ug/L	5	
		05-Mar-96	S		U	ug/L	5	
MW-11A	1,2,3-Trichloropropane	05-Mar-96	S		U	ug/L	5	
		05-Mar-96	S		U	ug/L	5	
MW-11A	1,2,4,5-Tetrachlorobenzene	05-Mar-96	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-11A	1,2,4-Trichlorobenzene	05-Mar-96	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
		08-Oct-97	S		U	ug/L		
MW-11A	1,2-Dibromo-3-chloropropane	05-Mar-96	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-11A	1,2-Dibromoethane (EDB)	05-Mar-96	S		U	ug/L	5	
		05-Mar-96	S		U	ug/L	5	
MW-11A	1,2-Dichlorobenzene	05-Mar-96	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
		15-Apr-97	S		U	ug/L	10	
MW-11A	1,2-Dichloroethane	05-Mar-96	S		U	ug/L	5	
		05-Mar-96	S		U	ug/L	5	
MW-11A	1,2-Dichloropropane	05-Mar-96	S		U	ug/L	5	
		05-Mar-96	S		U	ug/L	5	
MW-11A	1,3,5-Trinitrobenzene	05-Mar-96	S		U	ug/L	200	
		05-Mar-96	S		U	ug/L	200	
MW-11A	1,3-Dichlorobenzene	05-Mar-96	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-11A	1,4-Dichlorobenzene	05-Mar-96	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
		15-Apr-97	S		U	ug/L	10	
MW-11A	1,4-Dioxane	05-Mar-96	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-11A	1,4-Naphthoquinone	05-Mar-96	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-11A	1-Naphylamine	05-Mar-96	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-11A	2,3,4,6-Tetrachlorophenol	05-Mar-96	S		U	ug/L	50	
		05-Mar-96	S		U	ug/L	50	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
MW-11A	2,3,7,8-Tetrachlorodbenzo-p-dioxin	08-Oct-97	S		U	ug/L		
MW-11A	2,4,5-T	05-Mar-96	S		U	ug/L	0.5	
		05-Mar-96	S		U	ug/L	0.5	
MW-11A	2,4,5-TP (Silvex)	05-Mar-96	S		U	ug/L	0.5	
		05-Mar-96	S		U	ug/L	0.5	
MW-11A	2,4,5-Trichlorophend	05-Mar-96	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
		15-Apr-97	S		U	ug/L	10	
		08-Oct-97	G		U	ug/L	10	
MW-11A	2,4,6-Trichlorophend	05-Mar-96	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
		15-Apr-97	S		U	ug/L	10	
		08-Oct-97	G		U	ug/L	10	
MW-11A	2,4-D	05-Mar-96	S		U	ug/L	0.5	
		05-Mar-96	S		U	ug/L	0.5	
MW-11A	2,4-Dichlorophenol	05-Mar-96	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
		15-Apr-97	S		U	ug/L	10	
		08-Oct-97	G		U	ug/L	10	
MW-11A	2,4-Dimethylphenol	05-Mar-96	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-11A	2,4-Dinitrophenol	05-Mar-96	S		U	ug/L	50	
		05-Mar-96	S		U	ug/L	50	
MW-11A	2,4-Dinitrotoluene	05-Mar-96	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-11A	2,6-Dichlorophenol	05-Mar-96	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-11A	2,6-Dinitrotoluene	05-Mar-96	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-11A	2-Acetylaminofluorere	05-Mar-96	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-11A	2-Chloroethylvinyl ether	05-Mar-96	S		U	ug/L	50	
		05-Mar-96	S		U	ug/L	50	
MW-11A	2-Chloronaphthalene	05-Mar-96	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-11A	2-Chlorophenol	05-Mar-96	S		U	ug/L	10	

Location	Parameter	Date Samp	Lab	Qor F?	Result	Unit	PQL	Desc Qual
MW-11A	2-Chlorophenol	05-Mar-96	S		U	ug/L	10	
MW-11A	2-Hexanone	05-Mar-96	S		U	ug/L	25	
		05-Mar-96	S		U	ug/L	25	
MW-11A	2-Methylnaphthalene	05-Mar-96	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-11A	2-Naphtylamine	05-Mar-96	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-11A	2-Picoline	05-Mar-96	S		U	ug/L	200	
		05-Mar-96	S		U	ug/L	200	
MW-11A	2-sec-Butyl-4,6-dinitrophenol	05-Mar-96	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-11A	3,3'-Dichlorobenzidine	05-Mar-96	S		U	ug/L	20	
		05-Mar-96	S		U	ug/L	20	
MW-11A	3,3'-Dimethylbenzidine	05-Mar-96	S		U	ug/L	200	
		05-Mar-96	S		U	ug/L	200	
MW-11A	3-Methylcholanthrene	05-Mar-96	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-11A	4,4'-DDD	05-Mar-96	S		U	ug/L	0.1	
MW-11A	4,4'-DDE	05-Mar-96	S		U	ug/L	0.1	
MW-11A	4,4'-DDT	05-Mar-96	S		U	ug/L	0.1	
MW-11A	4,6-Dinitro-o-cresol	05-Mar-96	S		U	ug/L	50	
		05-Mar-96	S		U	ug/L	50	
MW-11A	4-Aminobiphenyl	05-Mar-96	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-11A	4-Bromophenyl-phenyl ether	05-Mar-96	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-11A	4-Chlorophenylphenyl ether	05-Mar-96	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-11A	4-Methyl-2-pentanone (MIBK)	05-Mar-96	S		U	ug/L	25	
		05-Mar-96	S		U	ug/L	25	
MW-11A	4-Nitroquinoline 1-oxide	05-Mar-96	S		U	ug/L	100	
		05-Mar-96	S		U	ug/L	100	
MW-11A	5-Nitro-o-toluidine	05-Mar-96	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	

Locaton	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
MW-11A	7,12-Dimethylbenz(a)anthracene	05-Mar-96	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-11A	a-a-Dimethylphenethylamine	05-Mar-96	S		U	ug/L	2000	
		05-Mar-96	S		U	ug/L	2000	
MW-11A	Acenaphthene	05-Mar-96	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-11A	Acenaphthylene	05-Mar-96	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-11A	Acetone	05-Mar-96	S		U	ug/L	25	
		05-Mar-96	S		U	ug/L	25	
MW-11A	Acetonitrile	05-Mar-96	S		U	ug/L	1000	
		05-Mar-96	S		U	ug/L	1000	
MW-11A	Acetophenone	05-Mar-96	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-11A	Acrolein	05-Mar-96	S		U	ug/L	100	
		05-Mar-96	S		U	ug/L	100	
MW-11A	Acrylonitrile	05-Mar-96	S		U	ug/L	100	
		05-Mar-96	S		U	ug/L	100	
MW-11A	Aldrin	05-Mar-96	S		U	ug/L	0.05	
MW-11A	Allychloride (3-chloropropene)	05-Mar-96	S		U	ug/L	5	
		05-Mar-96	S		U	ug/L	5	
MW-11A	alpha-BHC	05-Mar-96	S		U	ug/L	0.05	
MW-11A	Aniline	05-Mar-96	S		U	ug/L	50	
		05-Mar-96	S		U	ug/L	50	
MW-11A	Anthracene	05-Mar-96	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-11A	Antimony	05-Mar-96	S		U	ug/L	50	
		05-Mar-96	S		U	ug/L	50	
		05-Mar-96	S		U	ug/L	50	
MW-11A	Aramite	05-Mar-96	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-11A	Arocior 1016	05-Mar-96	S		U	ug/L	1	
		15-Apr-97	S		U	ug/L	0.5	
		08-Oct-97	C		U	ug/L	0.5	
		08-Oct-97	S		U	mg/L	0.5	

Location	Parameter	Date Samp	Lab	Qor F?	Result	Unit	PQL	Desc	Qual
MW-11A	Aroclor 1016	08-Oct-97	G	F	U	ug/L	0.5	S	
		08-Oct-97	S	F	U	mg/L	0.5	S	
		27-Mar-98	S		U	ug/L	0.5		
		27-Mar-98	S	F	U	ug/L	0.5		
MW-11A	Aroclor 1221	05-Mar-96	S		U	ug/L	2		
		15-Apr-97	S		U	ug/L	1		
		08-Oct-97	S		U	mg/L	1		
		08-Oct-97	G		U	ug/L	0.5		
		08-Oct-97	S	F	U	mg/L	1	S	
		08-Oct-97	G	F	U	ug/L	0.5	S	
		27-Mar-98	S		U	ug/L	0.5		
		27-Mar-98	S	F	U	ug/L	0.5		
MW-11A	Aroclor 1232	05-Mar-96	S		U	ug/L	1		
		15-Apr-97	S		U	ug/L	0.5		
		08-Oct-97	G		U	ug/L	0.5		
		08-Oct-97	S		U	mg/L	0.5		
		08-Oct-97	S	F	U	mg/L	0.5	S	
		08-Oct-97	G	F	U	ug/L	0.5	S	
		27-Mar-98	S		U	ug/L	0.5		
		27-Mar-98	S	F	U	ug/L	0.5		
MW-11A	Aroclor 1242	05-Mar-96	S		U	ug/L	1		
		15-Apr-97	S		U	ug/L	0.5		
		08-Oct-97	G		U	ug/L	0.5		
		08-Oct-97	S		U	mg/L	0.5		
		08-Oct-97	G	F	U	ug/L	0.5	S	
		08-Oct-97	S	F	U	mg/L	0.5	S	
		27-Mar-98	S		U	ug/L	0.5		
		27-Mar-98	S	F	U	ug/L	0.5		
MW-11A	Aroclor 1248	05-Mar-96	S		U	ug/L	1		
		15-Apr-97	S		U	ug/L	0.5		
		08-Oct-97	S		U	mg/L	0.5		
		08-Oct-97	G		U	ug/L	0.5		
		08-Oct-97	S	F	U	mg/L	0.5	S	
		08-Oct-97	G	F	U	ug/L	0.5	S	
		27-Mar-98	S		U	ug/L	0.5		
		27-Mar-98	S	F	U	ug/L	0.5		
MW-11A	Aroclor 1254	05-Mar-96	S		U	ug/L	1		
		15-Apr-97	S		U	ug/L	0.5		
		08-Oct-97	S		U	mg/L	0.5		
		08-Oct-97	G		U	ug/L	0.5		
		08-Oct-97	S	F	U	mg/L	0.5	S	

See Table L-3 for Abbreviations and Qualifiers.

Locaton	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-11A	Aroclor 1254	08-Oct-97	G	F	U	ug/L	0.5	S	
		27-Mar-98	S		U	ug/L	0.5		
		27-Mar-98	S	F	U	ug/L	0.5		
MW-11A	Aroclor 1260	05-Mar-96	S		U	ug/L	1		
		15-Apr-97	S		U	ug/L	0.5		
		08-Oct-97	S		U	mg/L	0.5		
		08-Oct-97	G		U	ug/L	0.5		
		08-Oct-97	G	F	U	ug/L	0.5	S	
		08-Oct-97	S	F	U	mg/L	0.5	S	
		27-Mar-98	S		U	ug/L	0.5		
		27-Mar-98	S	F	U	ug/L	0.5		
MW-11A	Aroclor 1268	05-Mar-96	S		U	ug/L	1		
MW-11A	Arsenic	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-11A	Barium	05-Mar-96	S		14	ug/L	10		
		05-Mar-96	S		35	ug/L	10		
		05-Mar-96	S		61	ug/L	10		
MW-11A	Benzene	05-Mar-91			U	ug/L	10		
		05-Mar-91			U	ug/L	10		
		05-Mar-91			U	ug/L	10		
		05-Mar-91			U	ug/L	10		
		16-Sep-91			U	ug/L	10		
		16-Sep-91			U	ug/L	10		
		16-Sep-91			U	ug/L	10		
		16-Sep-91			U	ug/L	10		
		11-Mar-92			U	ug/L	10		
		16-Sep-92			U	ug/L	1		
		24-Mar-93			U	ug/L	1		
		14-Sep-93			U	ug/L	1		
		07-Mar-94			U	ug/L	10		
		13-Sep-94			U	ug/L	1		
		19-Apr-95			U	ug/L	0.11		
		19-Apr-95			U	ug/L	0.11		
		19-Apr-95			U	ug/L	0.11		
		19-Apr-95			U	ug/L	0.11		
		05-Mar-96	S		U	ug/L	5		
		05-Mar-96	S		U	ug/L	5		
		11-Sep-96	S	Q	U	ug/L	1		
		11-Sep-96	S	Q	U	ug/L	1	Q3	
		11-Sep-96	S	Q	U	ug/L	1	Q4	
		11-Sep-96	S	Q	U	ug/L	1	Q2	

See Table L-3 for Abbreviations and Qualifiers.

Location	Parameter	Date Samp	Lab	Qor F?	Result	Unit	PQL	Desc	Qual
MW-11A	Benzene	11-Sep-96	S	Q	U	ug/L	1	Q3	
		11-Sep-96	S	Q	U	ug/L	1		
		11-Sep-96	S	Q	U	ug/L	1	Q4	
		11-Sep-96	S	Q	U	ug/L	1	Q2	
MW-11A	Benzo(a)anthracene	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-11A	Benzo(a)pyrene	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-11A	Benzo(b)fluoranthene	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-11A	Benzo(g,h,i)perylene	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-11A	Benzo(k)fluoranthene	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-11A	Benzyl alcohol	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-11A	Beryllium	05-Mar-96	S		U	ug/L	5		
		05-Mar-96	S		U	ug/L	5		
		05-Mar-96	S		U	ug/L	5		
MW-11A	bea-BHC	05-Mar-96	S		U	ug/L	0.05		
MW-11A	bis(2-Chloroethoxy)methane	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-11A	bis(2-Chloroethyl)ether	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-11A	bis(2-Chloroisopropyl)ether	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-11A	bis(2-Ethylhexyl)phthalate	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-11A	Bromodichloromethane	05-Mar-96	S		U	ug/L	5		
		05-Mar-96	S		U	ug/L	5		
MW-11A	Bromoform	05-Mar-96	S		U	ug/L	5		
		05-Mar-96	S		U	ug/L	5		
MW-11A	Bromomethane (methyl bromide)	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-11A	Butylbenzylphthalate	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		

Locaton	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-11A	Cadmium	05-Mar-96	S		U	ug/L	5		
		05-Mar-96	S		U	ug/L	5		
		05-Mar-96	S		U	ug/L	5		
MW-11A	Carbon disulfide	05-Mar-96	S		U	ug/L	5		
		05-Mar-96	S		U	ug/L	5		
MW-11A	Carbon tetrachloride	05-Mar-96	S		U	ug/L	5		
		05-Mar-96	S		U	ug/L	5		
MW-11A	Chlordane	05-Mar-96	S		U	ug/L	0.5		
MW-11A	Chlorobenzene	05-Mar-96	S		U	ug/L	5		
		05-Mar-96	S		U	ug/L	5		
		15-Apr-97	S		U	ug/L	1		
		08-Oct-97	G		U	ug/L	1		
MW-11A	Chlorobenzilate	05-Mar-96	S		U	ug/L	0.5		
MW-11A	Chloroethane	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-11A	Chloroform	05-Mar-96	S		U	ug/L	5		
		05-Mar-96	S		U	ug/L	5		
MW-11A	Chloromethane (methyl chloride)	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-11A	Chloroprene	05-Mar-96	S		U	ug/L	5		
		05-Mar-96	S		U	ug/L	5		
MW-11A	Chromium	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-11A	Chrysene	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-11A	cis-1,3-Dichloropropene	05-Mar-96	S		U	ug/L	5		
		05-Mar-96	S		U	ug/L	5		
MW-11A	Cobalt	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
		15-Apr-97	S		0.0041	mg/L	0.01	J	
		08-Oct-97	G		0.030	mg/L	0.01		
		08-Oct-97	G	F	U	mg/L	0.01	S	
MW-11A	Copper	05-Mar-96	S		U	ug/L	25		
		05-Mar-96	S		U	ug/L	25		
		05-Mar-96	S		U	ug/L	25		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-11A	Cresol, m&p	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-11A	delta-BHC	05-Mar-96	S		U	ug/L	0.05		
MW-11A	diN-Butylphthalate	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-11A	diN-Octylphthalate	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-11A	Dallate	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-11A	Dibenz(a,h)anthracene	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-11A	Dibenzofuran	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-11A	Dibromochloromethane	05-Mar-96	S		U	ug/L	5		
		05-Mar-96	S		U	ug/L	5		
MW-11A	Dichlorodifluoromethane	05-Mar-96	S		U	ug/L	5		
		05-Mar-96	S		U	ug/L	5		
MW-11A	Dieldrin	05-Mar-96	S		U	ug/L	0.1		
MW-11A	Diethylphthalate	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-11A	Dimethoate	05-Mar-96	S		U	ug/L	2		
MW-11A	Dimethylphthalate	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-11A	Dioxin-2,3,7,8-TCDD	05-Mar-96	S		U	ug/L	0.005		
		05-Mar-96	S		U	ug/L	0.005		
MW-11A	Disulfoton	05-Mar-96	S		U	ug/L	2		
MW-11A	Endosulfan I	05-Mar-96	S		U	ug/L	0.05		
MW-11A	Endosulfan II	05-Mar-96	S		U	ug/L	0.1		
MW-11A	Endosulfan sulfate	05-Mar-96	S		U	ug/L	0.1		
MW-11A	Endrin	05-Mar-96	S		U	ug/L	0.1		
MW-11A	Endrin Aldehyde	05-Mar-96	S		U	ug/L	0.1		
MW-11A	Ethyl methacrylate	05-Mar-96	S		U	ug/L	5		
		05-Mar-96	S		U	ug/L	5		
MW-11A	Ethyl methanesulfonate	05-Mar-96	S		U	ug/L	10		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-11A	Ethyl methanesulforate	05-Mar-96	S		U	ug/L	10		
MW-11A	Ethylbenzene	05-Mar-96	S		U	ug/L	5		
		05-Mar-96	S		U	ug/L	5		
MW-11A	Famphur	05-Mar-96	S		U	ug/L	2		
MW-11A	Fluoranthene	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-11A	Fluorene	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-11A	gamma-BHC (Lindane)	05-Mar-96	S		U	ug/L	0.05		
MW-11A	Heptachlor	05-Mar-96	S		U	ug/L	0.05		
MW-11A	Heptachlor epoxide	05-Mar-96	S		U	ug/L	0.05		
MW-11A	Hexa CDD	05-Mar-96	S		U	ug/L	0.005		
		05-Mar-96	S		U	ug/L	0.005		
MW-11A	Hexa CDF	05-Mar-96	S		U	ug/L	0.005		
		05-Mar-96	S		U	ug/L	0.005		
MW-11A	Hexachlorobenzene	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-11A	Hexachlorobutadiene	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-11A	Hexachlorocyclopentadiene	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-11A	Hexachloroethane	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-11A	Hexachloropropene	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-11A	Indeno(1,2,3-cd)pyrene	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-11A	Isobutyl alcohol	05-Mar-96	S		U	ug/L	1000		
		05-Mar-96	S		U	ug/L	1000		
MW-11A	Isodrin	05-Mar-96	S		U	ug/L	0.05		
MW-11A	Isophorone	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-11A	Kepone	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-11A	Lead	05-Mar-96	S		U	ug/L	5		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
MW-11A	Lead	05-Mar-96	S		22	ug/L	5	
MW-11A	mDinitrobenzene	05-Mar-96	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-11A	mNitroaniline	05-Mar-96	S		U	ug/L	50	
		05-Mar-96	S		U	ug/L	50	
MW-11A	Mercury	05-Mar-96	S		U	ug/L	0.2	
		05-Mar-96	S		0.81	ug/L	0.2	
		15-Apr-97	S		0.000066	mg/L	0.0002	J
		27-Mar-98	G		U	mg/L	0.0002	
		27-Mar-98	G	F	U	mg/L	0.0002	
MW-11A	Methacrylonitrile	05-Mar-96	S		U	ug/L	100	
		05-Mar-96	S		U	ug/L	100	
MW-11A	Methapyrilene	05-Mar-96	S		U	ug/L	2000	
		05-Mar-96	S		U	ug/L	2000	
MW-11A	Methoxychlor	05-Mar-96	S		U	ug/L	0.5	
MW-11A	Methyl ethyl ketone (MEK)	05-Mar-96	S		U	ug/L	25	
		05-Mar-96	S		U	ug/L	25	
MW-11A	Methyl iodide	05-Mar-96	S		U	ug/L	5	
		05-Mar-96	S		U	ug/L	5	
MW-11A	Methyl methacrylate	05-Mar-96	S		U	ug/L	5	
		05-Mar-96	S		U	ug/L	5	
MW-11A	Methyl methanesulfonate	05-Mar-96	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-11A	Methyl parathion	05-Mar-91			U	ug/L	1.2	
		16-Sep-91			U	ug/L	1.2	
		11-Mar-92			U	ug/L	1.2	
		16-Sep-92			U	ug/L	0.5	
		24-Mar-93			U	ug/L	0.5	
		05-Mar-96	S		U	ug/L	0.5	
MW-11A	Methylene bromide	05-Mar-96	S		U	ug/L	5	
		05-Mar-96	S		U	ug/L	5	
MW-11A	Methylene chloride (dichloromethane)	05-Mar-96	S		U	ug/L	5	
		05-Mar-96	S		U	ug/L	5	
		15-Apr-97	S		U	ug/L	5	
		08-Oct-97	G		U	ug/L	5	
MW-11A	N-Nitroso-di-n-butylamine	05-Mar-96	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
MW-11A	N-Nitroso-di-n-propylamine	05-Mar-96	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-11A	N-Nitrosodiethylamine	05-Mar-96	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-11A	N-Nitrosodimethylamine	05-Mar-96	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-11A	N-Nitrosodiphenylamine	05-Mar-96	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-11A	N-Nitrosomethylethylamine	05-Mar-96	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-11A	N-Nitrosomorpholine	05-Mar-96	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-11A	N-Nitrosopiperidine	05-Mar-96	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-11A	N-Nitrosopyrrolidine	05-Mar-96	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-11A	Naphthalene	05-Mar-96	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-11A	Nickel	05-Mar-96	S		U	ug/L	40	
		05-Mar-96	S		U	ug/L	40	
		05-Mar-96	S		U	ug/L	40	
MW-11A	Nitrobenzene	05-Mar-96	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-11A	o,o,o-Triethylphosphorothioate	05-Mar-96	S		31	ug/L	10	
		05-Mar-96	S		15	ug/L	10	
		15-Apr-97	S		36	ug/L	10	
		08-Oct-97	G		21	ug/L	10	
		26-Mar-98	G		21	ug/L	10	
MW-11A	o,o-Diethyl-o-2-pyrazinylphoshorothioate	05-Mar-96	S		U	ug/L	1	
MW-11A	o-Cresol	05-Mar-96	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	
MW-11A	o-Nitroaniline	05-Mar-96	S		U	ug/L	50	
		05-Mar-96	S		U	ug/L	50	
MW-11A	o-Nitrophenol (2-Nitrophenol)	05-Mar-96	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	10	

Location	Parameter	Date Samp	Lab	Qor F?	Result	Unit	PQL	Desc	Qual
MW-11A	o-Toluidine	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-11A	p-(Dimethylamino)azobenzere	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-11A	p-Chloro-m-cresol	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-11A	p-Chloroaniline	05-Mar-96	S		U	ug/L	20		
		05-Mar-96	S		U	ug/L	20		
MW-11A	p-Nitroaniline	05-Mar-96	S		U	ug/L	50		
		05-Mar-96	S		U	ug/L	50		
MW-11A	p-Phenylenediamine	05-Mar-96	S		U	ug/L	2000		
		05-Mar-96	S		U	ug/L	2000		
MW-11A	Penta CDD	05-Mar-96	S		U	ug/L	0.005		
		05-Mar-96	S		U	ug/L	0.005		
MW-11A	Penta CDF	05-Mar-96	S		U	ug/L	0.005		
		05-Mar-96	S		U	ug/L	0.005		
MW-11A	Pentachlorobenzene	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-11A	Pentachloroethane	05-Mar-96	S		U	ug/L	25		
		05-Mar-96	S		U	ug/L	25		
MW-11A	Pentachloronitrobenzene	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-11A	Pentachlorophenol	05-Mar-96	S		U	ug/L	50		
		05-Mar-96	S		U	ug/L	50		
		15-Apr-97	S		U	ug/L	1		
		08-Oct-97	G		U	ug/L	1		
MW-11A	Phenacetin	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-11A	Phenanthrene	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-11A	Phenol	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
		15-Apr-97	S		U	ug/L	10		
		08-Oct-97	G		U	ug/L	10		
		26-Mar-98	G		U	ug/L	10		
MW-11A	Phorate	05-Mar-96	S		U	ug/L	1		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-11A	Pronamide	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-11A	Propionitrile	05-Mar-96	S		U	ug/L	100		
		05-Mar-96	S		U	ug/L	100		
MW-11A	Pyrene	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-11A	Pyridine	05-Mar-96	S		U	ug/L	200		
		05-Mar-96	S		U	ug/L	200		
MW-11A	Safrole	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-11A	Selenium	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-11A	Silver	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-11A	Styrene	05-Mar-96	S		U	ug/L	5		
		05-Mar-96	S		U	ug/L	5		
MW-11A	Sulfide	05-Mar-96	S		U	ug/L	1000		
		05-Mar-96	S		U	ug/L	1000		
MW-11A	Tetra CDD	05-Mar-96	S		U	ug/L	0.005		
		05-Mar-96	S		U	ug/L	0.005		
MW-11A	Tetra CDF	05-Mar-96	S		U	ug/L	0.005		
		05-Mar-96	S		U	ug/L	0.005		
MW-11A	Tetrachloroethene	05-Mar-96	S		U	ug/L	5		
		05-Mar-96	S		U	ug/L	5		
MW-11A	Tetraethyldithiopyrophosphate (Sulfotepp)	05-Mar-96	S		U	ug/L	0.5		
		15-Apr-97	S		U	ug/L	0.5		
		08-Oct-97	G		U	ug/L	0.5		
MW-11A	Thallium	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-11A	Tin	05-Mar-96	S		U	ug/L	50		
		05-Mar-96	S		U	ug/L	50		
		05-Mar-96	S		U	ug/L	50		
MW-11A	Toluene	05-Mar-96	S		U	ug/L	5		
		05-Mar-96	S		U	ug/L	5		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-11A	Total Cyanide	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-11A	Toxaphene	05-Mar-96	S		U	ug/L	5		
MW-11A	trans-1,2-Dichloroethene	05-Mar-96	S		U	ug/L	5		
		05-Mar-96	S		U	ug/L	5		
MW-11A	trans-1,3-Dichloropropene	05-Mar-96	S		U	ug/L	5		
		05-Mar-96	S		U	ug/L	5		
MW-11A	trans-1,4-Dichloro-2-butene	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-11A	Trichloroethene	05-Mar-96	S		U	ug/L	5		
		05-Mar-96	S		U	ug/L	5		
MW-11A	Trichlorofluoromethane	05-Mar-96	S		U	ug/L	5		
		05-Mar-96	S		U	ug/L	5		
MW-11A	Vanadium	05-Mar-96	S		11	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		14	ug/L	10		
MW-11A	Vinyl acetate	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-11A	Vinyl chloride	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	10		
MW-11A	Xylenes	05-Mar-96	S		U	ug/L	5		
		05-Mar-96	S		U	ug/L	5		
MW-11A	Zinc	05-Mar-96	S		21	ug/L	20		
		05-Mar-96	S		23	ug/L	20		
		05-Mar-96	S		46	ug/L	20		
MW-12	Benzene	26-Mar-87			U	ug/L			
		26-Mar-87			U	ug/L			
		26-Mar-87			U	ug/L			
		26-Mar-87			U	ug/L			
		21-Sep-87			U	ug/L			
		21-Sep-87			U	ug/L			
		21-Sep-87			U	ug/L			
		21-Sep-87			U	ug/L			
		23-Mar-88			U	ug/L			
		23-Mar-88			U	ug/L			
		23-Mar-88			U	ug/L			
		23-Mar-88			U	ug/L			
		21-Mar-89			U	ug/L			

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-12	Benzene	21-Mar-89			U	ug/L			
		21-Mar-89			U	ug/L			
		21-Mar-89			U	ug/L			
		08-Sep-89			U	ug/L			
		08-Sep-89			U	ug/L			
		08-Sep-89			U	ug/L			
		08-Sep-89			U	ug/L			
		21-Mar-90			U	ug/L			
		21-Mar-90			U	ug/L			
		21-Mar-90			U	ug/L			
		21-Mar-90			U	ug/L			
		11-Sep-90			U	ug/L	10		
		11-Sep-90			U	ug/L	10		
		11-Sep-90			U	ug/L	10		
		11-Sep-90			U	ug/L	10		
MW-12	Methyl parathion	11-Sep-90			U	ug/L	1.2		
		11-Sep-90			U	ug/L	1.2		
		11-Sep-90			U	ug/L	1.2		
		11-Sep-90			U	ug/L	1.2		
MW-12A	1,2,4-Trichlorobenzene	08-Oct-97	S		U	ug/L			Y
MW-12A	1,2-Dichlorobenzene	15-Apr-97	S		U	ug/L	10		
		15-Apr-97	S	Q	U	ug/L	10		Q
MW-12A	1,4-Dichlorobenzene	15-Apr-97	S		U	ug/L	10		
		15-Apr-97	S	Q	U	ug/L	10		Q
MW-12A	2,3,7,8-Tetrachlorodibenzo-p-dioxin	08-Oct-97	S		U	ug/L			Y
MW-12A	2,4,5-Trichlorophenol	15-Apr-97	S		U	ug/L	10		
		15-Apr-97	S	Q	U	ug/L	10		Q
		08-Oct-97	G		U	ug/L	10		
MW-12A	2,4,6-Trichlorophenol	15-Apr-97	S		U	ug/L	10		
		15-Apr-97	S	Q	U	ug/L	10		Q
		08-Oct-97	G		U	ug/L	10		
MW-12A	2,4-Dichlorophenol	15-Apr-97	S		U	ug/L	10		
		15-Apr-97	S	Q	U	ug/L	10		Q
		08-Oct-97	G		U	ug/L	10		
MW-12A	Aroclor 1016	15-Apr-97	S		U	ug/L	0.5		
		15-Apr-97	S	Q	U	ug/L	0.5		Q
		08-Oct-97	G		U	ug/L	0.5		
		08-Oct-97	S		U	mg/L	0.5		

Location	Parameter	Date Samp	Lab	Q or F?		Result	Unit	PQL	Desc	Qual
MW-12A	Aroclor 1016	08-Oct-97	G		F	U	ug/L	0.5	S	
		08-Oct-97	S		F	U	mg/L	0.5	S	
		27-Mar-98	S			U	ug/L	0.5		
		27-Mar-98	S		F	U	ug/L	0.5		
		27-Mar-98	S	Q		U	ug/L	0.5		
		27-Mar-98	S	Q	F	U	ug/L	0.5		
MW-12A	Aroclor 1221	15-Apr-97	S			U	ug/L	1		
		15-Apr-97	S	Q		U	ug/L	1	Q	
		08-Oct-97	S			U	mg/L	1		
		08-Oct-97	G			U	ug/L	0.5		
		08-Oct-97	G		F	U	ug/L	0.5	S	
		08-Oct-97	S		F	U	mg/L	1	S	
		27-Mar-98	S			U	ug/L	0.5		
		27-Mar-98	S		F	U	ug/L	0.5		
		27-Mar-98	S	Q		U	ug/L	0.5		
		27-Mar-98	S	Q	F	U	ug/L	0.5		
MW-12A	Aroclor 1232	15-Apr-97	S			U	ug/L	0.5		
		15-Apr-97	S	Q		U	ug/L	0.5	Q	
		08-Oct-97	G			U	ug/L	0.5		
		08-Oct-97	S			U	mg/L	0.5		
		08-Oct-97	S		F	U	mg/L	0.5	S	
		08-Oct-97	G		F	U	ug/L	0.5	S	
		27-Mar-98	S			U	ug/L	0.5		
		27-Mar-98	S		F	U	ug/L	0.5		
		27-Mar-98	S	Q		U	ug/L	0.5		
		27-Mar-98	S	Q	F	U	ug/L	0.5		
MW-12A	Aroclor 1242	15-Apr-97	S			U	ug/L	0.5		
		15-Apr-97	S	Q		U	ug/L	0.5	Q	
		08-Oct-97	G			U	ug/L	0.5		
		08-Oct-97	S			U	mg/L	0.5		
		08-Oct-97	S		F	U	mg/L	0.5	S	
		08-Oct-97	G		F	U	ug/L	0.5	S	
		27-Mar-98	S			U	ug/L	0.5		
		27-Mar-98	S		F	U	ug/L	0.5		
		27-Mar-98	S	Q		U	ug/L	0.5		
		27-Mar-98	S	Q	F	U	ug/L	0.5		
MW-12A	Aroclor 1248	15-Apr-97	S			U	ug/L	0.5		
		15-Apr-97	S	Q		U	ug/L	0.5	Q	
		08-Oct-97	S			U	mg/L	0.5		
		08-Oct-97	G			U	ug/L	0.5		
		08-Oct-97	G		F	U	ug/L	0.5	S	
		08-Oct-97	S		F	U	mg/L	0.5	S	

See Table L-3 for Abbreviations and Qualifiers.

Location	Parameter	Date Samp	Lab	Q or F?		Result	Unit	PQL	Desc	Qual
MW-12A	Aroclor 1248	27-Mar-98	S			U	ug/L	0.5		
		27-Mar-98	S		F	U	ug/L	0.5		
		27-Mar-98	S	Q		U	ug/L	0.5		
		27-Mar-98	S	Q	F	U	ug/L	0.5		
MW-12A	Aroclor 1254	15-Apr-97	S			U	ug/L	0.5		
		15-Apr-97	S	Q		U	ug/L	0.5	Q	
		08-Oct-97	G			U	ug/L	0.5		
		08-Oct-97	S			U	mg/L	0.5		
		08-Oct-97	S		F	U	mg/L	0.5	S	
		08-Oct-97	G		F	U	ug/L	0.5	S	
		27-Mar-98	S			U	ug/L	0.5		
		27-Mar-98	S		F	U	ug/L	0.5		
		27-Mar-98	S	Q		U	ug/L	0.5		
		27-Mar-98	S	Q	F	U	ug/L	0.5		
MW-12A	Aroclor 1260	15-Apr-97	S	Q		U	ug/L	0.5	Q	
		08-Oct-97	S			U	mg/L	0.5		
		08-Oct-97	G			U	ug/L	0.5		
		08-Oct-97	G		F	U	ug/L	0.5	S	
		08-Oct-97	S		F	U	mg/L	0.5	S	
		27-Mar-98	S			U	ug/L	0.5		
		27-Mar-98	S		F	U	ug/L	0.5		
		27-Mar-98	S	Q		U	ug/L	0.5		
		27-Mar-98	S	Q	F	U	ug/L	0.5		
MW-12A	Benzene	05-Mar-91				U	ug/L	10		
		05-Mar-91				U	ug/L	10		
		05-Mar-91				U	ug/L	10		
		05-Mar-91				U	ug/L	10		
		16-Sep-91				U	ug/L	10		
		16-Sep-91				U	ug/L	10		
		16-Sep-91				U	ug/L	10		
		16-Sep-91				U	ug/L	10		
		11-Mar-92				U	ug/L	10		
		16-Sep-92				U	ug/L	1		
		24-Mar-93				U	ug/L	1		
		14-Sep-93				U	ug/L	1		
		07-Mar-94				U	ug/L	10		
		13-Sep-94				U	ug/L	1		
		19-Apr-95				U	ug/L	0.11		
		19-Apr-95				U	ug/L	0.11		
		19-Apr-95				U	ug/L	0.11		
		19-Apr-95				U	ug/L	0.11		
MW-12A	Chlorobenzene	15-Apr-97	S			U	ug/L	1		

See Table L-3 for Abbreviations and Qualifiers.

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-12A	Chlorobenzene	15-Apr-97	S	Q	U	ug/L	1	Q	
		08-Oct-97	G		U	ug/L	1		
MW-12A	Cobalt	15-Apr-97	S		U	mg/L	0.01		
		15-Apr-97	S	Q	U	mg/L	0.01	Q	
		08-Oct-97	G		U	mg/L	0.01		
		08-Oct-97	G	F	U	mg/L	0.01	S	
MW-12A	Mercury	15-Apr-97	S		0.000051	mg/L	0.0002	J	
		15-Apr-97	S	Q	0.000074	mg/L	0.0002	JQ	
		27-Mar-98	G		U	mg/L	0.0002		
		27-Mar-98	G	F	U	mg/L	0.0002		
MW-12A	Methyl parathion	05-Mar-91			U	ug/L	1.2		
		16-Sep-91			U	ug/L	1.2		
		11-Mar-92			U	ug/L	1.2		
		16-Sep-92			U	ug/L	0.5		
		24-Mar-93			U	ug/L	0.5		
MW-12A	Methylene chloride (dichloromethane)	15-Apr-97	S		U	ug/L	5		
		15-Apr-97	S	Q	U	ug/L	5	Q	
		08-Oct-97	G		U	ug/L	5		
MW-12A	o,c,o-Triethylphosphorothioate	15-Apr-97	S		57	ug/L	10		
		15-Apr-97	S	Q	51	ug/L	10	Q	
		08-Oct-97	G		30	ug/L	10		
		27-Mar-98	G		34	ug/L	10		
MW-12A	Pentachlorophenol	15-Apr-97	S		U	ug/L	1		
		15-Apr-97	S	Q	U	ug/L	1	Q	
		08-Oct-97	G		U	ug/L	1		
MW-12A	Phenol	15-Apr-97	S		U	ug/L	10		
		15-Apr-97	S	Q	U	ug/L	10	Q	
		08-Oct-97	G		U	ug/L	10		
		27-Mar-98	G		U	ug/L	10		
MW-12A	Tetraethyldithiopyrophosphate (Sulfotepp)	15-Apr-97	S		U	ug/L	0.5		
		15-Apr-97	S	Q	U	ug/L	0.5	Q	
		08-Oct-97	G		U	ug/L	0.5		
MW-13	Benzene	26-Mar-87			U	ug/L			
		26-Mar-87			U	ug/L			
		26-Mar-87			U	ug/L			
		26-Mar-87			U	ug/L			
		21-Sep-87			U	ug/L			

Locaton	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-13	Benzene	21-Sep-87			U	ug/L			
		21-Sep-87			U	ug/L			
		21-Sep-87			U	ug/L			
		23-Mar-88			U	ug/L			
		23-Mar-88			U	ug/L			
		23-Mar-88			U	ug/L			
		23-Mar-88			U	ug/L			
		17-Oct-88			U	ug/L			
		17-Oct-88			U	ug/L			
		17-Oct-88			U	ug/L			
		17-Oct-88			U	ug/L			
		21-Mar-89			U	ug/L	1		
		21-Mar-89			U	ug/L			
		21-Mar-89			U	ug/L			
		21-Mar-89			U	ug/L			
		08-Sep-89			U	ug/L			
		08-Sep-89			U	ug/L			
		08-Sep-89			U	ug/L			
		08-Sep-89			U	ug/L			
		21-Mar-90			U	ug/L			
		21-Mar-90			U	ug/L			
		21-Mar-90			U	ug/L			
		21-Mar-90			U	ug/L			
		11-Sep-90			U	ug/L	10		
		11-Sep-90			U	ug/L	10		
		11-Sep-90			U	ug/L	10		
		11-Sep-90			U	ug/L	10		
MW-13	Methyl parathion	11-Sep-90			U	ug/L	1.2		
		11-Sep-90			U	ug/L	1.2		
		11-Sep-90			U	ug/L	1.2		
		11-Sep-90			U	ug/L	1.2		
MW-13A	1,1,1,2-Tetrachloroethane	05-Mar-96	S		U	ug/L	5		
MW-13A	1,1,1-Trichloroethane	05-Mar-96	S		U	ug/L	5		
MW-13A	1,1,2,2-Tetrachloroethane	05-Mar-96	S		U	ug/L	5		
MW-13A	1,1,2-Trichloroethane	05-Mar-96	S		U	ug/L	5		
MW-13A	1,1-Dichloroethane	05-Mar-96	S		U	ug/L	5		
MW-13A	1,1-Dichloroethene	05-Mar-96	S		U	ug/L	5		
MW-13A	1,2,3-Trichloropropane	05-Mar-96	S		U	ug/L	5		
MW-13A	1,2,4,5-Tetrachlorobenzene	05-Mar-96	S		U	ug/L	10		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
MW-13A	1,2,4-Trichlorobenzene	05-Mar-96	S		U	ug/L	10	
MW-13A	1,2-Dibromo-3-choropropane	05-Mar-96	S		U	ug/L	10	
MW-13A	1,2-Dibromoethane (EDB)	05-Mar-96	S		U	ug/L	5	
MW-13A	1,2-Dichlorobenzene	05-Mar-96	S		U	ug/L	10	
		15-Apr-97	S		U	ug/L	10	
MW-13A	1,2-Dichloroethane	05-Mar-96	S		U	ug/L	5	
MW-13A	1,2-Dichloropropane	05-Mar-96	S		U	ug/L	5	
MW-13A	1,3,5-Trinitrobenzene	05-Mar-96	S		U	ug/L	200	
MW-13A	1,3-Dichlorobenzene	05-Mar-96	S		U	ug/L	10	
MW-13A	1,4-Dichlorobenzene	05-Mar-96	S		U	ug/L	10	
		15-Apr-97	S		U	ug/L	10	
MW-13A	1,4-Dioxane	05-Mar-96	S		U	ug/L	10	
MW-13A	1,4-Naphthoquinone	05-Mar-96	S		U	ug/L	10	
MW-13A	1-flapthylamine	05-Mar-96	S		U	ug/L	10	
MW-13A	2,3,4,6-Tetrachlorophenol	05-Mar-96	S		U	ug/L	50	
MW-13A	2,4,5-T	05-Mar-96	S		U	ug/L	0.5	
MW-13A	2,4,5-TP (Silvex)	05-Mar-96	S		U	ug/L	0.5	
MW-13A	2,4,5-Trichlorophenol	05-Mar-96	S		U	ug/L	10	
		15-Apr-97	S		U	ug/L	10	
		07-Oct-97	G		U	ug/L	10	
		07-Oct-97	G	Q	U	ug/L	10	Q
MW-13A	2,4,6-Trichlorophenol	05-Mar-96	S		U	ug/L	10	
		15-Apr-97	S		U	ug/L	10	
		07-Oct-97	G		U	ug/L	10	
		07-Oct-97	G	Q	U	ug/L	10	Q
MW-13A	2,4D	05-Mar-96	S		U	ug/L	0.5	
MW-13A	2,4Dichlorophenol	05-Mar-96	S		U	ug/L	10	
		15-Apr-97	S		U	ug/L	10	
		07-Oct-97	G		U	ug/L	10	
		07-Oct-97	G	Q	U	ug/L	10	Q
MW-13A	2,4Dimethylphenol	05-Mar-96	S		U	ug/L	10	
MW-13A	2,4Dinitrophenol	05-Mar-96	S		U	ug/L	50	
MW-13A	2,4Dinitrotoluene	05-Mar-96	S		U	ug/L	10	
MW-13A	2,6Dichlorophenol	05-Mar-96	S		U	ug/L	10	

Locaton	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
MW-13A	2,6-Dinitrotoluene	05-Mar-96	S		U	ug/L	10	
MW-13A	2-Acetylaminofluorene	05-Mar-96	S		U	ug/L	10	
MW-13A	2-Chloroethylvinyl ether	05-Mar-96	S		U	ug/L	50	
MW-13A	2-Chloronaphthalene	05-Mar-96	S		U	ug/L	10	
MW-13A	2-Chlorophenol	05-Mar-96	S		U	ug/L	10	
MW-13A	2-Hexanone	05-Mar-96	S		U	ug/L	25	
MW-13A	2-Methylnaphthalene	05-Mar-96	S		U	ug/L	10	
MW-13A	2-Naphtylamine	05-Mar-96	S		U	ug/L	10	
MW-13A	2-Picoline	05-Mar-96	S		U	ug/L	200	
MW-13A	2-sec-Butyl-4,6-dinitrophenol	05-Mar-96	S		U	ug/L	10	
MW-13A	3,3'-Dichlorobenzidine	05-Mar-96	S		U	ug/L	20	
MW-13A	3,3'-Dimethylbenzidine	05-Mar-96	S		U	ug/L	200	
MW-13A	3-Methylcholanthrene	05-Mar-96	S		U	ug/L	10	
MW-13A	4,6-Dinitro-o-cresol	05-Mar-96	S		U	ug/L	50	
MW-13A	4-Aminobiphenyl	05-Mar-96	S		U	ug/L	10	
MW-13A	4-Bromophenyl-phenyl ether	05-Mar-96	S		U	ug/L	10	
MW-13A	4-Chlorophenylphenyl ether	05-Mar-96	S		U	ug/L	10	
MW-13A	4-Methyl-2-pentanone (MIBK)	05-Mar-96	S		U	ug/L	25	
MW-13A	4-Nitroquinoline 1-oxide	05-Mar-96	S		U	ug/L	100	
MW-13A	5-Nitro-o-toluidine	05-Mar-96	S		U	ug/L	10	
MW-13A	7,12-Dimethylbenz(a)anthracene	05-Mar-96	S		U	ug/L	10	
MW-13A	a-a-Dimethylphenethylamine	05-Mar-96	S		U	ug/L	2000	
MW-13A	Acenaphthene	05-Mar-96	S		U	ug/L	10	
MW-13A	Acenaphthylene	05-Mar-96	S		U	ug/L	10	
MW-13A	Acetone	05-Mar-96	S		U	ug/L	25	
MW-13A	Acetonitrile	05-Mar-96	S		U	ug/L	1000	
MW-13A	Acetophenone	05-Mar-96	S		U	ug/L	10	
MW-13A	Acrolein	05-Mar-96	S		U	ug/L	100	
MW-13A	Acrylonitrile	05-Mar-96	S		U	ug/L	100	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
MW-13A	Alychloride (3-chloropropene)	05-Mar-96	S		U	ug/L	5	
MW-13A	Aniline	05-Mar-96	S		U	ug/L	50	
MW-13A	Anthracene	05-Mar-96	S		U	ug/L	10	
MW-13A	Aramite	05-Mar-96	S		U	ug/L	10	
MW-13A	Aroclor 1016	15-Apr-97	S		U	ug/L	0.5	
		07-Oct-97	S		U	mg/L	0.5	
		07-Oct-97	G		U	ug/L	0.5	
		07-Oct-97	S	F	U	mg/L	0.5	S
		07-Oct-97	G	F	U	ug/L	0.5	S
		07-Oct-97	G	Q	U	ug/L	0.5	Q
		07-Oct-97	S	Q	U	mg/L	0.5	Q
		07-Oct-97	S	Q F	U	mg/L	0.5	QS
		07-Oct-97	G	Q F	U	ug/L	0.5	QS
		27-Mar-98	S		U	ug/L	0.5	
		27-Mar-98	S	F	U	ug/L	0.5	
MW-13A	Aroclor 1221	15-Apr-97	S		U	ug/L	1	
		07-Oct-97	S		U	mg/L	1	
		07-Oct-97	G		U	ug/L	0.5	
		07-Oct-97	G	F	U	ug/L	0.5	S
		07-Oct-97	S	F	U	mg/L	1	S
		07-Oct-97	S	Q	U	mg/L	1	Q
		07-Oct-97	G	Q	U	ug/L	0.5	Q
		07-Oct-97	G	Q F	U	ug/L	0.5	QS
		07-Oct-97	S	Q F	U	mg/L	1	QS
		27-Mar-98	S		U	ug/L	0.5	
		27-Mar-98	S	F	U	ug/L	0.5	
MW-13A	Aroclor 1232	15-Apr-97	S		U	ug/L	0.5	
		07-Oct-97	S		U	mg/L	0.5	
		07-Oct-97	G		U	ug/L	0.5	
		07-Oct-97	S	F	U	mg/L	0.5	S
		07-Oct-97	G	F	U	ug/L	0.5	S
		07-Oct-97	S	Q	U	mg/L	0.5	Q
		07-Oct-97	G	Q	U	ug/L	0.5	Q
		07-Oct-97	G	Q F	U	ug/L	0.5	QS
		07-Oct-97	S	Q F	U	mg/L	0.5	QS
		27-Mar-98	S		U	ug/L	0.5	
		27-Mar-98	S	F	U	ug/L	0.5	
MW-13A	Aroclor 1242	15-Apr-97	S		U	ug/L	0.5	
		07-Oct-97	G		U	ug/L	0.5	
		07-Oct-97	S		U	mg/L	0.5	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
MW-13A	Aroclor 1242	07-Oct-97	S	F	U	ug/L	0.5	S
		07-Oct-97	S	F	U	mg/L	0.5	S
		07-Oct-97	S	Q	U	ug/L	0.5	Q
		07-Oct-97	S	Q	U	mg/L	0.5	Q
		07-Oct-97	S	Q F	U	mg/L	0.5	QS
		07-Oct-97	S	Q F	U	ug/L	0.5	QS
		27-Mar-98	S		U	ug/L	0.5	
		27-Mar-98	S	F	U	ug/L	0.5	
MW-13A	Aroclor 1248	15-Apr-97	S		U	ug/L	0.5	
		07-Oct-97	S		U	mg/L	0.5	
		07-Oct-97	S		U	ug/L	0.5	
		07-Oct-97	S	F	U	mg/L	0.5	S
		07-Oct-97	S	F	U	ug/L	0.5	S
		07-Oct-97	S	Q	U	ug/L	0.5	Q
		07-Oct-97	S	Q	U	mg/L	0.5	Q
		07-Oct-97	S	Q F	U	ug/L	0.5	QS
		07-Oct-97	S	Q F	U	mg/L	0.5	QS
		27-Mar-98	S		U	ug/L	0.5	
		27-Mar-98	S	F	U	ug/L	0.5	
MW-13A	Aroclor 1254	15-Apr-97	S		U	ug/L	0.5	
		07-Oct-97	S		U	mg/L	0.5	
		07-Oct-97	S		U	ug/L	0.5	
		07-Oct-97	S	F	U	ug/L	0.5	S
		07-Oct-97	S	F	U	mg/L	0.5	S
		07-Oct-97	S	Q	U	ug/L	0.5	Q
		07-Oct-97	S	Q	U	mg/L	0.5	Q
		07-Oct-97	S	Q F	U	mg/L	0.5	QS
		07-Oct-97	S	Q F	U	ug/L	0.5	QS
		27-Mar-98	S		U	ug/L	0.5	
		27-Mar-98	S	F	U	ug/L	0.5	
MW-13A	Aroclor 1260	15-Apr-97	S		U	ug/L	0.5	
		07-Oct-97	S		U	mg/L	0.5	
		07-Oct-97	S		U	ug/L	0.5	
		07-Oct-97	S	F	U	ug/L	0.5	S
		07-Oct-97	S	F	U	mg/L	0.5	S
		07-Oct-97	S	Q	U	mg/L	0.5	Q
		07-Oct-97	S	Q	U	ug/L	0.5	Q
		07-Oct-97	S	Q F	U	ug/L	0.5	QS
		07-Oct-97	S	Q F	U	mg/L	0.5	QS
		27-Mar-98	S		U	ug/L	0.5	
		27-Mar-98	S	F	U	ug/L	0.5	
MW-13A	Arsenic	05-Mar-96	S		U	ug/L	10	

Location	Parameter	Date Samp	Lab	Qor F?	Result	Unit	PQL	Desc	Qual
MW-13A	Benzene	05-Mar-91			U	ug/L	10		
		05-Mar-91			U	ug/L	10		
		05-Mar-91			U	ug/L	10		
		05-Mar-91			U	ug/L	10		
		16-Sep-91			U	ug/L	10		
		16-Sep-91			U	ug/L	10		
		16-Sep-91			U	ug/L	10		
		16-Sep-91			U	ug/L	10		
		11-Mar-92			U	ug/L	10		
		16-Sep-92			U	ug/L	1		
		24-Mar-93			U	ug/L	1		
		14-Sep-93			U	ug/L	1		
		07-Mar-94			U	ug/L	10		
		13-Sep-94			U	ug/L	1		
		19-Apr-95			U	ug/L	0.11		
		19-Apr-95			U	ug/L	0.11		
		19-Apr-95			U	ug/L	0.11		
		19-Apr-95			U	ug/L	0.11		
		05-Mar-96	S		U	ug/L	5		
		11-Sep-96	S	C	U	ug/L	1		Q1
		11-Sep-96	S	C	U	ug/L	1		Q3
		11-Sep-96	S	C	U	ug/L	1		Q2
		11-Sep-96	S	C	U	ug/L	1		Q
		11-Sep-96	S	C	U	ug/L	1		Q3
		11-Sep-96	S	C	U	ug/L	1		Q2
		11-Sep-96	S	C	U	ug/L	1		
		11-Sep-96	S	C	U	ug/L	1		Q4
MW-13A	Benzo(a)anthracene	05-Mar-96	S		U	ug/L	10		
MW-13A	Benzo(a)pyrene	05-Mar-96	S		U	ug/L	10		
MW-13A	Benzo(b)fluoranthene	05-Mar-96	S		U	ug/L	10		
MW-13A	Benzo(g,h,i)perylene	05-Mar-96	S		U	ug/L	10		
MW-13A	Benzo(k)fluoranthene	05-Mar-96	S		U	ug/L	10		
MW-13A	Benzyl alcohol	05-Mar-96	S		U	ug/L	10		
MW-13A	bis(2-Chloroethoxy)methane	05-Mar-96	S		U	ug/L	10		
MW-13A	bis(2-Chloroethyl)ether	05-Mar-96	S		U	ug/L	10		
MW-13A	bis(2-Chloroisopropyl)ether	05-Mar-96	S		U	ug/L	10		
MW-13A	bis(2-Ethylhexyl)phthalate	05-Mar-96	S		U	ug/L	10		
MW-13A	Bromodichloromethane	05-Mar-96	S		U	ug/L	5		

Location	Parameter	Date Samp	Lab	Q or F?		Result	Unit	PQL	Desc	Qual
MW-13A	Bromoform	05-Mar-96	S			U	ug/L	5		
MW-13A	Bromomethane (mehyl bromide)	05-Mar-96	S			U	ug/L	10		
MW-13A	Butylbenzylphthalate	05-Mar-96	S			U	ug/L	10		
MW-13A	Carbon disulfide	05-Mar-96	S			U	ug/L	5		
MW-13A	Carbon tetrachloride	05-Mar-96	S			U	ug/L	5		
MW-13A	Chlorobenzene	05-Mar-96	S			U	ug/L	5		
		15-Apr-97	S			U	ug/L	1		
		07-Oct-97	S			U	ug/L	1		
		07-Oct-97	S	Q		U	ug/L	1		Q
MW-13A	Chloroethane	05-Mar-96	S			U	ug/L	10		
MW-13A	Chloroform	05-Mar-96	S			U	ug/L	5		
MW-13A	Chloromethane (mehyl chloride)	05-Mar-96	S			U	ug/L	10		
MW-13A	Chloroprene	05-Mar-96	S			U	ug/L	5		
MW-13A	Chrysene	05-Mar-96	S			U	ug/L	10		
MW-13A	cis-1,3-Dichloropropene	05-Mar-96	S			U	ug/L	5		
MW-13A	Cobalt	15-Apr-97	S			U	mg/L	0.01		
		07-Oct-97	G			U	mg/L	0.01		
		07-Oct-97	G		F	U	mg/L	0.01		S
		07-Oct-97	G	Q		U	mg/L	0.01		Q
		07-Oct-97	G	Q	F	U	mg/L	0.01		QS
MW-13A	Cresol, m&p	05-Mar-96	S			U	ug/L	10		
MW-13A	di-N-Butylphthalate	05-Mar-96	S			U	ug/L	10		
MW-13A	di-N-Octylphthalate	05-Mar-96	S			U	ug/L	10		
MW-13A	Diallate	05-Mar-96	S			U	ug/L	10		
MW-13A	Dibenz(a,h)anthracene	05-Mar-96	S			U	ug/L	10		
MW-13A	Dibenzofuran	05-Mar-96	S			U	ug/L	10		
MW-13A	Dibromochloromethane	05-Mar-96	S			U	ug/L	5		
MW-13A	Dichlorodifluoromethane	05-Mar-96	S			U	ug/L	5		
MW-13A	Diethylphthalate	05-Mar-96	S			U	ug/L	10		
MW-13A	Dimethylphthalate	05-Mar-96	S			U	ug/L	10		
MW-13A	Dioxin-2,3,7,8-TCDD	05-Mar-96	S			U	ug/L	0.005		
MW-13A	Ethyl methacrylate	05-Mar-96	S			U	ug/L	5		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
MW-13A	Ethyl methanesulfonate	05-Mar-96	S		U	ug/L	10	
MW-13A	Ethylbenzene	05-Mar-96	S		U	ug/L	5	
MW-13A	Fluoranthene	05-Mar-96	S		U	ug/L	10	
MW-13A	Fluorene	05-Mar-96	S		U	ug/L	10	
MW-13A	Hexa CDD	05-Mar-96	S		U	ug/L	0.005	
MW-13A	Hexa CDF	05-Mar-96	S		U	ug/L	0.005	
MW-13A	Hexachlorobenzene	05-Mar-96	S		U	ug/L	10	
MW-13A	Hexachlorobutadiene	05-Mar-96	S		U	ug/L	10	
MW-13A	Hexachlorocyclopentadiene	05-Mar-96	S		U	ug/L	10	
MW-13A	Hexachloroethane	05-Mar-96	S		U	ug/L	10	
MW-13A	Hexachloropropene	05-Mar-96	S		U	ug/L	10	
MW-13A	Indeno(1,2,3-cd)pyrene	05-Mar-96	S		U	ug/L	10	
MW-13A	Isobutyl alcohol	05-Mar-96	S		U	ug/L	1000	
MW-13A	Isophorone	05-Mar-96	S		U	ug/L	10	
MW-13A	Kepone	05-Mar-96	S		U	ug/L	10	
MW-13A	Lead	05-Mar-96	S		U	ug/L	5	
MW-13A	m-Dinitrobenzene	05-Mar-96	S		U	ug/L	10	
MW-13A	m-Nitroaniline	05-Mar-96	S		U	ug/L	50	
MW-13A	Mercury	05-Mar-96	S		U	ug/L	0.2	
		15-Apr-97	S		0.000049	mg/L	0.0002	J
		27-Mar-98	G		U	mg/L	0.0002	
		27-Mar-98	G	F	U	mg/L	0.0002	
MW-13A	Methacrylonitrile	05-Mar-96	S		U	ug/L	100	
MW-13A	Methapyrilene	05-Mar-96	S		U	ug/L	2000	
MW-13A	Methyl ethyl ketone (MEK)	05-Mar-96	S		U	ug/L	25	
MW-13A	Methyl iodide	05-Mar-96	S		U	ug/L	5	
MW-13A	Methyl methacrylate	05-Mar-96	S		U	ug/L	5	
MW-13A	Methyl methanesulfonate	05-Mar-96	S		U	ug/L	10	
MW-13A	Methyl parathion	05-Mar-91			U	ug/L	1.2	
		16-Sep-91			U	ug/L	1.2	
		11-Mar-92			U	ug/L	1.2	
		16-Sep-92			U	ug/L	0.5	
		24-Mar-93			U	ug/L	0.5	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
MW-13A	Methylene bromide	05-Mar-96	S		U	ug/L	5	
MW-13A	Methylene chloride (dichloromethane)	05-Mar-96	S		U	ug/L	5	
		15-Apr-97	S		U	ug/L	5	
		07-Oct-97	G		U	ug/L	5	
		07-Oct-97	G	Q	U	ug/L	5	Q
MW-13A	N-Nitroso-di-n-butyamine	05-Mar-96	S		U	ug/L	10	
MW-13A	N-Nitroso-di-n-propylamine	05-Mar-96	S		U	ug/L	10	
MW-13A	N-Nitrosodiethylamne	05-Mar-96	S		U	ug/L	10	
MW-13A	N-Nitrosodimethylanine	05-Mar-96	S		U	ug/L	10	
MW-13A	N-Nitrosodiphenylanine	05-Mar-96	S		U	ug/L	10	
MW-13A	N-Nitrosomethylethylamine	05-Mar-96	S		U	ug/L	10	
MW-13A	N-Nitrosomorpholine	05-Mar-96	S		U	ug/L	10	
MW-13A	N-Nitrosopiperidine	05-Mar-96	S		U	ug/L	10	
MW-13A	N-Nitrosopyrrolidine	05-Mar-96	S		U	ug/L	10	
MW-13A	Naphthalene	05-Mar-96	S		U	ug/L	10	
MW-13A	Nitrobenzene	05-Mar-96	S		U	ug/L	10	
MW-13A	o,o,o-Triethylphosphorothioate	05-Mar-96	S		U	ug/L	10	
		15-Apr-97	S		U	ug/L	10	
		07-Oct-97	G		U	ug/L	10	
		07-Oct-97	G	Q	U	ug/L	10	Q
		26-Mar-98	G		U	ug/L	10	
MW-13A	o-Cresol	05-Mar-96	S		U	ug/L	10	
MW-13A	o-Nitroaniline	05-Mar-96	S		U	ug/L	50	
MW-13A	o-Nitrophenol (2-Nitophenol)	05-Mar-96	S		U	ug/L	10	
MW-13A	o-Toluidine	05-Mar-96	S		U	ug/L	10	
MW-13A	p-(Dimethylamino)azobenzene	05-Mar-96	S		U	ug/L	10	
MW-13A	p-Chloro-m-cresol	05-Mar-96	S		U	ug/L	10	
MW-13A	p-Chloroaniline	05-Mar-96	S		U	ug/L	20	
MW-13A	p-Nitroaniline	05-Mar-96	S		U	ug/L	50	
MW-13A	p-Phenylenediamine	05-Mar-96	S		U	ug/L	2000	
MW-13A	Penta CDD	05-Mar-96	S		U	ug/L	0.005	

Location	Parameter	Date Samp	Lab	Qor F?	Result	Unit	PQL	Desc	Qual
MW-13A	Penta CDF	05-Mar-96	S		U	ug/L	0.005		
MW-13A	Pentachlorobenzene	05-Mar-96	S		U	ug/L	10		
MW-13A	Pentachloroethane	05-Mar-96	S		U	ug/L	25		
MW-13A	Pentachloronitrobenzene	05-Mar-96	S		U	ug/L	10		
MW-13A	Pentachlorophenol	05-Mar-96	S		U	ug/L	50		
		15-Apr-97	S		U	ug/L	1		
		07-Oct-97	G		U	ug/L	1		
		07-Oct-97	G	Q	U	ug/L	1	Q	
MW-13A	Phenacetin	05-Mar-96	S		U	ug/L	10		
MW-13A	Phenanthrene	05-Mar-96	S		U	ug/L	10		
MW-13A	Phenol	05-Mar-96	S		U	ug/L	10		
		15-Apr-97	S		U	ug/L	10		
		07-Oct-97	G		U	ug/L	10		
		07-Oct-97	G	Q	U	ug/L	10	Q	
		26-Mar-98	G		U	ug/L	10		
MW-13A	Pronamide	05-Mar-96	S		U	ug/L	10		
MW-13A	Propionitrile	05-Mar-96	S		U	ug/L	100		
MW-13A	Pyrene	05-Mar-96	S		U	ug/L	10		
MW-13A	Pyridine	05-Mar-96	S		U	ug/L	200		
MW-13A	Safrole	05-Mar-96	S		U	ug/L	10		
MW-13A	Selenium	05-Mar-96	S		U	ug/L	10		
MW-13A	Styrene	05-Mar-96	S		U	ug/L	5		
MW-13A	Sulfide	05-Mar-96	S		1,300	ug/L	1000		
MW-13A	Tetra CDD	05-Mar-96	S		U	ug/L	0.005		
MW-13A	Tetra CDF	05-Mar-96	S		U	ug/L	0.005		
MW-13A	Tetrachloroethene	05-Mar-96	S		U	ug/L	5		
MW-13A	Teraethyldithiopyrophosphat e (Sulfotepp)	15-Apr-97	S		U	ug/L	0.5		
		07-Oct-97	G		U	ug/L	0.5		
		07-Oct-97	G	Q	U	ug/L	0.5	Q	
MW-13A	Toluene	05-Mar-96	S		U	ug/L	5		
MW-13A	Total Cyanide	05-Mar-96	S		U	ug/L	10		
MW-13A	trans-1,2-Dichloroethene	05-Mar-96	S		U	ug/L	5		
MW-13A	trans-1,3-Dichloropropene	05-Mar-96	S		U	ug/L	5		

Locaton	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-13A	trans-1,4-Dichloro-2-butene	05-Mar-96	S		U	ug/L	10		
MW-13A	Trichloroethene	05-Mar-96	S		U	ug/L	5		
MW-13A	Trichlorofluoromethane	05-Mar-96	S		U	ug/L	5		
MW-13A	Vinyl acetate	05-Mar-96	S		U	ug/L	10		
MW-13A	Vinyl chloride	05-Mar-96	S		U	ug/L	10		
MW-13A	Xylenes	05-Mar-96	S		U	ug/L	5		
MW-15	1,1,1,2-Tetrachloroethane	05-Mar-96	S		U	ug/L	5		
MW-15	1,1,1-Trichloroethane	05-Mar-96	S		U	ug/L	5		
MW-15	1,1,2,2-Tetrachloroethane	05-Mar-96	S		U	ug/L	5		
MW-15	1,1,2-Trichloroethane	05-Mar-96	S		U	ug/L	5		
MW-15	1,1-Dichloroethane	05-Mar-96	S		U	ug/L	5		
MW-15	1,1-Dichloroethene	05-Mar-96	S		U	ug/L	5		
MW-15	1,2,3-Trichloropropane	05-Mar-96	S		U	ug/L	5		
MW-15	1,2,4,5-Tetrachlorobenzene	05-Mar-96	S		U	ug/L	10		
MW-15	1,2,4-Trichlorobenzene	05-Mar-96	S		U	ug/L	10		
MW-15	1,2-Dibromo-3-chloropropane	05-Mar-96	S		U	ug/L	10		
MW-15	1,2-Dibromoethane (EDB)	05-Mar-96	S		U	ug/L	5		
MW-15	1,2-Dichlorobenzene	05-Mar-96	S		U	ug/L	10		
		17-Apr-97	S		1.0	ug/L	10	J	
		02-Apr-98	G		U	ug/L	10		
MW-15	1,2-Dichloroethane	05-Mar-96	S		U	ug/L	5		
MW-15	1,2-Dichloropropane	05-Mar-96	S		U	ug/L	5		
MW-15	1,3,5-Trinitrobenzene	05-Mar-96	S		U	ug/L	200		
MW-15	1,3-Dichlorobenzene	05-Mar-96	S		U	ug/L	10		
MW-15	1,4-Dichlorobenzene	05-Mar-96	S		U	ug/L	10		
		17-Apr-97	S		U	ug/L	10		
		02-Apr-98	G		U	ug/L	10		
MW-15	1,4-Dioxane	05-Mar-96	S		U	ug/L	10		
MW-15	1,4-Naphthoquinone	05-Mar-96	S		U	ug/L	10		
MW-15	1-Napthylamine	05-Mar-96	S		U	ug/L	10		
MW-15	2,3,4,6-Tetrachlorophenol	05-Mar-96	S		U	ug/L	50		

Location	Parameter	Date Samp	Lab	Qor F?	Result	Unit	PQL	Desc Qual
MW-15	2,4,5-T	05-Mar-96	S		U	ug/L	0.5	
MW-15	2,4,5-TP (Silvex)	05-Mar-96	S		U	ug/L	0.5	
MW-15	2,4,5-Trichlorophenol	05-Mar-96	S		U	ug/L	10	
		17-Apr-97	S		U	ug/L	10	
		23-Sep-97	G		U	ug/L	10	
		02-Apr-98	G		U	ug/L	10	
MW-15	2,4,6-Trichlorophenol	05-Mar-96	S		U	ug/L	10	
		17-Apr-97	S		U	ug/L	10	
		23-Sep-97	G		U	ug/L	10	
		02-Apr-98	G		U	ug/L	10	
MW-15	2,4-D	05-Mar-96	S		U	ug/L	0.5	
MW-15	2,4-Dichlorophenol	05-Mar-96	S		U	ug/L	10	
		17-Apr-97	S		U	ug/L	10	
		23-Sep-97	G		U	ug/L	10	
		02-Apr-98	G		U	ug/L	10	
MW-15	2,4-Dimethylphenol	05-Mar-96	S		U	ug/L	10	
MW-15	2,4-Dinitrophenol	05-Mar-96	S		U	ug/L	50	
MW-15	2,4-Dinitrotoluene	05-Mar-96	S		U	ug/L	10	
MW-15	2,4-Dichlorophenol	05-Mar-96	S		U	ug/L	10	
MW-15	2,4-Dinitrotoluene	05-Mar-96	S		U	ug/L	10	
MW-15	2-Acetylaminofluorene	05-Mar-96	S		U	ug/L	10	
MW-15	2-Chloroethylvinyl ether	05-Mar-96	S		U	ug/L	50	
MW-15	2-Chloronaphthalene	05-Mar-96	S		U	ug/L	10	
MW-15	2-Chlorophenol	05-Mar-96	S		U	ug/L	10	
MW-15	2-Hexanone	05-Mar-96	S		U	ug/L	25	
MW-15	2-Methylnaphthalene	05-Mar-96	S		U	ug/L	10	
MW-15	2-Naphtylamine	05-Mar-96	S		U	ug/L	10	
MW-15	2-Picoline	05-Mar-96	S		U	ug/L	200	
MW-15	2-sec-Butyl-4,6-dinitrophenol	05-Mar-96	S		U	ug/L	10	
MW-15	3,3'-Dichlorobenzidine	05-Mar-96	S		U	ug/L	20	
MW-15	3,3'-Dimethylbenzidine	05-Mar-96	S		U	ug/L	200	
MW-15	3-Methylcholanthrene	05-Mar-96	S		U	ug/L	10	
MW-15	4,4'-DDD	05-Mar-96	S		U	ug/L	0.1	
MW-15	4,4'-DDE	05-Mar-96	S		U	ug/L	0.1	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
MW-15	4,4'-DDT	05-Mar-96	S		U	ug/L	0.1	
MW-15	4,6-Dinitro-o-cresol	05-Mar-96	S		U	ug/L	50	
MW-15	4-Aminobiphenyl	05-Mar-96	S		U	ug/L	10	
MW-15	4-Bromophenyl-phenyl ether	05-Mar-96	S		U	ug/L	10	
MW-15	4-Chlorophenylphenyl ether	05-Mar-96	S		U	ug/L	10	
MW-15	4-Methyl-2-pentanone (MIBK)	05-Mar-96	S		U	ug/L	25	
MW-15	4-Nitroquinoline 1-oxide	05-Mar-96	S		U	ug/L	100	
MW-15	5-Nitro-o-toluidine	05-Mar-96	S		U	ug/L	10	
MW-15	7,12-Dimethylbenz(a)anthracene	05-Mar-96	S		U	ug/L	10	
MW-15	a-a-Dimethylphenethylamine	05-Mar-96	S		U	ug/L	2000	
MW-15	Acenaphthene	05-Mar-96	S		U	ug/L	10	
MW-15	Acenaphthylene	05-Mar-96	S		U	ug/L	10	
MW-15	Acetone	05-Mar-96	S		U	ug/L	25	
MW-15	Acetonitrile	05-Mar-96	S		U	ug/L	1000	
MW-15	Acetophenone	05-Mar-96	S		U	ug/L	10	
MW-15	Acrolein	05-Mar-96	S		U	ug/L	100	
MW-15	Acrylonitrile	05-Mar-96	S		U	ug/L	100	
MW-15	Aldrin	05-Mar-96	S		U	ug/L	0.05	
MW-15	Allychloride (3-chloropropene)	05-Mar-96	S		U	ug/L	5	
MW-15	alpha-BHC	05-Mar-96	S		U	ug/L	0.05	
MW-15	Aniline	05-Mar-96	S		U	ug/L	50	
MW-15	Anthracene	05-Mar-96	S		U	ug/L	10	
MW-15	Antimony	05-Mar-96	S		U	ug/L	50	
MW-15	Aramite	05-Mar-96	S		U	ug/L	10	
MW-15	Aroclor 1016	05-Mar-96	S		U	ug/L	1	
		17-Apr-97	S		U	ug/L	0.5	
		23-Sep-97	G		U	ug/L	0.5	
		23-Sep-97	S		U	ug/L	0.5	
		23-Sep-97	S	F	U	ug/L	0.5	S
		23-Sep-97	G	F	U	ug/L	0.5	S
		03-Apr-98	S		U	ug/L	0.5	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-15	Aroclor 1016	03-Apr-98	S	F	U	ug/L	0.5		
MW-15	Aroclor 1221	05-Mar-96	S		U	ug/L	2		
		17-Apr-97	S		U	ug/L	1		
		23-Sep-97	G		U	ug/L	0.5		
		23-Sep-97	S		U	ug/L	1		
		23-Sep-97	G	F	U	ug/L	0.5	S	
		23-Sep-97	S	F	U	ug/L	1	S	
		03-Apr-98	S		U	ug/L	0.5		
		03-Apr-98	S	F	U	ug/L	0.5		
MW-15	Aroclor 1232	05-Mar-96	S		U	ug/L	1		
		17-Apr-97	S		U	ug/L	0.5		
		23-Sep-97	G		U	ug/L	0.5		
		23-Sep-97	S		U	ug/L	0.5		
		23-Sep-97	G	F	U	ug/L	0.5	S	
		23-Sep-97	S	F	U	ug/L	0.5	S	
		03-Apr-98	S		U	ug/L	0.5		
		03-Apr-98	S	F	U	ug/L	0.5		
MW-15	Aroclor 1242	05-Mar-96	S		U	ug/L	1		
		17-Apr-97	S		U	ug/L	0.5		
		23-Sep-97	S		U	ug/L	0.5		
		23-Sep-97	G		U	ug/L	0.5		
		23-Sep-97	S	F	U	ug/L	0.5	S	
		23-Sep-97	G	F	U	ug/L	0.5	S	
		03-Apr-98	S		U	ug/L	0.5		
		03-Apr-98	S	F	U	ug/L	0.5		
MW-15	Aroclor 1248	05-Mar-96	S		U	ug/L	1		
		17-Apr-97	S		U	ug/L	0.5		
		23-Sep-97	G		U	ug/L	0.5		
		23-Sep-97	S		U	ug/L	0.5		
		23-Sep-97	G	F	U	ug/L	0.5	S	
		23-Sep-97	S	F	U	ug/L	0.5	S	
		03-Apr-98	S		U	ug/L	0.5		
		03-Apr-98	S	F	U	ug/L	0.5		
MW-15	Aroclor 1254	05-Mar-96	S		U	ug/L	1		
		17-Apr-97	S		U	ug/L	0.5		
		23-Sep-97	S		U	ug/L	0.5		
		23-Sep-97	G		U	ug/L	0.5		
		23-Sep-97	G	F	U	ug/L	0.5	S	
		23-Sep-97	S	F	U	ug/L	0.5	S	
		03-Apr-98	S		U	ug/L	0.5		
		03-Apr-98	S	F	U	ug/L	0.5		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-15	Aroclor 1260	05-Mar-96	S		U	ug/L	1		
		17-Apr-97	S		U	ug/L	0.5		
		23-Sep-97	S		U	ug/L	0.5		
		23-Sep-97	S		U	ug/L	0.5		
		23-Sep-97	S	F	U	ug/L	0.5	S	
		23-Sep-97	S	F	U	ug/L	0.5	S	
		03-Apr-98	S		U	ug/L	0.5		
		03-Apr-98	S	F	U	ug/L	0.5		
MW-15	Aroclor 1268	05-Mar-96	S		U	ug/L	1		
MW-15	Arsenic	05-Mar-96	S		U	ug/L	10		
MW-15	Barium	05-Mar-96	S		11	ug/L	10		
MW-15	Benzene	05-Mar-96	S		U	ug/L	5		
MW-15	Benzo(a)anthracene	05-Mar-96	S		U	ug/L	10		
MW-15	Benzo(a)pyrene	05-Mar-96	S		U	ug/L	10		
MW-15	Benzo(b)fluoranthene	05-Mar-96	S		U	ug/L	10		
MW-15	Benzo(g,h,i)perylene	05-Mar-96	S		U	ug/L	10		
MW-15	Benzo(k)fluoranthene	05-Mar-96	S		U	ug/L	10		
MW-15	Benzyl alcohol	05-Mar-96	S		U	ug/L	10		
MW-15	Beryllium	05-Mar-96	S		U	ug/L	5		
MW-15	beta-BHC	05-Mar-96	S		U	ug/L	0.05		
MW-15	bis(2-Chloroethoxy)methane	05-Mar-96	S		U	ug/L	10		
MW-15	bis(2-Chloroethyl)ether	05-Mar-96	S		U	ug/L	10		
MW-15	bis(2-Chloroisopropy)ether	05-Mar-96	S		U	ug/L	10		
MW-15	bis(2-Ethylhexyl)phthalate	05-Mar-96	S		U	ug/L	10		
MW-15	Bromodichloromethane	05-Mar-96	S		U	ug/L	5		
MW-15	Bromoform	05-Mar-96	S		U	ug/L	5		
MW-15	Bromomethane (methyl bromide)	05-Mar-96	S		U	ug/L	10		
MW-15	Butylbenzylphthalate	05-Mar-96	S		U	ug/L	10		
MW-15	Cadmium	05-Mar-96	S		U	ug/L	5		
MW-15	Carbon disulfide	05-Mar-96	S		U	ug/L	5		
MW-15	Carbon tetrachloride	05-Mar-96	S		U	ug/L	5		
MW-15	Chlordane	05-Mar-96	S		U	ug/L	0.5		

Location	Parameter	Date Samp	Lab	C or F?	Result	Unit	PQL	Desc	Qual
MW-15	Chlorobenzene	05-Mar-96	S		U	ug/L	5		
		17-Apr-97	S		0.93	ug/L	1	J	
		23-Sep-97	G		U	ug/L	1		
		02-Apr-98	G		U	ug/L	1		
MW-15	Chlorobenzilate	05-Mar-96	S		U	ug/L	0.5		
MW-15	Chloroethane	05-Mar-96	S		U	ug/L	10		
MW-15	Chloroform	05-Mar-96	S		U	ug/L	5		
MW-15	Chloromethane (methyl chloride)	05-Mar-96	S		U	ug/L	10		
MW-15	Chloroprene	05-Mar-96	S		U	ug/L	5		
MW-15	Chromium	05-Mar-96	S		U	ug/L	10		
MW-15	Chrysene	05-Mar-96	S		U	ug/L	10		
MW-15	cis-1,3-Dichloropropene	05-Mar-96	S		U	ug/L	5		
MW-15	Cobalt	05-Mar-96	S		U	ug/L	10		
		17-Apr-97	S		0.0022	mg/L	0.01	J	
		23-Sep-97	G		U	mg/L	0.01		
		23-Sep-97	G	F	U	mg/L	0.01	S	
		03-Apr-98	G		U	mg/L	0.01		
		03-Apr-98	G	F	U	mg/L	0.01		
MW-15	Copper	05-Mar-96	S		U	ug/L	25		
MW-15	Cresol, m&p	05-Mar-96	S		U	ug/L	10		
MW-15	delta-BHC	05-Mar-96	S		U	ug/L	0.05		
MW-15	diN-Butylphthalate	05-Mar-96	S		U	ug/L	10		
MW-15	diN-Octylphthalate	05-Mar-96	S		U	ug/L	10		
MW-15	Diallate	05-Mar-96	S		U	ug/L	10		
MW-15	Dibenz(a,h)anthracene	05-Mar-96	S		U	ug/L	10		
MW-15	Dibenzofuran	05-Mar-96	S		U	ug/L	10		
MW-15	Dibromochloromethane	05-Mar-96	S		U	ug/L	5		
MW-15	Dichlorodifluoromethane	05-Mar-96	S		U	ug/L	5		
MW-15	Dieldrin	05-Mar-96	S		U	ug/L	0.1		
MW-15	Diethylphthalate	05-Mar-96	S		U	ug/L	10		
MW-15	Dimethoate	05-Mar-96	S		U	ug/L	2		
MW-15	Dimethylphthalate	05-Mar-96	S		U	ug/L	10		
MW-15	Dioxin-2,3,7,8-TCDD	05-Mar-96	S		U	ug/L	0.005		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-15	Disulfoton	05-Mar-96	S		U	ug/L	2		
MW-15	Endosulfan I	05-Mar-96	S		U	ug/L	0.05		
MW-15	Endosulfan II	05-Mar-96	S		U	ug/L	0.1		
MW-15	Endosulfan sulfate	05-Mar-96	S		U	ug/L	0.1		
MW-15	Endrin	05-Mar-96	S		U	ug/L	0.1		
MW-15	Endrin Aldehyde	05-Mar-96	S		U	ug/L	0.1		
MW-15	Ethyl methacrylate	05-Mar-96	S		U	ug/L	5		
MW-15	Ethyl methanesulforate	05-Mar-96	S		U	ug/L	10		
MW-15	Ethylbenzene	05-Mar-96	S		U	ug/L	5		
MW-15	Famphur	05-Mar-96	S		U	ug/L	2		
MW-15	Fluoranthene	05-Mar-96	S		U	ug/L	10		
MW-15	Fluorene	05-Mar-96	S		U	ug/L	10		
MW-15	gamma-BHC (Lindane)	05-Mar-96	S		U	ug/L	0.05		
MW-15	Heptachlor	05-Mar-96	S		0.12	ug/L	0.05	X	
MW-15	Heptachlor epoxide	05-Mar-96	S		U	ug/L	0.05		
MW-15	Hexa CDD	05-Mar-96	S		U	ug/L	0.005		
MW-15	Hexa CDF	05-Mar-96	S		U	ug/L	0.005		
MW-15	Hexachlorobenzene	05-Mar-96	S		U	ug/L	10		
MW-15	Hexachlorobutadiene	05-Mar-96	S		U	ug/L	10		
MW-15	Hexachlorocyclopentadiene	05-Mar-96	S		U	ug/L	10		
MW-15	Hexachloroethane	05-Mar-96	S		U	ug/L	10		
MW-15	Hexachloropropene	05-Mar-96	S		U	ug/L	10		
MW-15	Indeno(1,2,3-cd)pyrene	05-Mar-96	S		U	ug/L	10		
MW-15	Isobutyl alcohol	05-Mar-96	S		U	ug/L	1000		
MW-15	Isodrin	05-Mar-96	S		U	ug/L	0.05		
MW-15	Isophorone	05-Mar-96	S		U	ug/L	10		
MW-15	Kepone	05-Mar-96	S		U	ug/L	10		
MW-15	Lead	05-Mar-96	S		U	ug/L	5		
MW-15	m-Dinitrobenzene	05-Mar-96	S		U	ug/L	10		
MW-15	m-Nitroaniline	05-Mar-96	S		U	ug/L	50		
MW-15	Mercury	05-Mar-96	S		1.0	ug/L	0.2		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-15	Mercury	17-Apr-97	S		0.0010	mg/L	0.0002		
		03-Apr-98	G		0.00030	mg/L	0.0002		
		03-Apr-98	G	F	U	mg/L	0.0002		
MW-15	Methacrylonitrile	05-Mar-96	S		U	ug/L	100		
MW-15	Methapyrilene	05-Mar-96	S		U	ug/L	2000		
MW-15	Methoxychlor	05-Mar-96	S		U	ug/L	0.5		
MW-15	Methyl ethyl ketone (MEK)	05-Mar-96	S		U	ug/L	25		
MW-15	Methyl iodide	05-Mar-96	S		U	ug/L	5		
MW-15	Methyl methacrylate	05-Mar-96	S		U	ug/L	5		
MW-15	Methyl methanesulfonate	05-Mar-96	S		U	ug/L	10		
MW-15	Methyl parathion	11-Sep-90			U	ug/L	1.2		
		11-Sep-90			U	ug/L	1.2		
		11-Sep-90			U	ug/L	1.2		
		11-Sep-90			U	ug/L	1.2		
		05-Mar-91			U	ug/L	1.2		
		16-Sep-91			U	ug/L	1.2		
		11-Mar-92			U	ug/L	1.2		
		16-Sep-92			U	ug/L	0.5		
		24-Mar-93			U	ug/L	0.5		
		05-Mar-96	S		U	ug/L	0.5		
MW-15	Methylene bromide	05-Mar-96	S		U	ug/L	5		
MW-15	Methylene chloride (dchloromethane)	05-Mar-96	S		U	ug/L	5		
		17-Apr-97	S		0.51	ug/L	5		J
		23-Sep-97	G		U	ug/L	5		
		02-Apr-98	G		U	ug/L	5		
MW-15	N-Nitroso-di-n-butylamine	05-Mar-96	S		U	ug/L	10		
MW-15	N-Nitroso-di-n-propylamine	05-Mar-96	S		U	ug/L	10		
MW-15	N-Nitrosodiethylamine	05-Mar-96	S		U	ug/L	10		
MW-15	N-Nitrosodimethylamine	05-Mar-96	S		U	ug/L	10		
MW-15	N-Nitrosodiphenylamine	05-Mar-96	S		U	ug/L	10		
MW-15	N-Nitrosomethylethylamine	05-Mar-96	S		U	ug/L	10		
MW-15	N-Nitrosomorpholine	05-Mar-96	S		U	ug/L	10		
MW-15	N-Nitrosopiperidine	05-Mar-96	S		U	ug/L	10		
MW-15	N-Nitrosopyrrolidine	05-Mar-96	S		U	ug/L	10		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-15	Naphthalene	05-Mar-96	S		U	ug/L	10		
MW-15	Nickel	05-Mar-96	S		U	ug/L	40		
MW-15	Nitrobenzene	05-Mar-96	S		U	ug/L	10		
MW-15	o,o,o-Triethylphosphorothioate	05-Mar-96	S		U	ug/L	10		
		17-Apr-97	S		U	ug/L	10		
		23-Sep-97	G		U	ug/L	10		
		02-Apr-98	G		U	ug/L	10		
MW-15	o,o-Diethyl-o-2-pyrazinylphoshorothioate	05-Mar-96	S		U	ug/L	1		
MW-15	o-Cresol	05-Mar-96	S		U	ug/L	10		
MW-15	o-Nitroaniline	05-Mar-96	S		U	ug/L	50		
MW-15	o-Nitrophenol (2-Nitophenol)	05-Mar-96	S		U	ug/L	10		
MW-15	o-Toluidine	05-Mar-96	S		U	ug/L	10		
MW-15	p-(Dimethylamino)azoenzene	05-Mar-96	S		U	ug/L	10		
MW-15	p-Chloro-m-cresol	05-Mar-96	S		U	ug/L	10		
MW-15	p-Chloroaniline	05-Mar-96	S		U	ug/L	20		
MW-15	p-Nitroaniline	05-Mar-96	S		U	ug/L	50		
MW-15	p-Phenylenediamine	05-Mar-96	S		U	ug/L	2000		
MW-15	Penta CDD	05-Mar-96	S		U	ug/L	0.005		
MW-15	Penta CDF	05-Mar-96	S		U	ug/L	0.005		
MW-15	Pentachlorobenzene	05-Mar-96	S		U	ug/L	10		
MW-15	Pentachloroethane	05-Mar-96	S		U	ug/L	25		
MW-15	Pentachloronitrobenzene	05-Mar-96	S		U	ug/L	10		
MW-15	Pentachlorophenol	05-Mar-96	S		U	ug/L	50		
		17-Apr-97	S		U	ug/L	1		
		23-Sep-97	G		U	ug/L	1		
		02-Apr-98	G		U	ug/L	1		
MW-15	Phenacetin	05-Mar-96	S		U	ug/L	10		
MW-15	Phenanthrene	05-Mar-96	S		U	ug/L	10		
MW-15	Phenol	05-Mar-96	S		U	ug/L	10		
		17-Apr-97	S		U	ug/L	10		
		23-Sep-97	G		U	ug/L	10		
		02-Apr-98	G		U	ug/L	10		

Location	Farameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
MW-15	Phorate	05-Mar-96	S		U	ug/L	1	
MW-15	Pronamide	05-Mar-96	S		U	ug/L	10	
MW-15	Propionitrile	05-Mar-96	S		U	ug/L	100	
MW-15	Pyrene	05-Mar-96	S		U	ug/L	10	
MW-15	Pyridine	05-Mar-96	S		U	ug/L	200	
MW-15	Safrole	05-Mar-96	S		U	ug/L	10	
MW-15	Selenium	05-Mar-96	S		U	ug/L	50	L
MW-15	Silver	05-Mar-96	S		U	ug/L	10	
MW-15	Syrene	05-Mar-96	S		U	ug/L	5	
MW-15	Sulfide	05-Mar-96	S		U	ug/L	1000	
MW-15	Tetra CDD	05-Mar-96	S		U	ug/L	0.005	
MW-15	Tetra CDF	05-Mar-96	S		U	ug/L	0.005	
MW-15	Tetrachloroethene	05-Mar-96	S		U	ug/L	5	
MW-15	Tetraethyldithiopyrophosphate(Sulfotepp)	05-Mar-96	S		U	ug/L	0.5	
		17-Apr-97	S		U	ug/L	0.5	
		23-Sep-97	G		U	ug/L	0.5	
		02-Apr-98	G		U	ug/L	0.5	
MW-15	Thallium	05-Mar-96	S		U	ug/L	10	
MW-15	Tin	05-Mar-96	S		U	ug/L	50	
MW-15	Toluene	05-Mar-96	S		U	ug/L	5	
MW-15	Total Cyanide	05-Mar-96	S		U	ug/L	10	
MW-15	Toxaphene	05-Mar-96	S		U	ug/L	5	
MW-15	trans-1,2-Dichloroethene	05-Mar-96	S		U	ug/L	5	
MW-15	trans-1,3-Dichloropropene	05-Mar-96	S		U	ug/L	5	
MW-15	trans-1,4-Dichloro-2-butene	05-Mar-96	S		U	ug/L	10	
MW-15	Trichloroethene	05-Mar-96	S		U	ug/L	5	
MW-15	Trichlorofluoromethane	05-Mar-96	S		U	ug/L	5	
MW-15	Vinadium	05-Mar-96	S		U	ug/L	10	
MW-15	Vinyl acetate	05-Mar-96	S		U	ug/L	10	
MW-15	Vinyl chloride	05-Mar-96	S		U	ug/L	10	
MW-15	Xylenes	05-Mar-96	S		U	ug/L	5	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
MW-15	Zinc	05-Mar-96	S		36	ug/L	20	
MW-16	1,1,1,2-Tetrachloroethane	05-Mar-96	S		U	ug/L	5	
MW-16	1,1,1-Trichloroethane	05-Mar-96	S		U	ug/L	5	
MW-16	1,1,2,2-Tetrachloroethane	05-Mar-96	S		U	ug/L	5	
MW-16	1,1,2-Trichloroethane	05-Mar-96	S		U	ug/L	5	
MW-16	1,1-Dichloroethane	05-Mar-96	S		U	ug/L	5	
MW-16	1,1-Dichloroethene	05-Mar-96	S		U	ug/L	5	
MW-16	1,2,3-Trichloropropane	05-Mar-96	S		U	ug/L	5	
MW-16	1,2,4,5-Tetrachlorobenzene	05-Mar-96	S		U	ug/L	10	
MW-16	1,2,4-Trichlorobenzene	05-Mar-96	S		U	ug/L	10	
MW-16	1,2-Dibromo-3-chloropropane	05-Mar-96	S		U	ug/L	10	
MW-16	1,2-Dibromoethane(EDB)	05-Mar-96	S		U	ug/L	5	
MW-16	1,2-Dichlorobenzene	05-Mar-96	S		U	ug/L	10	
		18-Apr-97	S		U	ug/L	10	
		02-Apr-98	G		U	ug/L	10	
MW-16	1,2-Dichloroethane	05-Mar-96	S		U	ug/L	5	
MW-16	1,2-Dichloropropane	05-Mar-96	S		U	ug/L	5	
MW-16	1,3,5-Trinitrobenzene	05-Mar-96	S		U	ug/L	200	
MW-16	1,3-Dichlorobenzene	05-Mar-96	S		U	ug/L	10	
MW-16	1,4-Dichlorobenzene	05-Mar-96	S		U	ug/L	10	
		18-Apr-97	S		U	ug/L	10	
		02-Apr-98	G		U	ug/L	10	
MW-16	1,4-Dioxane	05-Mar-96	S		U	ug/L	10	
MW-16	1,4-Naphthoquinone	05-Mar-96	S		U	ug/L	10	
MW-16	1-Napthylamine	05-Mar-96	S		U	ug/L	10	
MW-16	2,3,4,6-Tetrachlorophenol	05-Mar-96	S		U	ug/L	50	
MW-16	2,4,5-T	05-Mar-96	S		U	ug/L	0.5	
MW-16	2,4,5-TP (Silvex)	05-Mar-96	S		U	ug/L	0.5	
MW-16	2,4,5-Trichlorophenol	05-Mar-96	S		U	ug/L	10	
		18-Apr-97	S		U	ug/L	10	
		19-Sep-97	S		U	ug/L	10	
		02-Apr-98	S		U	ug/L	10	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-16	2,4,6-Trichlorophenol	05-Mar-96	S		U	ug/L	10		
		18-Apr-97	S		U	ug/L	10		
		19-Sep-97	G		U	ug/L	10		
		02-Apr-98	G		U	ug/L	10		
MW-16	2,4-D	05-Mar-96	S		U	ug/L	0.5		
MW-16	2,4-Dichlorophenol	05-Mar-96	S		U	ug/L	10		
		18-Apr-97	S		U	ug/L	10		
		19-Sep-97	G		U	ug/L	10		
		02-Apr-98	G		U	ug/L	10		
MW-16	2,4-Dimethylphenol	05-Mar-96	S		U	ug/L	10		
MW-16	2,4-Dinitrophenol	05-Mar-96	S		U	ug/L	50		
MW-16	2,4-Dinitrotoluene	05-Mar-96	S		U	ug/L	10		
MW-16	2,6-Dichlorophenol	05-Mar-96	S		U	ug/L	10		
MW-16	2,6-Dinitrotoluene	05-Mar-96	S		U	ug/L	10		
MW-16	2-Acetylaminofluorene	05-Mar-96	S		U	ug/L	10		
MW-16	2-Chloroethylvinyl ether	05-Mar-96	S		U	ug/L	50		
MW-16	2-Chloronaphthalene	05-Mar-96	S		U	ug/L	10		
MW-16	2-Chlorophenol	05-Mar-96	S		U	ug/L	10		
MW-16	2-Hexanone	05-Mar-96	S		U	ug/L	25		
MW-16	2-Methylnaphthalene	05-Mar-96	S		U	ug/L	10		
MW-16	2-Naphtylamine	05-Mar-96	S		U	ug/L	10		
MW-16	2-Picoline	05-Mar-96	S		U	ug/L	200		
MW-16	2-sec-Butyl-4,6-dinitrophenol	05-Mar-96	S		U	ug/L	10		
MW-16	3,3'-Dichlorobenzidine	05-Mar-96	S		U	ug/L	20		
MW-16	3,3'-Dimethylbenzidine	05-Mar-96	S		U	ug/L	200		
MW-16	3-Methylcholanthrene	05-Mar-96	S		U	ug/L	10		
MW-16	4,4'-DDD	05-Mar-96	S		U	ug/L	0.1		
MW-16	4,4'-DDE	05-Mar-96	S		U	ug/L	0.1		
MW-16	4,4'-DDT	05-Mar-96	S		U	ug/L	0.1		
MW-16	4,6-Dinitro-o-cresol	05-Mar-96	S		U	ug/L	50		
MW-16	4-Aminobiphenyl	05-Mar-96	S		U	ug/L	10		
MW-16	4-Bromophenyl-phenyl ether	05-Mar-96	S		U	ug/L	10		
MW-16	4-Chlorophenylphenyl ether	05-Mar-96	S		U	ug/L	10		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-16	4-Methyl-2-pentanone (MIBK)	05-Mar-96	S		U	ug/L	25		
MW-16	4-Nitroquinoline 1-oxide	05-Mar-96	S		U	ug/L	100		
MW-16	5-Nitro-o-toluidine	05-Mar-96	S		U	ug/L	10		
MW-16	7,12-Dimethylbenz(a)anthracene	05-Mar-96	S		U	ug/L	10		
MW-16	a-a-Dimethylphenethylamine	05-Mar-96	S		U	ug/L	2000		
MW-16	Acenaphthene	05-Mar-96	S		U	ug/L	10		
MW-16	Acenaphthylene	05-Mar-96	S		U	ug/L	10		
MW-16	Acetone	05-Mar-96	S		U	ug/L	25		
MW-16	Acetonitrile	05-Mar-96	S		U	ug/L	1000		
MW-16	Acetophenone	05-Mar-96	S		U	ug/L	10		
MW-16	Acrolein	05-Mar-96	S		U	ug/L	100		
MW-16	Acrylonitrile	05-Mar-96	S		U	ug/L	100		
MW-16	Aldrin	05-Mar-96	S		U	ug/L	0.05		
MW-16	Allychloride (3-chloropropene)	05-Mar-96	S		U	ug/L	5		
MW-16	alpha-BHC	05-Mar-96	S		U	ug/L	0.05		
MW-16	Aniline	05-Mar-96	S		U	ug/L	50		
MW-16	Anthracene	05-Mar-96	S		U	ug/L	10		
MW-16	Antimony	05-Mar-96	S		U	ug/L	50		
MW-16	Aramite	05-Mar-96	S		U	ug/L	10		
MW-16	Aroclor 1016	26-Mar-87		F	U	ug/L	0.5		
		05-Mar-96	S		U	ug/L	1		
		18-Apr-97	S		U	ug/L	0.5		
		19-Sep-97	G		U	ug/L	0.5		
		19-Sep-97	G	F	U	ug/L	0.5	S	
		03-Apr-98	S		U	ug/L	0.5		
		03-Apr-98	S	F	U	ug/L	0.5		
		03-Apr-98	S	Q	U	ug/L	0.5		
		03-Apr-98	S	Q F	U	ug/L	0.5		
MW-16	Aroclor 1221	26-Mar-87		F	U	ug/L	1		
		05-Mar-96	S		U	ug/L	2		
		18-Apr-97	S		U	ug/L	1		
		19-Sep-97	G		U	ug/L	0.5		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-16	Aroclor 1221	19-Sep-97	G	F	U	ug/L	0.5	S	
		03-Apr-98	S		U	ug/L	0.5		
		03-Apr-98	S	F	U	ug/L	0.5		
		03-Apr-98	S	Q	U	ug/L	0.5		
		03-Apr-98	S	Q F	U	ug/L	0.5		
MW-16	Aroclor 1232	26-Mar-87		F	U	ug/L	0.5	S	
		05-Mar-96	S		U	ug/L	1		
		18-Apr-97	S		U	ug/L	0.5		
		19-Sep-97	G		U	ug/L	0.5		
		19-Sep-97	G	F	U	ug/L	0.5	S	
		03-Apr-98	S		U	ug/L	0.5		
		03-Apr-98	S	F	U	ug/L	0.5		
		03-Apr-98	S	Q	U	ug/L	0.5		
		03-Apr-98	S	Q F	U	ug/L	0.5		
MW-16	Aroclor 1242	26-Mar-87		F	U	ug/L	0.5		
		05-Mar-96	S		U	ug/L	1		
		18-Apr-97	S		U	ug/L	0.5		
		19-Sep-97	G		U	ug/L	0.5		
		19-Sep-97	G	F	U	ug/L	0.5	S	
		03-Apr-98	S		U	ug/L	0.5		
		03-Apr-98	S	F	U	ug/L	0.5		
		03-Apr-98	S	Q	U	ug/L	0.5		
		03-Apr-98	S	Q F	U	ug/L	0.5		
MW-16	Aroclor 1248	26-Mar-87		F	U	ug/L	0.5	S	
		05-Mar-96	S		U	ug/L	1		
		18-Apr-97	S		U	ug/L	0.5		
		19-Sep-97	G		U	ug/L	0.5		
		19-Sep-97	G	F	U	ug/L	0.5	S	
		03-Apr-98	S		U	ug/L	0.5		
		03-Apr-98	S	F	U	ug/L	0.5		
		03-Apr-98	S	Q	U	ug/L	0.5		
		03-Apr-98	S	Q F	U	ug/L	0.5		
MW-16	Aroclor 1254	26-Mar-87		F	U	ug/L	0.5	S	
		05-Mar-96	S		U	ug/L	1		
		18-Apr-97	S		U	ug/L	0.5		
		19-Sep-97	G		U	ug/L	0.5		
		19-Sep-97	G	F	U	ug/L	0.5	S	
		03-Apr-98	S		U	ug/L	0.5		
		03-Apr-98	S	F	U	ug/L	0.5		
		03-Apr-98	S	Q	U	ug/L	0.5		
		03-Apr-98	S	Q F	U	ug/L	0.5		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-16	Aroclor 1260	26-Mar-87		F	U	ug/L	0.5	S	
		05-Mar-96	S		U	ug/L	1		
		18-Apr-97	S		U	ug/L	0.5		
		19-Sep-97	S		U	ug/L	0.5		
		19-Sep-97	G		U	ug/L	0.5		
		19-Sep-97	G	F	U	ug/L	0.5	S	
		03-Apr-98	S		U	ug/L	0.5		
		03-Apr-98	S	F	U	ug/L	0.5		
		03-Apr-98	S	Q	U	ug/L	0.5		
		03-Apr-98	S	Q F	U	ug/L	0.5		
MW-16	Aroclor 1268	05-Mar-96	S		U	ug/L	1		
MW-16	Arsenic	05-Mar-96	S		U	ug/L	10		
MW-16	Barium	05-Mar-96	S		23	ug/L	10		
MW-16	Benzene	05-Mar-96	S		U	ug/L	5		
MW-16	Benzo(a)anthracene	05-Mar-96	S		U	ug/L	10		
MW-16	Benzo(a)pyrene	05-Mar-96	S		U	ug/L	10		
MW-16	Benzo(b)fluoranthene	05-Mar-96	S		U	ug/L	10		
MW-16	Benzo(g,h,i)perylene	05-Mar-96	S		U	ug/L	10		
MW-16	Benzo(k)fluoranthene	05-Mar-96	S		U	ug/L	10		
MW-16	Benzyl alcohol	05-Mar-96	S		U	ug/L	10		
MW-16	Beryllium	05-Mar-96	S		U	ug/L	5		
MW-16	beta-BHC	05-Mar-96	S		U	ug/L	0.05		
MW-16	bis(2-Chloroethoxy)methane	05-Mar-96	S		U	ug/L	10		
MW-16	bis(2-Chloroethyl)ether	05-Mar-96	S		U	ug/L	10		
MW-16	bis(2-Chloroisopropyl)ether	05-Mar-96	S		U	ug/L	10		
MW-16	bis(2-Ethylhexyl)phthalate	05-Mar-96	S		U	ug/L	10		
MW-16	Bromodichloromethane	05-Mar-96	S		U	ug/L	5		
MW-16	Bromoform	05-Mar-96	S		U	ug/L	5		
MW-16	Bromomethane (methyl bromide)	05-Mar-96	S		U	ug/L	10		
MW-16	Butylbenzylphthalate	05-Mar-96	S		U	ug/L	10		
MW-16	Cadmium	05-Mar-96	S		U	ug/L	5		
MW-16	Carbon disulfide	05-Mar-96	S		U	ug/L	5		
MW-16	Carbon tetrachloride	05-Mar-96	S		U	ug/L	5		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-16	Chlordane	05-Mar-96	S		U	ug/L	0.5		
MW-16	Chlorobenzene	05-Mar-96	S		U	ug/L	5		
		18-Apr-97	S		U	ug/L	1		
		19-Sep-97	G		U	ug/L	1		
		02-Apr-98	G		U	ug/L	1		
MW-16	Chlorobenzilate	05-Mar-96	S		U	ug/L	0.5		
MW-16	Chloroethane	05-Mar-96	S		U	ug/L	10		
MW-16	Chloroform	05-Mar-96	S		U	ug/L	5		
MW-16	Chloromethane (methyl chloride)	05-Mar-96	S		U	ug/L	10		
MW-16	Chloroprene	05-Mar-96	S		U	ug/L	5		
MW-16	Chromium	05-Mar-96	S		U	ug/L	10		
MW-16	Chrysene	05-Mar-96	S		U	ug/L	10		
MW-16	cis-1,3-Dichloropropene	05-Mar-96	S		U	ug/L	5		
MW-16	Cobalt	05-Mar-96	S		U	ug/L	10		
		18-Apr-97	S		U	mg/L	0.01		
		19-Sep-97	G		U	mg/L	0.01		
		19-Sep-97	G	F	U	mg/L	0.01	S	
		03-Apr-98	G		U	mg/L	0.01		
		03-Apr-98	G	F	U	mg/L	0.01		
MW-16	Copper	05-Mar-96	S		U	ug/L	25		
MW-16	Cresol, m&p	05-Mar-96	S		U	ug/L	10		
MW-16	delta-BHC	05-Mar-96	S		U	ug/L	0.05		
MW-16	diN-Butylphthalate	05-Mar-96	S		U	ug/L	10		
MW-16	diN-Octylphthalate	05-Mar-96	S		U	ug/L	10		
MW-16	Diallate	05-Mar-96	S		U	ug/L	10		
MW-16	Dibenz(a,h)anthracene	05-Mar-96	S		U	ug/L	10		
MW-16	Dibenzofuran	05-Mar-96	S		U	ug/L	10		
MW-16	Dibromochloromethane	05-Mar-96	S		U	ug/L	5		
MW-16	Dichlorodifluoromethane	05-Mar-96	S		U	ug/L	5		
MW-16	Dieldrin	05-Mar-96	S		U	ug/L	0.1		
MW-16	Diethylphthalate	05-Mar-96	S		U	ug/L	10		
MW-16	Dimethoate	05-Mar-96	S		U	ug/L	2		
MW-16	Dimethylphthalate	05-Mar-96	S		U	ug/L	10		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-16	Dioxin-2,3,7,8-TCDD	05-Mar-96	S		U	ug/L	0.005		
MW-16	Disulfoton	05-Mar-96	S		U	ug/L	2		
MW-16	Endosulfan I	05-Mar-96	S		U	ug/L	0.05		
MW-16	Endosulfan II	05-Mar-96	S		U	ug/L	0.1		
MW-16	Endosulfan sulfate	05-Mar-96	S		U	ug/L	0.1		
MW-16	Endrin	05-Mar-96	S		U	ug/L	0.1		
MW-16	Endrin Aldehyde	05-Mar-96	S		U	ug/L	0.1		
MW-16	Ethyl methacrylate	05-Mar-96	S		U	ug/L	5		
MW-16	Ethyl methanesulfonate	05-Mar-96	S		U	ug/L	10		
MW-16	Ethylbenzene	05-Mar-96	S		U	ug/L	5		
MW-16	Famphur	05-Mar-96	S		U	ug/L	2		
MW-16	Fluoranthene	05-Mar-96	S		U	ug/L	10		
MW-16	Fluorene	05-Mar-96	S		U	ug/L	10		
MW-16	gamma-BHC (Lindane)	05-Mar-96	S		U	ug/L	0.05		
MW-16	Heptachlor	05-Mar-96	S		U	ug/L	0.05		
MW-16	Heptachlor epoxide	05-Mar-96	S		U	ug/L	0.05		
MW-16	Hexa CDD	05-Mar-96	S		U	ug/L	0.005		
MW-16	Hexa CDF	05-Mar-96	S		U	ug/L	0.005		
MW-16	Hexachlorobenzene	05-Mar-96	S		U	ug/L	10		
MW-16	Hexachlorobutadiene	05-Mar-96	S		U	ug/L	10		
MW-16	Hexachlorocyclopentadiene	05-Mar-96	S		U	ug/L	10		
MW-16	Hexachloroethane	05-Mar-96	S		U	ug/L	10		
MW-16	Hexachloropropene	05-Mar-96	S		U	ug/L	10		
MW-16	Indeno(1,2,3-cd)pyrene	05-Mar-96	S		U	ug/L	10		
MW-16	Isobutyl alcohol	05-Mar-96	S		U	ug/L	1000		
MW-16	Isodrin	05-Mar-96	S		U	ug/L	0.05		
MW-16	Isophorone	05-Mar-96	S		U	ug/L	10		
MW-16	Kepone	05-Mar-96	S		U	ug/L	10		
MW-16	Lead	05-Mar-96	S		U	ug/L	5		
MW-16	m-Dinitrobenzene	05-Mar-96	S		U	ug/L	10		
MW-16	m-Nitroaniline	05-Mar-96	S		U	ug/L	50		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-16	Mercury	05-Mar-96	S		U	ug/L	0.2		
		18-Apr-97	S		0.000060	mg/L	0.0002	JB	
		03-Apr-98	G		0.00080	mg/L	0.0002		
		03-Apr-98	G	F	0.00080	mg/L	0.0002		
MW-16	Methacrylonitrile	05-Mar-96	S		U	ug/L	100		
MW-16	Methapyrilene	05-Mar-96	S		U	ug/L	2000		
MW-16	Methoxychlor	05-Mar-96	S		U	ug/L	0.5		
MW-16	Methyl ethyl ketone (MEK)	05-Mar-96	S		U	ug/L	25		
MW-16	Methyl iodide	05-Mar-96	S		U	ug/L	5		
MW-16	Methyl methacrylate	05-Mar-96	S		U	ug/L	5		
MW-16	Methyl methanesulfonate	05-Mar-96	S		U	ug/L	10		
MW-16	Methyl parathion	11-Sep-90			0.49	ug/L	1.2		
		11-Sep-90			U	ug/L	1.2		
		11-Sep-90			U	ug/L	1.2		
		11-Sep-90			U	ug/L	1.2		
		05-Mar-91			U	ug/L	1.2		
		16-Sep-91			U	ug/L	1.2		
		11-Mar-92			U	ug/L	1.2		
		16-Sep-92			U	ug/L	0.5		
		24-Mar-93			U	ug/L	0.5		
		05-Mar-96	S		U	ug/L	0.5		
MW-16	Methylene bromide	05-Mar-96	S		U	ug/L	5		
MW-16	Methylene chloride (dchloromethane)	05-Mar-96	S		U	ug/L	5		
		18-Apr-97	S		U	ug/L	5		
		19-Sep-97	G		U	ug/L	5		
		02-Apr-98	G		U	ug/L	5		
MW-16	N-Nitroso-di-n-butylamine	05-Mar-96	S		U	ug/L	10		
MW-16	N-Nitroso-di-n-propylamine	05-Mar-96	S		U	ug/L	10		
MW-16	N-Nitrosodiethylamine	05-Mar-96	S		U	ug/L	10		
MW-16	N-Nitrosodimethylamine	05-Mar-96	S		U	ug/L	10		
MW-16	N-Nitrosodiphenylamine	05-Mar-96	S		U	ug/L	10		
MW-16	N-Nitrosomethylethylamine	05-Mar-96	S		U	ug/L	10		
MW-16	N-Nitrosomorpholine	05-Mar-96	S		U	ug/L	10		
MW-16	N-Nitrosopiperidine	05-Mar-96	S		U	ug/L	10		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-16	N-Nitrosopyrrolidine	05-Mar-96	S		U	ug/L	10		
MW-16	Naphthalene	05-Mar-96	S		U	ug/L	10		
MW-16	Nickel	05-Mar-96	S		U	ug/L	40		
MW-16	Nitrobenzene	05-Mar-96	S		U	ug/L	10		
MW-16	o,o,o-Triethylphosphorothioate	05-Mar-96	S		U	ug/L	10		
		18-Apr-97	S		U	ug/L	10		
		19-Sep-97	G		U	ug/L	10		
		02-Apr-98	G		U	ug/L	10		
MW-16	o,o-Diethyl-o-2-pyrazinylphoshorothioate	05-Mar-96	S		U	ug/L	1		
MW-16	o-Cresol	05-Mar-96	S		U	ug/L	10		
MW-16	o-Nitroaniline	05-Mar-96	S		U	ug/L	50		
MW-16	o-Nitrophenol (2-Nitophenol)	05-Mar-96	S		U	ug/L	10		
MW-16	o-Toluidine	05-Mar-96	S		U	ug/L	10		
MW-16	p-(Dimethylamino)azoenzene	05-Mar-96	S		U	ug/L	10		
MW-16	p-Chloro-m-cresol	05-Mar-96	S		U	ug/L	10		
MW-16	p-Chloroaniline	05-Mar-96	S		U	ug/L	20		
MW-16	p-Nitroaniline	05-Mar-96	S		U	ug/L	50		
MW-16	p-Phenylenediamine	05-Mar-96	S		U	ug/L	2000		
MW-16	Penta CDD	05-Mar-96	S		U	ug/L	0.005		
MW-16	Penta CDF	05-Mar-96	S		U	ug/L	0.005		
MW-16	Pentachlorobenzene	05-Mar-96	S		U	ug/L	10		
MW-16	Pentachloroethane	05-Mar-96	S		U	ug/L	25		
MW-16	Pentachloronitrobenzene	05-Mar-96	S		U	ug/L	10		
MW-16	Pentachlorophenol	05-Mar-96	S		U	ug/L	50		
		18-Apr-97	S		U	ug/L	1		
		19-Sep-97	G		U	ug/L	1		
		02-Apr-98	G		U	ug/L	1		
MW-16	Phenacetin	05-Mar-96	S		U	ug/L	10		
MW-16	Phenanthrene	05-Mar-96	S		U	ug/L	10		
MW-16	Phenol	05-Mar-96	S		U	ug/L	10		
		18-Apr-97	S		U	ug/L	10		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-16	Phenol	19-Sep-97	G		U	ug/L	10		
		02-Apr-98	G		U	ug/L	10		
MW-16	Phorate	05-Mar-96	S		U	ug/L	1		
MW-16	Pronamide	05-Mar-96	S		U	ug/L	10		
MW-16	Propionitrile	05-Mar-96	S		U	ug/L	100		
MW-16	Pyrene	05-Mar-96	S		U	ug/L	10		
MW-16	Pyridine	05-Mar-96	S		U	ug/L	200		
MW-16	Safrole	05-Mar-96	S		U	ug/L	10		
MW-16	Selenium	05-Mar-96	S		U	ug/L	10		
MW-16	Siver	05-Mar-96	S		U	ug/L	10		
MW-16	Styrene	05-Mar-96	S		U	ug/L	5		
MW-16	Sulfide	05-Mar-96	S		U	ug/L	1000		
MW-16	Tetra CDD	05-Mar-96	S		U	ug/L	0.005		
MW-16	Tetra CDF	05-Mar-96	S		U	ug/L	0.005		
MW-16	Tetrachloroethene	05-Mar-96	S		U	ug/L	5		
MW-16	Tetraethyldithiopyrophosphate (Sulfotepp)	05-Mar-96	S		U	ug/L	0.5		
		18-Apr-97	S		U	ug/L	0.5		
		19-Sep-97	G		U	ug/L	0.5		
		02-Apr-98	G		U	ug/L	0.5		
MW-16	Thallium	05-Mar-96	S		U	ug/L	10		
MW-16	Tin	05-Mar-96	S		U	ug/L	50		
MW-16	Toluene	05-Mar-96	S		U	ug/L	5		
MW-16	Total Cyanide	05-Mar-96	S		U	ug/L	10		
MW-16	Toxaphene	05-Mar-96	S		U	ug/L	5		
MW-16	trans-1,2-Dichloroethene	05-Mar-96	S		U	ug/L	5		
MW-16	trans-1,3-Dichloropropene	05-Mar-96	S		U	ug/L	5		
MW-16	trans-1,4-Dichloro-2-butene	05-Mar-96	S		U	ug/L	10		
MW-16	Trichloroethene	05-Mar-96	S		U	ug/L	5		
MW-16	Trichlorofluoromethane	05-Mar-96	S		U	ug/L	5		
MW-16	Vanadium	05-Mar-96	S		U	ug/L	10		
MW-16	Vinyl acetate	05-Mar-96	S		U	ug/L	10		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-16	Vinyl chloride	05-Mar-96	S		U	ug/L	10		
MW-16	Xylenes	05-Mar-96	S		U	ug/L	5		
MW-16	Zinc	05-Mar-96	S		U	ug/L	20		
MW-20A	1,1,1,2-Tetrachloroethane	05-Mar-96	S		U	ug/L	5		
MW-20A	1,1,1-Trichloroethane	05-Mar-96	S		U	ug/L	5		
MW-20A	1,1,2,2-Tetrachloroethane	05-Mar-96	S		U	ug/L	5		
MW-20A	1,1,2-Trichloroethane	05-Mar-96	S		U	ug/L	5		
MW-20A	1,1-Dichloroethane	05-Mar-96	S		U	ug/L	5		
MW-20A	1,1-Dichloroethene	05-Mar-96	S		U	ug/L	5		
MW-20A	1,2,3-Trichloropropane	05-Mar-96	S		U	ug/L	5		
MW-20A	1,2,4,5-Tetrachlorobenzene	05-Mar-96	S		U	ug/L	20		
		05-Mar-96	S		U	ug/L	10		
MW-20A	1,2,4-Trichlorobenzene	05-Mar-96	S		U	ug/L	20		
		05-Mar-96	S		U	ug/L	10		
MW-20A	1,2-Dibromo-3-chloropropane	05-Mar-96	S		U	ug/L	10		
MW-20A	1,2-Dibromoethane (EDB)	05-Mar-96	S		U	ug/L	5		
MW-20A	1,2-Dichlorobenzene	05-Mar-96	S		24	ug/L	20		
		05-Mar-96	S		24	ug/L	10		
		17-Apr-97	S	Q	18	ug/L	10		
		17-Apr-97	S	Q	17	ug/L			JD
		02-Apr-98	G		16	ug/L	10		
MW-20A	1,2-Dichloroethane	05-Mar-96	S		U	ug/L	5		
MW-20A	1,2-Dichloropropane	05-Mar-96	S		U	ug/L	5		
MW-20A	1,3,5-Trinitrobenzene	05-Mar-96	S		U	ug/L	400		
		05-Mar-96	S		U	ug/L	200		
MW-20A	1,3-Dichlorobenzene	05-Mar-96	S		U	ug/L	20		
		05-Mar-96	S		U	ug/L	10		
MW-20A	1,4-Dichlorobenzene	05-Mar-96	S		10	ug/L	10		
		05-Mar-96	S		U	ug/L	20		
		17-Apr-97	S	Q	6.9	ug/L	10		J
		17-Apr-97	S	Q	6.6	ug/L			JD
		02-Apr-98	G		U	ug/L	10		
MW-20A	1,4-Dioxane	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	20		

Location	Parameter	Date Samp	Lab	C or F?	Result	Unit	PQL	Desc	Qual
MW-20A	1,4-Naphthoquinone	05-Mar-96	S		U	ug/L	20		
		05-Mar-96	S		U	ug/L	10		
MW-20A	1-Napthylamine	05-Mar-96	S		U	ug/L	20		
		05-Mar-96	S		U	ug/L	10		
MW-20A	2,3,4,6-Tetrachlorophenol	05-Mar-96	S		U	ug/L	100		
		05-Mar-96	S		U	ug/L	50		
MW-20A	2,4,5-T	05-Mar-96	S		U	ug/L	2.5		
		05-Mar-96	S		U	ug/L	2.5		
MW-20A	2,4,5-TP (Silvex)	05-Mar-96	S		U	ug/L	2.5		
		05-Mar-96	S		U	ug/L	2.5		
MW-20A	2,4,5-Trichlorophenol	05-Mar-96	S		52	ug/L	10		
		05-Mar-96	S		54	ug/L	20		
		17-Apr-97	S	0	30	ug/L		D	
		17-Apr-97	S	0	33	ug/L	10		
		23-Sep-97	G		28	ug/L	10		
		02-Apr-98	G		26	ug/L	10		
MW-20A	2,4,6-Trichlorophenol	05-Mar-96	S		41	ug/L	10		
		05-Mar-96	S		39	ug/L	20		
		17-Apr-97	S	0	34	ug/L	10		
		17-Apr-97	S	0	31	ug/L		D	
		23-Sep-97	G		34	ug/L	10		
		02-Apr-98	G		35	ug/L	10		
MW-20A	2,4-D	05-Mar-96	S		U	ug/L	2.5	L	
		05-Mar-96	S		U	ug/L	2.5	L	
MW-20A	2,4-Dichlorophenol	05-Mar-96	S		U	ug/L	20		
		05-Mar-96	S		13	ug/L	10		
		17-Apr-97	S	C	6.7	ug/L		JD	
		17-Apr-97	S	C	8.1	ug/L	10	J	
		23-Sep-97	G		U	ug/L	10		
		02-Apr-98	G		U	ug/L	10		
MW-20A	2,4-Dimethylphenol	05-Mar-96	S		U	ug/L	20		
		05-Mar-96	S		U	ug/L	10		
MW-20A	2,4-Dinitrophenol	05-Mar-96	S		U	ug/L	50		
		05-Mar-96	S		U	ug/L	100		
MW-20A	2,4-Dinitrotoluene	05-Mar-96	S		U	ug/L	20		
		05-Mar-96	S		U	ug/L	10		
MW-20A	2,6-Dichlorophenol	05-Mar-96	S		U	ug/L	20		
		05-Mar-96	S		U	ug/L	10		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-20A	2,6-Dinitrotoluene	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	20		
MW-20A	2-Acetylaminofluorene	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	20		
MW-20A	2-Chloroethylvinyl ether	05-Mar-96	S		U	ug/L	50		
MW-20A	2-Chloronaphthalene	05-Mar-96	S		U	ug/L	20		
		05-Mar-96	S		U	ug/L	10		
MW-20A	2-Chlorophenol	05-Mar-96	S		U	ug/L	20		
		05-Mar-96	S		U	ug/L	10		
MW-20A	2-Hexanone	05-Mar-96	S		U	ug/L	25		
MW-20A	2-Methylnaphthalene	05-Mar-96	S		U	ug/L	20		
		05-Mar-96	S		U	ug/L	10		
MW-20A	2-Naphtylamine	05-Mar-96	S		U	ug/L	20		
		05-Mar-96	S		U	ug/L	10		
MW-20A	2-Picoline	05-Mar-96	S		U	ug/L	400		
		05-Mar-96	S		U	ug/L	200		
MW-20A	2-sec-Butyl-4,6-dinitrophenol	05-Mar-96	S		U	ug/L	20		
		05-Mar-96	S		U	ug/L	10		
MW-20A	3,3'-Dichlorobenzidine	05-Mar-96	S		U	ug/L	40		
		05-Mar-96	S		U	ug/L	20		
MW-20A	3,3'-Dimethylbenzidine	05-Mar-96	S		U	ug/L	200		
		05-Mar-96	S		U	ug/L	400		
MW-20A	3-Methylcholanthrene	05-Mar-96	S		U	ug/L	20		
		05-Mar-96	S		U	ug/L	10		
MW-20A	4,4'-DDD	05-Mar-96	S		U	ug/L	2		
MW-20A	4,4'-DDE	05-Mar-96	S		U	ug/L	2		
MW-20A	4,4'-DDT	05-Mar-96	S		U	ug/L	2		
MW-20A	4,6-Dinitro-o-cresol	05-Mar-96	S		U	ug/L	100		
		05-Mar-96	S		U	ug/L	50		
MW-20A	4-Aminobiphenyl	05-Mar-96	S		U	ug/L	20		
		05-Mar-96	S		U	ug/L	10		
MW-20A	4-Bromophenyl-phenyl ether	05-Mar-96	S		U	ug/L	20		
		05-Mar-96	S		U	ug/L	10		
MW-20A	4-Chlorophenylphenyl ether	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	20		

Location	Parameter	Date Samp	Lab	Qor F?	Result	Unit	PQL	Desc	Qual
MW-20A	4-Methyl-2-pentanone (MIBK)	05-Mar-96	S		U	ug/L	25		
MW-20A	4-Nitroquinoline 1-oxide	05-Mar-96	S		U	ug/L	200		
		05-Mar-96	S		U	ug/L	100		
MW-20A	5-Nitro-o-toluidine	05-Mar-96	S		U	ug/L	20		
		05-Mar-96	S		U	ug/L	10		
MW-20A	7,12-Dimethylbenz(a)anthracene	05-Mar-96	S		U	ug/L	20		
		05-Mar-96	S		U	ug/L	10		
MW-20A	a-a-Dimethylphenethylamine	05-Mar-96	S		U	ug/L	2000		
		05-Mar-96	S		U	ug/L	4000		
MW-20A	Acenaphthene	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	20		
MW-20A	Acenaphthylene	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	20		
MW-20A	Acetone	05-Mar-96	S		U	ug/L	25		
MW-20A	Acetonitrile	05-Mar-96	S		U	ug/L	1000		
MW-20A	Acetophenone	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	20		
MW-20A	Acrolein	05-Mar-96	S		U	ug/L	100		
MW-20A	Acrylonitrile	05-Mar-96	S		U	ug/L	100		
MW-20A	Aldrin	05-Mar-96	S		U	ug/L	1	L	
MW-20A	Allylchloride (3-choropropene)	05-Mar-96	S		U	ug/L	5		
MW-20A	alpha-BHC	05-Mar-96	S		U	ug/L	1		
MW-20A	Aniline	05-Mar-96	S		U	ug/L	50		
		05-Mar-96	S		U	ug/L	100		
MW-20A	Anthracene	05-Mar-96	S		U	ug/L	20		
		05-Mar-96	S		U	ug/L	10		
MW-20A	Antimony	05-Mar-96	S		U	ug/L	50		
MW-20A	Aramite	05-Mar-96	S		U	ug/L	20		
		05-Mar-96	S		U	ug/L	10		
MW-20A	Aroclor 1016	05-Mar-96	S		U	ug/L	40		
		17-Apr-97	S	Q	U	ug/L	0.5		
		23-Sep-97	S		U	ug/L	0.5		
		23-Sep-97	G		U	ug/L	0.5		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-20A	Aroclor 1016	23-Sep-97	S	F	U	ug/L	0.5	S	
		23-Sep-97	S	F	U	ug/L	0.5	S	
		03-Apr-98	S		U	ug/L	0.5		
		03-Apr-98	S	F	U	ug/L	0.5		
MW-20A	Aroclor 1221	05-Mar-96	S		U	ug/L	20		
		17-Apr-97	S	Q	U	ug/L	1		
		23-Sep-97	S		U	ug/L	0.5		
		23-Sep-97	S		U	ug/L	1		
		23-Sep-97	G	F	U	ug/L	0.5	S	
		23-Sep-97	S	F	U	ug/L	1	S	
		03-Apr-98	S		U	ug/L	0.5		
		03-Apr-98	S	F	U	ug/L	0.5		
MW-20A	Aroclor 1232	05-Mar-96	S		U	ug/L	20		
		17-Apr-97	S	Q	U	ug/L	0.5		
		23-Sep-97	G		U	ug/L	0.5		
		23-Sep-97	S		U	ug/L	0.5		
		23-Sep-97	S	F	U	ug/L	0.5	S	
		23-Sep-97	G	F	U	ug/L	0.5	S	
		03-Apr-98	S		U	ug/L	0.5		
		03-Apr-98	S	F	U	ug/L	0.5		
MW-20A	Aroclor 1242	05-Mar-96	S		U	ug/L	20		
		17-Apr-97	S	Q	U	ug/L	0.5		
		23-Sep-97	S		U	ug/L	0.5		
		23-Sep-97	G		U	ug/L	0.5		
		23-Sep-97	G	F	U	ug/L	0.5	S	
		23-Sep-97	S	F	U	ug/L	0.5	S	
		03-Apr-98	S		U	ug/L	0.5		
		03-Apr-98	S	F	U	ug/L	0.5		
MW-20A	Aroclor 1248	05-Mar-96	S		U	ug/L	20		
		17-Apr-97	S	Q	U	ug/L	0.5		
		23-Sep-97	S		U	ug/L	0.5		
		23-Sep-97	G		U	ug/L	0.5		
		23-Sep-97	S	F	U	ug/L	0.5	S	
		23-Sep-97	G	F	U	ug/L	0.5	S	
		03-Apr-98	S		U	ug/L	0.5		
		03-Apr-98	S	F	U	ug/L	0.5		
MW-20A	Aroclor 1254	05-Mar-96	S		U	ug/L	20		
		17-Apr-97	S	Q	U	ug/L	0.5		
		23-Sep-97	S		U	ug/L	0.5		
		23-Sep-97	G		U	ug/L	0.5		
		23-Sep-97	G	F	U	ug/L	0.5	S	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-20A	Aroclor 1254	23-Sep-97	S	F	U	ug/L	0.5	S	
		03-Apr-98	S		U	ug/L	0.5		
		03-Apr-98	S	F	U	ug/L	0.5		
MW-20A	Aroclor 1260	05-Mar-96	S		U	ug/L	20		
		17-Apr-97	S	Q	U	ug/L	0.5		
		23-Sep-97	S		U	ug/L	0.5		
		23-Sep-97	G		U	ug/L	0.5		
		23-Sep-97	S	F	U	ug/L	0.5	S	
		23-Sep-97	G	F	U	ug/L	0.5	S	
		03-Apr-98	S		U	ug/L	0.5		
		03-Apr-98	S	F	U	ug/L	0.5		
MW-20A	Aroclor 1268	05-Mar-96	S		U	ug/L	20		
MW-20A	Arsenic	05-Mar-96	S		U	ug/L	20	L	
MW-20A	Barium	05-Mar-96	S		U	ug/L	10		
MW-20A	Benzene	05-Mar-96	S		U	ug/L	5		
MW-20A	Benzo(a)anthracene	05-Mar-96	S		U	ug/L	20		
		05-Mar-96	S		U	ug/L	10		
MW-20A	Benzo(a)pyrene	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	20		
MW-20A	Benzo(b)fluoranthene	05-Mar-96	S		U	ug/L	20		
		05-Mar-96	S		U	ug/L	10		
MW-20A	Benzo(g,h,i)perylene	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	20		
MW-20A	Benzo(k)fluoranthene	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	20		
MW-20A	Benzyl alcohol	05-Mar-96	S		U	ug/L	20		
		05-Mar-96	S		U	ug/L	10		
MW-20A	Beryllium	05-Mar-96	S		U	ug/L	5		
MW-20A	beta-BHC	05-Mar-96	S		U	ug/L	1		
MW-20A	bis(2-Chloroethoxy)methane	05-Mar-96	S		U	ug/L	20		
		05-Mar-96	S		U	ug/L	10		
MW-20A	bis(2-Chloroethyl)ether	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	20		
MW-20A	bis(2-Chloroisopropyl)ether	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	20		
MW-20A	bis(2-Ethylhexyl)phthalate	05-Mar-96	S		U	ug/L	20		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-20A	bis(2-Ethylhexyl)phthalate	05-Mar-96	S		U	ug/L	10		
MW-20A	Bromodichloromethane	05-Mar-96	S		U	ug/L	5		
MW-20A	Bromoform	05-Mar-96	S		U	ug/L	5		
MW-20A	Bromomethane (methyl bromide)	05-Mar-96	S		U	ug/L	10		
MW-20A	Butylbenzylphthalate	05-Mar-96	S		U	ug/L	20		
		05-Mar-96	S		U	ug/L	10		
MW-20A	Cadmium	05-Mar-96	S		U	ug/L	5		
MW-20A	Carbon disulfide	05-Mar-96	S		U	ug/L	5		
MW-20A	Carbon tetrachloride	05-Mar-96	S		U	ug/L	5		
MW-20A	Chlordane	05-Mar-96	S		U	ug/L	10		
MW-20A	Chlorobenzene	05-Mar-96	S		9.4	ug/L	5		
		17-Apr-97	S	Q	10	ug/L	1		
		23-Sep-97	G		9.1	ug/L	1		
		02-Apr-98	G		U	ug/L	1		
MW-20A	Chlorobenzilate	05-Mar-96	S		U	ug/L	10		
MW-20A	Chloroethane	05-Mar-96	S		U	ug/L	10		
MW-20A	Chloroform	05-Mar-96	S		U	ug/L	5		
MW-20A	Chloromethane (methyl chloride)	05-Mar-96	S		U	ug/L	10		
MW-20A	Chloroprene	05-Mar-96	S		U	ug/L	5		
MW-20A	Chromium	05-Mar-96	S		U	ug/L	10		
MW-20A	Chrysene	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	20		
MW-20A	cis-1,3-Dichloropropene	05-Mar-96	S		U	ug/L	5		
MW-20A	Cobalt	05-Mar-96	S		23	ug/L	10		
		17-Apr-97	S	Q	0.025	mg/L	0.01		
		23-Sep-97	G		0.029	mg/L	0.01		
		23-Sep-97	G	F	0.019	mg/L	0.01	S	
		03-Apr-98	G		0.021	mg/L	0.01		
		03-Apr-98	G	F	0.018	mg/L	0.01		
MW-20A	Copper	05-Mar-96	S		U	ug/L	25		
MW-20A	Cresol, m&p	05-Mar-96	S		U	ug/L	20		
		05-Mar-96	S		U	ug/L	10		
MW-20A	delta-BHC	05-Mar-96	S		U	ug/L	1		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-20A	di-N-Butylphthalate	05-Mar-96	S		U	ug/L	20		
		05-Mar-96	S		U	ug/L	10		
MW-20A	di-N-Octylphthalate	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	20		
MW-20A	Dialate	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	20		
MW-20A	Dibenz(a,h)anthracene	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	20		
MW-20A	Dibenzofuran	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	20		
MW-20A	Dibromochloromethane	05-Mar-96	S		U	ug/L	5		
MW-20A	Dichlorodifluoromethane	05-Mar-96	S		U	ug/L	5		
MW-20A	Diedrin	05-Mar-96	S		U	ug/L	2		
MW-20A	Diethylphthalate	05-Mar-96	S		U	ug/L	20		
		05-Mar-96	S		U	ug/L	10		
MW-20A	Dinethoate	05-Mar-96	S		U	ug/L	2		
MW-20A	Dinethylphthalate	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	20		
MW-20A	Dioxin-2,3,7,8-TCDD	05-Mar-96	S		U	ug/L	0.005		
MW-20A	Disulfoton	05-Mar-96	S		U	ug/L	2		
MW-20A	Endosulfan I	05-Mar-96	S		U	ug/L	2		
MW-20A	Endosulfan II	05-Mar-96	S		U	ug/L	2		
MW-20A	Endosulfan sulfate	05-Mar-96	S		U	ug/L	2		
MW-20A	Endrin	05-Mar-96	S		U	ug/L	2		
MW-20A	Endrin Aldehyde	05-Mar-96	S		U	ug/L	2		
MW-20A	Ethyl methacrylate	05-Mar-96	S		U	ug/L	5		
MW-20A	Ethyl methanesulfonate	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	20		
MW-20A	Ethylbenzene	05-Mar-96	S		U	ug/L	5		
MW-20A	Famphur	05-Mar-96	S		U	ug/L	2		
MW-20A	Fluoranthene	05-Mar-96	S		U	ug/L	20		
		05-Mar-96	S		U	ug/L	10		
MW-20A	Fluorene	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	20		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-20A	gamma-BHC (Lindane)	05-Mar-96	S		U	ug/L	10	M	
MW-20A	Heptachlor	05-Mar-96	S		U	ug/L	1		
MW-20A	Heptachlor epoxide	05-Mar-96	S		U	ug/L	1		
MW-20A	Hexa CDD	05-Mar-96	S		0.095	ug/L	0.005		
		19-Jun-96	S	F	U	ug/L	0.005	S	
		19-Jun-96	S	F	U	ug/L	0.005		
MW-20A	Hexa CDF	05-Mar-96	S		U	ug/L	0.005		
MW-20A	Hexachlorobenzene	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	20		
MW-20A	Hexachlorobutadiene	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	20		
MW-20A	Hexachlorocyclopentadiene	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	20		
MW-20A	Hexachloroethane	05-Mar-96	S		U	ug/L	20		
		05-Mar-96	S		U	ug/L	10		
MW-20A	Hexachloropropene	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	20		
MW-20A	Indeno(1,2,3-cd)pyrene	05-Mar-96	S		U	ug/L	20		
		05-Mar-96	S		U	ug/L	10		
MW-20A	Isobutyl alcohol	05-Mar-96	S		U	ug/L	1000		
MW-20A	Isodrin	05-Mar-96	S		U	ug/L	1		
MW-20A	Isophorone	05-Mar-96	S		U	ug/L	20		
		05-Mar-96	S		U	ug/L	10		
MW-20A	Kepone	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	20		
MW-20A	Lead	05-Mar-96	S		U	ug/L	5		
MW-20A	m-Dinitrobenzene	05-Mar-96	S		U	ug/L	20		
		05-Mar-96	S		U	ug/L	10		
MW-20A	m-Nitroaniline	05-Mar-96	S		U	ug/L	100		
		05-Mar-96	S		U	ug/L	50		
MW-20A	Mercury	05-Mar-96	S		U	ug/L	0.2		
		17-Apr-97	S	Q	0.00024	mg/L	0.0002		
		03-Apr-98	G		U	mg/L	0.0002		
		03-Apr-98	G	F	U	mg/L	0.0002		
MW-20A	Methacrylonitrile	05-Mar-96	S		U	ug/L	100		

Location	Parameter	Date Samp	Lab	Qor F?	Result	Unit	PQL	Desc	Qual
MW-20A	Methapyrilene	05-Mar-96	S		U	ug/L	2000		
		05-Mar-96	S		U	ug/L	4000		
MW-20A	Methoxychlor	05-Mar-96	S		U	ug/L	10		
MW-20A	Methyl ethyl ketone (MEK)	05-Mar-96	S		U	ug/L	25		
MW-20A	Methyl iodide	05-Mar-96	S		U	ug/L	5		
MW-20A	Methyl methacrylate	05-Mar-96	S		U	ug/L	5		
MW-20A	Methyl methanesulfonate	05-Mar-96	S		U	ug/L	20		
		05-Mar-96	S		U	ug/L	10		
MW-20A	Methyl parathion	11-Sep-90			0.99	ug/L	1.2		
		11-Sep-90			1.1	ug/L	1.2		
		11-Sep-90			0.39	ug/L	1.2		
		11-Sep-90			1.1	ug/L	1.2		
		05-Mar-91			U	ug/L	1.2		
		16-Sep-91			U	ug/L	1.2		
		11-Mar-92			U	ug/L	1.2		
		16-Sep-92			U	ug/L	0.5		
		24-Mar-93			U	ug/L	0.5		
		05-Mar-96	S		U	ug/L	0.5		
MW-20A	Methylene bromide	05-Mar-96	S		U	ug/L	5		
MW-20A	Methylene chloride (dichloromethane)	05-Mar-96	S		43	ug/L	5		
		17-Apr-97	S	Q	12	ug/L	5		
		23-Sep-97	G		11	ug/L	5		
		02-Apr-98	G		U	ug/L	5		
MW-20A	N-Nitroso-di-n-butylamine	05-Mar-96	S		U	ug/L	20		
		05-Mar-96	S		U	ug/L	10		
MW-20A	N-Nitroso-di-n-propylamine	05-Mar-96	S		U	ug/L	20		
		05-Mar-96	S		U	ug/L	10		
MW-20A	N-Nitrosodiethylamine	05-Mar-96	S		U	ug/L	20		
		05-Mar-96	S		U	ug/L	10		
MW-20A	N-Nitrosodimethylamine	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	20		
MW-20A	N-Nitrosodiphenylamine	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	20		
MW-20A	N-Nitrosomethylethylamine	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	20		
MW-20A	N-Nitrosomorpholine	05-Mar-96	S		U	ug/L	10		

Locaton	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-20A	N-Nitrosomorpholine	05-Mar-96	S		U	ug/L	20		
MW-20A	N-Nitrosopiperidine	05-Mar-96	S		U	ug/L	20		
		05-Mar-96	S		U	ug/L	10		
MW-20A	N-Nitrosopyrrolidine	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	20		
MW-20A	Naphthalene	05-Mar-96	S		U	ug/L	20		
		05-Mar-96	S		U	ug/L	10		
MW-20A	Nickel	05-Mar-96	S		U	ug/L	40		
MW-20A	Nitrobenzene	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	20		
MW-20A	o,o,o-Triethylphosphorothioate	05-Mar-96	S		75	ug/L	10		
		05-Mar-96	S		74	ug/L	20		
		17-Apr-97	S	Q	46	ug/L	10		
		17-Apr-97	S	Q	45	ug/L		D	
		23-Sep-97	G		42	ug/L	10		
		02-Apr-98	G		53	ug/L	10		
MW-20A	o,o-Diethyl-o-2-pyrazinylphoshorothioate	05-Mar-96	S		U	ug/L	1		
MW-20A	o-Cresol	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	20		
MW-20A	o-Nitroaniline	05-Mar-96	S		U	ug/L	100		
		05-Mar-96	S		U	ug/L	50		
MW-20A	o-Nitrophenol (2-Nitrophenol)	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	20		
MW-20A	o-Toluidine	05-Mar-96	S		U	ug/L	20		
		05-Mar-96	S		U	ug/L	10		
MW-20A	p-(Dimethylamino)azobenzene	05-Mar-96	S		U	ug/L	20		
		05-Mar-96	S		U	ug/L	10		
MW-20A	p-Chloro-m-cresol	05-Mar-96	S		U	ug/L	10		
		05-Mar-96	S		U	ug/L	20		
MW-20A	p-Chloroaniline	05-Mar-96	S		U	ug/L	40		
		05-Mar-96	S		U	ug/L	20		
MW-20A	p-Nitroaniline	05-Mar-96	S		U	ug/L	100		
		05-Mar-96	S		U	ug/L	50		
MW-20A	p-Phenylenediamine	05-Mar-96	S		U	ug/L	2000		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
MW-20A	p-Phenylenediamine	05-Mar-96	S		U	ug/L	4000	
MW-20A	Perta CDD	05-Mar-96	S		0.026	ug/L	0.005	
		19-Jun-96	S	F	U	ug/L	0.005	S
		19-Jun-96	S	F	U	ug/L	0.005	
MW-20A	Perta CDF	05-Mar-96	S		U	ug/L	0.005	
MW-20A	Pertachlorobenzene	05-Mar-96	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	20	
MW-20A	Pertachloroethane	05-Mar-96	S		U	ug/L	25	
MW-20A	Pertachloronitrobenzene	05-Mar-96	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	20	
MW-20A	Pertachlorophenol	05-Mar-96	S		200	ug/L	100	
		05-Mar-96	S		190	ug/L	50	E
		17-Apr-97	S	Q	160	ug/L		D
		17-Apr-97	S	Q	170	ug/L	1	E
		23-Sep-97	G		150	ug/L	1	
		02-Apr-98	G		110	ug/L	1	
MW-20A	Phenacetin	05-Mar-96	S		U	ug/L	20	
		05-Mar-96	S		U	ug/L	10	
MW-20A	Phenanthrene	05-Mar-96	S		U	ug/L	20	
		05-Mar-96	S		U	ug/L	10	
MW-20A	Phenol	05-Mar-96	S		U	ug/L	20	
		05-Mar-96	S		U	ug/L	10	
		17-Apr-97	S	Q	U	ug/L	20	Q
		17-Apr-97	S	Q	U	ug/L	10	
		23-Sep-97	G		U	ug/L	10	
		02-Apr-98	G		U	ug/L	10	
MW-20A	Phorate	05-Mar-96	S		U	ug/L	1	
MW-20A	Pronamide	05-Mar-96	S		U	ug/L	20	
		05-Mar-96	S		U	ug/L	10	
MW-20A	Propionitrile	05-Mar-96	S		U	ug/L	100	
MW-20A	Pyrene	05-Mar-96	S		U	ug/L	20	
		05-Mar-96	S		U	ug/L	10	
MW-20A	Pyridine	05-Mar-96	S		U	ug/L	200	
		05-Mar-96	S		U	ug/L	400	
MW-20A	Safole	05-Mar-96	S		U	ug/L	10	
		05-Mar-96	S		U	ug/L	20	
MW-20A	Selenium	05-Mar-96	S		U	ug/L	10	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
MW-20A	Silver	05-Mar-96	S		U	ug/L	10	
MW-20A	Styrene	05-Mar-96	S		U	ug/L	5	
MW-20A	Sulfide	05-Mar-96	S		U	ug/L	1000	
MW-20A	Tetra CDD	05-Mar-96	S		U	ug/L	0.005	
MW-20A	Tetra CDF	05-Mar-96	S		U	ug/L	0.005	
MW-20A	Tetrachloroethene	05-Mar-96	S		U	ug/L	5	
MW-20A	Tetraethyldithiopyrophosphate (Sulfotepp)	05-Mar-96	S		2.2	ug/L	0.5	X
		17-Apr-97	S	Q	1.6	ug/L	0.5	
		23-Sep-97	G		U	ug/L	0.5	
		02-Apr-98	G		U	ug/L	0.5	
MW-20A	Thallium	05-Mar-96	S		U	ug/L	10	
MW-20A	Tin	05-Mar-96	S		U	ug/L	50	
MW-20A	Toluene	05-Mar-96	S		U	ug/L	5	
MW-20A	Total Cyanide	05-Mar-96	S		U	ug/L	10	
MW-20A	Toxaphene	05-Mar-96	S		U	ug/L	20	
MW-20A	trans-1,2-Dichloroethene	05-Mar-96	S		U	ug/L	5	
MW-20A	trans-1,3-Dichloropropene	05-Mar-96	S		U	ug/L	5	
MW-20A	trans-1,4-Dichloro-2-butene	05-Mar-96	S		U	ug/L	10	
MW-20A	Trichloroethene	05-Mar-96	S		U	ug/L	5	
MW-20A	Trichlorofluoromethane	05-Mar-96	S		U	ug/L	5	
MW-20A	Vanadium	05-Mar-96	S		23	ug/L	10	
MW-20A	Vinyl acetate	05-Mar-96	S		U	ug/L	10	
MW-20A	Vinyl chloride	05-Mar-96	S		U	ug/L	10	
MW-20A	Xylenes	05-Mar-96	S		U	ug/L	5	
MW-20A	Zinc	05-Mar-96	S		U	ug/L	20	
OW-02	1,2-Dichlorobenzene	22-Apr-97	S		U	ug/L	10	
OW-02	1,4-Dichlorobenzene	22-Apr-97	S		U	ug/L	10	
OW-02	2,4,5-Trichlorophenol	22-Apr-97	S		U	ug/L	10	
OW-02	2,4,6-Trichlorophenol	22-Apr-97	S		U	ug/L	10	
OW-02	2,4-Dichlorophenol	22-Apr-97	S		U	ug/L	10	
OW-02	Aroclor 1016	22-Apr-97	S		U	ug/L	0.5	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
OW-02	Aroclor 1221	22-Apr-97	S		U	ug/L	1		
OW-02	Aroclor 1232	22-Apr-97	S		U	ug/L	0.5		
OW-02	Aroclor 1242	22-Apr-97	S		U	ug/L	0.5		
OW-02	Aroclor 1248	22-Apr-97	S		U	ug/L	0.5		
OW-02	Aroclor 1254	22-Apr-97	S		U	ug/L	0.5		
OW-02	Aroclor 1260	22-Apr-97	S		U	ug/L	0.5		
OW-02	Chorobenzene	22-Apr-97	S		U	ug/L	1		
OW-02	Cobalt	22-Apr-97	S		U	mg/L	0.01		
OW-02	Mercury	22-Apr-97	S		0.000051	mg/L	0.0002	JB	
OW-02	Methylene chloride (dichloromethane)	22-Apr-97	S		U	ug/L	5		
OW-02	o,o,o-Triethylphosphorothioate	22-Apr-97	S		14	ug/L	10		
OW-02	Pentachlorophenol	22-Apr-97	S		U	ug/L	1		
OW-02	Phenol	22-Apr-97	S		U	ug/L	10		
OW-02	Tetraethyldithiopyrophosphate (Sulfotepp)	22-Apr-97	S		U	ug/L	0.5		
OW-04	1,2Dichlorobenzene	22-Apr-97	S		U	ug/L	10		
OW-04	1,4Dichlorobenzene	22-Apr-97	S		U	ug/L	10		
OW-04	2,45-Trichlorophenol	22-Apr-97	S		U	ug/L	10		
OW-04	2,46-Trichlorophenol	22-Apr-97	S		U	ug/L	10		
OW-04	2,4Dichlorophenol	22-Apr-97	S		U	ug/L	10		
OW-04	Aroclor 1016	22-Apr-97	S		U	ug/L	0.5		
OW-04	Aroclor 1221	22-Apr-97	S		U	ug/L	1		
OW-04	Aroclor 1232	22-Apr-97	S		U	ug/L	0.5		
OW-04	Aroclor 1242	22-Apr-97	S		U	ug/L	0.5		
OW-04	Aroclor 1248	22-Apr-97	S		U	ug/L	0.5		
OW-04	Aroclor 1254	22-Apr-97	S		U	ug/L	0.5		
OW-04	Aroclor 1260	22-Apr-97	S		U	ug/L	0.5		
OW-04	Chlorobenzene	22-Apr-97	S		U	ug/L	1		
OW-04	Cobalt	22-Apr-97	S		0.31	mg/L	0.01	B	
OW-04	Mercury	22-Apr-97	S		0.000083	mg/L	0.0002	JB	

See Table L-3 for Abbreviations and Qualifiers.

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
OW-04	Methylene chloride (dichloromethane)	22-Apr-97	S		U	ug/L	5		
OW-04	o,o,o-Triethylphosphorothioate	22-Apr-97	S		44	ug/L	10		
OW-04	Pentachlorophenol	22-Apr-97	S		U	ug/L	1		
OW-04	Phenol	22-Apr-97	S		U	ug/L	10		
OW-04	Tetraethyldithiopyrophosphate (Sulfotepp)	22-Apr-97	S		U	ug/L	0.5		
OW-06	1,2-Dichlorobenzene	22-Apr-97	S		U	ug/L	10		
OW-06	1,4-Dichlorobenzene	22-Apr-97	S		U	ug/L	10		
OW-06	2,4,5-Trichloropheno	22-Apr-97	S		U	ug/L	10		
		23-Sep-97	G		U	ug/L	10		
OW-06	2,4,6-Trichloropheno	22-Apr-97	S		U	ug/L	10		
		23-Sep-97	G		U	ug/L	10		
OW-06	2,4-Dichlorophenol	22-Apr-97	S		U	ug/L	10		
		23-Sep-97	G		U	ug/L	10		
OW-06	Aroclor 1016	22-Apr-97	S		U	ug/L	0.5		
		23-Sep-97	S		U	ug/L	0.5		
		23-Sep-97	G		U	ug/L	0.5		
		23-Sep-97	S	F	U	ug/L	0.5	S	
		23-Sep-97	G	F	U	ug/L	0.5		
OW-06	Aroclor 1221	22-Apr-97	S		U	ug/L	1		
		23-Sep-97	S		U	ug/L	1		
		23-Sep-97	G		U	ug/L	0.5		
		23-Sep-97	G	F	U	ug/L	0.5		
		23-Sep-97	S	F	U	ug/L	1	S	
OW-06	Aroclor 1232	22-Apr-97	S		U	ug/L	0.5		
		23-Sep-97	S		U	ug/L	0.5		
		23-Sep-97	G		U	ug/L	0.5		
		23-Sep-97	G	F	U	ug/L	0.5		
		23-Sep-97	S	F	U	ug/L	0.5	S	
OW-06	Aroclor 1242	22-Apr-97	S		U	ug/L	0.5		
		23-Sep-97	G		U	ug/L	0.5		
		23-Sep-97	S		U	ug/L	0.5		
		23-Sep-97	S	F	U	ug/L	0.5	S	
		23-Sep-97	G	F	U	ug/L	0.5		
OW-06	Aroclor 1248	22-Apr-97	S		U	ug/L	0.5		

See Table L-3 for Abbreviations and Qualifiers.

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
OW-06	Aroclor 1248	23-Sep-97	S		U	ug/L	0.5		
		23-Sep-97	G		U	ug/L	0.5		
		23-Sep-97	S	F	U	ug/L	0.5	S	
		23-Sep-97	G	F	U	ug/L	0.5		
OW-06	Aroclor 1254	22-Apr-97	S		U	ug/L	0.5		
		23-Sep-97	G		U	ug/L	0.5		
		23-Sep-97	S		U	ug/L	0.5		
		23-Sep-97	S	F	U	ug/L	0.5	S	
		23-Sep-97	G	F	U	ug/L	0.5		
OW-06	Aroclor 1260	22-Apr-97	S		U	ug/L	0.5		
		23-Sep-97	S		U	ug/L	0.5		
		23-Sep-97	G		U	ug/L	0.5		
		23-Sep-97	S	F	U	ug/L	0.5	S	
		23-Sep-97	G	F	U	ug/L	0.5		
OW-06	Chlorobenzene	22-Apr-97	S		U	ug/L	1		
		23-Sep-97	G		U	ug/L	1		
OW-06	Cobalt	22-Apr-97	S		U	mg/L	0.01		
		23-Sep-97	G		U	mg/L	0.01		
		23-Sep-97	G	F	U	mg/L	0.01		
OW-06	Mercury	22-Apr-97	S		0.000050	mg/L	0.0002	JB	
OW-06	Methylene chloride (dichloromethane)	22-Apr-97	S		U	ug/L	5		
		23-Sep-97	G		U	ug/L	5		
OW-06	o,o,o-Triethylphosphorothioate	22-Apr-97	S		U	ug/L	10		
		23-Sep-97	G		U	ug/L	10		
OW-06	Pentachlorophenol	22-Apr-97	S		U	ug/L	1		
		23-Sep-97	G		U	ug/L	1		
OW-06	Phenol	22-Apr-97	S		U	ug/L	10		
		23-Sep-97	G		U	ug/L	10		
OW-06	Tetraethyldithiopyrophosphate (Sulfotepp)	22-Apr-97	S		U	ug/L	0.5		
		23-Sep-97	G		U	ug/L	0.5		
OW-06A	1,2Dichlorobenzene	08-Apr-98	G		U	ug/L	10		
OW-06A	1,4Dichlorobenzene	08-Apr-98	G		U	ug/L	10		
OW-06A	2,4,5-Trichlorophenol	08-Apr-98	G		U	ug/L	10		
OW-06A	2,4,6-Trichlorophenol	08-Apr-98	G		U	ug/L	10		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
OW-06A	2,4-Dichlorophenol	08-Apr-98	G		U	ug/L	10		
OW-06A	Alkalinity (to pH 4.5)as CaCO3	21-Oct-98	S		14	mg/L	1		
OW-06A	Aroclor 1016	09-Apr-98	S		U	ug/L	0.5		
		09-Apr-98	S	F	U	ug/L	0.5		
OW-06A	Aroclor 1221	09-Apr-98	S		U	ug/L	0.5		
		09-Apr-98	S	F	U	ug/L	0.5		
OW-06A	Aroclor 1232	09-Apr-98	S		U	ug/L	0.5		
		09-Apr-98	S	F	U	ug/L	0.5		
OW-06A	Aroclor 1242	09-Apr-98	S		U	ug/L	0.5		
		09-Apr-98	S	F	U	ug/L	0.5		
OW-06A	Aroclor 1248	09-Apr-98	S		U	ug/L	0.5		
		09-Apr-98	S	F	U	ug/L	0.5		
OW-06A	Aroclor 1254	09-Apr-98	S		U	ug/L	0.5		
		09-Apr-98	S	F	U	ug/L	0.5		
OW-06A	Aroclor 1260	09-Apr-98	S		U	ug/L	0.5		
		09-Apr-98	S	F	U	ug/L	0.5		
OW-06A	Chlorobenzene	08-Apr-98	G		U	ug/L	1		
OW-06A	Cobalt	09-Apr-98	G		U	mg/L	0.01		
		09-Apr-98	G	F	U	mg/L	0.01		
OW-06A	Dissolved Oxygen	17-Nov-98			5.3	mg/L			
OW-06A	Iron, Ferrous (2+)	28-Oct-98	S		U	mg/L	0.1		
		28-Oct-98	S	Q	U	mg/L	0.1		
OW-06A	Mercury	09-Apr-98	G		U	mg/L	0.0002		
		09-Apr-98	G	F	U	mg/L	0.0002		
OW-06A	Methylene chloride (dichloromethane)	08-Apr-98	G		U	ug/L	5		
OW-06A	Nitrate-N	21-Oct-98	S		0.40	mg/L	0.05		
OW-06A	o,o,o-Triethylphosphorothicate	08-Apr-98	G		U	ug/L	10		
OW-06A	Pentachlorophenol	08-Apr-98	G		U	ug/L	1		
OW-06A	pH	21-Oct-98			5.3				
		21-Oct-98			5.7				
		21-Oct-98			5.5				
		21-Oct-98			5.4				
		26-Oct-98			4.9				

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
OW-06A	pH	26-Oct-98			5.3				
		17-Nov-98			5.3				
OW-06A	Phenol	08-Apr-98	G		U	ug/L	10		
OW-06A	Phenolics, Total Recoverables	21-Oct-98	S		U	mg/L	0.05		
OW-06A	Phosphorus, Total	21-Oct-98	S		6.8	mg/L	0.2		
OW-06A	Redox	17-Nov-98			120	mV			
OW-06A	Specific Conductance	21-Oct-98			0.65				
		21-Oct-98			0.63				
		21-Oct-98			0.71				
		21-Oct-98			0.71				
		26-Oct-98			0.11	mhos/c			
		26-Oct-98			0.051	mhos/c			
		17-Nov-98			0.039	mhos/c			
OW-06A	Standard Plate Count	21-Oct-98	S		10,000	CFU/m	100		
OW-06A	Sulfate as SO4	21-Oct-98	S		U	mg/L	5		
OW-06A	Sulfide	21-Oct-98	S		U	mg/L	0.1		
OW-06A	Temperature	21-Oct-98			20	°C			
		21-Oct-98			20	°C			
		26-Oct-98			18	°C			
		26-Oct-98			19	°C			
		17-Nov-98			20	°C			
OW-06A	Tetraethyldithiopyrophosphate (Sulfotepp)	08-Apr-98	G		U	ug/L	0.5		
OW-06A	Total Dissolved Solids	21-Oct-98	S		45	mg/L	5		
OW-06A	Total Kjeldahl Nitrogen-N	21-Oct-98	S		U	mg/L	0.2		
OW-06A	Total Organic Carbon	21-Oct-98	S		12	mg/L	1		
OW-06A	Total Organic Halogen	21-Oct-98	S		U	mg/L	0.01		
OW-06A	Total Suspended Solids	21-Oct-98	S		140	mg/L	5		
OW-06A	Turbidity	21-Oct-98			1,000	NTU			
		21-Oct-98			1,000	NTU			
		21-Oct-98			1,000	NTU			
		21-Oct-98			1,000	NTU			
		26-Oct-98			220	NTU			
		26-Oct-98			230	NTU			
		17-Nov-98			10	NTU			

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
OW-07	1,2-Dichlorobenzene	22-Apr-97	S		U	ug/L	10		
		31-Mar-98	G		U	ug/L	10		
OW-07	1,4-Dichlorobenzene	22-Apr-97	S		U	ug/L	10		
		31-Mar-98	G		U	ug/L	10		
OW-07	2,4,5-Trichlorophenol	22-Apr-97	S		U	ug/L	10		
		23-Sep-97	G		U	ug/L	10		
		31-Mar-98	G		U	ug/L	10		
OW-07	2,4,6-Trichlorophenol	22-Apr-97	S		U	ug/L	10		
		23-Sep-97	G		U	ug/L	10		
		31-Mar-98	G		U	ug/L	10		
OW-07	2,4-Dichlorophenol	22-Apr-97	S		U	ug/L	10		
		23-Sep-97	G		U	ug/L	10		
		31-Mar-98	G		U	ug/L	10		
OW-07	Aroclor 1016	22-Apr-97	S		U	ug/L	0.5		
		23-Sep-97	G		U	ug/L	0.5		
		23-Sep-97	S		U	ug/L	0.5		
		23-Sep-97	G	F	U	ug/L	0.5		
		23-Sep-97	S	F	U	ug/L	0.5		S
		01-Apr-98	S		U	ug/L	0.5		
		01-Apr-98	S	F	U	ug/L	0.5		
OW-07	Aroclor 1221	22-Apr-97	S		U	ug/L	1		
		23-Sep-97	S		U	ug/L	1		
		23-Sep-97	G		U	ug/L	0.5		
		23-Sep-97	G	F	U	ug/L	0.5		
		23-Sep-97	S	F	U	ug/L	1		S
		01-Apr-98	S		U	ug/L	0.5		
		01-Apr-98	S	F	U	ug/L	0.5		
OW-07	Aroclor 1232	22-Apr-97	S		U	ug/L	0.5		
		23-Sep-97	G		U	ug/L	0.5		
		23-Sep-97	S		U	ug/L	0.5		
		23-Sep-97	G	F	U	ug/L	0.5		
		23-Sep-97	S	F	U	ug/L	0.5		S
		01-Apr-98	S		U	ug/L	0.5		
		01-Apr-98	S	F	U	ug/L	0.5		
OW-07	Aroclor 1242	22-Apr-97	S		U	ug/L	0.5		
		23-Sep-97	S		U	ug/L	0.5		
		23-Sep-97	G		U	ug/L	0.5		
		23-Sep-97	S	F	U	ug/L	0.5		S
		23-Sep-97	G	F	U	ug/L	0.5		
		01-Apr-98	S		U	ug/L	0.5		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
OW-07	Aroclor 1242	01-Apr-98	S	F	U	ug/L	0.5		
OW-07	Aroclor 1248	22-Apr-97	S		U	ug/L	0.5		
		23-Sep-97	G		U	ug/L	0.5		
		23-Sep-97	S		U	ug/L	0.5		
		23-Sep-97	G	F	U	ug/L	0.5		
		23-Sep-97	S	F	U	ug/L	0.5	S	
		01-Apr-98	S		U	ug/L	0.5		
		01-Apr-98	S	F	U	ug/L	0.5		
OW-07	Aroclor 1254	22-Apr-97	S		U	ug/L	0.5		
		23-Sep-97	G		U	ug/L	0.5		
		23-Sep-97	S		U	ug/L	0.5		
		23-Sep-97	G	F	U	ug/L	0.5		
		23-Sep-97	S	F	U	ug/L	0.5	S	
		01-Apr-98	S		U	ug/L	0.5		
		01-Apr-98	S	F	U	ug/L	0.5		
OW-07	Aroclor 1260	22-Apr-97	S		U	ug/L	0.5		
		23-Sep-97	S		U	ug/L	0.5		
		23-Sep-97	G		U	ug/L	0.5		
		23-Sep-97	G	F	U	ug/L	0.5		
		23-Sep-97	S	F	U	ug/L	0.5	S	
		01-Apr-98	S		U	ug/L	0.5		
		01-Apr-98	S	F	U	ug/L	0.5		
OW-07	Chlorobenzene	22-Apr-97	S		U	ug/L	1		
		23-Sep-97	G		U	ug/L	1		
		31-Mar-98	G		U	ug/L	1		
OW-07	Cobalt	22-Apr-97	S		0.0066	mg/L	0.01	JB	
		23-Sep-97	G		U	mg/L	0.01		
		23-Sep-97	G	F	U	mg/L	0.01		
		01-Apr-98	G		U	mg/L	0.01		
		01-Apr-98	G	F	U	mg/L	0.01		
OW-07	Mercury	22-Apr-97	S		0.00013	mg/L	0.0002	JB	
		01-Apr-98	G		U	mg/L	0.0002		
		01-Apr-98	G	F	U	mg/L	0.0002		
OW-07	Methylene chloride (dichloromethane)	22-Apr-97	S		U	ug/L	5		
		23-Sep-97	G		U	ug/L	5		
		31-Mar-98	G		U	ug/L	5		
OW-07	o,o,e-Triethylphosphorothioate	22-Apr-97	S		U	ug/L	10		
		23-Sep-97	G		U	ug/L	10		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
OW-07	o,o,o-Triethylphosphorothicate	31-Mar-98	G		U	ug/L	10		
OW-07	Pentachlorophenol	22-Apr-97	S		U	ug/L	1		
		23-Sep-97	G		U	ug/L	1		
		31-Mar-98	G		U	ug/L	1		
OW-07	Phenol	22-Apr-97	S		U	ug/L	10		
		23-Sep-97	G		U	ug/L	10		
		31-Mar-98	G		U	ug/L	10		
OW-07	Tetraethyldithiopyrophosphate (Sulfotepp)	22-Apr-97	S		U	ug/L	0.5		
		23-Sep-97	G		U	ug/L	0.5		
		31-Mar-98	G		U	ug/L	0.5		
OW-08	1,2-Dichlorobenzene	21-Apr-97	S		U	ug/L	10		
		21-Apr-97	S	Q	U	ug/L	10	Q	
OW-08	1,4-Dichlorobenzene	21-Apr-97	S		U	ug/L	10		
		21-Apr-97	S	Q	U	ug/L	10	Q	
OW-08	2,4,5-Trichlorophenol	21-Apr-97	S		U	ug/L	10		
		21-Apr-97	S	Q	U	ug/L	10	Q	
		07-Oct-97	G		U	ug/L	10		
		07-Oct-97	G	Q	U	ug/L	10	Q	
OW-08	2,4,6-Trichlorophenol	21-Apr-97	S		U	ug/L	10		
		21-Apr-97	S	Q	U	ug/L	10	Q	
		07-Oct-97	G		U	ug/L	10		
		07-Oct-97	G	Q	U	ug/L	10	Q	
OW-08	2,4-Dichlorophenol	21-Apr-97	S		U	ug/L	10		
		21-Apr-97	S	Q	U	ug/L	10	Q	
		07-Oct-97	G		U	ug/L	10		
		07-Oct-97	G	Q	U	ug/L	10	Q	
OW-08	Aroclor 1016	17-Apr-97	S		U	ug/L	0.5	OT	
		17-Apr-97	S	F	U	ug/L	0.5	OS	
		21-Apr-97	S		U	ug/L	0.5		
		21-Apr-97	S	Q	U	ug/L	0.5	Q	
		08-Jul-97	S	F	U	ug/L	0.5	S	
		08-Jul-97	S	Q	U	ug/L	0.5	Q	
		08-Jul-97	S	Q F	U	ug/L	0.5	QS	
		07-Oct-97	G		U	ug/L	25		
		07-Oct-97	S		U	mg/L	25	D	
		07-Oct-97	S	F	U	mg/L	5	SD	
		07-Oct-97	G	F	U	ug/L	2.5	S	
		07-Oct-97	G	Q	U	ug/L	25	Q	

Location	Parameter	Date Samp	Lab	Q or F?		Result	Unit	PQL	Desc	Qual
OW-08	Aroclor 1016	07-Oct-97	G	Q	F	U	ug/L	2.5	QS	
OW-08	Aroclor 1221	17-Apr-97	S			U	ug/L	1	OT	
		17-Apr-97	S		F	U	ug/L	1	OS	
		21-Apr-97	S			15	ug/L	1		
		21-Apr-97	S	Q		10	ug/L	1	Q	
		08-Jul-97	S		F	32	ug/L		SC	
		08-Jul-97	S		F	16	ug/L	1	S	
		08-Jul-97	S	Q		28	ug/L	2	Q	
		08-Jul-97	S	Q	F	14	ug/L	0.5	QS	
		07-Oct-97	G			600	ug/L	25		
		07-Oct-97	S			460	mg/L	50	D	
		07-Oct-97	S		F	60	mg/L	10	SD	
		07-Oct-97	G		F	79	ug/L	2.5	S	
		07-Oct-97	G	Q		620	ug/L	25	Q	
		07-Oct-97	G	Q	F	81	ug/L	2.5	QS	
OW-08	Aroclor 1232	17-Apr-97	S			U	ug/L	0.5	OT	
		17-Apr-97	S		F	U	ug/L	0.5	OS	
		21-Apr-97	S			U	ug/L	0.5		
		21-Apr-97	S	Q		U	ug/L	0.5	Q	
		08-Jul-97	S		F	U	ug/L	0.5	S	
		08-Jul-97	S	Q		U	ug/L	0.5	Q	
		08-Jul-97	S	Q	F	U	ug/L	0.5	QS	
		07-Oct-97	G			U	ug/L	25		
		07-Oct-97	S			U	mg/L	25	D	
		07-Oct-97	S		F	U	mg/L	5	SD	
		07-Oct-97	G		F	U	ug/L	2.5	S	
		07-Oct-97	G	Q		U	ug/L	25	Q	
		07-Oct-97	G	Q	F	U	ug/L	2.5	QS	
OW-08	Arodor 1242	17-Apr-97	S			U	ug/L	0.5	OT	
		17-Apr-97	S		F	U	ug/L	0.5	OS	
		21-Apr-97	S			7.0	ug/L	0.5	P	
		21-Apr-97	S	Q		4.8	ug/L	0.5	PQ	
		08-Jul-97	S		F	U	ug/L	0.5	S	
		08-Jul-97	S	Q		U	ug/L	0.5	Q	
		08-Jul-97	S	Q	F	U	ug/L	0.5	QS	
		07-Oct-97	G			U	ug/L	25		
		07-Oct-97	S			U	mg/L	25	D	
		07-Oct-97	S		F	U	mg/L	5	SD	
		07-Oct-97	G		F	U	ug/L	2.5	S	
		07-Oct-97	G	Q		U	ug/L	25	Q	
		07-Oct-97	G	Q	F	U	ug/L	2.5	QS	
OW-08	Arodor 1248	17-Apr-97	S			U	ug/L	0.5	OT	

Location	Parameter	Date Samp	Lab	Q or F?		Result	Unit	PQL	Desc	Qual
OW-08	Aroclor 1248	17-Apr-97	S		F	U	ug/L	0.5	OS	
		21-Apr-97	S			U	ug/L	0.5		
		21-Apr-97	S	Q		U	ug/L	0.5	Q	
		08-Jul-97	S		F	U	ug/L	0.5	S	
		08-Jul-97	S	Q		9.7	ug/L	1	QP	
		08-Jul-97	S	Q	F	U	ug/L	0.5	QS	
		07-Oct-97	S			U	mg/L	25	D	
		07-Oct-97	G			U	ug/L	25		
		07-Oct-97	S		F	U	mg/L	5	SD	
		07-Oct-97	G		F	U	ug/L	2.5	S	
		07-Oct-97	G	Q		U	ug/L	25	Q	
		07-Oct-97	G	Q	F	U	ug/L	2.5	QS	
OW-08	Aroclor 1254	17-Apr-97	S			2.4	ug/L	0.5	OTP	
		17-Apr-97	S		F	U	ug/L	0.5	OS	
		21-Apr-97	S			2.6	ug/L	0.5	P	
		21-Apr-97	S	Q		3.2	ug/L	0.5	PQ	
		08-Jul-97	S		F	U	ug/L	0.5	S	
		08-Jul-97	S	Q		3.8	ug/L	1	Q	
		08-Jul-97	S	Q	F	U	ug/L	0.5	QS	
		07-Oct-97	S			U	mg/L	25	D	
		07-Oct-97	G			U	ug/L	25		
		07-Oct-97	S		F	U	mg/L	5	SD	
		07-Oct-97	G		F	U	ug/L	2.5	S	
		07-Oct-97	G	Q		U	ug/L	25	Q	
		07-Oct-97	G	Q	F	U	ug/L	2.5	QS	
OW-08	Aroclor 1260	17-Apr-97	S			U	ug/L	0.5	OT	
		17-Apr-97	S		F	U	ug/L	0.5	OS	
		21-Apr-97	S			U	ug/L	0.5		
		21-Apr-97	S	Q		U	ug/L	0.5	Q	
		08-Jul-97	S		F	U	ug/L	0.5	S	
		08-Jul-97	S	Q		1.3	ug/L	1	Q	
		08-Jul-97	S	Q	F	U	ug/L	0.5	QS	
		07-Oct-97	G			U	ug/L	25		
		07-Oct-97	S			U	mg/L	25	D	
		07-Oct-97	G		F	U	ug/L	2.5	S	
		07-Oct-97	S		F	U	mg/L	5	SD	
		07-Oct-97	G	Q		U	ug/L	25	Q	
		07-Oct-97	G	Q	F	U	ug/L	2.5	QS	
OW-08	Chlorobenzene	21-Apr-97	S			U	ug/L	1		
		21-Apr-97	S	Q		U	ug/L	1	Q	
		07-Oct-97	G			1.6	ug/L	1		
		07-Oct-97	G	Q		0.88	ug/L	1	JQ	

Location	Parameter	Date Samp	Lab	Q or F?		Result	Unit	PQL	Desc Qual
OW-08	Cobalt	21-Apr-97	S			U	mg/L	0.01	
		21-Apr-97	S	Q		U	mg/L	0.01	Q
		07-Oct-97	G			U	mg/L	0.01	
		07-Oct-97	G		F	U	mg/L	0.01	S
		07-Oct-97	G	Q		U	mg/L	0.01	Q
		07-Oct-97	G	Q	F	U	mg/L	0.01	QS
OW-08	Mercury	21-Apr-97	S			0.000061	mg/L	0.0002	JB
		21-Apr-97	S	Q		0.000062	mg/L	0.0002	JBQ
OW-08	Mehylene chloride (dichloromethane)	21-Apr-97	S			U	ug/L	5	
		21-Apr-97	S	Q		U	ug/L	5	Q
		07-Oct-97	G			U	ug/L	5	
		07-Oct-97	G	Q		U	ug/L	5	Q
OW-08	o,oo-Triethylphosphorothioate	21-Apr-97	S			5.5	ug/L	10	J
		21-Apr-97	S	Q		5.4	ug/L	10	JQ
		07-Oct-97	G			U	ug/L	10	
		07-Oct-97	G	Q		U	ug/L	10	Q
OW-08	Pentachlorophenol	21-Apr-97	S			U	ug/L	1	
		21-Apr-97	S	Q		U	ug/L	1	Q
		07-Oct-97	G			U	ug/L	1	
		07-Oct-97	G	Q		U	ug/L	1	Q
OW-08	Phenol	21-Apr-97	S			U	ug/L	10	
		21-Apr-97	S	Q		U	ug/L	10	Q
		07-Oct-97	G			U	ug/L	10	
		07-Oct-97	G	Q		U	ug/L	10	Q
OW-08	Tetaethyldithiopyrophospha e (Sulfotepp)	21-Apr-97	S			U	ug/L	0.5	
		21-Apr-97	S	Q		U	ug/L	0.5	Q
		07-Oct-97	G			U	ug/L	0.5	
		07-Oct-97	G	Q		U	ug/L	0.5	Q
OW-08A	1,2-Dichlorobenzene	08-Apr-98	G			U	ug/L	10	
OW-08A	1,4-Dichlorobenzene	08-Apr-98	G			U	ug/L	10	
OW-08A	2,4,5-Trichlorophenol	08-Apr-98	G			U	ug/L	10	
OW-08A	2,4,5-Trichlorophenol	08-Apr-98	G			U	ug/L	10	
OW-08A	2,4-Dichlorophenol	08-Apr-98	G			U	ug/L	10	
OW-08A	Aroclor 1016	09-Apr-98	S			U	ug/L	25	
		09-Apr-98	S		F	U	ug/L	0.5	
		17-Jun-98	S			U	ug/L		

Location	Parameter	Date Samp	Lab	Q or F?		Result	Unit	PQL	Desc Qual
OW-08A	Aroclor 1016	19-Jun-98	S			U	ug/L		
		23-Jun-98	S			U	ug/L		
OW-08A	Aroclor 1221	09-Apr-98	S			320	ug/L	25	
		09-Apr-98	S		F	U	ug/L	0.5	
		17-Jun-98	S			U	ug/L		
		19-Jun-98	S			U	ug/L		
		23-Jun-98	S			95	ug/L		
OW-08A	Aroclor 1232	09-Apr-98	S			U	ug/L	25	
		09-Apr-98	S		F	U	ug/L	0.5	
		17-Jun-98	S			U	ug/L		
		19-Jun-98	S			U	ug/L		
		23-Jun-98	S			U	ug/L		
OW-08A	Aroclor 1242	09-Apr-98	S			U	ug/L	25	
		09-Apr-98	S		F	U	ug/L	0.5	
		17-Jun-98	S			U	ug/L		
		19-Jun-98	S			U	ug/L		
		23-Jun-98	S			U	ug/L		
OW-08A	Aroclor 1248	09-Apr-98	S			U	ug/L	25	
		09-Apr-98	S		F	U	ug/L	0.5	
		17-Jun-98	S			U	ug/L		
		19-Jun-98	S			U	ug/L		
		23-Jun-98	S			U	ug/L		
OW-08A	Aroclor 1254	09-Apr-98	S			U	ug/L	25	
		09-Apr-98	S		F	U	ug/L	0.5	
		17-Jun-98	S			U	ug/L		
		19-Jun-98	S			U	ug/L		
		23-Jun-98	S			U	ug/L		
OW-08A	Aroclor 1260	09-Apr-98	S			U	ug/L	25	
		09-Apr-98	S		F	U	ug/L	0.5	
		17-Jun-98	S			U	ug/L		
		19-Jun-98	S			U	ug/L		
		23-Jun-98	S			U	ug/L		
OW-08A	Chlorobenzene	08-Apr-98	G			2.9	ug/L	1	
OW-08A	Cobalt	09-Apr-98	G			U	mg/L	0.01	
		09-Apr-98	G		F	U	mg/L	0.01	
OW-08A	Mercury	09-Apr-98	G			U	mg/L	0.0002	
		09-Apr-98	G		F	U	mg/L	0.0002	
OW-08A	Methylene chloride (dichloromethane)	08-Apr-98	G			U	ug/L	5	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
OW-08A	o,o,o-Triethylphosphorothioate	08-Apr-98	G		U	ug/L	10		
OW-08A	Pentachlorophenol	08-Apr-98	G		U	ug/L	1		
OW-08A	Phenol	08-Apr-98	G		U	ug/L	10		
OW-08A	Teraethyldithiopyrophosphate (Sulfotepp)	08-Apr-98	G		U	ug/L	0.5		
OW-09	1,1,2,2-Tetrachloroethane	28-Jul-98	S		U	ug/L	5		
OW-09	1,2-Dichlorobenzene	28-Jul-98	S		U	ug/L	10		
OW-09	1,4-Dichlorobenzene	28-Jul-98	S		U	ug/L	10		
OW-09	2,4,5-Trichlorophenol	28-Jul-98	S		U	ug/L	10		
OW-09	2,4,6-Trichlorophenol	28-Jul-98	S		U	ug/L	10		
OW-09	2,4-Dichlorophenol	28-Jul-98	S		U	ug/L	10		
OW-09	Aroclor 1016	28-Jul-98	S		U	ug/L	1		
		28-Jul-98	S	F	U	ug/L	1		
OW-09	Aroclor 1221	28-Jul-98	S		U	ug/L	1		
		28-Jul-98	S	F	U	ug/L	1		
OW-09	Aroclor 1232	28-Jul-98	S		U	ug/L	1		
		28-Jul-98	S	F	U	ug/L	1		
OW-09	Aroclor 1242	28-Jul-98	S		U	ug/L	1		
		28-Jul-98	S	F	U	ug/L	1		
OW-09	Aroclor 1248	28-Jul-98	S		U	ug/L	1		
		28-Jul-98	S	F	U	ug/L	1		
OW-09	Aroclor 1254	28-Jul-98	S		U	ug/L	1		
		28-Jul-98	S	F	U	ug/L	1		
OW-09	Aroclor 1260	28-Jul-98	S		U	ug/L	1		
		28-Jul-98	S	F	U	ug/L	1		
OW-09	Arsenic	28-Jul-98	S		U	mg/L	0.01		
		28-Jul-98	S	F	U	mg/L	0.01		
OW-09	Barium	28-Jul-98	S		0.19	mg/L	0.01		
		28-Jul-98	S	F	0.19	mg/L	0.01		
OW-09	Beryllium	28-Jul-98	S		U	mg/L	0.004		
		28-Jul-98	S	F	U	mg/L	0.004		
OW-09	Cadmium	28-Jul-98	S		U	mg/L	0.005		
		28-Jul-98	S	F	U	mg/L	0.005		
OW-09	Chlorobenzene	28-Jul-98	S		U	ug/L	5		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
OW-09	Chromium	28-Jul-98	S		U	mg/L	0.01		
		28-Jul-98	S	F	U	mg/L	0.01		
OW-09	Cobalt	28-Jul-98	S		U	mg/L	0.01		
		28-Jul-98	S	F	0.010	mg/L	0.01		
OW-09	Dissolved Oxygen	10-Nov-98			2.1	mg/L			
OW-09	Isopropylbenzene	28-Jul-98	S		U	ug/L	5		
OW-09	Lead	28-Jul-98	S		U	mg/L	0.005		
		28-Jul-98	S	F	0.018	mg/L	0.005		
OW-09	Manganese	28-Jul-98	S		0.31	mg/L	0.01		
		28-Jul-98	S	F	0.33	mg/L	0.01		J
OW-09	Mercury	28-Jul-98	S		0.00068	mg/L	0.0002		
		28-Jul-98	S	F	0.00093	mg/L	0.0002		
OW-09	Methyl parathion	28-Jul-98	S		U	ug/L	0.5		
OW-09	Methylene chloride (dichloromethane)	28-Jul-98	S		U	ug/L	5		
OW-09	Nickel	28-Jul-98	S		0.0087	mg/L	0.004		
		28-Jul-98	S	F	0.0092	mg/L	0.004		
OW-09	o,o,o-Triethylphosphorothioate	28-Jul-98	S		U	ug/L	10		
OW-09	Pentachlorophenol	28-Jul-98	S		U	ug/L	1		
OW-09	pH	28-Jul-98	S		4.9				
		28-Jul-98	S		4.8				
		28-Jul-98	S		4.8				
		28-Jul-98	S		4.9				
OW-09	Phenol	28-Jul-98	S		U	ug/L	10		
OW-09	Redox	10-Nov-98				mV			
OW-09	Specific Conductance	28-Jul-98	S		0.24	ms/cm			
		28-Jul-98	S		0.24	ms/cm			
		28-Jul-98	S		0.26	ms/cm			
		28-Jul-98	S		0.25	ms/cm			
OW-09	Temperature	28-Jul-98	S		22	°C			
		28-Jul-98	S		22	°C			
		28-Jul-98	S		23	°C			
		28-Jul-98	S		22	°C			
OW-09	Tetraethyldithiopyrophosphate (Sulfotepp)	28-Jul-98	S		U	ug/L	0.5		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
OW-09	Total PCBs	28-Jul-98	S		U	ug/L			
		28-Jul-98	S	F	U	ug/L	1		
OW-09	Turbidity	28-Jul-98	S		0.69	NTU			
		28-Jul-98	S		0.61	NTU			
		28-Jul-98	S		0.49	NTU			
		28-Jul-98	S		0.39	NTU			
OW-09	Vanadium	28-Jul-98	S		U	mg/L	0.01		
		28-Jul-98	S	F	U	mg/L	0.01		
OW-10	1,1,2,2-Tetrachloroethane	30-Jul-98	S		U	ug/L	5		
OW-10	1,2Dichlorobenzene	30-Jul-98	S		U	ug/L	10		
OW-10	1,4Dichlorobenzene	30-Jul-98	S		U	ug/L	10		
OW-10	2,4,5-Trichlorophenol	30-Jul-98	S		U	ug/L	10		
OW-10	2,4,6-Trichlorophenol	30-Jul-98	S		U	ug/L	10		
OW-10	2,4Dichlorophenol	30-Jul-98	S		U	ug/L	10		
OW-10	Alkalinity (to pH 4.5) as CaCO3	29-Jul-98	S		20	mg/L	1		
OW-10	Aroclor 1016	30-Jul-98	S		U	ug/L	1		
		31-Jul-98	S	F	U	ug/L	1		
OW-10	Aroclor 1221	30-Jul-98	S		U	ug/L	1		
		31-Jul-98	S	F	U	ug/L	1		
OW-10	Aroclor 1232	30-Jul-98	S		U	ug/L	1		
		31-Jul-98	S	F	U	ug/L	1		
OW-10	Aroclor 1242	30-Jul-98	S		U	ug/L	1		
		31-Jul-98	S	F	U	ug/L	1		
OW-10	Aroclor 1248	30-Jul-98	S		U	ug/L	1		
		31-Jul-98	S	F	U	ug/L	1		
OW-10	Aroclor 1254	30-Jul-98	S		U	ug/L	1		
		31-Jul-98	S	F	U	ug/L	1		
OW-10	Aroclor 1260	30-Jul-98	S		U	ug/L	1		
		31-Jul-98	S	F	U	ug/L	1		
OW-10	Arsenic	30-Jul-98	S		U	mg/L	0.01		
		31-Jul-98	S	F	U	mg/L	0.01		
OW-10	Barium	30-Jul-98	S		1.0	mg/L	0.01		
		31-Jul-98	S	F	1.0	mg/L	0.01		
OW-10	Beryllium	30-Jul-98	S		0.0068	mg/L	0.004		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
OW-10	Beryllium	31-Jul-98	S	F	0.0043	mg/L	0.004		
OW-10	Cadmium	30-Jul-98	S		U	mg/L	0.005		
		31-Jul-98	S	F	U	mg/L	0.005		
OW-10	Chlorobenzene	30-Jul-98	S		U	ug/L	5		
OW-10	Chromium	30-Jul-98	S		U	mg/L	0.01		
		31-Jul-98	S	F	U	mg/L	0.01		
OW-10	Cobalt	30-Jul-98	S		0.052	mg/L	0.01		
		31-Jul-98	S	F	0.049	mg/L	0.01		
OW-10	Dissolved Oxygen	10-Nov-98			3.3	mg/L			
OW-10	Iron, Ferrous (2+)	29-Jul-98	S		U	mg/L	0.25		
OW-10	Isopropylbenzene	30-Jul-98	S		U	ug/L	5		
OW-10	Lead	30-Jul-98	S		U	mg/L	0.005		
		31-Jul-98	S	F	0.014	mg/L	0.005		J
OW-10	Manganese	30-Jul-98	S		1.5	mg/L	0.01		
		31-Jul-98	S	F	1.4	mg/L	0.01		J
OW-10	Mercury	30-Jul-98	S		0.050	mg/L	0.002		
		31-Jul-98	S	F	U	mg/L	0.0002		
OW-10	Methyl parathion	30-Jul-98	S		U	ug/L	0.5		
OW-10	Methylene chloride (dichloromethane)	30-Jul-98	S		U	ug/L	5		
OW-10	Nickel	30-Jul-98	S		0.063	mg/L	0.004		
		31-Jul-98	S	F	0.061	mg/L	0.004		
OW-10	Nitrate-N	29-Jul-98	S		1.4	mg/L	0.05		J
OW-10	o,o,o-Triethylphosphorothioate	30-Jul-98	S		U	ug/L	10		
OW-10	Pentachlorophenol	30-Jul-98	S		U	ug/L	1		
OW-10	pH	01-Jan-88			5.7				
		01-Jan-88			5.8				
		01-Jan-88			6.1				
		29-Jul-98	S		5.3				
		29-Jul-98	S		5.3				
		29-Jul-98	S		5.4				
		29-Jul-98	S		4.8				
		30-Jul-98	S		5.8				
		30-Jul-98	S		5.7				
		30-Jul-98	S		5.6				
		30-Jul-98	S		5.8				

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
OW-10	pH	31-Jul-98			5.7				
		01-Aug-98			5.5				
		01-Aug-98			5.6				
		01-Aug-98			5.3				
		01-Aug-98			5.5				
OW-10	Phenol	30-Jul-98	S		U	ug/L	10		
OW-10	Phenolics, Total Recoverables	30-Jul-98	S		U	mg/L	0.05		
OW-10	Phosphorus, Total	29-Jul-98	S		U	mg/L	0.044		
OW-10	Relox	01-Jan-88			270	mV			
		01-Jan-88			290	mV			
		01-Jan-88			300	mV			
		01-Jan-88			280	mV			
		10-Nov-98			30	mV			
OW-10	Specific Conductance	01-Jan-88			1.6	ms/cm			
		01-Jan-88			1.6	ms/cm			
		01-Jan-88			1.5	ms/cm			
		01-Jan-88			1.6	ms/cm			
		29-Jul-98	S		1.7	ms/cm			
		29-Jul-98	S		1.7	ms/cm			
		29-Jul-98	S		1.7	ms/cm			
		29-Jul-98	S		1.7	ms/cm			
		30-Jul-98	S		1.6	ms/cm			
		30-Jul-98	S		1.6	ms/cm			
		30-Jul-98	S		1.6	ms/cm			
		30-Jul-98	S		1.6	ms/cm			
		01-Aug-98			1.6	ms/cm			
		01-Aug-98			1.6	ms/cm			
		01-Aug-98			1.6	ms/cm			
		01-Aug-98			1.6	ms/cm			
OW-10	Standard Plate Count	29-Jul-98	S		730	CFU/m	1		J
OW-10	Sulate as SO4	29-Jul-98	S		U	mg/L	5		
OW-10	Sulide	30-Jul-98	S		U	mg/L	0.1		
OW-10	Temperature	01-Jan-88			23	°C			
		01-Jan-88			26	°C			
		01-Jan-88			24	°C			
		01-Jan-88			24	°C			
		29-Jul-98	S		26	°C			
		29-Jul-98	S		27	°C			
		29-Jul-98	S		27	°C			

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
OW-10	Temperature	29-Jul-98	S		27	°C			
		30-Jul-98	S		25	°C			
		30-Jul-98	S		24	°C			
		30-Jul-98	S		25	°C			
		30-Jul-98	S		24	°C			
		01-Aug-98			21	°C			
		01-Aug-98			20	°C			
		01-Aug-98			20	°C			
		01-Aug-98			20	°C			
OW-10	Tetraethyldithiopyrophosphate (Sulfotepp)	30-Jul-98	S		U	ug/L	0.5		
OW-10	Total Dissolved Solids	29-Jul-98	S		1,300	mg/L	5		J
OW-10	Total Kjeldahl Nitrogen-N	29-Jul-98	S		3,100	mg/L	800		
OW-10	Total Organic Carbon	30-Jul-98	S		U	mg/L	1		
OW-10	Total Organic Halogen	30-Jul-98	S		0.13	mg/L	0.02		J
OW-10	Total PCBs	30-Jul-98	S		U	ug/L			
		31-Jul-98	S	F	U	ug/L	1		
OW-10	Total Suspended Solids	29-Jul-98	S		10	mg/L	5		J
OW-10	Turbidity	01-Jan-88			28	NTU			
		01-Jan-88			4.8	NTU			
		01-Jan-88			4.7	NTU			
		01-Jan-88			13	NTU			
		29-Jul-98	S		3.5	NTU			
		29-Jul-98	S		3.5	NTU			
		29-Jul-98	S		3.4	NTU			
		29-Jul-98	S		3.4	NTU			
		30-Jul-98	S		3.4	NTU			
		30-Jul-98	S		3.1	NTU			
		30-Jul-98	S		3.1	NTU			
		30-Jul-98	S		3.6	NTU			
		01-Aug-98			5.7	NTU			
		01-Aug-98			4.3	NTU			
		01-Aug-98			4.3	NTU			
		01-Aug-98			6.7	NTU			
OW-10	Vanadium	30-Jul-98	S		U	mg/L	0.01		
		31-Jul-98	S	F	U	mg/L	0.01		
OW-15	1,2-Dichlorobenzene	31-Mar-98	G		U	ug/L	10		
OW-15	1,4-Dichlorobenzene	31-Mar-98	G		U	ug/L	10		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
OW-15	2,45-Trichlorophenol	26-Sep-97	G		U	ug/L	10	
		31-Mar-98	G		U	ug/L	10	
OW-15	2,46-Trichlorophenol	26-Sep-97	G		U	ug/L	10	
		31-Mar-98	G		U	ug/L	10	
OW-15	2,4Dichlorophenol	26-Sep-97	G		U	ug/L	10	
		31-Mar-98	G		U	ug/L	10	
OW-15	Arcclor 1016	26-Sep-97	G		U	ug/L	0.5	
		26-Sep-97	S		U	ug/L	0.5	
		26-Sep-97	S	F	U	ug/L	0.5	S
		26-Sep-97	G	F	U	ug/L	0.5	S
		01-Apr-98	S		U	ug/L	0.5	
		01-Apr-98	S	F	U	ug/L	0.5	
OW-15	Arcclor 1221	26-Sep-97	G		U	ug/L	0.5	
		26-Sep-97	S		U	ug/L	1	
		26-Sep-97	S	F	U	ug/L	1	S
		26-Sep-97	G	F	U	ug/L	0.5	S
		01-Apr-98	S		2.9	ug/L	0.5	
		01-Apr-98	S	F	U	ug/L	0.5	
OW-15	Arcclor 1232	26-Sep-97	G		U	ug/L	0.5	
		26-Sep-97	S		U	ug/L	0.5	
		26-Sep-97	S	F	U	ug/L	0.5	S
		26-Sep-97	G	F	U	ug/L	0.5	S
		01-Apr-98	S		U	ug/L	0.5	
		01-Apr-98	S	F	U	ug/L	0.5	
OW-15	Arcclor 1242	26-Sep-97	G		U	ug/L	0.5	
		26-Sep-97	S		U	ug/L	0.5	
		26-Sep-97	S	F	U	ug/L	0.5	S
		26-Sep-97	G	F	U	ug/L	0.5	S
		01-Apr-98	S		U	ug/L	0.5	
		01-Apr-98	S	F	U	ug/L	0.5	
OW-15	Arcclor 1248	26-Sep-97	G		U	ug/L	0.5	
		26-Sep-97	S		U	ug/L	0.5	
		26-Sep-97	G	F	U	ug/L	0.5	S
		26-Sep-97	S	F	U	ug/L	0.5	S
		01-Apr-98	S		1.3	ug/L	0.5	
		01-Apr-98	S	F	U	ug/L	0.5	
OW-15	Arcclor 1254	26-Sep-97	G		U	ug/L	0.5	
		26-Sep-97	S		U	ug/L	0.5	
		26-Sep-97	G	F	U	ug/L	0.5	S
		26-Sep-97	S	F	U	ug/L	0.5	S

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
OW-15	Aroclor 1254	01-Apr-98	S		U	ug/L	0.5	
		01-Apr-98	S	F	U	ug/L	0.5	
OW-15	Aroclor 1260	26-Sep-97	G		U	ug/L	0.5	
		26-Sep-97	S		U	ug/L	0.5	
		26-Sep-97	G	F	U	ug/L	0.5	S
		26-Sep-97	S	F	U	ug/L	0.5	S
		01-Apr-98	S		U	ug/L	0.5	
		01-Apr-98	S	F	U	ug/L	0.5	
OW-15	Chlorobenzene	26-Sep-97	G		U	ug/L	1	
		31-Mar-98	G		U	ug/L	1	
OW-15	Cobalt	22-Apr-97	S		0.0073	mg/L	0.01	JB
		26-Sep-97	G		U	mg/L	0.01	
		26-Sep-97	G	F	U	mg/L	0.01	S
		01-Apr-98	G		U	mg/L	0.01	
		01-Apr-98	G	F	U	mg/L	0.01	
OW-15	Mercury	22-Apr-97	S		0.000083	mg/L	0.0002	JB
		01-Apr-98	G		U	mg/L	0.0002	
		01-Apr-98	G	F	U	mg/L	0.0002	
OW-15	Methylene chloride (dichloromethane)	26-Sep-97	G		U	ug/L	5	
		31-Mar-98	G		U	ug/L	5	
OW-15	o,o,o-Triethylphosphorothioate	26-Sep-97	G		U	ug/L	10	
		31-Mar-98	G		U	ug/L	10	
OW-15	Pentachlorophenol	26-Sep-97	G		U	ug/L	1	
		31-Mar-98	G		U	ug/L	1	
OW-15	Phenol	26-Sep-97	G		U	ug/L	10	
		31-Mar-98	G		U	ug/L	10	
OW-15	Tetraethyldithiopyrophosphate (Sulfotepp)	26-Sep-97	G		U	ug/L	0.5	
		31-Mar-98	G		U	ug/L	0.5	
OW-16	1,2-Dichlorobenzene	22-Apr-97	S		14	ug/L	10	
OW-16	1,4-Dichlorobenzene	22-Apr-97	S		5.1	ug/L	10	J
OW-16	2,4,5-Trichlorophenol	22-Apr-97	S		U	ug/L	10	
		08-Oct-97	G		U	ug/L	10	
OW-16	2,4,6-Trichlorophenol	22-Apr-97	S		U	ug/L	10	
		08-Oct-97	G		U	ug/L	10	
OW-16	2,4-Dichlorophenol	22-Apr-97	S		0.34	ug/L	10	J

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
OW-16	2,4 Dichlorophenol	08-Oct-97	G		U	ug/L	10	
OW-16	Arclor 1016	17-Apr-97	S		U	ug/L	0.5	OT
		17-Apr-97	S	F	U	ug/L	0.5	OS
		08-Jul-97	S		U	ug/L	2.5	
		08-Jul-97	S	F	U	ug/L	0.5	S
		08-Oct-97	G		U	ug/L	10	
		08-Oct-97	S		U	mg/L	10	
		08-Oct-97	G	F	U	ug/L	0.5	S
		08-Oct-97	S	F	U	mg/L	0.5	S
OW-16	Arclor 1221	17-Apr-97	S		U	ug/L	1	OT
		17-Apr-97	S	F	U	ug/L	1	OS
		22-Apr-97	S		80	ug/L		D
		08-Jul-97	S		250	ug/L	50	D
		08-Jul-97	S	F	U	ug/L	1	S
		08-Oct-97	S		170	mg/L	20	D
		08-Oct-97	G		260	ug/L	10	
		08-Oct-97	G	F	8.9	ug/L	0.5	S
		08-Oct-97	S	F	U	mg/L	1	S
OW-16	Arclor 1232	17-Apr-97	S		U	ug/L	0.5	OT
		17-Apr-97	S	F	U	ug/L	0.5	OS
		22-Apr-97	S		U	ug/L	1	
		08-Jul-97	S		U	ug/L	2.5	
		08-Jul-97	S	F	U	ug/L	0.5	S
		08-Oct-97	S		U	mg/L	10	
		08-Oct-97	G		U	ug/L	10	
		08-Oct-97	S	F	U	mg/L	0.5	S
		08-Oct-97	G	F	U	ug/L	0.5	S
OW-16	Arclor 1242	17-Apr-97	S		U	ug/L	0.5	OT
		17-Apr-97	S	F	U	ug/L	0.5	OS
		22-Apr-97	S		14	ug/L		D
		08-Jul-97	S		16	ug/L	0.5	
		08-Jul-97	S	F	U	ug/L	0.5	S
		08-Oct-97	G		U	ug/L	10	
		08-Oct-97	S		U	mg/L	10	
		08-Oct-97	G	F	U	ug/L	0.5	S
		08-Oct-97	S	F	U	mg/L	0.5	S
OW-16	Arclor 1248	17-Apr-97	S		U	ug/L	0.5	OT
		17-Apr-97	S	F	U	ug/L	0.5	OS
		22-Apr-97	S		U	ug/L	1	
		08-Jul-97	S		U	ug/L	0.5	
		08-Jul-97	S	F	U	ug/L	0.5	S

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
OW-16	Aroclor 1248	08-Oct-97	G		U	ug/L	10	
		08-Oct-97	S		U	mg/L	10	
		08-Oct-97	S	F	U	mg/L	0.5	S
		08-Oct-97	G	F	U	ug/L	0.5	S
OW-16	Aroclor 1254	17-Apr-97	S		U	ug/L	0.5	OT
		17-Apr-97	S	F	U	ug/L	0.5	OS
		22-Apr-97	S		U	ug/L	1	
		08-Jul-97	S		U	ug/L	0.5	
		08-Jul-97	S	F	U	ug/L	0.5	S
		08-Oct-97	G		U	ug/L	10	
		08-Oct-97	S		U	mg/L	10	
		08-Oct-97	S	F	U	mg/L	0.5	S
		08-Oct-97	G	F	U	ug/L	0.5	S
OW-16	Aroclor 1260	17-Apr-97	S		U	ug/L	0.5	OT
		17-Apr-97	S	F	U	ug/L	0.5	OS
		22-Apr-97	S		U	ug/L	1	
		08-Jul-97	S		U	ug/L	0.5	
		08-Jul-97	S	F	U	ug/L	0.5	S
		08-Oct-97	G		U	ug/L	10	
		08-Oct-97	S		U	mg/L	10	
		08-Oct-97	G	F	U	ug/L	0.5	S
		08-Oct-97	S	F	U	mg/L	0.5	S
OW-16	Chlorobenzene	22-Apr-97	S		2.4	ug/L	1	
		08-Oct-97	G		3.4	ug/L	1	
OW-16	Cobalt	22-Apr-97	S		0.015	mg/L	0.01	B
		08-Oct-97	G		0.020	mg/L	0.01	
		08-Oct-97	G	F	0.015	mg/L	0.01	S
OW-16	Mercury	22-Apr-97	S		0.000066	mg/L	0.0002	JB
OW-16	Methylene chloride (dichloromethane)	22-Apr-97	S		U	ug/L	5	
		08-Oct-97	G		U	ug/L	5	
OW-16	o,o,o-Triethylphosphorothicate	22-Apr-97	S		12	ug/L	10	
		08-Oct-97	G		12	ug/L	10	
OW-16	Pentachlorophenol	22-Apr-97	S		U	ug/L	1	
		08-Oct-97	G		U	ug/L	1	
OW-16	Phenol	22-Apr-97	S		U	ug/L	10	
		08-Oct-97	G		U	ug/L	10	
OW-16	Tetraethyldithiopyrophosphate (Sulfotepp)	22-Apr-97	S		U	ug/L	0.5	

Location	Parameter	Date Samp	Lab	Qor F?	Result	Unit	PQL	Desc	Qual
OW-16	Tetraethyldithiopyrophosphate (Sulfotepp)	08-Oct-97	G		U	ug/L	0.5		
OW-16A	1,2-Dichlorobenzene	08-Apr-98	G		37	ug/L	10		
OW-16A	1,4-Dichlorobenzene	08-Apr-98	G		U	ug/L	10		
OW-16A	2,4,5-Trichlorophenol	08-Apr-98	G		U	ug/L	10		
OW-16A	2,4,6-Trichlorophenol	08-Apr-98	G		U	ug/L	10		
OW-16A	2,4-Dichlorophenol	08-Apr-98	G		U	ug/L	10		
OW-16A	Aroclor 1016	09-Apr-98	S		U	ug/L	5		
		09-Apr-98	S	F	U	ug/L	0.5		
		18-Jun-98	S		U	ug/L			
		19-Jun-98	S		U	ug/L			
		23-Jun-98	S		U	ug/L			
OW-16A	Aroclor 1221	09-Apr-98	S		99	ug/L	5	*F47	
		09-Apr-98	S	F	U	ug/L	0.5		
		18-Jun-98	S		81	ug/L			
		19-Jun-98	S		71	ug/L			
		23-Jun-98	S		73	ug/L			
OW-16A	Aroclor 1232	09-Apr-98	S		U	ug/L	5		
		09-Apr-98	S	F	U	ug/L	0.5		
		18-Jun-98	S		U	ug/L			
		19-Jun-98	S		U	ug/L			
		23-Jun-98	S		U	ug/L			
OW-16A	Aroclor 1242	09-Apr-98	S		U	ug/L	5		
		09-Apr-98	S	F	U	ug/L	0.5		
		18-Jun-98	S		U	ug/L			
		19-Jun-98	S		U	ug/L			
		23-Jun-98	S		U	ug/L			
OW-16A	Aroclor 1248	09-Apr-98	S		U	ug/L	5		
		09-Apr-98	S	F	U	ug/L	0.5		
		18-Jun-98	S		U	ug/L			
		19-Jun-98	S		U	ug/L			
		23-Jun-98	S		U	ug/L			
OW-16A	Aroclor 1254	09-Apr-98	S		U	ug/L	5		
		09-Apr-98	S	F	U	ug/L	0.5		
		18-Jun-98	S		U	ug/L			
		19-Jun-98	S		U	ug/L			
		23-Jun-98	S		U	ug/L			
OW-16A	Aroclor 1260	09-Apr-98	S		U	ug/L	5		

Locaton	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
OW-16A	Aroclor 1260	09-Apr-98	S	F	U	ug/L	0.5		
		18-Jun-98	S		U	ug/L			
		19-Jun-98	S		U	ug/L			
		23-Jun-98	S		U	ug/L			
OW-16A	Chlorobenzene	08-Apr-98	G		5.7	ug/L	1		
OW-16A	Cobalt	09-Apr-98	G		0.029	mg/L	0.01		
		09-Apr-98	G	F	0.027	mg/L	0.01		
OW-16A	Mercury	09-Apr-98	G		U	mg/L	0.0002		
		09-Apr-98	G	F	U	mg/L	0.0002		
OW-16A	Methylene chloride (dichloromethane)	08-Apr-98	G		U	ug/L	5		
OW-16A	o,o,o-Triethylphosphorothioate	08-Apr-98	G		15	ug/L	10		
OW-16A	Pentachlorophenol	08-Apr-98	G		U	ug/L	1		
OW-16A	Phenol	08-Apr-98	G		U	ug/L	10		
OW-16A	Tetraethyldithiopyrophosphate (Sulfotepp)	08-Apr-98	G		U	ug/L	1		
OW-19	1,2-Dichlorobenzene	17-Apr-97	S	Q	3.4	ug/L	10	J	
		17-Apr-97	S	Q	U	ug/L	100	D	
		02-Apr-98	G		U	ug/L	10		
OW-19	1,4-Dichlorobenzene	17-Apr-97	S	Q	U	ug/L	10		
		17-Apr-97	S	Q	U	ug/L	100	Q	
		02-Apr-98	G		U	ug/L	10		
OW-19	2,4,5-Trichlorophenol	17-Apr-97	S	Q	U	ug/L	100	Q	
		17-Apr-97	S	Q	U	ug/L	10		
		02-Apr-98	G		U	ug/L	10		
OW-19	2,4,6-Trichlorophenol	17-Apr-97	S	Q	0.45	ug/L	10	J	
		17-Apr-97	S	Q	U	ug/L	100	D	
		02-Apr-98	G		U	ug/L	10		
OW-19	2,4-Dichlorophenol	17-Apr-97	S	Q	0.76	ug/L	10	J	
		17-Apr-97	S	Q	U	ug/L	100	D	
		02-Apr-98	G		U	ug/L	10		
OW-19	Aroclor 1016	17-Apr-97	S	Q	U	ug/L	0.5		
		02-Apr-98	S		U	ug/L	0.5		
		02-Apr-98	S	F	U	ug/L	0.5		
OW-19	Aroclor 1221	17-Apr-97	S	Q	U	ug/L	1		
		02-Apr-98	S		U	ug/L	0.5		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
OW-19	Aroclor 1221	02-Apr-98	S	F	U	ug/L	0.5	
OW-19	Aroclor 1232	17-Apr-97	S	Q	U	ug/L	0.5	
		02-Apr-98	S		U	ug/L	0.5	
		02-Apr-98	S	F	U	ug/L	0.5	
OW-19	Aroclor 1242	17-Apr-97	S	Q	U	ug/L	0.5	
		02-Apr-98	S		U	ug/L	0.5	
		02-Apr-98	S	F	U	ug/L	0.5	
OW-19	Aroclor 1248	17-Apr-97	S	Q	U	ug/L	0.5	
		02-Apr-98	S		U	ug/L	0.5	
		02-Apr-98	S	F	U	ug/L	0.5	
OW-19	Aroclor 1254	17-Apr-97	S	Q	U	ug/L	0.5	
		02-Apr-98	S		U	ug/L	0.5	
		02-Apr-98	S	F	U	ug/L	0.5	
OW-19	Aroclor 1260	17-Apr-97	S	Q	U	ug/L	0.5	
		02-Apr-98	S		U	ug/L	0.5	
		02-Apr-98	S	F	U	ug/L	0.5	
OW-19	Chorobenzene	17-Apr-97	S	Q	1.0	ug/L	1	
		02-Apr-98	G		U	ug/L	1	
OW-19	Coalt	17-Apr-97	S	Q	0.34	mg/L	0.01	
		02-Apr-98	G		0.35	mg/L	0.01	
		02-Apr-98	G	F	0.28	mg/L	0.01	
OW-19	Mecury	17-Apr-97	S	Q	0.000066	mg/L	0.0002	J
		02-Apr-98	G		U	mg/L	0.0002	
		02-Apr-98	G	F	U	mg/L	0.0002	
OW-19	Mehylene chloride (dichloromethane)	17-Apr-97	S	Q	2.3	ug/L	5	J
		02-Apr-98	G		U	ug/L	5	
OW-19	o,oo-Triethylphosphorothioate	17-Apr-97	S	Q	75	ug/L		JQ
		17-Apr-97	S	Q	75	ug/L	10	
		02-Apr-98	G		68	ug/L	10	
OW-19	Pertachlorophenol	17-Apr-97	S	Q	U	ug/L	1	Q
		17-Apr-97	S	Q	U	ug/L	1	
		02-Apr-98	G		U	ug/L	1	
OW-19	Phenol	17-Apr-97	S	Q	U	ug/L	100	Q
		17-Apr-97	S	Q	U	ug/L	10	
		02-Apr-98	G		U	ug/L	10	
OW-19	Tetaethyldithiopyrophospha e (Sulfotepp)	17-Apr-97	S	Q	U	ug/L	0.5	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
OW-19	Tetraethyldithiopyrophosphat e (Sulfotepp)	02-Apr-98	G		U	ug/L	0.5	
OW-21	1,2-Dichlorobenzene	17-Apr-97	S		U	ug/L	10	
		31-Mar-98	G		U	ug/L	10	
OW-21	1,4-Dichlorobenzene	17-Apr-97	S		U	ug/L	10	
		31-Mar-98	G		U	ug/L	10	
OW-21	2,4,5-Trichloropheno	17-Apr-97	S		U	ug/L	10	
		31-Mar-98	G		U	ug/L	10	
OW-21	2,4,6-Trichloropheno	17-Apr-97	S		U	ug/L	10	
		31-Mar-98	G		U	ug/L	10	
OW-21	2,4-Dichlorophenol	17-Apr-97	S		U	ug/L	10	
		31-Mar-98	G		U	ug/L	10	
OW-21	Aroclor 1016	17-Apr-97	S		U	ug/L	2.5	OT
		17-Apr-97	S		U	ug/L	0.5	
		17-Apr-97	S	F	U	ug/L	0.5	OS
		08-Jul-97	S		U	ug/L	0.5	
		08-Jul-97	S	F	U	ug/L	0.5	S
		01-Apr-98	S		U	ug/L	0.5	
		01-Apr-98	S	F	U	ug/L	0.5	
		01-Apr-98	S	Q	U	ug/L	0.5	
		01-Apr-98	S	Q F	U	ug/L	0.5	
		17-Jun-98	S		U	ug/L		
		19-Jun-98	S		U	ug/L		
OW-21	Aroclor 1221	17-Apr-97	S		U	ug/L	5	OT
		17-Apr-97	S		U	ug/L	1	
		17-Apr-97	S	F	U	ug/L	1	OS
		08-Jul-97	S		U	ug/L	1	
		08-Jul-97	S	F	U	ug/L	1	S
		01-Apr-98	S		U	ug/L	0.5	
		01-Apr-98	S	F	U	ug/L	0.5	
		01-Apr-98	S	Q	U	ug/L	0.5	
		01-Apr-98	S	Q F	U	ug/L	0.5	
		17-Jun-98	S		U	ug/L		
		19-Jun-98	S		U	ug/L		
OW-21	Aroclor 1232	17-Apr-97	S		U	ug/L	0.5	
		17-Apr-97	S		U	ug/L	2.5	OT
		17-Apr-97	S	F	U	ug/L	0.5	OS
		08-Jul-97	S		U	ug/L	0.5	
		08-Jul-97	S	F	U	ug/L	0.5	S
		01-Apr-98	S		U	ug/L	0.5	

Location	Parameter	Date Samp	Lab	Qor	F?	Result	Unit	PQL	Desc	Qual
OW-21	Aroclor 1232	01-Apr-98	S		F	U	ug/L	0.5		
		01-Apr-98	S	Q		U	ug/L	0.5		
		01-Apr-98	S	Q	F	U	ug/L	0.5		
		17-Jun-98	S			U	ug/L			
		19-Jun-98	S			U	ug/L			
OW-21	Aroclor 1242	17-Apr-97	S			U	ug/L	2.5	OT	
		17-Apr-97	S			U	ug/L	0.5		
		17-Apr-97	S		F	U	ug/L	0.5	OS	
		08-Jul-97	S			U	ug/L	0.5		
		08-Jul-97	S		F	U	ug/L	0.5	S	
		01-Apr-98	S			4.4	ug/L	0.5	X	
		01-Apr-98	S		F	U	ug/L	0.5		
		01-Apr-98	S	Q		4.6	ug/L	0.5	X	
		01-Apr-98	S	Q	F	U	ug/L	0.5		
		17-Jun-98	S			8.3	ug/L			
		19-Jun-98	S			7.3	ug/L			
OW-21	Aroclor 1248	17-Apr-97	S			16	ug/L	2.5	OT	
		17-Apr-97	S			10	ug/L	0.5		
		17-Apr-97	S		F	U	ug/L	0.5	OS	
		08-Jul-97	S		F	U	ug/L	0.5	S	
		01-Apr-98	S			U	ug/L	0.5		
		01-Apr-98	S		F	U	ug/L	0.5		
		01-Apr-98	S	Q		U	ug/L	0.5		
		01-Apr-98	S	Q	F	U	ug/L	0.5		
		17-Jun-98	S			U	ug/L			
		19-Jun-98	S			U	ug/L			
OW-21	Aroclor 1254	17-Apr-97	S			4.8	ug/L	0.5	P	
		17-Apr-97	S			4.2	ug/L	2.5	OP	
		17-Apr-97	S		F	U	ug/L	0.5	OS	
		08-Jul-97	S			7.1	ug/L	2.5		
		08-Jul-97	S		F	U	ug/L	0.5	S	
		01-Apr-98	S			3.9	ug/L	0.5	X	
		01-Apr-98	S		F	U	ug/L	0.5		
		01-Apr-98	S	Q		3.9	ug/L	0.5	X	
		01-Apr-98	S	Q	F	U	ug/L	0.5		
		17-Jun-98	S			U	ug/L			
		19-Jun-98	S			U	ug/L			
OW-21	Aroclor 1260	17-Apr-97	S			U	ug/L	2.5	OT	
		17-Apr-97	S			U	ug/L	0.5		
		17-Apr-97	S		F	U	ug/L	0.5	OS	
		08-Jul-97	S			U	ug/L	0.5		
		08-Jul-97	S		F	U	ug/L	0.5	S	

See Table L-3 for Abbreviations and Qualifiers.

Location	Parameter	Date Samp	Lab	Q or	F?	Result	Unit	PQL	Desc	Qual
OW-2	Aroclor 1260	01-Apr-98	S			U	ug/L	0.5		
		01-Apr-98	S		F	U	ug/L	0.5		
		01-Apr-98	S	Q		U	ug/L	0.5		
		01-Apr-98	S	Q	F	U	ug/L	0.5		
		17-Jun-98	S			U	ug/L			
		19-Jun-98	S			U	ug/L			
OW-2	Chlorobenzene	17-Apr-97	S			U	ug/L	1		
		31-Mar-98	G			U	ug/L	1		
OW-2	Cobalt	17-Apr-97	S			U	mg/L	0.01		
		01-Apr-98	G			U	mg/L	0.01		
		01-Apr-98	G		F	U	mg/L	0.01		
OW-21	Mercury	17-Apr-97	S			0.00042	mg/L	0.0002		
		01-Apr-98	G			0.00060	mg/L	0.0002		
		01-Apr-98	G		F	0.00050	mg/L	0.0002		
OW-21	Methylene chloride (dichloromethane)	17-Apr-97	S			U	ug/L	5		
		31-Mar-98	G			U	ug/L	5		
OW-21	o,o,o-Triethylphosphorothioate	17-Apr-97	S			U	ug/L	10		
		31-Mar-98	G			U	ug/L	10		
OW-21	Pentachlorophenol	17-Apr-97	S			U	ug/L	1		
		31-Mar-98	G			U	ug/L	1		
OW-21	Phenol	17-Apr-97	S			U	ug/L	10		
		31-Mar-98	G			U	ug/L	10		
OW-21	Tetraethyldithiopyrophosphate (Sulfotepp)	17-Apr-97	S			U	ug/L	0.5		
		31-Mar-98	G			U	ug/L	0.5		
OW-22	1,2-Dichlorobenzene	17-Apr-97	S			0.78	ug/L	10	J	
		17-Apr-97	S	Q		0.69	ug/L	10	QJ	
		31-Mar-98	G			U	ug/L	10		
OW-22	1,4-Dichlorobenzene	17-Apr-97	S			U	ug/L	10		
		17-Apr-97	S	Q		U	ug/L	10	Q	
		31-Mar-98	G			U	ug/L	10		
OW-22	2,4,5-Trichloropheno	17-Apr-97	S			U	ug/L	10		
		17-Apr-97	S	Q		U	ug/L	10	Q	
		31-Mar-98	G			U	ug/L	10		
OW-22	2,4,6-Trichloropheno	17-Apr-97	S			U	ug/L	10		
		17-Apr-97	S	Q		U	ug/L	10	Q	
		31-Mar-98	G			U	ug/L	10		

See Table L-3 for Abbreviations and Qualifiers.

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
OW-22	2,4-Dichlorophenol	17-Apr-97	S		U	ug/L	10		
		17-Apr-97	S	Q	U	ug/L	10		Q
		31-Mar-98	G		U	ug/L	10		
OW-22	Aroclor 1016	01-Apr-89	S	F	U	ug/L	0.5		
		17-Apr-97	S		U	ug/L	0.5		OT
		17-Apr-97	S		U	ug/L	0.5		
		17-Apr-97	S	F	U	ug/L	0.5		OS
		17-Apr-97	S	Q	U	ug/L	0.5		Q
		08-Jul-97	S		U	ug/L	0.5		
		08-Jul-97	S	F	U	ug/L	0.5		S
		01-Apr-98	S		U	ug/L	0.5		
OW-22	Aroclor 1221	01-Apr-89	S	F	U	ug/L	0.5		
		17-Apr-97	S		U	ug/L	1		
		17-Apr-97	S		U	ug/L	1		OT
		17-Apr-97	S	F	U	ug/L	1		OS
		17-Apr-97	S	Q	U	ug/L	1		Q
		08-Jul-97	S		U	ug/L	1		
		08-Jul-97	S	F	U	ug/L	1		S
		01-Apr-98	S		U	ug/L	0.5		
OW-22	Aroclor 1232	01-Apr-89	S	F	U	ug/L	0.5		
		17-Apr-97	S		U	ug/L	0.5		OT
		17-Apr-97	S		U	ug/L	0.5		
		17-Apr-97	S	F	U	ug/L	0.5		OS
		17-Apr-97	S	Q	U	ug/L	0.5		Q
		08-Jul-97	S		U	ug/L	0.5		
		08-Jul-97	S	F	U	ug/L	0.5		S
		01-Apr-98	S		U	ug/L	0.5		
OW-22	Aroclor 1242	01-Apr-89	S	F	U	ug/L	0.5		
		17-Apr-97	S		U	ug/L	0.5		OT
		17-Apr-97	S		U	ug/L	0.5		
		17-Apr-97	S	F	U	ug/L	0.5		OS
		17-Apr-97	S	Q	U	ug/L	0.5		Q
		08-Jul-97	S		U	ug/L	0.5		
		08-Jul-97	S	F	U	ug/L	0.5		S
		01-Apr-98	S		U	ug/L	0.5		
OW-22	Aroclor 1248	01-Apr-89	S	F	U	ug/L	0.5		
		17-Apr-97	S		1.8	ug/L	0.5		OT
		17-Apr-97	S		0.69	ug/L			OTC
		17-Apr-97	S		1.6	ug/L	0.5		
		17-Apr-97	S	F	U	ug/L	0.5		OS
		17-Apr-97	S	Q	1.4	ug/L	0.5		Q

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
OW-22	Aroclor 1248	08-Jul-97	S		2.2	ug/L	0.5		
		08-Jul-97	S	F	U	ug/L	0.5		S
		01-Apr-98	S		U	ug/L	0.5		
OW-22	Aroclor 1254	01-Apr-89	S	F	U	ug/L	0.5		
		17-Apr-97	S		U	ug/L	0.5		OT
		17-Apr-97	S		U	ug/L	0.5		
		17-Apr-97	S	F	U	ug/L	0.5		OS
		17-Apr-97	S	Q	U	ug/L	0.5		Q
		08-Jul-97	S		U	ug/L	0.5		
		08-Jul-97	S	F	U	ug/L	0.5		S
		01-Apr-98	S		U	ug/L	0.5		
OW-22	Aroclor 1260	01-Apr-89	S	F	U	ug/L	0.5		
		17-Apr-97	S		U	ug/L	0.5		OT
		17-Apr-97	S		U	ug/L	0.5		
		17-Apr-97	S	F	U	ug/L	0.5		OS
		17-Apr-97	S	Q	U	ug/L	0.5		Q
		08-Jul-97	S		U	ug/L	0.5		
		08-Jul-97	S	F	U	ug/L	0.5		S
		01-Apr-98	S		U	ug/L	0.5		
OW-22	Chlorobenzene	17-Apr-97	S		U	ug/L	1		
		31-Mar-98	G		U	ug/L	1		
OW-22	Cobalt	17-Apr-97	S		0.0034	mg/L	0.01		J
		17-Apr-97	S	Q	0.0034	mg/L	0.01		JQ
		01-Apr-98	G		U	mg/L	0.01		
		01-Apr-98	G	F	U	mg/L	0.01		
OW-22	Mercury	17-Apr-97	S		0.00040	mg/L	0.0002		
		17-Apr-97	S	Q	0.00041	mg/L	0.0002		Q
		01-Apr-98	G		0.00040	mg/L	0.0002		
		01-Apr-98	G	F	0.00070	mg/L	0.0002		
OW-22	Methylene chloride (dichloromethane)	17-Apr-97	S		U	ug/L	5		
		31-Mar-98	G		U	ug/L	5		
OW-22	o,o,o-Triethylphosphorothicate	17-Apr-97	S		U	ug/L	10		
		17-Apr-97	S	Q	U	ug/L	10		Q
		31-Mar-98	G		U	ug/L	10		
OW-22	Pentachlorophenol	17-Apr-97	S		U	ug/L	1		
		17-Apr-97	S	Q	U	ug/L	1		Q
		31-Mar-98	G		U	ug/L	1		
OW-22	Phenol	17-Apr-97	S		U	ug/L	10		

Location	Parameter	Date Samp	Lab	Qor F?	Result	Unit	PQL	Desc Qual
OW-22	Phenol	17-Apr-97	S	C	U	ug/L	10	Q
		31-Mar-98	G		U	ug/L	10	
OW-22	Tetraethyldithiopyrophosphate (Sulfotepp)	17-Apr-97	S		U	ug/L	0.5	
		17-Apr-97	S	C	U	ug/L	0.5	Q
		31-Mar-98	G		U	ug/L	0.5	
OW-24	1,3-Dichlorobenzene	17-Apr-97	S		1.2	ug/L	10	J
		02-Apr-98	G		U	ug/L	10	
OW-24	1,4-Dichlorobenzene	17-Apr-97	S		U	ug/L	10	
		02-Apr-98	G		U	ug/L	10	
OW-24	2,4,5-Trichlorophenol	17-Apr-97	S		1.8	ug/L	10	J
		02-Apr-98	G		U	ug/L	10	
OW-24	2,4,6-Trichlorophenol	17-Apr-97	S		0.39	ug/L	10	J
		02-Apr-98	G		U	ug/L	10	
OW-24	2,4-Dichlorophenol	17-Apr-97	S		U	ug/L	10	
		02-Apr-98	G		U	ug/L	10	
OW-24	Aroclor 1016	17-Apr-97	S		U	ug/L	0.5	
		17-Apr-97	S		U	ug/L	0.5	OT
		17-Apr-97	S	F	U	ug/L	0.5	OS
		08-Jul-97	S		U	ug/L	0.5	
		08-Jul-97	S	F	U	ug/L	0.5	S
		02-Apr-98	S		U	ug/L	0.5	
		02-Apr-98	S	F	U	ug/L	0.5	
OW-24	Aroclor 1221	17-Apr-97	S		U	ug/L	1	
		17-Apr-97	S		U	ug/L	1	OT
		17-Apr-97	S	F	U	ug/L	1	OS
		08-Jul-97	S		7.5	ug/L	1	
		08-Jul-97	S	F	U	ug/L	1	S
		02-Apr-98	S		U	ug/L	0.5	
		02-Apr-98	S	F	U	ug/L	0.5	
OW-24	Aroclor 1232	17-Apr-97	S		U	ug/L	0.5	OT
		17-Apr-97	S		U	ug/L	0.5	
		17-Apr-97	S	F	U	ug/L	0.5	OS
		08-Jul-97	S		U	ug/L	0.5	
		08-Jul-97	S	F	U	ug/L	0.5	S
		02-Apr-98	S		U	ug/L	0.5	
		02-Apr-98	S	F	U	ug/L	0.5	
OW-24	Aroclor 1242	17-Apr-97	S		2.4	ug/L	0.5	
		17-Apr-97	S		1.7	ug/L	0.5	OT

Locaton	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
OW-24	Aroclor 1242	17-Apr-97	S	F	U	ug/L	0.5	OS
		08-Jul-97	S		U	ug/L	0.5	
		08-Jul-97	S	F	U	ug/L	0.5	S
		02-Apr-98	S		1.5	ug/L	0.5	X
		02-Apr-98	S	F	U	ug/L	0.5	
OW-24	Aroclor 1248	17-Apr-97	S		U	ug/L	0.5	
		17-Apr-97	S		U	ug/L	0.5	OT
		17-Apr-97	S	F	U	ug/L	0.5	OS
		08-Jul-97	S		3.8	ug/L	0.5	
		08-Jul-97	S	F	U	ug/L	0.5	S
		02-Apr-98	S		U	ug/L	0.5	
		02-Apr-98	S	F	U	ug/L	0.5	
OW-24	Aroclor 1254	17-Apr-97	S		U	ug/L	0.5	OT
		17-Apr-97	S		U	ug/L	0.5	
		17-Apr-97	S	F	U	ug/L	0.5	OS
		08-Jul-97	S		1.7	ug/L	0.5	
		08-Jul-97	S	F	U	ug/L	0.5	S
		02-Apr-98	S		U	ug/L	0.5	
		02-Apr-98	S	F	U	ug/L	0.5	
OW-24	Aroclor 1260	17-Apr-97	S		U	ug/L	0.5	OT
		17-Apr-97	S		U	ug/L	0.5	
		17-Apr-97	S	F	U	ug/L	0.5	OS
		08-Jul-97	S		U	ug/L	0.5	
		08-Jul-97	S	F	U	ug/L	0.5	S
		02-Apr-98	S		U	ug/L	0.5	
		02-Apr-98	S	F	U	ug/L	0.5	
OW-24	Chlorobenzene	17-Apr-97	S		U	ug/L	1	
		02-Apr-98	G		U	ug/L	1	
OW-24	Cobalt	17-Apr-97	S		0.0025	mg/L	0.01	J
		02-Apr-98	G		U	mg/L	0.01	
		02-Apr-98	G	F	U	mg/L	0.01	
OW-24	Mercury	17-Apr-97	S		0.000061	mg/L	0.0002	J
		02-Apr-98	G		0.00020	mg/L	0.0002	
		02-Apr-98	G	F	U	mg/L	0.0002	
OW-24	Methylene chloride (dichloromethane)	17-Apr-97	S		U	ug/L	5	
		02-Apr-98	G		U	ug/L	5	
OW-24	o,o,o-Triethylphosphorothicate	17-Apr-97	S		U	ug/L	10	
		02-Apr-98	G		U	ug/L	10	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
OW-24	Pentachlorophenol	17-Apr-97	S		U	ug/L	1	
		02-Apr-98	G		U	ug/L	1	
OW-24	Phenol	17-Apr-97	S		U	ug/L	10	
		02-Apr-98	G		U	ug/L	10	
OW-24	Teraethyldithiopyrophosphat e (Sulfotepp)	17-Apr-97	S		U	ug/L	0.5	
		02-Apr-98	G		U	ug/L	0.5	
OWR-01D	1,12,2-Tetrachloroethane	03-Aug-98	S		U	ug/L	5	
OWR-01D	1,2-Dichlorobenzene	03-Aug-98	S		U	ug/L	10	
OWR-01D	1,4-Dichlorobenzene	03-Aug-98	S		U	ug/L	10	
OWR-01D	2,45-Trichlorophenol	03-Aug-98	S		U	ug/L	10	
OWR-01D	2,46-Trichlorophenol	03-Aug-98	S		U	ug/L	10	
OWR-01D	2,4Dichlorophenol	03-Aug-98	S		U	ug/L	10	
OWR-01D	Alkalinity (to pH 4.5) as CaCO3	03-Aug-98	S		210	mg/L	1	
OWR-01D	Arcclor 1016	03-Aug-98	S		U	ug/L	1	
		07-Aug-98	S	F	U	ug/L	1	
OWR-01D	Arcclor 1221	03-Aug-98	S		U	ug/L	1	
		07-Aug-98	S	F	U	ug/L	1	
OWR-01D	Arcclor 1232	03-Aug-98	S		U	ug/L	1	
		07-Aug-98	S	F	U	ug/L	1	
OWR-01D	Arcclor 1242	03-Aug-98	S		U	ug/L	1	
		07-Aug-98	S	F	U	ug/L	1	
OWR-01D	Arcclor 1248	03-Aug-98	S		U	ug/L	1	
		07-Aug-98	S	F	U	ug/L	1	
OWR-01D	Arcclor 1254	03-Aug-98	S		U	ug/L	1	
		07-Aug-98	S	F	U	ug/L	1	
OWR-01D	Arcclor 1260	03-Aug-98	S		U	ug/L	1	
		07-Aug-98	S	F	U	ug/L	1	
OWR-01D	Arsenic	03-Aug-98	S		U	mg/L	0.01	
		07-Aug-98	S	F	U	mg/L	0.01	
OWR-01D	Barum	03-Aug-98	S		0.21	mg/L	0.01	
		07-Aug-98	S	F	0.13	mg/L	0.01	
OWR-01D	Beryllium	03-Aug-98	S		U	mg/L	0.004	
		07-Aug-98	S	F	U	mg/L	0.004	

See Table L-3 for Abbreviations and Qualifiers.

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
OWR-01D	Cadmium	03-Aug-98	S		U	mg/L	0.005	
		07-Aug-98	S	F	U	mg/L	0.005	
OWR-01D	Chlorobenzene	03-Aug-98	S		U	ug/L	5	
OWR-01D	Chromium	03-Aug-98	S		U	mg/L	0.01	
		07-Aug-98	S	F	U	mg/L	0.01	
OWR-01D	Cobalt	03-Aug-98	S		U	mg/L	0.01	
		07-Aug-98	S	F	U	mg/L	0.01	
OWR-01D	Dissolved Oxygen	10-Nov-98			0.030	mg/L		
OWR-01D	Iron, Ferrous (2+)	03-Aug-98	S		U	mg/L	0.05	
OWR-01D	Isopropylbenzene	03-Aug-98	S		U	ug/L	5	
OWR-01D	Lead	03-Aug-98	S		U	mg/L	0.005	
		07-Aug-98	S	F	0.0068	mg/L	0.005	
OWR-01D	Manganese	03-Aug-98	S		2.3	mg/L	0.01	
		07-Aug-98	S	F	0.83	mg/L	0.01	
OWR-01D	Mercury	03-Aug-98	S		U	mg/L	0.0002	
		07-Aug-98	S	F	U	mg/L	0.0002	
OWR-01D	Methyl parathion	03-Aug-98	S		U	ug/L	0.5	
OWR-01D	Methylene chloride (dichloromethane)	03-Aug-98	S		U	ug/L	5	
OWR-01D	Nickel	03-Aug-98	S		U	mg/L	0.004	
		07-Aug-98	S	F	U	mg/L	0.004	
OWR-01D	Nitrate-N	03-Aug-98	S		U	mg/L	0.05	
OWR-01D	o,o,o-Triethylphosphorothicate	03-Aug-98	S		U	ug/L	10	
OWR-01D	Pentachlorophenol	03-Aug-98	S		U	ug/L	1	
OWR-01D	pH	03-Aug-98	S		6.9			
		03-Aug-98	S		7.6			
		03-Aug-98	S		7.5			
		03-Aug-98	S		7.6			
		04-Aug-98			7.0			
		04-Aug-98			7.4			
		05-Aug-98			7.4			
		05-Aug-98			7.0			
		06-Aug-98			6.9			
		06-Aug-98			7.0			
		07-Aug-98	S	F	7.3			
		07-Aug-98	S	F	6.9			

See Table L-3 for Abbreviations and Qualifiers.

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
OWR-01D	Phenol	03-Aug-98	S		U	ug/L	10		
OWR-01D	Phenolics, Total Recoverables	03-Aug-98	S		U	mg/L	0.05		
OWR-01D	Phosphorus, Total	03-Aug-98	S		U	mg/L	0.044		
OWR-01D	Redox	10-Nov-98			17	mV			
OWR-01D	Specific Conductance	03-Aug-98	S		0.31	ms/cm			
		03-Aug-98	S		0.49	ms/cm			
		03-Aug-98	S		0.35	ms/cm			
		03-Aug-98	S		0.43	ms/cm			
		04-Aug-98			0.42	ms/cm			
		04-Aug-98			0.30	ms/cm			
		05-Aug-98			0.37	ms/cm			
		05-Aug-98			0.29	ms/cm			
		06-Aug-98			0.29	ms/cm			
		06-Aug-98			0.35	ms/cm			
		07-Aug-98	S	F	0.53	ms/cm			
		07-Aug-98	S	F	0.54	ms/cm			
OWR-01D	Standard Plate Count	03-Aug-98	S		5,000	CFU/m	1		J
OWR-01D	Sulfate as SO4	03-Aug-98	S		U	mg/L	5		
OWR-01D	Sulfide	03-Aug-98	S		U	mg/L	0.1		
OWR-01D	Temperature	03-Aug-98	S		24	°C			
		03-Aug-98	S		25	°C			
		03-Aug-98	S		24	°C			
		03-Aug-98	S		24	°C			
		04-Aug-98			24	°C			
		04-Aug-98			25	°C			
		05-Aug-98			26	°C			
		05-Aug-98			25	°C			
		06-Aug-98			25	°C			
		06-Aug-98			25	°C			
		07-Aug-98	S	F	24	°C			
		07-Aug-98	S	F	24	°C			
OWR-01D	Tetraethyldithiopyrophosphate (Sulfotepp)	03-Aug-98	S		U	ug/L	0.5		
OWR-01D	Total Dissolved Solids	03-Aug-98	S		300	mg/L	5		J
OWR-01D	Total Kjeldahl Nitrogen-N	03-Aug-98	S		U	mg/L	0.2		J
OWR-01D	Total Organic Carbon	03-Aug-98	S		8.2	mg/L	1		
OWR-01D	Total Organic Halogen	03-Aug-98	S		110	mg/L	0.02		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
OWR-01D	Total PCBs	03-Aug-98	S		U	ug/L			
		07-Aug-98	S	F	U	ug/L	1		
OWR-01D	Total Suspended Solids	03-Aug-98	S		7.0	mg/L	5		J
OWR-01D	Turbidity	03-Aug-98	S		29	NTU			
		03-Aug-98	S		14	NTU			
		03-Aug-98	S		33	NTU			
		03-Aug-98	S		32	NTU			
		04-Aug-98			9.3	NTU			
		04-Aug-98			6.8	NTU			
		05-Aug-98			9.2	NTU			
		05-Aug-98			6.4	NTU			
		06-Aug-98			8.1	NTU			
		06-Aug-98			6.8	NTU			
		07-Aug-98	S	F	11	NTU			
		07-Aug-98	S	F	8.3	NTU			
OWR-01D	Vanadium	03-Aug-98	S		U	mg/L	0.01		
		07-Aug-98	S	F	U	mg/L	0.01		
OWR-01S	1,1,2,2-Tetrachloroethane	10-Aug-98	S		U	ug/L	5		
OWR-01S	1,2-Dichlorobenzene	10-Aug-98	S		U	ug/L	10		
OWR-01S	1,4-Dichlorobenzene	10-Aug-98	S		U	ug/L	10		
OWR-01S	2,4,5-Trichlorophenol	10-Aug-98	S		U	ug/L	10		
OWR-01S	2,4,6-Trichlorophenol	10-Aug-98	S		U	ug/L	10		
OWR-01S	2,4-Dichlorophenol	10-Aug-98	S		U	ug/L	10		
OWR-01S	Alkalinity (to pH 4.5) as CaCO3	10-Aug-98	S		9.8	mg/L	1		
OWR-01S	Aroclor 1016	10-Aug-98	S		U	ug/L	1		
		10-Aug-98	S	F	U	ug/L	1		
OWR-01S	Aroclor 1221	10-Aug-98	S		U	ug/L	1		
		10-Aug-98	S	F	U	ug/L	1		
OWR-01S	Aroclor 1232	10-Aug-98	S		U	ug/L	1		
		10-Aug-98	S	F	U	ug/L	1		
OWR-01S	Aroclor 1242	10-Aug-98	S		U	ug/L	1		
		10-Aug-98	S	F	U	ug/L	1		
OWR-01S	Aroclor 1248	10-Aug-98	S		U	ug/L	1		
		10-Aug-98	S	F	U	ug/L	1		
OWR-01S	Aroclor 1254	10-Aug-98	S		U	ug/L	1		
		10-Aug-98	S	F	U	ug/L	1		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
OWR-01S	Aroclor 1260	10-Aug-98	S		U	ug/L	1		
		10-Aug-98	S	F	U	ug/L	1		
OWR-01S	Arsenic	10-Aug-98	S		U	mg/L	0.01		
		10-Aug-98	S	F	U	mg/L	0.01		
OWR-01S	Barium	10-Aug-98	S		0.040	mg/L	0.01		
		10-Aug-98	S	F	0.041	mg/L	0.01		
OWR-01S	Beryllium	10-Aug-98	S		U	mg/L	0.004		
		10-Aug-98	S	F	U	mg/L	0.004		
OWR-01S	Cadmium	10-Aug-98	S		U	mg/L	0.005		
		10-Aug-98	S	F	U	mg/L	0.005		
OWR-01S	Chorobenzene	10-Aug-98	S		U	ug/L	5		
OWR-01S	Chromium	10-Aug-98	S		U	mg/L	0.01		
		10-Aug-98	S	F	U	mg/L	0.01		
OWR-01S	Cobalt	10-Aug-98	S		U	mg/L	0.01		
		10-Aug-98	S	F	U	mg/L	0.01		
OWR-01S	Dissolved Oxygen	10-Nov-98			0.73	mg/L			
OWR-01S	Iron, Ferrous (2+)	10-Aug-98	S		U	mg/L	0.05		
OWR-01S	Isopropylbenzene	10-Aug-98	S		U	ug/L	5		
OWR-01S	Lead	10-Aug-98	S		U	mg/L	0.005		
		10-Aug-98	S	F	U	mg/L	0.005		J
OWR-01S	Manganese	10-Aug-98	S		0.25	mg/L	0.01		
		10-Aug-98	S	F	0.25	mg/L	0.01		J
OWR-01S	Mercury	10-Aug-98	S		U	mg/L	0.0002		
		10-Aug-98	S	F	U	mg/L	0.0002		
OWR-01S	Methyl parathion	10-Aug-98	S		U	mg/L	0.5		
OWR-01S	Methylene chloride (dichloromethane)	10-Aug-98	S		U	ug/L	5		
OWR-01S	Nickel	10-Aug-98	S		U	mg/L	0.004		
		10-Aug-98	S	F	U	mg/L	0.004		
OWR-01S	Nitrate-N	10-Aug-98	S		1.6	mg/L	0.05		J
OWR-01S	o,o,o-Triethylphosphorothioate	10-Aug-98	S		U	ug/L	10		
OWR-01S	Pentachlorophenol	10-Aug-98	S		U	ug/L	1		
OWR-01S	pH	10-Aug-98			5.5				
		10-Aug-98			5.3				

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
OWR-01S	pH	10-Aug-98			5.2				
		10-Aug-98			5.5				
OWR-01S	Phenol	10-Aug-98	S		U	ug/L	10		
OWR-01S	Phenolics, Total Recoverables	10-Aug-98	S		U	mg/L	0.05		
OWR-01S	Phosphorus, Total	10-Aug-98	S		U	mg/L	0.044		
OWR-01S	Redox	10-Nov-98			25	mV			
OWR-01S	Specific Conductance	10-Aug-98			0.15	ms/cm			
		10-Aug-98			0.17	ms/cm			
		10-Aug-98			0.18	ms/cm			
		10-Aug-98			0.15	ms/cm			
OWR-01S	Standard Plate Coun	10-Aug-98	S		1,000	CFU/m	1		J
OWR-01S	Sulfate as SO4	10-Aug-98	S		35	mg/L	5		
OWR-01S	Sulfide	10-Aug-98	S		U	mg/L	0.1		
OWR-01S	Temperature	10-Aug-98			22	°C			
		10-Aug-98			21	°C			
		10-Aug-98			21	°C			
		10-Aug-98			21	°C			
OWR-01S	Tetraethyldithiopyrophosphate (Sulfotepp)	10-Aug-98	S		U	mg/L	0.5		
OWR-01S	Total Dissolved Solids	10-Aug-98	S		100	mg/L	5		J
OWR-01S	Total Kjeldahl Nitrogen-N	10-Aug-98	S		U	mg/L	0.2		
OWR-01S	Total Organic Carbon	10-Aug-98	S		U	mg/L	1		
OWR-01S	Total Organic Halogen	10-Aug-98	S		U	mg/L	0.01		
OWR-01S	Total PCBs	10-Aug-98	S		U	ug/L			
		10-Aug-98	S	F	U	ug/L	1		
OWR-01S	Total Suspended Solids	10-Aug-98	S		U	mg/L	5		J
OWR-01S	Turbidity	10-Aug-98			1.1	NTU			
		10-Aug-98			0.89	NTU			
		10-Aug-98			0.84	NTU			
		10-Aug-98			0.85	NTU			
OWR-01S	Vanadium	10-Aug-98	S		U	mg/L	0.01		
		10-Aug-98	S	F	U	mg/L	0.01		
OWR-02D	1,1,2,2-Tetrachloroethane	29-Jul-98	S		U	ug/L	5		
		29-Jul-98	S	Q	U	ug/L	5		

Location	Parameter	Date Samp	Lab	Q or F?		Result	Unit	PQL	Desc	Qual
OWR-02D	1,2-Dichlorobenzene	29-Jul-98	S			U	ug/L	10		
		29-Jul-98	S	Q		U	ug/L	10		
OWR-02D	1,4-Dichlorobenzene	29-Jul-98	S			U	ug/L	10		
		29-Jul-98	S	Q		U	ug/L	10		
OWR-02D	2,4,5-Trichlorophenol	29-Jul-98	S			U	ug/L	10		
		29-Jul-98	S	Q		U	ug/L	10		
OWR-02D	2,4,6-Trichlorophenol	29-Jul-98	S			U	ug/L	10		
		29-Jul-98	S	Q		U	ug/L	10		
OWR-02D	2,4-Dichlorophenol	29-Jul-98	S			U	ug/L	10		
		29-Jul-98	S	Q		U	ug/L	10		
OWR-02D	Alkalinity (to pH 4.5) as CaCO3	29-Jul-98	S			120	mg/L	1		
		29-Jul-98	S	Q		120	mg/L	1		
OWR-02D	Aroclor 1016	29-Jul-98	S		F	U	ug/L	1		
		29-Jul-98	S	Q	F	U	ug/L	1		
		29-Jul-98	S			U	ug/L	1		
		29-Jul-98	S	Q		U	ug/L	1		
OWR-02D	Aroclor 1221	29-Jul-98	S		F	U	ug/L	1		
		29-Jul-98	S	Q	F	U	ug/L	1		
		29-Jul-98	S			U	ug/L	1		
		29-Jul-98	S	Q		U	ug/L	1		
OWR-02D	Aroclor 1232	29-Jul-98	S		F	U	ug/L	1		
		29-Jul-98	S	Q	F	U	ug/L	1		
		29-Jul-98	S			U	ug/L	1		
		29-Jul-98	S	Q		U	ug/L	1		
OWR-02D	Aroclor 1242	29-Jul-98	S		F	U	ug/L	1		
		29-Jul-98	S	Q	F	U	ug/L	1		
		29-Jul-98	S			U	ug/L	1		
		29-Jul-98	S	Q		U	ug/L	1		
OWR-02D	Aroclor 1248	29-Jul-98	S		F	U	ug/L	1		
		29-Jul-98	S	Q	F	U	ug/L	1		
		29-Jul-98	S			U	ug/L	1		
		29-Jul-98	S	Q		U	ug/L	1		
OWR-02D	Aroclor 1254	29-Jul-98	S		F	U	ug/L	1		
		29-Jul-98	S	Q	F	U	ug/L	1		
		29-Jul-98	S			U	ug/L	1		
		29-Jul-98	S	Q		U	ug/L	1		
OWR-02D	Aroclor 1260	29-Jul-98	S		F	U	ug/L	1		
		29-Jul-98	S	Q	F	U	ug/L	1		

Location	Parameter	Date Samp	Lab	Q or F?		Result	Unit	PQL	Desc	Qual
OWR-02D	Aroclor 1260	29-Jul-98	S			U	ug/L	1		
		29-Jul-98	S	Q		U	ug/L	1		
OWR-02D	Arsenic	29-Jul-98	S		F	U	mg/L	0.01		
		29-Jul-98	S	Q	F	U	mg/L	0.01		
		29-Jul-98	S			U	mg/L	0.01		
		29-Jul-98	S	Q		U	mg/L	0.01		
OWR-02D	Barium	29-Jul-98	S		F	0.017	mg/L	0.01		
		29-Jul-98	S	Q	F	0.017	mg/L	0.01		
		29-Jul-98	S			0.029	mg/L	0.01		
		29-Jul-98	S	Q		0.034	mg/L	0.01		
OWR-02D	Beryllium	29-Jul-98	S		F	U	mg/L	0.004		
		29-Jul-98	S	Q	F	U	mg/L	0.004		
		29-Jul-98	S			U	mg/L	0.004		
		29-Jul-98	S	Q		U	mg/L	0.004		
OWR-02D	Cadmium	29-Jul-98	S		F	U	mg/L	0.005		
		29-Jul-98	S	Q	F	U	mg/L	0.005		
		29-Jul-98	S			U	mg/L	0.005		
		29-Jul-98	S	Q		U	mg/L	0.005		
OWR-02D	Chlorobenzene	29-Jul-98	S			U	ug/L	5		
		29-Jul-98	S	Q		U	ug/L	5		
OWR-02D	Chromium	29-Jul-98	S		F	U	mg/L	0.01		
		29-Jul-98	S	Q	F	U	mg/L	0.01		
		29-Jul-98	S			U	mg/L	0.01		
		29-Jul-98	S	Q		U	mg/L	0.01		
OWR-02D	Cobalt	29-Jul-98	S		F	U	mg/L	0.01		
		29-Jul-98	S	Q	F	U	mg/L	0.01		
		29-Jul-98	S			U	mg/L	0.01		
		29-Jul-98	S	Q		U	mg/L	0.01		
OWR-02D	Dissolved Oxygen	10-Nov-98				0.67	mg/L			
OWR-02D	Iron, Ferrous (2+)	29-Jul-98	S			U	mg/L	0.05		
		29-Jul-98	S	Q		U	mg/L	0.05		
OWR-02D	Isopropylbenzene	29-Jul-98	S			U	ug/L	5		
		29-Jul-98	S	Q		U	ug/L	5		
OWR-02D	Lead	29-Jul-98	S		F	U	mg/L	0.005		
		29-Jul-98	S	Q	F	U	mg/L	0.005		J
		29-Jul-98	S			U	mg/L	0.005		
		29-Jul-98	S	Q		U	mg/L	0.005		
OWR-02D	Manganese	29-Jul-98	S		F	0.013	mg/L	0.01		

Location	Parameter	Date Samp	Lab	Q or F?		Result	Unit	PQL	Desc	Qual
OWR-02D	Manganese	29-Jul-98	S	Q	F	0.013	mg/L	0.01		J
		29-Jul-98	S			0.13	mg/L	0.01		
		29-Jul-98	S	Q		0.14	mg/L	0.01		
OWR-02D	Mercury	29-Jul-98	S		F	U	mg/L	0.0002		
		29-Jul-98	S	Q	F	U	mg/L	0.0002		
		29-Jul-98	S			U	mg/L	0.0002		J
		29-Jul-98	S	Q		U	mg/L	0.0002		J
OWR-02D	Methyl parathion	29-Jul-98	S			U	ug/L	0.5		
		29-Jul-98	S	Q		U	ug/L	0.5		
OWR-02D	Methylene chloride (dichloromethane)	29-Jul-98	S			U	ug/L	5		
		29-Jul-98	S	Q		U	ug/L	5		
OWR-02D	Nickel	29-Jul-98	S		F	U	mg/L	0.004		
		29-Jul-98	S	Q	F	U	mg/L	0.004		
		29-Jul-98	S			U	mg/L	0.004		
		29-Jul-98	S	Q		U	mg/L	0.004		
OWR-02D	Nitrate-N	29-Jul-98	S			1.7	mg/L	0.05		J
		29-Jul-98	S	Q		1.8	mg/L	0.05		J
OWR-02D	o,oo-Trithylphosphorothioate	29-Jul-98	S			U	ug/L	10		
		29-Jul-98	S	Q		U	ug/L	10		
OWR-02D	Pentachlorophenol	29-Jul-98	S			U	ug/L	1		
		29-Jul-98	S	Q		U	ug/L	1		
OWR-02D	pH	29-Jul-98	S			7.9				
		29-Jul-98	S			8.5				
		29-Jul-98	S			8.2				
		29-Jul-98	S			8.0				
OWR-02D	Phenol	29-Jul-98	S			U	ug/L	10		
		29-Jul-98	S	Q		U	ug/L	10		
OWR-02D	Phenolics, Total Recoverables	29-Jul-98	S			U	mg/L	0.05		
		29-Jul-98	S	Q		U	mg/L	0.05		
OWR-02D	Phosphorus, Total	29-Jul-98	S			U	mg/L	0.044		
		29-Jul-98	S	Q		U	mg/L	0.044		
OWR-02D	Redox	10-Nov-98					mV			
OWR-02D	Specific Conductance	29-Jul-98	S			0.29	ms/cm			
		29-Jul-98	S			0.33	ms/cm			
		29-Jul-98	S			0.29	ms/cm			
		29-Jul-98	S			0.30	ms/cm			

See Table L-3 for Abbreviations and Qualifiers.

Location	Parameter	Date Samp	Lab	Q or F?		Result	Unit	PQL	Desc	Qual
OWR-02D	Standard Plate Count	29-Jul-98	S			720	CFU/m	1		J
		29-Jul-98	S	Q		520	CFU/m	1		J
OWR-02D	Sulfate as SO4	29-Jul-98	S			U	mg/L	5		
		29-Jul-98	S	Q		U	mg/L	5		
OWR-02D	Sulfide	29-Jul-98	S			U	mg/L	0.1		
		29-Jul-98	S	Q		U	mg/L	0.1		
OWR-02D	Temperature	29-Jul-98	S			25	°C			
		29-Jul-98	S			25	°C			
		29-Jul-98	S			25	°C			
		29-Jul-98	S			25	°C			
OWR-02D	Tetraethyldithiopyrophosphate (Sulfotepp)	29-Jul-98	S			U	ug/L	0.5		
		29-Jul-98	S	Q		U	ug/L	0.5		
OWR-02D	Total Dissolved Solids	29-Jul-98	S			180	mg/L	5		J
		29-Jul-98	S	Q		170	mg/L	5		J
OWR-02D	Total Kjeldahl Nitrogen-N	29-Jul-98	S			0.71	mg/L	0.2		J
		29-Jul-98	S	Q		0.54	mg/L	0.2		J
OWR-02D	Total Organic Carbon	29-Jul-98	S			U	mg/L	1		
		29-Jul-98	S	Q		U	mg/L	1		
OWR-02D	Total Organic Halogen	29-Jul-98	S			0.032	mg/L	0.02		
		29-Jul-98	S	Q		0.028	mg/L	0.02		J
OWR-02D	Total PCBs	29-Jul-98	S		F	U	ug/L	1		
		29-Jul-98	S	Q	F	U	ug/L			
		29-Jul-98	S			U	ug/L			
		29-Jul-98	S	Q		U	ug/L			
OWR-02D	Total Suspended Solids	29-Jul-98	S			6.0	mg/L	5		J
		29-Jul-98	S	Q		9.0	mg/L	5		J
OWR-02D	Turbidity	29-Jul-98	S			1.9	NTU			
		29-Jul-98	S			1.6	NTU			
		29-Jul-98	S			1.6	NTU			
		29-Jul-98	S			2.0	NTU			
OWR-02D	Vanadium	29-Jul-98	S		F	U	mg/L	0.01		
		29-Jul-98	S	Q	F	U	mg/L	0.01		
		29-Jul-98	S			U	mg/L	0.01		
		29-Jul-98	S	Q		U	mg/L	0.01		
OWR-02S	1,1,2,2-Tetrachloroethane	03-Aug-98	S			U	ug/L	5		
OWR-02S	1,2-Dichlorobenzene	03-Aug-98	S			U	ug/L	10		

See Table L-3 for Abbreviations and Qualifiers.

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
OWR-02S	1,4-Dichlorobenzene	03-Aug-98	S		U	ug/L	10		
OWR-02S	2,45-Trichlorophenol	03-Aug-98	S		U	ug/L	10		
OWR-02S	2,46-Trichlorophenol	03-Aug-98	S		U	ug/L	10		
OWR-02S	2,4Dichlorophenol	03-Aug-98	S		U	ug/L	10		
OWR-02S	Alkalinity (to pH 4.5) as CaCO3	03-Aug-98	S		23	mg/L	1		
OWR-02S	Arcclor 1016	03-Aug-98	S		U	ug/L	1		
		03-Aug-98	S	F	U	ug/L	1		
OWR-02S	Arcclor 1221	03-Aug-98	S		U	ug/L	1		
		03-Aug-98	S	F	U	ug/L	1		
OWR-02S	Arcclor 1232	03-Aug-98	S		U	ug/L	1		
		03-Aug-98	S	F	U	ug/L	1		
OWR-02S	Arcclor 1242	03-Aug-98	S		U	ug/L	1		
		03-Aug-98	S	F	U	ug/L	1		
OWR-02S	Arcclor 1248	03-Aug-98	S		U	ug/L	1		
		03-Aug-98	S	F	U	ug/L	1		
OWR-02S	Arcclor 1254	03-Aug-98	S		U	ug/L	1		
		03-Aug-98	S	F	U	ug/L	1		
OWR-02S	Arcclor 1260	03-Aug-98	S		U	ug/L	1		
		03-Aug-98	S	F	U	ug/L	1		
OWR-02S	Arsenic	03-Aug-98	S		U	mg/L	0.01		
		03-Aug-98	S	F	U	mg/L	0.01		
OWR-02S	Barum	03-Aug-98	S		0.093	mg/L	0.01		
		03-Aug-98	S	F	0.092	mg/L	0.01		
OWR-02S	Beryllium	03-Aug-98	S		U	mg/L	0.004		
		03-Aug-98	S	F	U	mg/L	0.004		
OWR-02S	Cadmium	03-Aug-98	S		U	mg/L	0.005		
		03-Aug-98	S	F	U	mg/L	0.005		
OWR-02S	Chlorobenzene	03-Aug-98	S		U	ug/L	5		
OWR-02S	Chromium	03-Aug-98	S		U	mg/L	0.01		
		03-Aug-98	S	F	U	mg/L	0.01		
OWR-02S	Cobalt	03-Aug-98	S		0.029	mg/L	0.01		
		03-Aug-98	S	F	0.033	mg/L	0.01		
OWR-02S	Dissolved Oxygen	10-Nov-98			0.79	mg/L			
OWR-02S	Iron Ferrous (2+)	03-Aug-98	S		U	mg/L	0.05		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
OWR-02S	Isopropylbenzene	03-Aug-98	S		U	ug/L	5		
OWR-02S	Lead	03-Aug-98	S		U	mg/L	0.005		
		03-Aug-98	S	F	U	mg/L	0.005		J
OWR-02S	Manganese	03-Aug-98	S		4.5	mg/L	0.01		
		03-Aug-98	S	F	4.5	mg/L	0.01		J
OWR-02S	Mercury	03-Aug-98	S		U	mg/L	0.0002		
		03-Aug-98	S	F	U	mg/L	0.0002		
OWR-02S	Methyl parathion	03-Aug-98	S		U	ug/L	0.5		
OWR-02S	Methylene chloride (dichloromethane)	03-Aug-98	S		U	ug/L	5		
OWR-02S	Nickel	03-Aug-98	S		U	mg/L	0.004		
		03-Aug-98	S	F	U	mg/L	0.004		
OWR-02S	Nitrate-N	03-Aug-98	S		2.2	mg/L	0.1		J
OWR-02S	o,o,o-Triethylphosphorothicate	03-Aug-98	S		U	ug/L	10		
OWR-02S	Pentachlorophenol	03-Aug-98	S		1.2	ug/L	1		
OWR-02S	pH	03-Aug-98	S		5.7				
		03-Aug-98	S		5.8				
		03-Aug-98	S		5.9				
		03-Aug-98	S		5.6				
OWR-02S	Phenol	03-Aug-98	S		U	ug/L	10		
OWR-02S	Phenolics, Total Recoverables	03-Aug-98	S		U	mg/L	0.05		
OWR-02S	Phosphorus, Total	03-Aug-98	S		U	mg/L	0.044		
OWR-02S	Redox	10-Nov-98			110	mV			
OWR-02S	Specific Conductance	03-Aug-98	S		0.43	ms/cm			
		03-Aug-98	S		0.42	ms/cm			
		03-Aug-98	S		0.43	ms/cm			
		03-Aug-98	S		0.43	ms/cm			
OWR-02S	Standard Plate Count	03-Aug-98	S		740	CFU/m	1		J
OWR-02S	Sulfate as SO4	03-Aug-98	S		U	mg/L	5		
OWR-02S	Sulfide	03-Aug-98	S		U	mg/L	0.1		
OWR-02S	Temperature	03-Aug-98	S		23	°C			
		03-Aug-98	S		26	°C			
		03-Aug-98	S		23	°C			
		03-Aug-98	S		26	°C			

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
OWR-02S	Teraethyldithiopyrophosphate (Sulfotepp)	03-Aug-98	S		U	ug/L	0.5		
OWR-02S	Toal Dissolved Solids	03-Aug-98	S		240	mg/L	5		J
OWR-02S	Toal Kjeldahl Nitrogen-N	03-Aug-98	S		U	mg/L	0.2		
OWR-02S	Toal Organic Carbon	03-Aug-98	S		3.0	mg/L	1		
OWR-02S	Toal Organic Halogen	03-Aug-98	S		0.040	mg/L	0.02		
OWR-02S	Toal PCBs	03-Aug-98	S		U	ug/L			
		03-Aug-98	S	F	U	ug/L	1		
OWR-02S	Toal Suspended Solids	03-Aug-98	S		U	mg/L	5		J
OWR-02S	Turbidity	03-Aug-98	S		1.4	NTU			
		03-Aug-98	S		1.2	NTU			
		03-Aug-98	S		2.2	NTU			
		03-Aug-98	S		1.1	NTU			
OWR-02S	Vaiadium	03-Aug-98	S		U	mg/L	0.01		
		03-Aug-98	S	F	U	mg/L	0.01		
OWR-03S	1,1,2,2-Tetrachloroethane	29-Jul-98	S		U	ug/L	5		
OWR-03S	1,2Dichlorobenzene	29-Jul-98	S		U	ug/L	10		
OWR-03S	1,4Dichlorobenzene	29-Jul-98	S		U	ug/L	10		
OWR-03S	2,45-Trichlorophenol	29-Jul-98	S		U	ug/L	10		
OWR-03S	2,46-Trichlorophenol	29-Jul-98	S		U	ug/L	10		
OWR-03S	2,4Dichlorophenol	29-Jul-98	S		U	ug/L	10		
OWR-03S	Arcclor 1016	29-Jul-98	S	F	U	ug/L	1		
		29-Jul-98	S		U	ug/L	1		
OWR-03S	Arcclor 1221	29-Jul-98	S	F	U	ug/L	1		
		29-Jul-98	S		U	ug/L	1		
OWR-03S	Arcclor 1232	29-Jul-98	S	F	U	ug/L	1		
		29-Jul-98	S		U	ug/L	1		
OWR-03S	Arcclor 1242	29-Jul-98	S	F	U	ug/L	1		
		29-Jul-98	S		U	ug/L	1		
OWR-03S	Arcclor 1248	29-Jul-98	S	F	U	ug/L	1		
		29-Jul-98	S		U	ug/L	1		
OWR-03S	Arcclor 1254	29-Jul-98	S	F	U	ug/L	1		
		29-Jul-98	S		U	ug/L	1		
OWR-03S	Arcclor 1260	29-Jul-98	S	F	U	ug/L	1		
		29-Jul-98	S		U	ug/L	1		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
OWR-03S	Arsenic	29-Jul-98	S	F	U	mg/L	0.01		
		29-Jul-98	S		U	mg/L	0.01		
OWR-03S	Barium	29-Jul-98	S	F	0.043	mg/L	0.01		
		29-Jul-98	S		0.038	mg/L	0.01		
OWR-03S	Berylium	29-Jul-98	S	F	U	mg/L	0.004		
		29-Jul-98	S		U	mg/L	0.004		
OWR-03S	Cadmium	29-Jul-98	S	F	U	mg/L	0.005		
		29-Jul-98	S		U	mg/L	0.005		
OWR-03S	Chlorobenzene	29-Jul-98	S		U	ug/L	5		
OWR-03S	Chromium	29-Jul-98	S	F	U	mg/L	0.01		
		29-Jul-98	S		U	mg/L	0.01		
OWR-03S	Cobalt	29-Jul-98	S	F	U	mg/L	0.01		
		29-Jul-98	S		U	mg/L	0.01		
OWR-03S	Dissolved Oxygen	10-Nov-98			0.85	mg/L			
OWR-03S	Isopropylbenzene	29-Jul-98	S		U	ug/L	5		
OWR-03S	Lead	29-Jul-98	S	F	0.015	mg/L	0.005		J
		29-Jul-98	S		U	mg/L	0.005		
OWR-03S	Manganese	29-Jul-98	S	F	0.27	mg/L	0.01		J
		29-Jul-98	S		0.27	mg/L	0.01		
OWR-03S	Mercury	29-Jul-98	S	F	0.00023	mg/L	0.0002		
		29-Jul-98	S		0.00025	mg/L	0.0002		
OWR-03S	Methyl parathion	29-Jul-98	S		U	ug/L	0.5		
OWR-03S	Methylene chloride (dichloromethane)	29-Jul-98	S		U	ug/L	5		
OWR-03S	Nickel	29-Jul-98	S	F	0.0046	mg/L	0.004		
		29-Jul-98	S		U	mg/L	0.004		
OWR-03S	o,o,o-Triethylphosphorothicate	29-Jul-98	S		U	ug/L	10		
OWR-03S	Pentachlorophenol	29-Jul-98	S		U	ug/L	1		
OWR-03S	pH	29-Jul-98	S		5.3				
		29-Jul-98	S		5.4				
		29-Jul-98	S		5.2				
		29-Jul-98	S		5.3				
		10-Nov-98			5.9				
OWR-03S	Phenol	29-Jul-98	S		U	ug/L	10		
OWR-03S	Redox	10-Nov-98			30	mV			

Location	Parameter	Date Samp	Lab	Qor F?	Result	Unit	PQL	Desc	Qual
OWR-03S	Specific Conductance	29-Jul-98	S		0.16	ms/cm			
		29-Jul-98	S		0.16	ms/cm			
		29-Jul-98	S		0.16	ms/cm			
		29-Jul-98	S		0.16	ms/cm			
		10-Nov-98			0.34	ms/cm			
OWR-03S	Temperature	29-Jul-98	S		24	°C			
		29-Jul-98	S		24	°C			
		29-Jul-98	S		24	°C			
		29-Jul-98	S		24	°C			
		10-Nov-98			20	°C			
OWR-03S	Tetraethyldithiopyrophosphate (Sulfotepp)	29-Jul-98	S		U	ug/L	0.5		
OWR-03S	Total PCBs	29-Jul-98	S	F	U	ug/L	1		
		29-Jul-98	S		U	ug/L			
OWR-03S	Turbidity	29-Jul-98	S		0.87	NTU			
		29-Jul-98	S		0.59	NTU			
		29-Jul-98	S		0.98	NTU			
		29-Jul-98	S		1.0	NTU			
		10-Nov-98			35	NTU			
OWR-03S	Vanadium	29-Jul-98	S	F	U	mg/L	0.01		
		29-Jul-98	S		U	mg/L	0.01		
OWR-04D	1,1,2,2-Tetrachloroethane	31-Jul-98	S		U	ug/L	5		
OWR-04D	1,2-Dichlorobenzene	31-Jul-98	S		U	ug/L	10		
OWR-04D	1,4-Dichlorobenzene	31-Jul-98	S		U	ug/L	10		
OWR-04D	2,4,5-Trichlorophenol	31-Jul-98	S		U	ug/L	10		
OWR-04D	2,4,6-Trichlorophenol	31-Jul-98	S		U	ug/L	10		
OWR-04D	2,4-Dichlorophenol	31-Jul-98	S		U	ug/L	10		
OWR-04D	Aroclor 1016	31-Jul-98	S		U	ug/L	1		
		31-Jul-98	S	F	U	ug/L	10		
OWR-04D	Aroclor 1221	31-Jul-98	S		U	ug/L	1		
		31-Jul-98	S	F	U	ug/L	10		
OWR-04D	Aroclor 1232	31-Jul-98	S		U	ug/L	1		
		31-Jul-98	S	F	U	ug/L	10		
OWR-04D	Aroclor 1242	31-Jul-98	S		U	ug/L	1		
		31-Jul-98	S	F	U	ug/L	10		
OWR-04D	Aroclor 1248	31-Jul-98	S		U	ug/L	1		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
OWR-04D	Aroclor 1248	31-Jul-98	S	F	U	ug/L	10		
OWR-04D	Aroclor 1254	31-Jul-98	S		U	ug/L	1		
		31-Jul-98	S	F	U	ug/L	10		
OWR-04D	Aroclor 1260	31-Jul-98	S		U	ug/L	1		
		31-Jul-98	S	F	U	ug/L	10		
OWR-04D	Arsenic	31-Jul-98	S		U	mg/L	0.01		
		31-Jul-98	S	F	U	mg/L	0.01		
OWR-04D	Barium	31-Jul-98	S		0.022	mg/L	0.01		
		31-Jul-98	S	F	0.025	mg/L	0.01		
OWR-04D	Beryllium	31-Jul-98	S		U	mg/L	0.004		
		31-Jul-98	S	F	U	mg/L	0.004		
OWR-04D	Cadmium	31-Jul-98	S		U	mg/L	0.005		
		31-Jul-98	S	F	U	mg/L	0.005		
OWR-04D	Chlorobenzene	31-Jul-98	S		U	ug/L	5		
OWR-04D	Chromium	31-Jul-98	S		U	mg/L	0.01		
		31-Jul-98	S	F	U	mg/L	0.01		
OWR-04D	Cobalt	31-Jul-98	S		U	mg/L	0.01		
		31-Jul-98	S	F	U	mg/L	0.01		
OWR-04D	Dissolved Oxygen	10-Nov-98			0.79	mg/L			
OWR-04D	Isopropylbenzene	31-Jul-98	S		U	ug/L	5		
OWR-04D	Lead	31-Jul-98	S		U	mg/L	0.005		
		31-Jul-98	S	F	U	mg/L	0.005	J	
OWR-04D	Manganese	31-Jul-98	S		U	mg/L	0.01		
		31-Jul-98	S	F	U	mg/L	0.01	J	
OWR-04D	Mercury	31-Jul-98	S		U	mg/L	0.0002		
		31-Jul-98	S	F	U	mg/L	0.0002		
OWR-04D	Methyl parathion	31-Jul-98	S		U	ug/L	0.5		
OWR-04D	Methylene chloride (dichloromethane)	31-Jul-98	S		U	ug/L	5		
OWR-04D	Nickel	31-Jul-98	S		U	mg/L	0.004		
		31-Jul-98	S	F	U	mg/L	0.004		
OWR-04D	o,o,o-Triethylphosphorothioate	31-Jul-98	S		U	ug/L	10		
OWR-04D	Pentachlorophenol	31-Jul-98	S		U	ug/L	1		
OWR-04D	pH	31-Jul-98	S		9.3				

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
OWR-04D	pH	31-Jul-98	S		9.0				
		31-Jul-98	S		9.0				
		31-Jul-98	S		9.0				
		10-Nov-98			7.1				
OWR-04D	Phenol	31-Jul-98	S		U	ug/L	10		
OWR-04D	Redox	10-Nov-98			120	mV			
OWR-04D	Specific Conductance	31-Jul-98	S		0.17	ms/cm			
		31-Jul-98	S		0.21	ms/cm			
		31-Jul-98	S		0.18	ms/cm			
		31-Jul-98	S		0.18	ms/cm			
		10-Nov-98			0.31	ms/cm			
OWR-04D	Temperature	31-Jul-98	S		22	°C			
		31-Jul-98	S		24	°C			
		31-Jul-98	S		23	°C			
		31-Jul-98	S		22	°C			
		10-Nov-98			18	°C			
OWR-04D	Tetraethyldithiopyrophosphate (Sulfotepp)	31-Jul-98	S		U	ug/L	0.5		
OWR-04D	Total PCBs	31-Jul-98	S		U	ug/L			
		31-Jul-98	S	F	U	ug/L	10		
OWR-04D	Turbidity	31-Jul-98	S		3.2	NTU			
		31-Jul-98	S		3.3	NTU			
		31-Jul-98	S		1.6	NTU			
		31-Jul-98	S		2.5	NTU			
		10-Nov-98			72	NTU			
OWR-04D	Vanadium	31-Jul-98	S		U	mg/L	0.01		
		31-Jul-98	S	F	U	mg/L	0.01		
OWR-05D	1,1,2,2-Tetrachloroethane	10-Aug-98	S		U	ug/L	5		
OWR-05D	1,2-Dichlorobenzene	10-Aug-98	S		U	ug/L	10		
OWR-05D	1,4-Dichlorobenzene	10-Aug-98	S		U	ug/L	10		
OWR-05D	2,4,5-Trichlorophenol	10-Aug-98	S		U	ug/L	10		
OWR-05D	2,4,6-Trichlorophenol	10-Aug-98	S		U	ug/L	10		
OWR-05D	2,4-Dichlorophenol	10-Aug-98	S		U	ug/L	10		
OWR-05D	Alkalinity (to pH 4.5) as CaCO3	21-Oct-98	S		11	mg/L	1		
OWR-05D	Aroclor 1016	10-Aug-98	S		U	ug/L	20		
		10-Aug-98	S	F	U	ug/L	20		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
OWR-05D	Aroclor 1221	10-Aug-98	S		210	ug/L	20		
		10-Aug-98	S	F	U	ug/L	20		
OWR-05D	Aroclor 1232	10-Aug-98	S		U	ug/L	20		
		10-Aug-98	S	F	U	ug/L	20		
OWR-05D	Aroclor 1242	10-Aug-98	S		U	ug/L	20		
		10-Aug-98	S	F	U	ug/L	20		
OWR-05D	Aroclor 1248	10-Aug-98	S		U	ug/L	20		
		10-Aug-98	S	F	U	ug/L	20		
OWR-05D	Aroclor 1254	10-Aug-98	S		U	ug/L	20		
		10-Aug-98	S	F	U	ug/L	20		
OWR-05D	Aroclor 1260	10-Aug-98	S		U	ug/L	20		
		10-Aug-98	S	F	U	ug/L	20		
OWR-05D	Arsenic	10-Aug-98	S		U	mg/L	0.01		
		10-Aug-98	S	F	U	mg/L	0.01		
OWR-05D	Barium	10-Aug-98	S		1.2	mg/L	0.01		
		10-Aug-98	S	F	1.3	mg/L	0.01		
OWR-05D	Beryllium	10-Aug-98	S		U	mg/L	0.004		
		10-Aug-98	S	F	U	mg/L	0.004		
OWR-05D	Cadmium	10-Aug-98	S		U	mg/L	0.005		
		10-Aug-98	S	F	U	mg/L	0.005		
OWR-05D	Chlorobenzene	10-Aug-98	S		46	ug/L	5		
OWR-05D	Chromium	10-Aug-98	S		U	mg/L	0.01		
		10-Aug-98	S	F	U	mg/L	0.01		
OWR-05D	Cobalt	10-Aug-98	S		0.079	mg/L	0.01		
		10-Aug-98	S	F	0.081	mg/L	0.01		
OWR-05D	Dissolved Oxygen	10-Nov-98			0.57	mg/L			
OWR-05D	Iron, Ferrous (2+)	28-Oct-98	S		0.14	mg/L			
OWR-05D	Isopropylbenzene	10-Aug-98	S		U	ug/L	5		
OWR-05D	Lead	10-Aug-98	S		U	mg/L	0.005		
		10-Aug-98	S	F	0.021	mg/L	0.005		
OWR-05D	Manganese	10-Aug-98	S		1.3	mg/L	0.01		
		10-Aug-98	S	F	1.3	mg/L	0.01		
OWR-05D	Mercury	10-Aug-98	S		0.00057	mg/L	0.0002		
		10-Aug-98	S	F	U	mg/L	0.0002		
OWR-05D	Methyl parathion	10-Aug-98	S		5.5	ug/L	0.5		

Location	Parameter	Date Samp	Lab	Qor F?	Result	Unit	PQL	Desc Qual
OWR-05D	Methylene chloride (dichloromethane)	10-Aug-98	S		U	ug/L	5	
OWR-05D	Nickel	10-Aug-98	S		0.055	mg/L	0.004	
		10-Aug-98	S	F	0.056	mg/L	0.004	
OWR-05D	Nitrate-N	21-Oct-98	S		U	mg/L	0.05	
OWR-05D	o,c,o-Trethylphosphorothioate	10-Aug-98	S		U	ug/L	10	
OWR-05D	Pentachlorophenol	10-Aug-98	S		1.2	ug/L		
OWR-05D	pH	10-Aug-98			4.3			
		10-Aug-98			4.3			
		10-Aug-98			4.3			
		10-Aug-98			4.3			
		26-Oct-98			4.6			
		26-Oct-98			4.6			
		10-Nov-98			4.4			
OWR-05D	Phenol	10-Aug-98	S		U	ug/L	10	
OWR-05D	Phenolics, Total Recoverables	21-Oct-98	S		U	mg/L	0.05	
OWR-05D	Phosphorus, Total	21-Oct-98	S		0.039	mg/L	0.01	
OWR-05D	Redox	26-Oct-98			120	mV		
		26-Oct-98			120	mV		
		10-Nov-98			120	mV		
OWR-05D	Specific Conductance	10-Aug-98			1.6	ms/cm		
		10-Aug-98			1.6	ms/cm		
		10-Aug-98			1.5	ms/cm		
		10-Aug-98			1.6	ms/cm		
		26-Oct-98			1.6	mhos/c		
		26-Oct-98			1.6	mhos/c		
		10-Nov-98			1.6	ms/cm		
OWR-05D	Standard Plate Count	21-Oct-98	S		960	CFU/m	10	
OWR-05D	Sulfate as SO4	21-Oct-98	S		5.0	mg/L	5	
OWR-05D	Sulfide	21-Oct-98	S		U	mg/L	10	
OWR-05D	Temperature	10-Aug-98			23	°C		
		10-Aug-98			23	°C		
		10-Aug-98			23	°C		
		10-Aug-98			23	°C		
		26-Oct-98			18	°C		
		26-Oct-98			19	°C		

Locaton	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
OWR-05D	Temperature	10-Nov-98			18	°C		
OWR-05D	Tetraethyldithiopyrophosphate (Sulfotepp)	10-Aug-98	S		U	ug/L	0.5	
OWR-05D	Total Dissolved Solids	21-Oct-98	S		970	mg/L	10	
OWR-05D	Total Kjeldahl Nitrogen-N	21-Oct-98	S		2.3	mg/L	0.2	
OWR-05D	Total Organic Carbon	21-Oct-98	S		23	mg/L	1	
OWR-05D	Total Organic Halogen	21-Oct-98	S		1.6	mg/L	0.1	
OWR-05D	Total PCBs	10-Aug-98	S		210	ug/L		
		10-Aug-98	S	F	U	ug/L	20	
OWR-05D	Total Suspended Solids	21-Oct-98	S		5,400	mg/L	50	
OWR-05D	Turbidity	10-Aug-98			0.86	NTU		
		10-Aug-98			0.76	NTU		
		10-Aug-98			0.75	NTU		
		10-Aug-98			0.48	NTU		
		26-Oct-98			220	NTU		
		26-Oct-98			400	NTU		
		10-Nov-98			1,000	NTU		
OWR-05D	Vanadium	10-Aug-98	S		U	mg/L	0.01	
		10-Aug-98	S	F	U	mg/L	0.01	
OWR-06D	1,1,2,2-Tetrachloroethane	28-Jul-98	S		U	ug/L	5	
OWR-06D	1,2-Dichlorobenzene	28-Jul-98	S		U	ug/L	10	
OWR-06D	1,4-Dichlorobenzene	28-Jul-98	S		U	ug/L	10	
OWR-06D	2,4,5-Trichlorophenol	28-Jul-98	S		U	ug/L	10	
OWR-06D	2,4,6-Trichlorophenol	28-Jul-98	S		U	ug/L	10	
OWR-06D	2,4-Dichlorophenol	28-Jul-98	S		U	ug/L	10	
OWR-06D	Aroclor 1016	29-Jul-98	S		U	ug/L	1	
		29-Jul-98	S	F	U	ug/L	1	
OWR-06D	Aroclor 1221	29-Jul-98	S		U	ug/L	1	
		29-Jul-98	S	F	U	ug/L	1	
OWR-06D	Aroclor 1232	29-Jul-98	S		U	ug/L	1	
		29-Jul-98	S	F	U	ug/L	1	
OWR-06D	Aroclor 1242	29-Jul-98	S		U	ug/L	1	
		29-Jul-98	S	F	U	ug/L	1	
OWR-06D	Aroclor 1248	29-Jul-98	S		U	ug/L	1	
		29-Jul-98	S	F	U	ug/L	1	

Location	Parameter	Date Samp	Lab	Qor F?	Result	Unit	PQL	Desc	Qual
OWR-06D	Aroclor 1254	29-Jul-98	S		U	ug/L	1		
		29-Jul-98	S	F	U	ug/L	1		
OWR-06D	Aroclor 1260	29-Jul-98	S		U	ug/L	1		
		29-Jul-98	S	F	U	ug/L	1		
OWR-06D	Arsenic	29-Jul-98	S		U	mg/L	0.01		
		29-Jul-98	S	F	U	mg/L	0.01		
OWR-06D	Barium	29-Jul-98	S		0.15	mg/L	0.01		
		29-Jul-98	S	F	0.18	mg/L	0.01		
OWR-06D	Beryllium	29-Jul-98	S		U	mg/L	0.004		
		29-Jul-98	S	F	U	mg/L	0.004		
OWR-06D	Cadmium	29-Jul-98	S		U	mg/L	0.005		
		29-Jul-98	S	F	U	mg/L	0.005		
OWR-06D	Chorobenzene	28-Jul-98	S		U	ug/L	5		
OWR-06D	Chromium	29-Jul-98	S		U	mg/L	0.01		
		29-Jul-98	S	F	U	mg/L	0.01		
OWR-06D	Cobalt	29-Jul-98	S		U	mg/L	0.01		
		29-Jul-98	S	F	U	mg/L	0.01		
OWR-06D	Dissolved Oxygen	10-Nov-98			0.86	mg/L			
OWR-06D	Isopropylbenzene	28-Jul-98	S		U	ug/L	5		
OWR-06D	Lead	29-Jul-98	S		U	mg/L	0.005		
		29-Jul-98	S	F	U	mg/L	0.005		
OWR-06D	Manganese	29-Jul-98	S		0.47	mg/L	0.01		
		29-Jul-98	S	F	0.66	mg/L	0.01		
OWR-06D	Mercury	29-Jul-98	S		0.0013	mg/L	0.0002		
		29-Jul-98	S	F	0.00027	mg/L	0.0002		
OWR-06D	Methyl parathion	28-Jul-98	S		U	ug/L	0.5		
OWR-06D	Methylene chloride (dikhloromethane)	28-Jul-98	S		U	ug/L	5		
OWR-06D	Nickel	29-Jul-98	S		0.0095	mg/L	0.004		
		29-Jul-98	S	F	0.011	mg/L	0.004		
OWR-06D	o,oo-Trithylphosphorothioate	28-Jul-98	S		U	ug/L	10		
OWR-06D	Pentachlorophenol	28-Jul-98	S		U	ug/L	1		
OWR-06D	pH	28-Jul-98	S		6.7				
		28-Jul-98	S		6.2				
		28-Jul-98	S		6.5				

Locaton	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
OWR-06D	pH	28-Jul-98	S		6.8				
OWR-06D	Phenol	28-Jul-98	S		U	ug/L	10		
OWR-06D	Redox	10-Nov-98				mV			
OWR-06D	Specific Conductance	28-Jul-98	S		1.4	ms/cm			
		28-Jul-98	S		1.4	ms/cm			
		28-Jul-98	S		1.4	ms/cm			
		28-Jul-98	S		1.4	ms/cm			
OWR-06D	Temperature	28-Jul-98	S		22	°C			
		28-Jul-98	S		22	°C			
		28-Jul-98	S		22	°C			
		28-Jul-98	S		22	°C			
OWR-06D	Tetraethyldithiopyrophosphate (Sulfotepp)	28-Jul-98	S		U	ug/L	0.5		
OWR-06D	Total PCBs	29-Jul-98	S		U	ug/L			
		29-Jul-98	S	F	U	ug/L	1		
OWR-06D	Turbidity	28-Jul-98	S		1.6	NTU			
		28-Jul-98	S		1.5	NTU			
		28-Jul-98	S		2.2	NTU			
		28-Jul-98	S		1.9	NTU			
OWR-06D	Vanadium	29-Jul-98	S		U	mg/L	0.01		
		29-Jul-98	S	F	U	mg/L	0.01		
OWR-07D	1,1,2,2-Tetrachloroethane	05-Aug-98	S		U	ug/L	5		
OWR-07D	1,2-Dichlorobenzene	05-Aug-98	S		U	ug/L	10		
OWR-07D	1,4-Dichlorobenzene	05-Aug-98	S		U	ug/L	10		
OWR-07D	2,4,5-Trichlorophenol	05-Aug-98	S		U	ug/L	10		
OWR-07D	2,4,6-Trichlorophenol	05-Aug-98	S		U	ug/L	10		
OWR-07D	2,4-Dichlorophenol	05-Aug-98	S		U	ug/L	10		
OWR-07D	Aroclor 1016	05-Aug-98	S		U	ug/L	1		
		05-Aug-98	S	F	U	ug/L	1		
OWR-07D	Aroclor 1221	05-Aug-98	S		U	ug/L	1		
		05-Aug-98	S	F	U	ug/L	1		
OWR-07D	Aroclor 1232	05-Aug-98	S		U	ug/L	1		
		05-Aug-98	S	F	U	ug/L	1		
OWR-07D	Aroclor 1242	05-Aug-98	S		U	ug/L	1		
		05-Aug-98	S	F	U	ug/L	1		

Location	Parameter	Date Samp	Lab	Qor F?	Result	Unit	PQL	Desc Qual
OWR-07D	Aroclor 1248	05-Aug-98	S		2.2	ug/L	1	
		05-Aug-98	S	F	U	ug/L	1	
OWR-07D	Aroclor 1254	05-Aug-98	S		U	ug/L	1	
		05-Aug-98	S	F	U	ug/L	1	
OWR-07D	Aroclor 1260	05-Aug-98	S		U	ug/L	1	
		05-Aug-98	S	F	U	ug/L	1	
OWR-07D	Arsenic	05-Aug-98	S		U	mg/L	0.01	
		05-Aug-98	S	F	U	mg/L	0.01	
OWR-07D	Barium	05-Aug-98	S		U	mg/L	0.01	
		05-Aug-98	S	F	0.017	mg/L	0.01	
OWR-07D	Beryllium	05-Aug-98	S		U	mg/L	0.004	
		05-Aug-98	S	F	U	mg/L	0.004	
OWR-07D	Cadmium	05-Aug-98	S		U	mg/L	0.005	
		05-Aug-98	S	F	U	mg/L	0.005	
OWR-07D	Chorobenzene	05-Aug-98	S		U	ug/L	5	
OWR-07D	Chromium	05-Aug-98	S		0.031	mg/L	0.01	
		05-Aug-98	S	F	0.039	mg/L	0.01	
OWR-07D	Cobalt	05-Aug-98	S		U	mg/L	0.01	
		05-Aug-98	S	F	U	mg/L	0.01	
OWR-07D	Dissolved Oxygen	10-Nov-98			4.5	mg/L		
OWR-07D	Isopropylbenzene	05-Aug-98	S		U	ug/L	5	
OWR-07D	Lead	05-Aug-98	S		U	mg/L	0.005	
		05-Aug-98	S	F	0.013	mg/L	0.005	
OWR-07D	Manganese	05-Aug-98	S		U	mg/L	0.01	
		05-Aug-98	S	F	U	mg/L	0.01	
OWR-07D	Mecury	05-Aug-98	S		U	mg/L	0.0002	
		05-Aug-98	S	F	U	mg/L	0.0002	J
OWR-07D	Mehyl parathion	05-Aug-98	S		U	ug/L	0.5	
OWR-07D	Mehylene chloride (dichloromethane)	05-Aug-98	S		U	ug/L	5	
OWR-07D	Nickel	05-Aug-98	S		U	mg/L	0.004	
		05-Aug-98	S	F	U	mg/L	0.004	
OWR-07D	o,o,o-Triethylphosphorothioate	05-Aug-98	S		U	ug/L	10	
OWR-07D	Pentachlorophenol	05-Aug-98	S		U	ug/L	1	

See Table L-3 for Abbreviations and Qualifiers.

Locaton	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
OWR-07D	pH	05-Aug-98	S		8.2			
		05-Aug-98	S		9.3			
		05-Aug-98	S		9.8			
		05-Aug-98	S		11			
		06-Aug-98			10			
		06-Aug-98			9.8			
		06-Aug-98			9.5			
		06-Aug-98			9.7			
OWR-07D	Phenol	05-Aug-98	S		U	ug/L	10	
OWR-07D	Redox	10-Nov-98			41	mV		
OWR-07D	Specific Conductance	05-Aug-98	S		0.97	ms/cm		
		05-Aug-98	S		0.78	ms/cm		
		05-Aug-98	S		0.62	ms/cm		
		05-Aug-98	S		0.73	ms/cm		
		06-Aug-98			0.80	ms/cm		
		06-Aug-98			0.75	ms/cm		
		06-Aug-98			0.68	ms/cm		
		06-Aug-98			0.72	ms/cm		
OWR-07D	Temperature	05-Aug-98	S		26	°C		
		05-Aug-98	S		25	°C		
		05-Aug-98	S		25	°C		
		05-Aug-98	S		25	°C		
		06-Aug-98			23	°C		
		06-Aug-98			24	°C		
		06-Aug-98			24	°C		
		06-Aug-98			24	°C		
OWR-07D	Tetraethyldithiopyrophosphate (Sulfotepp)	05-Aug-98	S		U	ug/L	0.5	
OWR-07D	Total PCBs	05-Aug-98	S		2.2	ug/L		
		05-Aug-98	S	F	U	ug/L	1	
OWR-07D	Turbidity	05-Aug-98	S		1.8	NTU		
		05-Aug-98	S		1.7	NTU		
		05-Aug-98	S		1.8	NTU		
		05-Aug-98	S		1.7	NTU		
		06-Aug-98			2.2	NTU		
		06-Aug-98			2.1	NTU		
		06-Aug-98			1.9	NTU		
		06-Aug-98			2.0	NTU		
OWR-07D	Vanadium	05-Aug-98	S		0.010	mg/L	0.01	
		05-Aug-98	S	F	U	mg/L	0.01	

See Table L-3 for Abbreviations and Qualifiers.

Location	Parameter	Date Samp	Lab	Q or F?		Result	Unit	PQL	Desc	Qual
OWR-08S	1,1,2,2-Tetrachloroethane	03-Aug-98	S			U	ug/L	5		
		03-Aug-98	S	Q		U	ug/L	5		
OWR-08S	1,2-Dichlorobenzene	03-Aug-98	S			U	ug/L	40		
		03-Aug-98	S	Q		U	ug/L	40		
OWR-08S	1,4-Dichlorobenzene	03-Aug-98	S			U	ug/L	40		
		03-Aug-98	S	Q		U	ug/L	40		
OWR-08S	2,4,5-Trichlorophenol	03-Aug-98	S			U	ug/L	40		
		03-Aug-98	S	Q		U	ug/L	40		
OWR-08S	2,4,6-Trichlorophenol	03-Aug-98	S			U	ug/L	40		
		03-Aug-98	S	Q		U	ug/L	40		
OWR-08S	2,4-Dichlorophenol	03-Aug-98	S			U	ug/L	40		
		03-Aug-98	S	Q		U	ug/L	40		
OWR-08S	Aroclor 1016	03-Aug-98	S			U	ug/L	10		
		03-Aug-98	S	Q		U	ug/L	10		
		03-Aug-98	S		F	U	ug/L	10		
		03-Aug-98	S	Q	F	U	ug/L	10		
OWR-08S	Aroclor 1221	03-Aug-98	S			U	ug/L	10		
		03-Aug-98	S	Q		U	ug/L	10		
		03-Aug-98	S		F	U	ug/L	10		
		03-Aug-98	S	Q	F	U	ug/L	10		
OWR-08S	Aroclor 1232	03-Aug-98	S			U	ug/L	10		
		03-Aug-98	S	Q		U	ug/L	10		
		03-Aug-98	S		F	U	ug/L	10		
		03-Aug-98	S	Q	F	U	ug/L	10		
OWR-08S	Aroclor 1242	03-Aug-98	S			U	ug/L	10		
		03-Aug-98	S	Q		U	ug/L	10		
		03-Aug-98	S		F	U	ug/L	10		
		03-Aug-98	S	Q	F	U	ug/L	10		
OWR-08S	Aroclor 1248	03-Aug-98	S			U	ug/L	10		
		03-Aug-98	S	Q		U	ug/L	10		
		03-Aug-98	S		F	U	ug/L	10		
		03-Aug-98	S	Q	F	U	ug/L	10		
OWR-08S	Aroclor 1254	03-Aug-98	S			U	ug/L	10		
		03-Aug-98	S	Q		U	ug/L	10		
		03-Aug-98	S		F	U	ug/L	10		
		03-Aug-98	S	Q	F	U	ug/L	10		
OWR-08S	Aroclor 1260	03-Aug-98	S			U	ug/L	10		
		03-Aug-98	S	Q		U	ug/L	10		

Location	Parameter	Date Samp	Lab	Q or F?		Result	Unit	PQL	Desc	Qual
OWR-08S	Aroclor 1260	03-Aug-98	S		F	U	ug/L	10		
		03-Aug-98	S	Q	F	U	ug/L	10		
OWR-08S	Arsenic	03-Aug-98	S			U	mg/L	0.01		
		03-Aug-98	S	Q		U	mg/L	0.01		
		03-Aug-98	S		F	U	mg/L	0.01		
		03-Aug-98	S	Q	F	U	mg/L	0.01		
OWR-08S	Barium	03-Aug-98	S			0.24	mg/L	0.01		
		03-Aug-98	S	Q		0.24	mg/L	0.01		
		03-Aug-98	S		F	0.19	mg/L	0.01		
		03-Aug-98	S	Q	F	0.23	mg/L	0.01		
OWR-08S	Beryllium	03-Aug-98	S			U	mg/L	0.004		
		03-Aug-98	S	Q		U	mg/L	0.004		
		03-Aug-98	S		F	U	mg/L	0.004		
		03-Aug-98	S	Q	F	U	mg/L	0.004		
OWR-08S	Cadmium	03-Aug-98	S			U	mg/L	0.005		
		03-Aug-98	S	Q		U	mg/L	0.005		
		03-Aug-98	S		F	U	mg/L	0.005		
		03-Aug-98	S	Q	F	U	mg/L	0.005		
OWR-08S	Chlorobenzene	03-Aug-98	S			U	ug/L	5		
		03-Aug-98	S	Q		U	ug/L	5		
OWR-08S	Chromium	03-Aug-98	S			U	mg/L	0.01		
		03-Aug-98	S	Q		U	mg/L	0.01		
		03-Aug-98	S		F	U	mg/L	0.01		
		03-Aug-98	S	Q	F	U	mg/L	0.01		
OWR-08S	Cobalt	03-Aug-98	S			0.029	mg/L	0.01		
		03-Aug-98	S	Q		0.030	mg/L	0.01		
		03-Aug-98	S		F	0.024	mg/L	0.01		
		03-Aug-98	S	Q	F	0.026	mg/L	0.01		
OWR-08S	Dissolved Oxygen	10-Nov-98				1.3	mg/L			
OWR-08S	Isopropylbenzene	03-Aug-98	S			U	ug/L	5		
		03-Aug-98	S	Q		U	ug/L	5		
OWR-08S	Lead	03-Aug-98	S			U	mg/L	0.005		
		03-Aug-98	S	Q		0.0060	mg/L	0.005		
		03-Aug-98	S		F	0.027	mg/L	0.005		J
		03-Aug-98	S	Q	F	0.045	mg/L	0.005		J
OWR-08S	Manganese	03-Aug-98	S			1.4	mg/L	0.01		
		03-Aug-98	S	Q		1.5	mg/L	0.01		
		03-Aug-98	S		F	1.1	mg/L	0.01		J
		03-Aug-98	S	Q	F	1.4	mg/L	0.01		J

Location	Parameter	Date Samp	Lab	Q or F?		Result	Unit	PQL	Desc	Qual
OWR-08S	Mercury	03-Aug-98	S			U	mg/L	0.0002		
		03-Aug-98	S	C		0.00033	mg/L	0.0002		J
		03-Aug-98	S		F	U	mg/L	0.0002		
		03-Aug-98	S	C	F	U	mg/L	0.0002		
OWR-08S	Methyl parathion	03-Aug-98	S			9.6	ug/L	0.5		
		03-Aug-98	S	C		9.7	ug/L	0.5		
OWR-08S	Methylene chloride (dchloromethane)	03-Aug-98	S			36	ug/L	5		
		03-Aug-98	S	C		36	ug/L	5		
OWR-08S	Nickel	03-Aug-98	S			0.010	mg/L	0.004		
		03-Aug-98	S	C		0.011	mg/L	0.004		
		03-Aug-98	S		F	0.0091	mg/L	0.004		
		03-Aug-98	S	C	F	0.0010	mg/L	0.004		
OWR-08S	o,e,o-Trethylphosphorothioate	03-Aug-98	S			330	ug/L	40		
		03-Aug-98	S	C		330	ug/L	40		
OWR-08S	Pentachlorophenol	03-Aug-98	S			1.2	ug/L	4		
		03-Aug-98	S	C		U	ug/L	1		
OWR-08S	ph	03-Aug-98	S		F	4.5				
		03-Aug-98	S		F	4.6				
		03-Aug-98	S		F	4.5				
		03-Aug-98	S		F	4.5				
		10-Nov-98				7.5				
OWR-08S	Phenol	03-Aug-98	S			U	ug/L	40		
		03-Aug-98	S	Q		U	ug/L	40		
OWR-08S	Redox	10-Nov-98				43	mV			
OWR-08S	Specific Conductance	03-Aug-98	S		F	1.1	ms/cm			
		03-Aug-98	S		F	0.95	ms/cm			
		03-Aug-98	S		F	1.1	ms/cm			
		03-Aug-98	S		F	1.1	ms/cm			
		10-Nov-98				1.0	ms/cm			
OWR-08S	Temperature	03-Aug-98	S		F	26	°C			
		03-Aug-98	S		F	23	°C			
		03-Aug-98	S		F	23	°C			
		03-Aug-98	S		F	23	°C			
		10-Nov-98				21	°C			
OWR-08S	Teraethyldithiopyrophosphate (Sulfotepp)	03-Aug-98	S			1.8	ug/L	0.5		
		03-Aug-98	S	Q		1.9	ug/L	0.5		

Location	Parameter	Date Samp	Lab	Q or F?		Result	Unit	PQL	Desc	Qual
OWR-08S	Total PCBs	03-Aug-98	S			U	ug/L			
		03-Aug-98	S	Q		U	ug/L			
		03-Aug-98	S		F	U	ug/L	10		
		03-Aug-98	S	Q	F	U	ug/L	10		
OWR-08S	Turbidity	03-Aug-98	S		F	2.2	NTU			
		03-Aug-98	S		F	1.8	NTU			
		03-Aug-98	S		F	1.9	NTU			
		03-Aug-98	S		F	1.6	NTU			
		10-Nov-98				9.0	NTU			
OWR-08S	Vanadium	03-Aug-98	S			U	mg/L	0.01		
		03-Aug-98	S	Q		U	mg/L	0.01		
		03-Aug-98	S		F	U	mg/L	0.01		
		03-Aug-98	S	Q	F	U	mg/L	0.01		
OWR-09S	1,1,2,2-Tetrachloroethane	04-Aug-98	S			U	ug/L	5		
OWR-09S	1,2-Dichlorobenzene	04-Aug-98	S			U	ug/L	10		
OWR-09S	1,4-Dichlorobenzene	04-Aug-98	S			U	ug/L	10		
OWR-09S	2,4,5-Trichlorophenol	04-Aug-98	S			U	ug/L	10		
OWR-09S	2,4,6-Trichlorophenol	04-Aug-98	S			U	ug/L	10		
OWR-09S	2,4-Dichlorophenol	04-Aug-98	S			U	ug/L	10		
OWR-09S	Aroclor 1016	07-Aug-98	S			U	ug/L	1		
		07-Aug-98	S		F	U	ug/L	1		
OWR-09S	Aroclor 1221	07-Aug-98	S			U	ug/L	1		
		07-Aug-98	S		F	U	ug/L	1		
OWR-09S	Aroclor 1232	07-Aug-98	S			U	ug/L	1		
		07-Aug-98	S		F	U	ug/L	1		
OWR-09S	Aroclor 1242	07-Aug-98	S			U	ug/L	1		
		07-Aug-98	S		F	U	ug/L	1		
OWR-09S	Aroclor 1248	07-Aug-98	S			U	ug/L	1		
		07-Aug-98	S		F	U	ug/L	1		
OWR-09S	Aroclor 1254	07-Aug-98	S			U	ug/L	1		
		07-Aug-98	S		F	U	ug/L	1		
OWR-09S	Aroclor 1260	07-Aug-98	S			U	ug/L	1		
		07-Aug-98	S		F	U	ug/L	1		
OWR-09S	Arsenic	07-Aug-98	S			U	mg/L	0.01		
		07-Aug-98	S		F	U	mg/L	0.01		
OWR-09S	Barium	07-Aug-98	S			0.044	mg/L	0.01		

Location	Parameter	Date Samp	Lab	Qor F?	Result	Unit	PQL	Desc	Qual
OWR-09S	Barium	07-Aug-98	S	F	0.015	mg/L	0.01		
OWR-09S	Beryllium	07-Aug-98	S		U	mg/L	0.004		
		07-Aug-98	S	F	U	mg/L	0.004		
OWR-09S	Cadmium	07-Aug-98	S		U	mg/L	0.005		
		07-Aug-98	S	F	U	mg/L	0.005		
OWR-09S	Chlorobenzene	04-Aug-98	S		U	ug/L	5		
OWR-09S	Chromium	07-Aug-98	S		U	mg/L	0.01		
		07-Aug-98	S	F	U	mg/L	0.01		
OWR-09S	Cobalt	07-Aug-98	S		U	mg/L	0.01		
		07-Aug-98	S	F	U	mg/L	0.01		
OWR-09S	Dissolved Oxygen	10-Nov-98			4.5	mg/L			
OWR-09S	Isopropylbenzene	04-Aug-98	S		U	ug/L	5		
OWR-09S	Lead	07-Aug-98	S		0.0091	mg/L	0.005		
		07-Aug-98	S	F	U	mg/L	0.005		J
OWR-09S	Manganese	07-Aug-98	S		0.51	mg/L	0.01		
		07-Aug-98	S	F	0.082	mg/L	0.01		J
OWR-09S	Mercury	07-Aug-98	S		U	mg/L	0.0002		
		07-Aug-98	S	F	U	mg/L	0.0002		
OWR-09S	Methyl parathion	04-Aug-98	S		U	ug/L	0.5		
OWR-09S	Methylene chloride (dichloromethane)	04-Aug-98	S		U	ug/L	5		
OWR-09S	Nickel	07-Aug-98	S		0.016	mg/L	0.004		
		07-Aug-98	S	F	U	mg/L	0.004		
OWR-09S	o,oo-Triethylphosphorothioate	04-Aug-98	S		U	ug/L	10		
OWR-09S	Pentachlorophenol	04-Aug-98	S		U	ug/L	1		
OWR-09S	pH	04-Aug-98	S		6.9				
		04-Aug-98	S		7.0				
		04-Aug-98	S		7.4				
		04-Aug-98	S		7.5				
		07-Aug-98	S		7.9				
		07-Aug-98	S		7.2				
OWR-09S	Phenol	04-Aug-98	S		U	ug/L	10		
OWR-09S	Redox	10-Nov-98			120	mV			
OWR-09S	Specific Conductance	04-Aug-98	S		0.31	ms/cm			
		04-Aug-98	S		0.25	ms/cm			

See Table L-3 for Abbreviations and Qualifiers.

Locaton	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
OWR-09S	Specific Conductance	04-Aug-98	S		0.29	ms/cm			
		04-Aug-98	S		0.20	ms/cm			
		07-Aug-98	S		0.29	ms/cm			
		07-Aug-98	S		0.25	ms/cm			
OWR-09S	Temperature	04-Aug-98	S		25	°C			
		04-Aug-98	S		27	°C			
		04-Aug-98	S		25	°C			
		04-Aug-98	S		24	°C			
		07-Aug-98	S		24	°C			
		07-Aug-98	S		23	°C			
OWR-09S	Tetraethyldithiopyrophosphate (Sulfotepp)	04-Aug-98	S		U	ug/L	0.5		
OWR-09S	Total PCBs	07-Aug-98	S		U	ug/L			
		07-Aug-98	S	F	U	ug/L	1		
OWR-09S	Turbidity	04-Aug-98	S		170	NTU			
		04-Aug-98	S		100	NTU			
		04-Aug-98	S		10	NTU			
		04-Aug-98	S		190	NTU			
		07-Aug-98	S		230	NTU			
		07-Aug-98	S		320	NTU			
OWR-09S	Vanadium	07-Aug-98	S		0.018	mg/L	0.01		
		07-Aug-98	S	F	U	mg/L	0.01		
SBP-01	Methyl parathion				U	ug/L	1.1		
SBP-01	Paration, Total				U	ug/L	1.1		
SBP-02	Methyl parathion				U	ug/L	1.1		
SBP-02	Paration, Total				U	ug/L	1.1		
SBP-03	Methyl parathion				U	ug/L	1.1		
SBP-03	Paration, Total				U	ug/L	1.1		
SBP-04	Methyl parathion				U	ug/L	1.1		
SBP-04	Paration, Total				U	ug/L	1.1		
SBP-05	1,2-Dichlorobenzene	22-Apr-97	S		U	ug/L	10		
		06-Apr-98	G		U	ug/L	10		
SBP-05	1,4-Dichlorobenzene	22-Apr-97	S		U	ug/L	10		
		06-Apr-98	G		U	ug/L	10		
SBP-05	2,4,5-Trichlorophenol	22-Apr-97	S		U	ug/L	10		

See Table L-3 for Abbreviations and Qualifiers.

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
SBP-05	2,4,5-Trichlorophenol	24-Sep-97	G		U	ug/L	10		
		06-Apr-98	G		U	ug/L	10		
SBP-05	2,4,6-Trichlorophenol	22-Apr-97	S		U	ug/L	10		
		24-Sep-97	G		U	ug/L	10		
		06-Apr-98	G		U	ug/L	10		
SBP-05	2,4Dichlorophenol	22-Apr-97	S		U	ug/L	10		
		24-Sep-97	G		U	ug/L	10		
		06-Apr-98	G		U	ug/L	10		
SBP-05	Arcclor 1016	22-Apr-97	S		U	ug/L	0.5		
		24-Sep-97	S		U	ug/L	0.5		
		24-Sep-97	G		U	ug/L	0.5		
		24-Sep-97	S	F	U	ug/L	0.5	S	
		24-Sep-97	G	F	U	ug/L	0.5	S	
		07-Apr-98	S		U	ug/L	0.5		
		07-Apr-98	S	F	U	ug/L	0.5		
SBP-05	Arcclor 1221	22-Apr-97	S		U	ug/L	1		
		24-Sep-97	G		U	ug/L	0.5		
		24-Sep-97	S		U	ug/L	1		
		24-Sep-97	S	F	U	ug/L	1	S	
		24-Sep-97	G	F	U	ug/L	0.5	S	
		07-Apr-98	S		U	ug/L	0.5		
		07-Apr-98	S	F	U	ug/L	0.5		
SBP-05	Arcclor 1232	22-Apr-97	S		U	ug/L	0.5		
		24-Sep-97	G		U	ug/L	0.5		
		24-Sep-97	S		U	ug/L	0.5		
		24-Sep-97	G	F	U	ug/L	0.5	S	
		24-Sep-97	S	F	U	ug/L	0.5	S	
		07-Apr-98	S		U	ug/L	0.5		
		07-Apr-98	S	F	U	ug/L	0.5		
SBP-05	Arcclor 1242	22-Apr-97	S		U	ug/L	0.5		
		24-Sep-97	G		U	ug/L	0.5		
		24-Sep-97	S		U	ug/L	0.5		
		24-Sep-97	G	F	U	ug/L	0.5	S	
		24-Sep-97	S	F	U	ug/L	0.5	S	
		07-Apr-98	S		U	ug/L	0.5		
		07-Apr-98	S	F	U	ug/L	0.5		
SBP-05	Arcclor 1248	22-Apr-97	S		U	ug/L	0.5		
		24-Sep-97	G		U	ug/L	0.5		
		24-Sep-97	S		U	ug/L	0.5		
		24-Sep-97	G	F	U	ug/L	0.5	S	
		24-Sep-97	S	F	U	ug/L	0.5	S	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
SBP-05	Arcclor 1248	07-Apr-98	S		U	ug/L	0.5		
		07-Apr-98	S	F	U	ug/L	0.5		
SBP-05	Arcclor 1254	22-Apr-97	S		U	ug/L	0.5		
		24-Sep-97	G		U	ug/L	0.5		
		24-Sep-97	S		U	ug/L	0.5		
		24-Sep-97	G	F	U	ug/L	0.5	S	
		24-Sep-97	S	F	U	ug/L	0.5	S	
		07-Apr-98	S		U	ug/L	0.5		
		07-Apr-98	S	F	U	ug/L	0.5		
SBP-05	Arcclor 1260	22-Apr-97	S		U	ug/L	0.5		
		24-Sep-97	S		U	ug/L	0.5		
		24-Sep-97	G		U	ug/L	0.5		
		24-Sep-97	S	F	U	ug/L	0.5	S	
		24-Sep-97	G	F	U	ug/L	0.5	S	
		07-Apr-98	S		U	ug/L	0.5		
		07-Apr-98	S	F	U	ug/L	0.5		
SBP-05	Chlorobenzene	22-Apr-97	S		U	ug/L	1		
		24-Sep-97	G		U	ug/L	1		
		06-Apr-98	G		U	ug/L	1		
SBP-05	Cobalt	22-Apr-97	S		U	mg/L	0.01		
		24-Sep-97	G		U	mg/L	0.01		
		24-Sep-97	G	F	U	mg/L	0.01	S	
		07-Apr-98	G		U	mg/L	0.01		
		07-Apr-98	G	F	U	mg/L	0.01		
SBP-05	Mercury	22-Apr-97	S		0.000073	mg/L	0.0002	JB	
		07-Apr-98	G		U	mg/L	0.0002		
		07-Apr-98	G	F	U	mg/L	0.0002		
SBP-05	Methyl parathion				U	ug/L	1.1		
SBP-05	Methylene chloride (dichloromethane)	22-Apr-97	S		U	ug/L	5		
		24-Sep-97	G		U	ug/L	5		
		06-Apr-98	G		U	ug/L	5		
SBP-05	o,o,o-Triethylphosphorothioate	22-Apr-97	S		U	ug/L	10		
		24-Sep-97	G		U	ug/L	10		
		06-Apr-98	G		U	ug/L	10		
SBP-05	Paration, Total				U	ug/L	1.1		
SBP-05	Pentachlorophenol	22-Apr-97	S		U	ug/L	1		
		24-Sep-97	G		U	ug/L	1		
		06-Apr-98	G		U	ug/L	1		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
SBP-05	Phenol	22-Apr-97	S		U	ug/L	10		
		24-Sep-97	G		U	ug/L	10		
		06-Apr-98	G		U	ug/L	10		
SBP-05	Tetraethyldithiopyrophosphate (Sulfotepp)	22-Apr-97	S		U	ug/L	0.5		
		24-Sep-97	G		U	ug/L	0.5		
		06-Apr-98	G		U	ug/L	0.5		
SG	Aroclor 1016	25-Feb-98	S		U	ug/L			
		05-Mar-98	S		U	ug/L			
SG	Aroclor 1221	25-Feb-98	S		U	ug/L			
		05-Mar-98	S		U	ug/L			
SG	Aroclor 1232	25-Feb-98	S		U	ug/L			
		05-Mar-98	S		U	ug/L			
SG	Aroclor 1242	25-Feb-98	S		U	ug/L			
		05-Mar-98	S		U	ug/L			
SG	Aroclor 1248	25-Feb-98	S		U	ug/L			
		05-Mar-98	S		83	ug/L			
SG	Aroclor 1254	25-Feb-98	S		0.72	ug/L			
		05-Mar-98	S		110	ug/L		X	
SG	Aroclor 1260	25-Feb-98	S		0.51	ug/L		X	
		05-Mar-98	S		86	ug/L			
SG	Total PCBs	25-Feb-98	S		1.2	ug/L			
		05-Mar-98	S		280	ug/L			
V-68	Bicarbonate	28-Nov-47			U	ug/L			
V-68	Calcium	28-Nov-47			U	ug/L			
V-68	Calcium carbonate	28-Nov-47			120,000	ug/L			
V-68	Chloride	28-Nov-47			12,000	ug/L			
V-68	Fluoride	28-Nov-47			U	ug/L			
V-68	Iron	28-Nov-47			U	ug/L			
V-68	Magnesium	28-Nov-47			U	ug/L			
V-68	Nitrate	28-Nov-47			1,400	ug/L			
V-68	pH	28-Nov-47			7.3				
V-68	Sodium	28-Nov-47			U	ug/L			
V-68	Specific Conductance	28-Nov-47			240	mhos/c			

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
V-68	Sulfate	28-Nov-47			8,000	ug/L			
W-20	Bicarbonate	01-Jan-58			U	ug/L			
W-20	Calcium	01-Jan-58			64,000	ug/L			
W-20	Calcium carbonate	01-Jan-58			110,000	ug/L			
W-20	Chloride	01-Jan-58			900	ug/L			
W-20	Fluoride	01-Jan-58			U	ug/L			
W-20	Iron	01-Jan-58			U	ug/L			
W-20	Magnesium	01-Jan-58			49,000	ug/L			
W-20	Nitrate	01-Jan-58			U	ug/L			
W-20	pH	01-Jan-58			7.3				
W-20	Sodium	01-Jan-58			U	ug/L			
W-20	Sulfate	01-Jan-58			3,000	ug/L			
W-32	Bicarbonate	28-Apr-58			25,000	ug/L			
W-32	Calcium	28-Apr-58			8,000	ug/L			
W-32	Calcium carbonate	28-Apr-58			40,000	ug/L			
W-32	Chloride	28-Apr-58			2,800	ug/L			
W-32	Fluoride	28-Apr-58			U	ug/L			
W-32	Iron	28-Apr-58			U	ug/L			
W-32	Magnesium	28-Apr-58			1,900	ug/L			
W-32	Nitrate	28-Apr-58			U	ug/L			
W-32	pH	28-Apr-58			7.0				
W-32	Sodium	28-Apr-58			3,100	ug/L			
W-32	Specific Conductance	28-Apr-58			92	mhos/c			
W-32	Sulfate	28-Apr-58			17,000	ug/L			
W-34	Aluminum				270	ug/L			
W-34	Arsenic				8.0	ug/L			
W-34	Barium				40	ug/L			
W-34	Bicarbonate				210,000	ug/L			
		14-Nov-49			U	ug/L			
W-34	Cadmium				U	ug/L			

Location	Parameter	Date Samp	Lab	Qor F?	Result	Unit	PQL	Desc	Qual
W-34	Calcium				11,000	ug/L			
		14-Nov-49			60,000	ug/L			
W-34	Calcium carbonate	14-Nov-49			220,000	ug/L			
W-34	Carbonate				U	ug/L			
W-34	Chloride				120,000	ug/L			
		14-Nov-49			87,000	ug/L			
W-34	Chromium				1.0	ug/L			
W-34	Cobalt				U	ug/L			
W-34	Copper				3.0	ug/L			
W-34	Fluoride				100	ug/L			
		14-Nov-49			U	ug/L			
W-34	Iron				20	ug/L			
		14-Nov-49			U	ug/L			
W-34	Lead				5.0	ug/L			
W-34	Magnesium				41,000	ug/L			
		14-Nov-49			18,000	ug/L			
W-34	Manganese				5.0	ug/L			
W-34	Mercury				0.20	ug/L			
W-34	Molybdenum				U	ug/L			
W-34	Nitrate				2,400	ug/L			
		14-Nov-49			U	ug/L			
W-34	pH				6.8				
		14-Nov-49			7.7				
W-34	Phosphorus, Total				2.0	ug/L			
W-34	Potassium				2,200	ug/L			
W-34	Selenium				U	ug/L			
W-34	Silica				11,000	ug/L			
W-34	Sodium				21,000	ug/L			
		14-Nov-49			U	ug/L			
W-34	Specific Conductance				600	mhos/c			
		14-Nov-49			730	mhos/c			
W-34	Strontium				70	ug/L			
W-34	Sulfate				20,000	ug/L			
		14-Nov-49			8,000	ug/L			

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
W-34	Total Dissolved Solids				400,000	ug/L			
W-34	Uranium				U	ug/L			
W-34	Vanadium				U	ug/L			
W-34	Zinc				U	ug/L			
WEL-01	1,1,1,2-Tetrachloroethane	04-May-94	S		U	ug/L	5		
WEL-01	1,1,1-Trichloroethane	04-May-94	S		U	ug/L	5		
WEL-01	1,1,2,2-Tetrachloroethane	04-May-94	S		U	ug/L	5		
		18-Oct-98	S		U	ug/L	5		
WEL-01	1,1,2-Trichloroethane	04-May-94	S		U	ug/L	5		
WEL-01	1,1-Dichloroethane	04-May-94	S		U	ug/L	5		
WEL-01	1,1-Dichloroethene	04-May-94	S		U	ug/L	5		
WEL-01	1,2,3-Trichloropropane	04-May-94	S		U	ug/L	5		
WEL-01	1,2,4,5-Tetrachlorobenzene	04-May-94	S		U	ug/L	10		
WEL-01	1,2,4-Trichlorobenzene	04-May-94	S		U	ug/L	10		
WEL-01	1,2-Dibromo-3-chloropropane	04-May-94	S		U	ug/L	10		
WEL-01	1,2-Dibromoethane (EDB)	04-May-94	S		U	ug/L	5		
WEL-01	1,2-Dichlorobenzene	04-May-94	S		U	ug/L	10		
		18-Oct-98	S		U	ug/L	10		
WEL-01	1,2-Dichloroethane	04-May-94	S		U	ug/L	5		
WEL-01	1,2-Dichloropropane	04-May-94	S		U	ug/L	5		
WEL-01	1,3,5-Trinitrobenzene	04-May-94	S		U	ug/L	200		
WEL-01	1,3-Dichlorobenzene	04-May-94	S		U	ug/L	10		
WEL-01	1,4-Dichlorobenzene	04-May-94	S		U	ug/L	10		
		18-Oct-98	S		U	ug/L	10		
WEL-01	1,4-Dioxane	04-May-94	S		U	ug/L	10		
WEL-01	1,4-Naphthoquinone	04-May-94	S		U	ug/L	10		
WEL-01	1-Napthylamine	04-May-94	S		U	ug/L	10		
WEL-01	2,3,4,6-Tetrachlorophenol	04-May-94	S		U	ug/L	50		
WEL-01	2,4,5-T	04-May-94	S		U	ug/L	0.5		
WEL-01	2,4,5-TP (Silvex)	04-May-94	S		U	ug/L	0.5		
WEL-01	2,4,5-Trichlorophenol	04-May-94	S		U	ug/L	10		

Location	Parameter	Date Samp	Lab	C or F?	Result	Unit	PQL	Desc	Qual
WEL-01	2,4,5-Trichlorophenol	18-Oct-98	S		U	ug/L	10		
WEL-01	2,4,6-Trichlorophenol	04-May-94	S		U	ug/L	10		
		18-Oct-98	S		U	ug/L	10		
WEL-01	2,4-D	04-May-94	S		U	ug/L	0.5		
WEL-01	2,4-Dichlorophenol	04-May-94	S		U	ug/L	10		
		18-Oct-98	S		U	ug/L	10		
WEL-01	2,4-Dimethylphenol	04-May-94	S		U	ug/L	10		
WEL-01	2,4-Dinitrophenol	04-May-94	S		U	ug/L	50		
WEL-01	2,4-Dinitrotoluene	04-May-94	S		U	ug/L	10		
WEL-01	2,5-Dichlorophenol	04-May-94	S		U	ug/L	10		
WEL-01	2,5-Dinitrotoluene	04-May-94	S		U	ug/L	10		
WEL-01	2-Acetylaminofluorene	04-May-94	S		U	ug/L	10		
WEL-01	2-Chloroethylvinyl ether	04-May-94	S		U	ug/L	50		
WEL-01	2-Chloronaphthalene	04-May-94	S		U	ug/L	10		
WEL-01	2-Chlorophenol	04-May-94	S		U	ug/L	10		
WEL-01	2-Hexanone	04-May-94	S		U	ug/L	50		
WEL-01	2-Methylnaphthalene	04-May-94	S		U	ug/L	10		
WEL-01	2-Naphtylamine	04-May-94	S		U	ug/L	10		
WEL-01	2-Picoline	04-May-94	S		U	ug/L	200		
WEL-01	2-sec-Butyl-4,6-dinitrophenol	04-May-94	S		U	ug/L	10		
WEL-01	3,3'-Dichlorobenzidine	04-May-94	S		U	ug/L	20		
WEL-01	3,3'-Dimethylbenzidine	04-May-94	S		U	ug/L	200		
WEL-01	3-Methylcholanthrene	04-May-94	S		U	ug/L	10		
WEL-01	4,4'-DDD	04-May-94	S		U	ug/L	0.1		
WEL-01	4,4'-DDE	04-May-94	S		U	ug/L	0.1		
WEL-01	4,4'-DDT	04-May-94	S		U	ug/L	0.1		
WEL-01	4,6-Dinitro-o-cresol	04-May-94	S		U	ug/L	50		
WEL-01	4-Aminobiphenyl	04-May-94	S		U	ug/L	10		
WEL-01	4-Bromophenyl-phenyl ether	04-May-94	S		U	ug/L	10		
WEL-01	4-Chlorophenylphenyl ether	04-May-94	S		U	ug/L	10		
WEL-01	4-Methyl-2-pentanone (MIBK)	04-May-94	S		U	ug/L	50		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
WEL-01	4-Nitroquinoline 1-oxide	04-May-94	S		U	ug/L	100		
WEL-01	5-Nitro-o-toluidine	04-May-94	S		U	ug/L	10		
WEL-01	7,12-Dimethylbenz(a)anthracene	04-May-94	S		U	ug/L	10		
WEL-01	a-a-Dimethylphenethylamine	04-May-94	S		U	ug/L	2000		
WEL-01	Acenaphthene	04-May-94	S		U	ug/L	10		
WEL-01	Acenaphthylene	04-May-94	S		U	ug/L	10		
WEL-01	Acetone	04-May-94	S		U	ug/L	50		
WEL-01	Acetonitrile	04-May-94	S		U	ug/L	1000		
WEL-01	Acetophenone	04-May-94	S		U	ug/L	10		
WEL-01	Acrolein	04-May-94	S		U	ug/L	100		
WEL-01	Acrylonitrile	04-May-94	S		U	ug/L	100		
WEL-01	Aldrin	04-May-94	S		U	ug/L	0.05		
WEL-01	Allychloride (3-chloropropene)	04-May-94	S		U	ug/L	5		
WEL-01	alpha-BHC	04-May-94	S		U	ug/L	0.05		
WEL-01	Aniline	04-May-94	S		U	ug/L	50		
WEL-01	Anthracene	04-May-94	S		U	ug/L	10		
WEL-01	Antimony	04-May-94	S		U	ug/L	50		
WEL-01	Aramite	04-May-94	S		U	ug/L	10		
WEL-01	Arocior 1016	04-May-94	S		U	ug/L	1		
		18-Oct-98	S		U	ug/L	1		
		20-Oct-98	S	F	U	ug/L	1		
WEL-01	Arocior 1221	04-May-94	S		U	ug/L	2		
		18-Oct-98	S		U	ug/L	1		
		20-Oct-98	S	F	U	ug/L	1		
WEL-01	Arocior 1232	04-May-94	S		U	ug/L	1		
		18-Oct-98	S		U	ug/L	1		
		20-Oct-98	S	F	U	ug/L	1		
WEL-01	Arocior 1242	04-May-94	S		U	ug/L	1		
		18-Oct-98	S		U	ug/L	1		
		20-Oct-98	S	F	U	ug/L	1		
WEL-01	Arocior 1248	04-May-94	S		U	ug/L	1		
		18-Oct-98	S		U	ug/L	1		
		20-Oct-98	S	F	U	ug/L	1		

Location	Parameter	Date Samp	Lab	Qor F?	Result	Unit	PQL	Desc	Qual
WEL-01	Aroclor 1254	04-May-94	S		U	ug/L	1		
		18-Oct-98	S		U	ug/L	1		
		20-Oct-98	S	F	U	ug/L	1		
WEL-01	Aroclor 1260	04-May-94	S		U	ug/L	1		
		18-Oct-98	S		U	ug/L	1		
		20-Oct-98	S	F	U	ug/L	1		
WEL-01	Arsenic	04-May-94	S		U	ug/L	10		
		18-Oct-98	S		U	mg/L	0.01		
		20-Oct-98	S	F	U	mg/L	0.01		
WEL-01	Barium	04-May-94	S		36	ug/L	10		
		18-Oct-98	S		0.16	mg/L	0.01		J
		20-Oct-98	S	F	0.029	mg/L	0.01		
WEL-01	Benzene	04-May-94	S		U	ug/L	5		
WEL-01	Benzo(a)anthracene	04-May-94	S		U	ug/L	10		
WEL-01	Benzo(a)pyrene	04-May-94	S		U	ug/L	10		
WEL-01	Benzo(b)fluoranthene	04-May-94	S		U	ug/L	10		
WEL-01	Benzo(g,h,i)perylene	04-May-94	S		U	ug/L	10		
WEL-01	Benzo(k)fluoranthene	04-May-94	S		U	ug/L	10		
WEL-01	Benzyl alcohol	04-May-94	S		U	ug/L	10		
WEL-01	Beryllium	04-May-94	S		U	ug/L	5		
		18-Oct-98	S		U	mg/L	0.004		
		20-Oct-98	S	F	U	mg/L	0.005		
WEL-01	beta-BHC	04-May-94	S		U	ug/L	0.05		
WEL-01	bis(2-Chloroethoxy)methane	04-May-94	S		U	ug/L	10		
WEL-01	bis(2-Chloroethyl)ether	04-May-94	S		U	ug/L	10		
WEL-01	bis(2-Chloroisopropyl)ether	04-May-94	S		U	ug/L	10		
WEL-01	bis(2-Ethylhexyl)phthalate	04-May-94	S		U	ug/L	10		
WEL-01	Bromodichloromethane	04-May-94	S		U	ug/L	5		
WEL-01	Bromoform	04-May-94	S		U	ug/L	5		
WEL-01	Bromomethane (methyl bromide)	04-May-94	S		U	ug/L	10		
WEL-01	Butylbenzylphthalate	04-May-94	S		U	ug/L	10		
WEL-01	Cadmium	04-May-94	S		U	ug/L	5		
		18-Oct-98	S		U	mg/L	0.005		
		20-Oct-98	S	F	U	mg/L	0.005		

Locaton	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
WEL-01	Carbon disulfide	04-May-94	S		U	ug/L	5		
WEL-01	Carbon tetrachloride	04-May-94	S		U	ug/L	5		
WEL-01	Chlordane	04-May-94	S		U	ug/L	0.5		
WEL-01	Chlorobenzene	04-May-94	S		U	ug/L	5		
		18-Oct-98	S		U	ug/L	5		
WEL-01	Chlorobenzilate	04-May-94	S		U	ug/L	0.5		
WEL-01	Chloroethane	04-May-94	S		U	ug/L	10		
WEL-01	Chloroform	04-May-94	S		U	ug/L	5		
WEL-01	Chloromethane (methyl chloride)	04-May-94	S		U	ug/L	10		
WEL-01	Chloroprene	04-May-94	S		U	ug/L	5		
WEL-01	Chromium	04-May-94	S		U	ug/L	10		
		18-Oct-98	S		0.057	mg/L	0.01		
		20-Oct-98	S	F	U	mg/L	0.01		
WEL-01	Chrysene	04-May-94	S		U	ug/L	10		
WEL-01	cis-1,3-Dichloropropene	04-May-94	S		U	ug/L	5		
WEL-01	Cobalt	04-May-94	S		U	ug/L	10		
		18-Oct-98	S		0.036	mg/L	0.01		
		20-Oct-98	S	F	U	mg/L	0.01		
WEL-01	Copper	04-May-94	S		U	ug/L	25		
WEL-01	Cresol, m&p	04-May-94	S		U	ug/L	10		
WEL-01	delta-BHC	04-May-94	S		U	ug/L	0.05		
WEL-01	di-N-Butylphthalate	04-May-94	S		U	ug/L	10		
WEL-01	di-N-Octylphthalate	04-May-94	S		U	ug/L	10		
WEL-01	Diallate	04-May-94	S		U	ug/L	10		
WEL-01	Dibenz(a,h)anthracene	04-May-94	S		U	ug/L	10		
WEL-01	Dibenzofuran	04-May-94	S		U	ug/L	10		
WEL-01	Dibromochloromethane	04-May-94	S		U	ug/L	5		
WEL-01	Dichlorodifluoromethane	04-May-94	S		U	ug/L	5		
WEL-01	Dieldrin	04-May-94	S		U	ug/L	0.1		
WEL-01	Diethylphthalate	04-May-94	S		U	ug/L	10		
WEL-01	Dimethoate	04-May-94	S		U	ug/L	10		

Location	Parameter	Date Samp	Lab	C or F?	Result	Unit	PQL	Desc	Qual
WEL-01	Dimethylphthalate	04-May-94	S		U	ug/L	10		
WEL-01	Dioxin-2,3,7,8-TCDD	04-May-94	S		U	ug/L	0.005		
WEL-01	Dissolved Oxygen	10-Nov-98			3.9	mg/L			
WEL-01	Disulfoton	04-May-94	S		U	ug/L	2		
WEL-01	Endosulfan I	04-May-94	S		U	ug/L	0.05		
WEL-01	Endosulfan II	04-May-94	S		U	ug/L	0.1		
WEL-01	Endosulfan sulfate	04-May-94	S		U	ug/L	0.1		
WEL-01	Endrin	04-May-94	S		U	ug/L	0.1		
WEL-01	Endrin Aldehyde	04-May-94	S		U	ug/L	0.1		
WEL-01	Ethyl methacrylate	04-May-94	S		U	ug/L	5		
WEL-01	Ethyl methanesulfonate	04-May-94	S		U	ug/L	10		
WEL-01	Ethylbenzene	04-May-94	S		U	ug/L	5		
WEL-01	Famphur	04-May-94	S		U	ug/L	2		
WEL-01	Fluoranthene	04-May-94	S		U	ug/L	10		
WEL-01	Fluorene	04-May-94	S		U	ug/L	10		
WEL-01	gamma-BHC (Lindane)	04-May-94	S		U	ug/L	0.05		
WEL-01	Heptachlor	04-May-94	S		U	ug/L	0.05		
WEL-01	Heptachlor epoxide	04-May-94	S		U	ug/L	0.05		
WEL-01	Hexa CDD	04-May-94	S		U	ug/L	0.005		
WEL-01	Hexa CDF	04-May-94	S		U	ug/L	0.005		
WEL-01	Hexachlorobenzene	04-May-94	S		U	ug/L	10		
WEL-01	Hexachlorobutadiene	04-May-94	S		U	ug/L	10		
WEL-01	Hexachlorocyclopentadiene	04-May-94	S		U	ug/L	10		
WEL-01	Hexachloroethane	04-May-94	S		U	ug/L	10		
WEL-01	Hexachloropropene	04-May-94	S		U	ug/L	10		
WEL-01	Indeno(1,2,3-cd)pyrene	04-May-94	S		U	ug/L	10		
WEL-01	Isobutyl alcohol	04-May-94	S		U	ug/L	1000		
WEL-01	Isodrin	04-May-94	S		U	ug/L	0.05		
WEL-01	Isophorone	04-May-94	S		U	ug/L	10		
WEL-01	Isopropylbenzene	18-Oct-98	S		U	ug/L	5		
WEL-01	Kepone	04-May-94	S		U	ug/L	10		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
WEL-01	Lead	04-May-94	S		U	ug/L	5		
		18-Oct-98	S		0.033	mg/L	0.005		
		20-Oct-98	S	F	U	mg/L	0.005		
WEL-01	m-Dinitrobenzene	04-May-94	S		U	ug/L	10		
WEL-01	m-Nitroaniline	04-May-94	S		U	ug/L	50		
WEL-01	Manganese	18-Oct-98	S		2.0	mg/L	0.01		
		20-Oct-98	S	F	0.13	mg/L	0.01		
WEL-01	Mercury	04-May-94	S		U	ug/L	0.2		
		18-Oct-98	S		U	mg/L	0.0002		
		20-Oct-98	S	F	U	mg/L	0.0002		
WEL-01	Methacrylonitrile	04-May-94	S		U	ug/L	100		
WEL-01	Methapyrilene	04-May-94	S		U	ug/L	2000		
WEL-01	Methoxychlor	04-May-94	S		U	ug/L	0.5		
WEL-01	Methyl ethyl ketone (MEK)	04-May-94	S		U	ug/L	50		
WEL-01	Methyl iodide	04-May-94	S		U	ug/L	5		
WEL-01	Methyl methacrylate	04-May-94	S		U	ug/L	5		
WEL-01	Methyl methanesulfonate	04-May-94	S		U	ug/L	10		
WEL-01	Methyl parathion	04-May-94	S		U	ug/L	0.5		
		18-Oct-98	S		U	mg/L	0.0005		
WEL-01	Methylene bromide	04-May-94	S		U	ug/L	10		
WEL-01	Methylene chloride (dichloromethane)	04-May-94	S		U	ug/L	5		
		18-Oct-98	S		U	ug/L	5		
WEL-01	N-Nitroso-di-n-butylamine	04-May-94	S		U	ug/L	10		
WEL-01	N-Nitroso-di-n-propylamine	04-May-94	S		U	ug/L	10		
WEL-01	N-Nitrosodiethylamine	04-May-94	S		U	ug/L	10		
WEL-01	N-Nitrosodimethylamine	04-May-94	S		U	ug/L	10		
WEL-01	N-Nitrosodiphenylamine	04-May-94	S		U	ug/L	10		
WEL-01	N-Nitrosomethylethylamine	04-May-94	S		U	ug/L	10		
WEL-01	N-Nitrosomorpholine	04-May-94	S		U	ug/L	10		
WEL-01	N-Nitrosopiperidine	04-May-94	S		U	ug/L	10		
WEL-01	N-Nitrosopyrrolidine	04-May-94	S		U	ug/L	10		
WEL-01	Naphthalene	04-May-94	S		U	ug/L	10		

Location	Parameter	Date Samp	Lab	Qor F?	Result	Unit	PQL	Desc	Qual
WEL-01	Nickel	04-May-94	S		U	ug/L	40		
		18-Oct-98	S		0.063	mg/L	0.04		
		20-Oct-98	S	F	U	mg/L	0.04		
WEL-01	Nirobenzene	04-May-94	S		U	ug/L	10		
WEL-01	o,s,o-Trethylphosphorothioate	04-May-94	S		U	ug/L	10		
		18-Oct-98	S		U	ug/L	10		
WEL-01	o,s-Diethyl-o-2-pyazinylphoshorothioate	04-May-94	S		U	ug/L	1		
WEL-01	o-Cresol	04-May-94	S		U	ug/L	10		
WEL-01	o-Nitroaniline	04-May-94	S		U	ug/L	50		
WEL-01	o-Nitrophenol (2-Nitrophenol)	04-May-94	S		U	ug/L	10		
WEL-01	o-Toluidine	04-May-94	S		U	ug/L	10		
WEL-01	p-(Dmethylamino)azobenzene	04-May-94	S		U	ug/L	10		
WEL-01	p-Chloro-m-cresol	04-May-94	S		U	ug/L	10		
WEL-01	p-Chloroaniline	04-May-94	S		U	ug/L	20		
WEL-01	p-Nitroaniline	04-May-94	S		U	ug/L	50		
WEL-01	p-Phenylenediamine	04-May-94	S		U	ug/L	2000		
WEL-01	Penta CDD	04-May-94	S		U	ug/L	0.005		
WEL-01	Penta CDF	04-May-94	S		U	ug/L	0.005		
WEL-01	Pentachlorobenzene	04-May-94	S		U	ug/L	10		
WEL-01	Pentachloroethane	04-May-94	S		U	ug/L	25		
WEL-01	Pentachloronitrobenzene	04-May-94	S		U	ug/L	10		
WEL-01	Pentachlorophenol	04-May-94	S		U	ug/L	50		
		18-Oct-98	S		U	ug/L	1		
WEL-01	pH	10-Nov-98			4.7				
WEL-01	Phenacetin	04-May-94	S		U	ug/L	10		
WEL-01	Phenanthrene	04-May-94	S		U	ug/L	10		
WEL-01	Phenol	04-May-94	S		U	ug/L	10		
		18-Oct-98	S		U	ug/L	10		
WEL-01	Phorate	04-May-94	S		U	ug/L	1		
WEL-01	Pronamide	04-May-94	S		U	ug/L	10		
WEL-01	Propionitrile	04-May-94	S		U	ug/L	100		

See Table L-3 for Abbreviations and Qualifiers.

Locaton	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
WEL-01	Pyrene	04-May-94	S		U	ug/L	10		
WEL-01	Pyridine	04-May-94	S		U	ug/L	200		
WEL-01	Redox	10-Nov-98			150	mV			
WEL-01	Safrole	04-May-94	S		U	ug/L	10		
WEL-01	Selenium	04-May-94	S		U	ug/L	10		
WEL-01	Silver	04-May-94	S		U	ug/L	10		
WEL-01	Specific Conductance	10-Nov-98			0.055	ms/cm			
WEL-01	Styrene	04-May-94	S		U	ug/L	5		
WEL-01	Sulfide	04-May-94	S		U	ug/L	400		
WEL-01	Temperature	10-Nov-98			17	°C			
WEL-01	Tetra CDD	04-May-94	S		U	ug/L	0.005		
WEL-01	Tetra CDF	04-May-94	S		U	ug/L	0.005		
WEL-01	Tetraethyldithiopyrophosphate (Sulfotepp)	04-May-94	S		U	ug/L	0.5		
		18-Oct-98	S		U	mg/L	0.0005		
WEL-01	Thallium	04-May-94	S		U	ug/L	10		
WEL-01	Tin	04-May-94	S		U	ug/L	50		
WEL-01	Toluene	04-May-94	S		U	ug/L	5		
WEL-01	Total Cyanide	04-May-94	S		U	ug/L	10		
WEL-01	Total PCBs	18-Oct-98	S		U	ug/L	1		
		20-Oct-98	S	F	U	ug/L	1		
WEL-01	Toxaphene	04-May-94	S		U	ug/L	5		
WEL-01	trans-1,2-Dichloroethene	04-May-94	S		U	ug/L	5		
WEL-01	trans-1,3-Dichloropropene	04-May-94	S		U	ug/L	5		
WEL-01	trans-1,4-Dichloro-2-butene	04-May-94	S		U	ug/L	10		
WEL-01	Trichloroethene	04-May-94	S		U	ug/L	5		
WEL-01	Trichlorofluoromethane	04-May-94	S		U	ug/L	5		
WEL-01	Turbidity	10-Nov-98			62	NTU			
WEL-01	Vanadium	04-May-94	S		U	ug/L	10		
		18-Oct-98	S		0.081	mg/L	0.01		
		20-Oct-98	S	F	U	mg/L	0.01		
WEL-01	Vinyl acetate	04-May-94	S		U	ug/L	10		

See Table L-3 for Abbreviations and Qualifiers.

Location	Parameter	Date Samp	Lab	Qor F?	Result	Unit	PQL	Desc	Qual
WEL-01	Vinyl chloride	04-May-94	S		U	ug/L	10		
WEL-01	Xylenes	04-May-94	S		U	ug/L	5		
WEL-01	Zinc	04-May-94	S		U	ug/L	20		
WEL-02	1,1,1,2-Tetrachloroethane	04-May-94	S		U	ug/L	5		
WEL-02	1,1,1-Trichloroethane	04-May-94	S		U	ug/L	5		
WEL-02	1,1,2,2-Tetrachloroethane	04-May-94	S		U	ug/L	5		
		16-Oct-98	S		U	ug/L	5		
WEL-02	1,1,2-Trichloroethane	04-May-94	S		U	ug/L	5		
WEL-02	1,1-Dichloroethane	04-May-94	S		U	ug/L	5		
WEL-02	1,1-Dichloroethene	04-May-94	S		U	ug/L	5		
WEL-02	1,2,3-Trichloropropane	04-May-94	S		U	ug/L	5		
WEL-02	1,2,4,5-Tetrachlorobenzene	04-May-94	S		U	ug/L	10		
WEL-02	1,2,4-Trichlorobenzene	04-May-94	S		U	ug/L	10		
WEL-02	1,2-Dibromo-3-chloropropane	04-May-94	S		U	ug/L	10		
WEL-02	1,2-Dibromoethane (EDB)	04-May-94	S		U	ug/L	5		
WEL-02	1,2-Dichlorobenzene	04-May-94	S		U	ug/L	10		
		17-Oct-98	S		U	ug/L	10		
WEL-02	1,2-Dichloroethane	04-May-94	S		U	ug/L	5		
WEL-02	1,2-Dichloropropane	04-May-94	S		U	ug/L	5		
WEL-02	1,3,5-Trinitrobenzene	04-May-94	S		U	ug/L	200		
WEL-02	1,3-Dichlorobenzene	04-May-94	S		U	ug/L	10		
WEL-02	1,4-Dichlorobenzene	04-May-94	S		U	ug/L	10		
		17-Oct-98	S		U	ug/L	10		
WEL-02	1,4-Dioxane	04-May-94	S		U	ug/L	10		
WEL-02	1,4-Naphthoquinone	04-May-94	S		U	ug/L	10		
WEL-02	1-Napthylamine	04-May-94	S		U	ug/L	10		
WEL-02	2,3,4,6-Tetrachlorophenol	04-May-94	S		U	ug/L	50		
WEL-02	2,4,5-T	04-May-94	S		U	ug/L	0.5		
WEL-02	2,4,5-TP (Silvex)	04-May-94	S		U	ug/L	0.5		
WEL-02	2,4,6-Trichlorophenol	04-May-94	S		U	ug/L	10		
		17-Oct-98	S		U	ug/L	10		

Locaton	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
WEL-02	2,4,6-Trichlorophenol	04-May-94	S		U	ug/L	10		
		17-Oct-98	S		U	ug/L	10		
WEL-02	2,4-D	04-May-94	S		U	ug/L	0.5		
WEL-02	2,4-Dichlorophenol	04-May-94	S		U	ug/L	10		
		17-Oct-98	S		U	ug/L	10		
WEL-02	2,4-Dimethylphenol	04-May-94	S		U	ug/L	10		
WEL-02	2,4-Dinitrophenol	04-May-94	S		U	ug/L	50		
WEL-02	2,4-Dinitrotoluene	04-May-94	S		U	ug/L	10		
WEL-02	2,6-Dichlorophenol	04-May-94	S		U	ug/L	10		
WEL-02	2,6-Dinitrotoluene	04-May-94	S		U	ug/L	10		
WEL-02	2-Acetylaminofluorene	04-May-94	S		U	ug/L	10		
WEL-02	2-Chloroethylvinyl ether	04-May-94	S		U	ug/L	50		
WEL-02	2-Chloronaphthalene	04-May-94	S		U	ug/L	10		
WEL-02	2-Chlorophenol	04-May-94	S		U	ug/L	10		
WEL-02	2-Hexanone	04-May-94	S		U	ug/L	50		
WEL-02	2-Methylnaphthalene	04-May-94	S		U	ug/L	10		
WEL-02	2-Naphtylamine	04-May-94	S		U	ug/L	10		
WEL-02	2-Picoline	04-May-94	S		U	ug/L	200		
WEL-02	2-sec-Butyl-4,6-dinitrophenol	04-May-94	S		U	ug/L	10		
WEL-02	3,3'-Dichlorobenzidine	04-May-94	S		U	ug/L	20		
WEL-02	3,3'-Dimethylbenzidine	04-May-94	S		U	ug/L	200		
WEL-02	3-Methylcholanthrene	04-May-94	S		U	ug/L	10		
WEL-02	4,4'-DDD	04-May-94	S		U	ug/L	0.1		
WEL-02	4,4'-DDE	04-May-94	S		U	ug/L	0.1		
WEL-02	4,4'-DDT	04-May-94	S		U	ug/L	0.1		
WEL-02	4,6-Dinitro-o-cresol	04-May-94	S		U	ug/L	50		
WEL-02	4-Aminobiphenyl	04-May-94	S		U	ug/L	10		
WEL-02	4-Bromophenyl-phenyl ether	04-May-94	S		U	ug/L	10		
WEL-02	4-Chlorophenylphenyl ether	04-May-94	S		U	ug/L	10		
WEL-02	4-Methyl-2-pentanone (MIBK)	04-May-94	S		U	ug/L	50		
WEL-02	4-Nitroquinoline 1-oxide	04-May-94	S		U	ug/L	100		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
WEL-02	5-Nitro-o-toluidine	04-May-94	S		U	ug/L	10		
WEL-02	7,12-Dimethylbenz(a)anthracene	04-May-94	S		U	ug/L	10		
WEL-02	a-a-Dimethylphenethylamine	04-May-94	S		U	ug/L	2000		
WEL-02	Acenaphthene	04-May-94	S		U	ug/L	10		
WEL-02	Acenaphthylene	04-May-94	S		U	ug/L	10		
WEL-02	Acetone	04-May-94	S		U	ug/L	50		
WEL-02	Acetonitrile	04-May-94	S		U	ug/L	1000		
WEL-02	Acetophenone	04-May-94	S		U	ug/L	10		
WEL-02	Acrolein	04-May-94	S		U	ug/L	100		
WEL-02	Acrylonitrile	04-May-94	S		U	ug/L	100		
WEL-02	Aldrin	04-May-94	S		U	ug/L	0.05		
WEL-02	Allychloride (3-choropropene)	04-May-94	S		U	ug/L	5		
WEL-02	alpha-BHC	04-May-94	S		U	ug/L	0.05		
WEL-02	Aniline	04-May-94	S		U	ug/L	50		
WEL-02	Anthracene	04-May-94	S		U	ug/L	10		
WEL-02	Antimony	04-May-94	S		U	ug/L	50		
WEL-02	Aramite	04-May-94	S		U	ug/L	10		
WEL-02	Arsclor 1016	04-May-94	S		U	ug/L	1		
		16-Oct-98	S		U	ug/L	1		
		18-Oct-98	S	F	U	ug/L	1		
WEL-02	Arsclor 1221	04-May-94	S		U	ug/L	2		
		16-Oct-98	S		U	ug/L	1		
		18-Oct-98	S	F	U	ug/L	1		
WEL-02	Arsclor 1232	04-May-94	S		U	ug/L	1		
		16-Oct-98	S		U	ug/L	1		
		18-Oct-98	S	F	U	ug/L	1		
WEL-02	Arsclor 1242	04-May-94	S		U	ug/L	1		
		16-Oct-98	S		U	ug/L	1		
		18-Oct-98	S	F	U	ug/L	1		
WEL-02	Arsclor 1248	04-May-94	S		U	ug/L	1		
		16-Oct-98	S		U	ug/L	1		
		18-Oct-98	S	F	U	ug/L	1		
WEL-02	Arsclor 1254	04-May-94	S		U	ug/L	1		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
WEL-02	Aroclor 1254	16-Oct-98	S		U	ug/L	1		
		18-Oct-98	S	F	U	ug/L	1		
WEL-02	Aroclor 1260	04-May-94	S		U	ug/L	1		
		16-Oct-98	S		U	ug/L	1		
		18-Oct-98	S	F	U	ug/L	1		
WEL-02	Arsenic	04-May-94	S		U	ug/L	10		
		17-Oct-98	S		U	mg/L	0.01		
		18-Oct-98	S	F	U	mg/L	0.01		
WEL-02	Barium	04-May-94	S		80	ug/L	10		
		17-Oct-98	S		0.15	mg/L	0.01		J
		18-Oct-98	S	F	0.068	mg/L	0.01		
WEL-02	Benzene	04-May-94	S		U	ug/L	5		
WEL-02	Benzo(a)anthracene	04-May-94	S		U	ug/L	10		
WEL-02	Benzo(a)pyrene	04-May-94	S		U	ug/L	10		
WEL-02	Benzo(b)fluoranthene	04-May-94	S		U	ug/L	10		
WEL-02	Benzo(g,h,i)perylene	04-May-94	S		U	ug/L	10		
WEL-02	Benzo(k)fluoranthene	04-May-94	S		U	ug/L	10		
WEL-02	Benzyl alcohol	04-May-94	S		U	ug/L	10		
WEL-02	Beryllium	04-May-94	S		U	ug/L	5		
		17-Oct-98	S		U	mg/L	0.004		
		18-Oct-98	S	F	U	mg/L	0.004		
WEL-02	beta-BHC	04-May-94	S		U	ug/L	0.05		
WEL-02	bis(2-Chloroethoxy)methane	04-May-94	S		U	ug/L	10		
WEL-02	bis(2-Chloroethyl)ether	04-May-94	S		U	ug/L	10		
WEL-02	bis(2-Chloroisopropy)ether	04-May-94	S		U	ug/L	10		
WEL-02	bis(2-Ethylhexyl)phthalate	04-May-94	S		U	ug/L	10		
WEL-02	Bromodichloromethane	04-May-94	S		U	ug/L	5		
WEL-02	Bromoform	04-May-94	S		U	ug/L	5		
WEL-02	Bromomethane (methyl bromide)	04-May-94	S		U	ug/L	10		
WEL-02	Butylbenzylphthalate	04-May-94	S		U	ug/L	10		
WEL-02	Cadmium	04-May-94	S		U	ug/L	5		
		17-Oct-98	S		U	mg/L	0.005		
		18-Oct-98	S	F	U	mg/L	0.005		
WEL-02	Carbon disulfide	04-May-94	S		U	ug/L	5		

Location	Parameter	Date Samp	Lab	Qor F?	Result	Unit	PQL	Desc	Qual
WEL-02	Carbon tetrachloride	04-May-94	S		U	ug/L	5		
WEL-02	Chlordane	04-May-94	S		U	ug/L	0.5		
WEL-02	Chlorobenzene	04-May-94	S		U	ug/L	5		
		16-Oct-98	S		U	ug/L	5		
WEL-02	Chlorobenzilate	04-May-94	S		U	ug/L	0.5		
WEL-02	Chloroethane	04-May-94	S		U	ug/L	10		
WEL-02	Chloroform	04-May-94	S		U	ug/L	5		
WEL-02	Chloromethane (methyl choride)	04-May-94	S		U	ug/L	10		
WEL-02	Chloroprene	04-May-94	S		U	ug/L	5		
WEL-02	Chromium	04-May-94	S		U	ug/L	10		
		17-Oct-98	S		0.014	mg/L	0.01		
		18-Oct-98	S	F	U	mg/L	0.01		
WEL-02	Chrysene	04-May-94	S		U	ug/L	10		
WEL-02	cis 1,3-Dichloropropene	04-May-94	S		U	ug/L	5		
WEL-02	Cobalt	04-May-94	S		U	ug/L	10		
		17-Oct-98	S		0.019	mg/L	0.01		
		18-Oct-98	S	F	U	mg/L	0.01		
WEL-02	Copper	04-May-94	S		U	ug/L	25		
WEL-02	Cresol, m&p	04-May-94	S		U	ug/L	10		
WEL-02	delta-BHC	04-May-94	S		U	ug/L	0.05		
WEL-02	di-N-Butylphthalate	04-May-94	S		U	ug/L	10		
WEL-02	di-N-Octylphthalate	04-May-94	S		U	ug/L	10		
WEL-02	Dialate	04-May-94	S		U	ug/L	10		
WEL-02	Dibenz(a,h)anthracene	04-May-94	S		U	ug/L	10		
WEL-02	Dibenzofuran	04-May-94	S		U	ug/L	10		
WEL-02	Dibromochloromethane	04-May-94	S		U	ug/L	5		
WEL-02	Dichlorodifluoromethane	04-May-94	S		U	ug/L	5		
WEL-02	Dieldrin	04-May-94	S		U	ug/L	0.1		
WEL-02	Diethylphthalate	04-May-94	S		U	ug/L	10		
WEL-02	Dimethoate	04-May-94	S		U	ug/L	10		
WEL-02	Dimethylphthalate	04-May-94	S		U	ug/L	10		

Locaton	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
WEL-02	Dioxin-2,3,7,8-TCDD	04-May-94	S		U	ug/L	0.005		
WEL-02	Dissolved Oxygen	10-Nov-98			3.1	mg/L			
WEL-02	Disulfoton	04-May-94	S		U	ug/L	2		
WEL-02	Endosulfan I	04-May-94	S		U	ug/L	0.05		
WEL-02	Endosulfan II	04-May-94	S		U	ug/L	0.1		
WEL-02	Endosulfan sulfate	04-May-94	S		U	ug/L	0.1		
WEL-02	Endrin	04-May-94	S		U	ug/L	0.1		
WEL-02	Endrin Aldehyde	04-May-94	S		U	ug/L	0.1		
WEL-02	Ethyl methacrylate	04-May-94	S		U	ug/L	5		
WEL-02	Ethyl methanesulfonate	04-May-94	S		U	ug/L	10		
WEL-02	Ethylbenzene	04-May-94	S		U	ug/L	5		
WEL-02	Famphur	04-May-94	S		U	ug/L	2		
WEL-02	Fluoranthene	04-May-94	S		U	ug/L	10		
WEL-02	Fluorene	04-May-94	S		U	ug/L	10		
WEL-02	gamma-BHC (Lindane)	04-May-94	S		U	ug/L	0.05		
WEL-02	Heptachlor	04-May-94	S		U	ug/L	0.05		
WEL-02	Heptachlor epoxide	04-May-94	S		U	ug/L	0.05		
WEL-02	Hexa CDD	04-May-94	S		U	ug/L	0.005		
WEL-02	Hexa CDF	04-May-94	S		U	ug/L	0.005		
WEL-02	Hexachlorobenzene	04-May-94	S		U	ug/L	10		
WEL-02	Hexachlorobutadiene	04-May-94	S		U	ug/L	10		
WEL-02	Hexachlorocyclopentadiene	04-May-94	S		U	ug/L	10		
WEL-02	Hexachloroethane	04-May-94	S		U	ug/L	10		
WEL-02	Hexachloropropene	04-May-94	S		U	ug/L	10		
WEL-02	Indeno(1,2,3-cd)pyrene	04-May-94	S		U	ug/L	10		
WEL-02	Isobutyl alcohol	04-May-94	S		U	ug/L	1000		
WEL-02	Isodrin	04-May-94	S		U	ug/L	0.05		
WEL-02	Isophorone	04-May-94	S		U	ug/L	10		
WEL-02	Isopropylbenzene	16-Oct-98	S		U	ug/L	5		
WEL-02	Kepone	04-May-94	S		U	ug/L	10		
WEL-02	Lead	04-May-94	S		U	ug/L	5		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
WEL-02	Lead	17-Oct-98	S		0.018	mg/L	0.005	
		18-Oct-98	S	F	U	mg/L	0.005	
WEL-02	m-Dinitrobenzene	04-May-94	S		U	ug/L	10	
WEL-02	m-Nitroaniline	04-May-94	S		U	ug/L	50	
WEL-02	Manganese	17-Oct-98	S		1.7	mg/L	0.01	
		18-Oct-98	S	F	0.19	mg/L	0.01	
WEL-02	Mercury	04-May-94	S		U	ug/L	0.2	
		17-Oct-98	S		U	mg/L	0.0002	
		18-Oct-98	S	F	U	mg/L	0.0002	
WEL-02	Methacrylonitrile	04-May-94	S		U	ug/L	100	
WEL-02	Methapyrilene	04-May-94	S		U	ug/L	2000	
WEL-02	Methoxychlor	04-May-94	S		U	ug/L	0.5	
WEL-02	Methyl ethyl ketone (MEK)	04-May-94	S		U	ug/L	50	
WEL-02	Methyl iodide	04-May-94	S		U	ug/L	5	
WEL-02	Methyl methacrylate	04-May-94	S		U	ug/L	5	
WEL-02	Methyl methanesulfonate	04-May-94	S		U	ug/L	10	
WEL-02	Methyl parathion	04-May-94	S		U	ug/L	0.5	
		16-Oct-98	S		U	mg/L	0.0005	
WEL-02	Methylene bromide	04-May-94	S		U	ug/L	10	
WEL-02	Methylene chloride (dichloromethane)	04-May-94	S		U	ug/L	5	
		16-Oct-98	S		U	ug/L	5	
WEL-02	N-Nitroso-di-n-butylamine	04-May-94	S		U	ug/L	10	
WEL-02	N-Nitroso-di-n-propylamine	04-May-94	S		U	ug/L	10	
WEL-02	N-Nitrosodiethylamine	04-May-94	S		U	ug/L	10	
WEL-02	N-Nitrosodimethylamine	04-May-94	S		U	ug/L	10	
WEL-02	N-Nitrosodiphenylamine	04-May-94	S		U	ug/L	10	
WEL-02	N-Nitrosomethylethylamine	04-May-94	S		U	ug/L	10	
WEL-02	N-Nitrosomorpholine	04-May-94	S		U	ug/L	10	
WEL-02	N-Nitrosopiperidine	04-May-94	S		U	ug/L	10	
WEL-02	N-Nitrosopyrrolidine	04-May-94	S		U	ug/L	10	
WEL-02	Naphthalene	04-May-94	S		U	ug/L	10	
WEL-02	Nickel	04-May-94	S		U	ug/L	40	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
WEL-02	Nickel	17-Oct-98	S		0.035	mg/L	0.04	
		18-Oct-98	S	F	0.0057	mg/L	0.04	
WEL-02	Nitrobenzene	04-May-94	S		U	ug/L	10	
WEL-02	o,o,o-Triethylphosphorothioate	04-May-94	S		U	ug/L	10	
		17-Oct-98	S		U	ug/L	10	
WEL-02	o,o-Diethyl-o-2-pyrazinylphoshorothioate	04-May-94	S		U	ug/L	1	
WEL-02	o-Cresol	04-May-94	S		U	ug/L	10	
WEL-02	o-Nitroaniline	04-May-94	S		U	ug/L	50	
WEL-02	o-Nitrophenol (2-Nitophenol)	04-May-94	S		U	ug/L	10	
WEL-02	o-Toluidine	04-May-94	S		U	ug/L	10	
WEL-02	p-(Dimethylamino)azobenzene	04-May-94	S		U	ug/L	10	
WEL-02	p-Chloro-m-cresol	04-May-94	S		U	ug/L	10	
WEL-02	p-Chloroaniline	04-May-94	S		U	ug/L	20	
WEL-02	p-Nitroaniline	04-May-94	S		U	ug/L	50	
WEL-02	p-Phenylenediamine	04-May-94	S		U	ug/L	2000	
WEL-02	Penta CDD	04-May-94	S		U	ug/L	0.005	
WEL-02	Penta CDF	04-May-94	S		U	ug/L	0.005	
WEL-02	Pentachlorobenzene	04-May-94	S		U	ug/L	10	
WEL-02	Pentachloroethane	04-May-94	S		U	ug/L	25	
WEL-02	Pentachloronitrobenzene	04-May-94	S		U	ug/L	10	
WEL-02	Pentachlorophenol	04-May-94	S		U	ug/L	50	
		17-Oct-98	S		U	ug/L	1	
WEL-02	pH	10-Nov-98			4.6			
WEL-02	Phenacetin	04-May-94	S		U	ug/L	10	
WEL-02	Phenanthrene	04-May-94	S		U	ug/L	10	
WEL-02	Phenol	04-May-94	S		U	ug/L	10	
		17-Oct-98	S		U	ug/L	10	
WEL-02	Phorate	04-May-94	S		U	ug/L	1	
WEL-02	Pronamide	04-May-94	S		U	ug/L	10	
WEL-02	Propionitrile	04-May-94	S		U	ug/L	100	

Location	Parameter	Date Samp	Lab	Qor F?	Result	Unit	PQL	Desc	Qual
WEL-02	Pyrene	04-May-94	S		U	ug/L	10		
WEL-02	Pyridine	04-May-94	S		U	ug/L	200		
WEL-02	Redox	10-Nov-98			150	mV			
WEL-02	Safrole	04-May-94	S		U	ug/L	10		
WEL-02	Selenium	04-May-94	S		U	ug/L	10		
WEL-02	Silver	04-May-94	S		U	ug/L	10		
WEL-02	Specific Conductance	10-Nov-98			0.11	ms/cm			
WEL-02	Styrene	04-May-94	S		U	ug/L	5		
WEL-02	Sulfide	04-May-94	S		U	ug/L	400		
WEL-02	Temperature	10-Nov-98			18	°C			
WEL-02	Tera CDD	04-May-94	S		U	ug/L	0.005		
WEL-02	Tera CDF	04-May-94	S		U	ug/L	0.005		
WEL-02	Teraethyldithiopyrophosphate (Sulfotepp)	04-May-94	S		U	ug/L	0.5		
		16-Oct-98	S		U	mg/L	0.0005		
WEL-02	Thallium	04-May-94	S		U	ug/L	10		
WEL-02	Tin	04-May-94	S		U	ug/L	50		
WEL-02	Toluene	04-May-94	S		U	ug/L	5		
WEL-02	Total Cyanide	04-May-94	S		U	ug/L	10		
WEL-02	Total PCBs	16-Oct-98	S		U	ug/L	1		
		18-Oct-98	S	F	U	ug/L	1		
WEL-02	Toxaphene	04-May-94	S		U	ug/L	5		
WEL-02	trans-1,2-Dichloroethene	04-May-94	S		U	ug/L	5		
WEL-02	trans-1,3-Dichloropropene	04-May-94	S		U	ug/L	5		
WEL-02	trans-1,4-Dichloro-2-butene	04-May-94	S		U	ug/L	10		
WEL-02	Trichloroethene	04-May-94	S		U	ug/L	5		
WEL-02	Trichlorofluoromethane	04-May-94	S		U	ug/L	5		
WEL-02	Turbidity	10-Nov-98			1,000	NTU			
WEL-02	Vanadium	04-May-94	S		U	ug/L	10		
		17-Oct-98	S		0.033	mg/L	0.01		
		18-Oct-98	S	F	U	mg/L	0.01		
WEL-02	Vinyl acetate	04-May-94	S		U	ug/L	10		

Locaton	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
WEL-02	Vinyl chloride	04-May-94	S		U	ug/L	10		
WEL-02	Xylenes	04-May-94	S		U	ug/L	5		
WEL-02	Zinc	04-May-94	S		U	ug/L	20		
WEL-03	1,1,1,2-Tetrachloroethane	03-May-94	S		U	ug/L	5		
		03-May-94	S	Q	U	ug/L	5	Q	
WEL-03	1,1,1-Trichloroethane	03-May-94	S		U	ug/L	5		
		03-May-94	S	Q	U	ug/L	5	Q	
WEL-03	1,1,2,2-Tetrachloroethane	03-May-94	S		U	ug/L	5		
		03-May-94	S	Q	U	ug/L	5	Q	
		16-Oct-98	S		U	ug/L	5		
WEL-03	1,1,2-Trichloroethane	03-May-94	S		U	ug/L	5		
		03-May-94	S	Q	U	ug/L	5	Q	
WEL-03	1,1-Dichloroethane	03-May-94	S		U	ug/L	5		
		03-May-94	S	Q	U	ug/L	5	Q	
WEL-03	1,1-Dichloroethene	03-May-94	S		U	ug/L	5		
		03-May-94	S	Q	U	ug/L	5	Q	
WEL-03	1,2,3-Trichloropropane	03-May-94	S		U	ug/L	5		
		03-May-94	S	Q	U	ug/L	5	Q	
WEL-03	1,2,4,5-Tetrachlorobenzene	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
WEL-03	1,2,4-Trichlorobenzene	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
WEL-03	1,2-Dibromo-3-chloropropane	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
WEL-03	1,2-Dibromoethane (EDB)	03-May-94	S		U	ug/L	5		
		03-May-94	S	Q	U	ug/L	5	Q	
WEL-03	1,2-Dichlorobenzene	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
		18-Oct-98	S		U	ug/L	10		
WEL-03	1,2-Dichloroethane	03-May-94	S		U	ug/L	5		
		03-May-94	S	Q	U	ug/L	5	Q	
WEL-03	1,2-Dichloropropane	03-May-94	S		U	ug/L	5		
		03-May-94	S	Q	U	ug/L	5	Q	
WEL-03	1,3,5-Trinitrobenzene	03-May-94	S		U	ug/L	200		
		03-May-94	S	Q	U	ug/L	200	Q	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
WEL-03	1,3-Dichlorobenzene	03-May-94	S		U	ug/L	10		
		03-May-94	S	C	U	ug/L	10	Q	
WEL-03	1,4-Dichlorobenzene	03-May-94	S		U	ug/L	10		
		03-May-94	S	C	U	ug/L	10	Q	
		18-Oct-98	S		U	ug/L	10		
WEL-03	1,4-Dioxane	03-May-94	S		U	ug/L	10		
		03-May-94	S	C	U	ug/L	10	Q	
WEL-03	1,4-Naphthoquinone	03-May-94	S		U	ug/L	10		
		03-May-94	S	C	U	ug/L	10	Q	
WEL-03	1-Napthylamine	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
WEL-03	2,3,4,6-Tetrachlorophenol	03-May-94	S		U	ug/L	50		
		03-May-94	S	Q	U	ug/L	50	Q	
WEL-03	2,4,5-T	03-May-94	S		U	ug/L	0.5		
		03-May-94	S	Q	U	ug/L	0.5	Q	
WEL-03	2,4,5-TP (Silvex)	03-May-94	S		U	ug/L	0.5		
		03-May-94	S	Q	U	ug/L	0.5	Q	
WEL-03	2,4,5-Trichlorophenol	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
		18-Oct-98	S		U	ug/L	10		
WEL-03	2,4,6-Trichlorophenol	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
		18-Oct-98	S		U	ug/L	10		
WEL-03	2,4-D	03-May-94	S		U	ug/L	0.5		
		03-May-94	S	Q	U	ug/L	0.5	Q	
WEL-03	2,4-Dichlorophenol	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
		18-Oct-98	S		U	ug/L	10		
WEL-03	2,4-Dimethylphenol	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
WEL-03	2,4-Dinitrophenol	03-May-94	S		U	ug/L	50		
		03-May-94	S	Q	U	ug/L	50	Q	
WEL-03	2,4-Dinitrotoluene	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
WEL-03	2,6-Dichlorophenol	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
WEL-03	2,6-Dinitrotoluene	03-May-94	S		U	ug/L	10		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
WEL-03	2,6-Dinitrotoluene	03-May-94	S	Q	U	ug/L	10	Q	
WEL-03	2-Acetylaminofluorene	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
WEL-03	2-Chloroethylvinyl ether	03-May-94	S		U	ug/L	50		
		03-May-94	S	Q	U	ug/L	50	Q	
WEL-03	2-Chloronaphthalene	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
WEL-03	2-Chlorophenol	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
WEL-03	2-Hexanone	03-May-94	S		U	ug/L	50		
		03-May-94	S	Q	U	ug/L	50	Q	
WEL-03	2-Methylnaphthalene	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
WEL-03	2-Naphtylamine	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
WEL-03	2-Picoline	03-May-94	S		U	ug/L	200		
		03-May-94	S	Q	U	ug/L	200	Q	
WEL-03	2-sec-Butyl-4,6-dinitophenol	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
WEL-03	3,3'-Dichlorobenzidine	03-May-94	S		U	ug/L	20		
		03-May-94	S	Q	U	ug/L	20	Q	
WEL-03	3,3'-Dimethylbenzidine	03-May-94	S		U	ug/L	200		
		03-May-94	S	Q	U	ug/L	200	Q	
WEL-03	3-Methylcholanthrene	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
WEL-03	4,4'-DDD	03-May-94	S		U	ug/L	0.1		
WEL-03	4,4'-DDE	03-May-94	S		U	ug/L	0.1		
WEL-03	4,4'-DDT	03-May-94	S		U	ug/L	0.1		
WEL-03	4,6-Dinitro-o-cresol	03-May-94	S		U	ug/L	50		
		03-May-94	S	Q	U	ug/L	50	Q	
WEL-03	4-Aminobiphenyl	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
WEL-03	4-Bromophenyl-phenyl ether	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
WEL-03	4-Chlorophenylphenyl ether	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	

Location	Parameter	Date Samp	Lab	Qor F?	Result	Unit	PQL	Desc	Qual
WEL-03	4-Methyl-2-pentanone (MBK)	03-May-94	S		U	ug/L	50		
		03-May-94	S	C	U	ug/L	50	Q	
WEL-03	4-Nitroquinoline 1-oxide	03-May-94	S		U	ug/L	100		
		03-May-94	S	Q	U	ug/L	100	Q	
WEL-03	5-Nitro-o-toluidine	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
WEL-03	7,12-Dimethylbenz(a)anthracene	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
WEL-03	a,a-Dimethylphenethylamine	03-May-94	S		U	ug/L	2000		
		03-May-94	S	Q	U	ug/L	2000	Q	
WEL-03	Acenaphthene	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
WEL-03	Acenaphthylene	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
WEL-03	Acetone	03-May-94	S		U	ug/L	50		
		03-May-94	S	Q	U	ug/L	50	Q	
WEL-03	Acetonitrile	03-May-94	S		U	ug/L	1000		
		03-May-94	S	Q	U	ug/L	1000	Q	
WEL-03	Acetophenone	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
WEL-03	Acrolein	03-May-94	S		U	ug/L	100		
		03-May-94	S	Q	U	ug/L	100	Q	
WEL-03	Acrylonitrile	03-May-94	S		U	ug/L	100		
WEL-03	Aldrin	03-May-94	S		U	ug/L	0.05		
WEL-03	Allrchloride (3-chloropropene)	03-May-94	S		U	ug/L	5		
		03-May-94	S	Q	U	ug/L	5	Q	
WEL-03	alpha-BHC	03-May-94	S		U	ug/L	0.05		
WEL-03	Aniline	03-May-94	S		U	ug/L	50		
		03-May-94	S	Q	U	ug/L	50	Q	
WEL-03	Anthracene	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
WEL-03	Antimony	03-May-94	S		U	ug/L	50		
		03-May-94	S	Q	U	ug/L	50	Q	

See Table L-3 for Abbreviations and Qualifiers.

Locaton	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
WEL-03	Aramite	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
WEL-03	Aroclor 1016	03-May-94	S		U	ug/L	1		
		17-Oct-98	S		U	ug/L	1		
		23-Oct-98	S	F	U	ug/L	1		
WEL-03	Aroclor 1221	03-May-94	S		U	ug/L	2		
		17-Oct-98	S		U	ug/L	1		
		23-Oct-98	S	F	U	ug/L	1		
WEL-03	Aroclor 1232	03-May-94	S		U	ug/L	1		
		17-Oct-98	S		U	ug/L	1		
		23-Oct-98	S	F	U	ug/L	1		
WEL-03	Aroclor 1242	03-May-94	S		U	ug/L	1		
		17-Oct-98	S		U	ug/L	1		
		23-Oct-98	S	F	U	ug/L	1		
WEL-03	Aroclor 1248	03-May-94	S		4.0	ug/L	1		
		17-Oct-98	S		U	ug/L	1		
		23-Oct-98	S	F	U	ug/L	1		
WEL-03	Aroclor 1254	03-May-94	S		2.8	ug/L	1		
		17-Oct-98	S		U	ug/L	1		
		23-Oct-98	S	F	U	ug/L	1		
WEL-03	Aroclor 1260	03-May-94	S		U	ug/L	1		
		17-Oct-98	S		U	ug/L	1		
		23-Oct-98	S	F	U	ug/L	1		
WEL-03	Arsenic	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
		21-Oct-98	S		U	mg/L	0.01		
		23-Oct-98	S	F	U	mg/L	0.01		
WEL-03	Barium	03-May-94	S		56	ug/L	10		
		03-May-94	S	Q	56	ug/L	10	Q	
		21-Oct-98	S		0.048	mg/L	0.01		J
		23-Oct-98	S	F	0.047	mg/L	0.01		
WEL-03	Benzene	03-May-94	S		U	ug/L	5		
		03-May-94	S	Q	U	ug/L	5	Q	
WEL-03	Benzo(a)anthracene	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
WEL-03	Benzo(a)pyrene	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
WEL-03	Benzo(b)fluoranthene	03-May-94	S		U	ug/L	10		

See Table L-3 for Abbreviations and Qualifiers.

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
WEL-03	Benzo(b)fluoranthene	03-May-94	S	Q	U	ug/L	10	Q
WEL-03	Benzo(g,h,i)perylene	03-May-94	S		U	ug/L	10	
		03-May-94	S	Q	U	ug/L	10	Q
WEL-03	Benzo(k)fluoranthene	03-May-94	S		U	ug/L	10	
		03-May-94	S	Q	U	ug/L	10	Q
WEL-03	Benzyl alcohol	03-May-94	S		U	ug/L	10	
		03-May-94	S	Q	U	ug/L	10	Q
WEL-03	Beryllium	03-May-94	S		U	ug/L	5	
		03-May-94	S	Q	U	ug/L	5	Q
		21-Oct-98	S		U	mg/L	0.005	
		23-Oct-98	S	F	U	mg/L	0.005	
WEL-03	beta-BHC	03-May-94	S		U	ug/L	0.05	
WEL-03	bis(2-Chloroethoxy)methane	03-May-94	S		U	ug/L	10	
		03-May-94	S	Q	U	ug/L	10	Q
WEL-03	bis(2-Chloroethyl)ether	03-May-94	S		U	ug/L	10	
		03-May-94	S	Q	U	ug/L	10	Q
WEL-03	bis(2-Chloroisopropyl)ether	03-May-94	S		U	ug/L	10	
		03-May-94	S	Q	U	ug/L	10	Q
WEL-03	bis(2-Ethylhexyl)phthalate	03-May-94	S		U	ug/L	10	
		03-May-94	S	Q	U	ug/L	10	Q
WEL-03	Bromodichloromethane	03-May-94	S		U	ug/L	5	
		03-May-94	S	Q	U	ug/L	5	Q
WEL-03	Bromoform	03-May-94	S		U	ug/L	5	
		03-May-94	S	Q	U	ug/L	5	Q
WEL-03	Bromomethane (methyl bromide)	03-May-94	S		U	ug/L	10	
		03-May-94	S	Q	U	ug/L	10	Q
WEL-03	Butylbenzylphthalate	03-May-94	S		U	ug/L	10	
		03-May-94	S	Q	U	ug/L	10	Q
WEL-03	Cadmium	03-May-94	S		U	ug/L	5	
		03-May-94	S	Q	U	ug/L	5	Q
		21-Oct-98	S		U	mg/L	0.005	
		23-Oct-98	S	F	U	mg/L	0.005	
WEL-03	Carbon disulfide	03-May-94	S		U	ug/L	5	
		03-May-94	S	Q	U	ug/L	5	Q
WEL-03	Carbon tetrachloride	03-May-94	S		U	ug/L	5	
		03-May-94	S	Q	U	ug/L	5	Q

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
WEL-03	Chlordane	03-May-94	S		U	ug/L	0.5	
WEL-03	Chlorobenzene	03-May-94	S		U	ug/L	5	
		03-May-94	S	Q	U	ug/L	5	Q
		16-Oct-98	S		U	ug/L	5	
WEL-03	Chlorobenzilate	03-May-94	S		U	ug/L	0.5	
WEL-03	Chloroethane	03-May-94	S		U	ug/L	10	
		03-May-94	S	Q	U	ug/L	10	Q
WEL-03	Chloroform	03-May-94	S		U	ug/L	5	
		03-May-94	S	Q	U	ug/L	5	Q
WEL-03	Chloromethane (mehyl chloride)	03-May-94	S		U	ug/L	10	
		03-May-94	S	Q	U	ug/L	10	Q
WEL-03	Chloroprene	03-May-94	S		U	ug/L	5	
		03-May-94	S	Q	U	ug/L	5	Q
WEL-03	Chromium	03-May-94	S		U	ug/L	10	
		03-May-94	S	Q	U	ug/L	10	Q
		21-Oct-98	S		U	mg/L	0.01	
		23-Oct-98	S	F	U	mg/L	0.01	
WEL-03	Chrysene	03-May-94	S		U	ug/L	10	
		03-May-94	S	Q	U	ug/L	10	Q
WEL-03	cis-1,3-Dichloropropene	03-May-94	S		U	ug/L	5	
		03-May-94	S	Q	U	ug/L	5	Q
WEL-03	Cobalt	03-May-94	S		U	ug/L	10	
		03-May-94	S	Q	U	ug/L	10	Q
		21-Oct-98	S		U	mg/L	0.01	
		23-Oct-98	S	F	U	mg/L	0.01	
WEL-03	Copper	03-May-94	S		U	ug/L	25	
		03-May-94	S	Q	U	ug/L	25	Q
WEL-03	Cresol, m&p	03-May-94	S		U	ug/L	10	
		03-May-94	S	Q	U	ug/L	10	Q
WEL-03	delta-BHC	03-May-94	S		U	ug/L	0.05	
WEL-03	di-N-Butylphthalate	03-May-94	S		U	ug/L	10	
		03-May-94	S	Q	U	ug/L	10	Q
WEL-03	di-N-Octylphthalate	03-May-94	S		U	ug/L	10	
		03-May-94	S	Q	U	ug/L	10	Q
WEL-03	Diallate	03-May-94	S		U	ug/L	10	
		03-May-94	S	Q	U	ug/L	10	Q

Location	Parameter	Date Samp	Lab	Qor F?	Result	Unit	PQL	Desc	Qual
WEL-03	Dbenz(a,h)anthracene	03-May-94	S		U	ug/L	10		
		03-May-94	S	C	U	ug/L	10	Q	
WEL-03	Dbenzofuran	03-May-94	S		U	ug/L	10		
		03-May-94	S	C	U	ug/L	10	Q	
WEL-03	Dibromochloromethane	03-May-94	S		U	ug/L	5		
		03-May-94	S	C	U	ug/L	5	Q	
WEL-03	Dichlorodifluoromethane	03-May-94	S		U	ug/L	5		
		03-May-94	S	C	U	ug/L	5	Q	
WEL-03	Dieldrin	03-May-94	S		U	ug/L	0.1		
WEL-03	Diethylphthalate	03-May-94	S		U	ug/L	10		
		03-May-94	S	C	U	ug/L	10	Q	
WEL-03	Dimethoate	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
WEL-03	Dimethylphthalate	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
WEL-03	Dioxin-2,3,7,8-TCDD	03-May-94	S		U	ug/L	0.005		
		03-May-94	S	Q	U	ug/L	0.005	Q	
WEL-03	Disolved Oxygen	10-Nov-98			1.2	mg/L			
WEL-03	Disulfoton	03-May-94	S		U	ug/L	2		
		03-May-94	S	Q	U	ug/L	2	Q	
WEL-03	Endosulfan I	03-May-94	S		U	ug/L	0.05		
WEL-03	Endosulfan II	03-May-94	S		U	ug/L	0.1		
WEL-03	Endosulfan sulfate	03-May-94	S		U	ug/L	0.1		
WEL-03	Endrin	03-May-94	S		U	ug/L	0.1		
WEL-03	Endrin Aldehyde	03-May-94	S		U	ug/L	0.1		
WEL-03	Ethyl methacrylate	03-May-94	S		U	ug/L	5		
WEL-03	Ethyl methanesulfonate	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
WEL-03	Ethylbenzene	03-May-94	S		U	ug/L	5		
		03-May-94	S	Q	U	ug/L	5	Q	
WEL-03	Famphur	03-May-94	S		U	ug/L	2		
		03-May-94	S	Q	U	ug/L	2	Q	
WEL-03	Fluoranthene	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
WEL-03	Fluorene	03-May-94	S		U	ug/L	10		

See Table L-3 for Abbreviations and Qualifiers.

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
WEL-03	Fluorene	03-May-94	S	Q	U	ug/L	10	Q	
WEL-03	gamma-BHC (Lindane)	03-May-94	S		U	ug/L	0.05		
WEL-03	Heptachlor	03-May-94	S		U	ug/L	0.05		
WEL-03	Heptachlor epoxide	03-May-94	S		U	ug/L	0.05		
WEL-03	Hexa CDD	03-May-94	S		U	ug/L	0.005		
		03-May-94	S	Q	U	ug/L	0.005	Q	
WEL-03	Hexa CDF	03-May-94	S		U	ug/L	0.005		
		03-May-94	S	Q	U	ug/L	0.005	Q	
WEL-03	Hexachlorobenzene	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
WEL-03	Hexachlorobutadiene	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
WEL-03	Hexachlorocyclopentadiene	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
WEL-03	Hexachloroethane	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
WEL-03	Hexachloropropene	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
WEL-03	Indeno(1,2,3-cd)pyrene	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
WEL-03	Isobutyl alcohol	03-May-94	S		U	ug/L	1000		
WEL-03	Isodrin	03-May-94	S		U	ug/L	0.05		
WEL-03	Isophorone	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
WEL-03	Isopropylbenzene	16-Oct-98	S		U	ug/L	5		
WEL-03	Kepone	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
WEL-03	Lead	03-May-94	S		U	ug/L	5		
		03-May-94	S	Q	U	ug/L	5	Q	
		21-Oct-98	S		U	mg/L	0.005		
		23-Oct-98	S	F	U	mg/L	0.005		
WEL-03	m-Dinitrobenzene	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
WEL-03	m-Nitroaniline	03-May-94	S		U	ug/L	50		
		03-May-94	S	Q	U	ug/L	50	Q	

See Table L-3 for Abbreviations and Qualifiers.

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
WEL-03	Manganese	21-Oct-98	S		0.25	mg/L	0.01	
		23-Oct-98	S	F	0.25	mg/L	0.01	
WEL-03	Mercury	03-May-94	S		U	ug/L	0.2	
		03-May-94	S	Q	U	ug/L	0.2	Q
		21-Oct-98	S		U	mg/L	0.0002	
		23-Oct-98	S	F	U	mg/L	0.0002	
WEL-03	Methacrylonitrile	03-May-94	S		U	ug/L	100	
		03-May-94	S	Q	U	ug/L	100	Q
WEL-03	Methapyrilene	03-May-94	S		U	ug/L	2000	
		03-May-94	S	Q	U	ug/L	2000	Q
WEL-03	Methoxychlor	03-May-94	S		U	ug/L	0.5	
WEL-03	Methyl ethyl ketone (MEK)	03-May-94	S		U	ug/L	50	
		03-May-94	S	Q	U	ug/L	50	Q
WEL-03	Methyl iodide	03-May-94	S		U	ug/L	5	
		03-May-94	S	Q	U	ug/L	5	Q
WEL-03	Methyl methacrylate	03-May-94	S		U	ug/L	5	
		03-May-94	S	Q	U	ug/L	5	Q
WEL-03	Methyl methanesulfonate	03-May-94	S		U	ug/L	10	
		03-May-94	S	Q	U	ug/L	10	Q
WEL-03	Methyl parathion	03-May-94	S		U	ug/L	0.5	
		03-May-94	S	Q	U	ug/L	0.5	Q
		18-Oct-98	S		U	mg/L	0.0005	
WEL-03	Methylene bromide	03-May-94	S		U	ug/L	10	
		03-May-94	S	Q	U	ug/L	10	Q
WEL-03	Methylene chloride (dchloromethane)	03-May-94	S		U	ug/L	5	
		03-May-94	S	Q	U	ug/L	5	Q
		16-Oct-98	S		U	ug/L	5	
WEL-03	N-Nitroso-di-n-butylamine	03-May-94	S		U	ug/L	10	
		03-May-94	S	Q	U	ug/L	10	Q
WEL-03	N-Nitroso-di-n-propylamine	03-May-94	S		U	ug/L	10	
		03-May-94	S	Q	U	ug/L	10	Q
WEL-03	N-Nitrosodiethylamine	03-May-94	S		U	ug/L	10	
		03-May-94	S	Q	U	ug/L	10	Q
WEL-03	N-Nitrosodimethylamine	03-May-94	S		U	ug/L	10	
		03-May-94	S	Q	U	ug/L	10	Q
WEL-03	N-Nitrosodiphenylamine	03-May-94	S		U	ug/L	10	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
WEL-03	N-Nitrosodiphenylamine	03-May-94	S	Q	U	ug/L	10	Q
WEL-03	N-Nitrosomethylethylamine	03-May-94	S		U	ug/L	10	
		03-May-94	S	Q	U	ug/L	10	Q
WEL-03	N-Nitrosomorpholine	03-May-94	S		U	ug/L	10	
		03-May-94	S	Q	U	ug/L	10	Q
WEL-03	N-Nitrosopiperidine	03-May-94	S		U	ug/L	10	
		03-May-94	S	Q	U	ug/L	10	Q
WEL-03	N-Nitrosopyrrolidine	03-May-94	S		U	ug/L	10	
		03-May-94	S	Q	U	ug/L	10	Q
WEL-03	Naphthalene	03-May-94	S		U	ug/L	10	
		03-May-94	S	Q	U	ug/L	10	Q
WEL-03	Nickel	03-May-94	S		U	ug/L	40	
		03-May-94	S	Q	U	ug/L	40	Q
		21-Oct-98	S		U	mg/L	0.04	
		23-Oct-98	S	F	U	mg/L	0.04	
WEL-03	Nitrobenzene	03-May-94	S		U	ug/L	10	
		03-May-94	S	Q	U	ug/L	10	Q
WEL-03	o,o,o-Triethylphosphorothoate	03-May-94	S		U	ug/L	10	
		03-May-94	S	Q	U	ug/L	10	Q
		18-Oct-98	S		U	ug/L	10	
WEL-03	o,o-Diethyl-o-2-pyrazinylphoshorothoate	03-May-94	S		U	ug/L	1	
		03-May-94	S	Q	U	ug/L	1	Q
WEL-03	o-Cresol	03-May-94	S		U	ug/L	10	
		03-May-94	S	Q	U	ug/L	10	Q
WEL-03	o-Nitroaniline	03-May-94	S		U	ug/L	50	
		03-May-94	S	Q	U	ug/L	50	Q
WEL-03	o-Nitrophenol (2-Nitrophenol)	03-May-94	S		U	ug/L	10	
		03-May-94	S	Q	U	ug/L	10	Q
WEL-03	o-Toluidine	03-May-94	S		U	ug/L	10	
		03-May-94	S	Q	U	ug/L	10	Q
WEL-03	p-(Dimethylamino)azobenzene	03-May-94	S		U	ug/L	10	
		03-May-94	S	Q	U	ug/L	10	Q
WEL-03	p-Chloro-m-cresol	03-May-94	S		U	ug/L	10	
		03-May-94	S	Q	U	ug/L	10	Q

Location	Parameter	Date Samp	Lab	Qor F?	Result	Unit	PQL	Desc	Qual
WEL-03	p-Chloroaniline	03-May-94	S		U	ug/L	20		
		03-May-94	S	C	U	ug/L	20	Q	
WEL-03	p-Nitroaniline	03-May-94	S		U	ug/L	50		
		03-May-94	S	C	U	ug/L	50	Q	
WEL-03	p-Phenylenediamine	03-May-94	S		U	ug/L	2000		
		03-May-94	S	C	U	ug/L	2000	Q	
WEL-03	Penta CDD	03-May-94	S		U	ug/L	0.005		
		03-May-94	S	C	U	ug/L	0.005	Q	
WEL-03	Penta CDF	03-May-94	S		U	ug/L	0.005		
		03-May-94	S	C	U	ug/L	0.005	Q	
WEL-03	Pentachlorobenzene	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
WEL-03	Pentachloroethane	03-May-94	S		U	ug/L	25		
		03-May-94	S	Q	U	ug/L	25	Q	
WEL-03	Pentachloronitrobenzene	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
WEL-03	Pentachlorophenol	03-May-94	S		U	ug/L	50		
		03-May-94	S	Q	U	ug/L	50	Q	
		18-Oct-98	S		U	ug/L	1		
WEL-03	Phenacetin	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
WEL-03	Phenanthrene	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
WEL-03	Phenol	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
		18-Oct-98	S		U	ug/L	10		
WEL-03	Phorate	03-May-94	S		U	ug/L	1		
		03-May-94	S	Q	U	ug/L	1	Q	
WEL-03	Pronamide	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
WEL-03	Propionitrile	03-May-94	S		U	ug/L	100		
		03-May-94	S	Q	U	ug/L	100	Q	
WEL-03	Pyrene	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
WEL-03	Pyridine	03-May-94	S		U	ug/L	200		
		03-May-94	S	Q	U	ug/L	200	Q	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
WEL-03	Redox	10-Nov-98			110	mV			
WEL-03	Safrole	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
WEL-03	Selenium	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
WEL-03	Silver	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
WEL-03	Styrene	03-May-94	S		U	ug/L	5		
		03-May-94	S	Q	U	ug/L	5	Q	
WEL-03	Sulfide	03-May-94	S		U	ug/L	400		
		03-May-94	S	Q	U	ug/L	400	Q	
WEL-03	Tetra CDD	03-May-94	S		U	ug/L	0.005		
		03-May-94	S	Q	U	ug/L	0.005	Q	
WEL-03	Tetra CDF	03-May-94	S		U	ug/L	0.005		
		03-May-94	S	Q	U	ug/L	0.005	Q	
WEL-03	Tetraethyldithiopyrophosphate (Sulfotepp)	03-May-94	S		U	ug/L	0.5		
		03-May-94	S	Q	U	ug/L	0.5	Q	
		18-Oct-98	S		U	mg/L	0.0005		
WEL-03	Thallium	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
WEL-03	Tin	03-May-94	S		U	ug/L	50		
		03-May-94	S	Q	U	ug/L	50	Q	
WEL-03	Toluene	03-May-94	S		U	ug/L	5		
		03-May-94	S	Q	U	ug/L	5	Q	
WEL-03	Total Cyanide	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
WEL-03	Total PCBs	17-Oct-98	S		U	ug/L	1		
		23-Oct-98	S	F	U	ug/L	1		
WEL-03	Toxaphene	03-May-94	S		U	ug/L	5		
WEL-03	trans-1,2-Dichloroethene	03-May-94	S		U	ug/L	5		
		03-May-94	S	Q	U	ug/L	5	Q	
WEL-03	trans-1,3-Dichloropropene	03-May-94	S		U	ug/L	5		
		03-May-94	S	Q	U	ug/L	5	Q	
WEL-03	trans-1,4-Dichloro-2-butene	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
WEL-03	Trichloroethene	03-May-94	S		U	ug/L	5		
		03-May-94	S	Q	U	ug/L	5	Q	
WEL-03	Trichlorofluoromethane	03-May-94	S		U	ug/L	5		
		03-May-94	S	Q	U	ug/L	5	Q	
WEL-03	Vanadium	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
		21-Oct-98	S		U	mg/L	0.01		
		23-Oct-98	S	F	U	mg/L	0.01		
WEL-03	Vinyl acetate	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
WEL-03	Vinyl chloride	03-May-94	S		U	ug/L	10		
		03-May-94	S	Q	U	ug/L	10	Q	
WEL-03	Xylenes	03-May-94	S		U	ug/L	5		
		03-May-94	S	Q	U	ug/L	5	Q	
WEL-03	Zinc	03-May-94	S		23	ug/L	20		
		03-May-94	S	Q	31	ug/L	20	Q	
WEL-04	1,1,1,2-Tetrachloroethane	03-May-94	S		U	ug/L	5		
WEL-04	1,1,1-Trichloroethane	03-May-94	S		U	ug/L	5		
WEL-04	1,1,2,2-Tetrachloroethane	03-May-94	S		U	ug/L	5		
		15-Oct-98	S		U	ug/L	5		
		15-Oct-98	S	Q	U	ug/L	5		
WEL-04	1,1,2-Trichloroethane	03-May-94	S		U	ug/L	5		
WEL-04	1,1-Dichloroethane	03-May-94	S		U	ug/L	5		
WEL-04	1,1-Dichloroethene	03-May-94	S		U	ug/L	5		
WEL-04	1,2,3-Trichloropropane	03-May-94	S		U	ug/L	5		
WEL-04	1,2,4,5-Tetrachlorobenzene	03-May-94	S		U	ug/L	10		
WEL-04	1,2,4-Trichlorobenzene	03-May-94	S		U	ug/L	10		
WEL-04	1,2-Dibromo-3-choropropane	03-May-94	S		U	ug/L	10		
WEL-04	1,2-Dibromoethane (EDB)	03-May-94	S		U	ug/L	5		
WEL-04	1,2-Dichlorobenzene	03-May-94	S		U	ug/L	10		
		15-Oct-98	S		U	ug/L	10		
		15-Oct-98	S	Q	U	ug/L	10		
WEL-04	1,2-Dichloroethane	03-May-94	S		U	ug/L	5		
WEL-04	1,2-Dichloropropane	03-May-94	S		U	ug/L	5		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
WEL-04	1,3,5-Trinitrobenzene	03-May-94	S		U	ug/L	200		
WEL-04	1,3-Dichlorobenzene	03-May-94	S		U	ug/L	10		
WEL-04	1,4-Dichlorobenzene	03-May-94	S		U	ug/L	10		
		15-Oct-98	S		U	ug/L	10		
		15-Oct-98	S	Q	U	ug/L	10		
WEL-04	1,4-Dioxane	03-May-94	S		U	ug/L	10		
WEL-04	1,4-Naphthoquinone	03-May-94	S		U	ug/L	10		
WEL-04	1-Napthylamine	03-May-94	S		U	ug/L	10		
WEL-04	2,3,4,6-Tetrachlorophenol	03-May-94	S		U	ug/L	50		
WEL-04	2,4,5-T	03-May-94	S		U	ug/L	0.5		
WEL-04	2,4,5-TP (Silvex)	03-May-94	S		U	ug/L	0.5		
WEL-04	2,4,5-Trichlorophenol	03-May-94	S		U	ug/L	10		
		15-Oct-98	S		U	ug/L	10		
		15-Oct-98	S	Q	U	ug/L	10		
WEL-04	2,4,6-Trichlorophenol	03-May-94	S		U	ug/L	10		
		15-Oct-98	S		U	ug/L	10		
		15-Oct-98	S	Q	U	ug/L	10		
WEL-04	2,4-D	03-May-94	S		U	ug/L	0.5		
WEL-04	2,4-Dichlorophenol	03-May-94	S		U	ug/L	10		
		15-Oct-98	S		U	ug/L	10		
		15-Oct-98	S	Q	U	ug/L	10		
WEL-04	2,4-Dimethylphenol	03-May-94	S		U	ug/L	10		
WEL-04	2,4-Dinitrophenol	03-May-94	S		U	ug/L	50		
WEL-04	2,4-Dinitrotoluene	03-May-94	S		U	ug/L	10		
WEL-04	2,6-Dichlorophenol	03-May-94	S		U	ug/L	10		
WEL-04	2,6-Dinitrotoluene	03-May-94	S		U	ug/L	10		
WEL-04	2-Acetylaminofluorene	03-May-94	S		U	ug/L	10		
WEL-04	2-Chloroethylvinyl ether	03-May-94	S		U	ug/L	50		
WEL-04	2-Chloronaphthalene	03-May-94	S		U	ug/L	10		
WEL-04	2-Chlorophenol	03-May-94	S		U	ug/L	10		
WEL-04	2-Hexanone	03-May-94	S		U	ug/L	50		
WEL-04	2-Methylnaphthalene	03-May-94	S		U	ug/L	10		
WEL-04	2-Naphtylamine	03-May-94	S		U	ug/L	10		

Location	Parameter	Date Samp	Lab	C or F?	Result	Unit	PQL	Desc Qual
WEL-04	2-Picoline	03-May-94	S		U	ug/L	200	
WEL-04	2-sec-Butyl-4,6-dinitrophenol	03-May-94	S		U	ug/L	10	
WEL-04	3,3'-Dichlorobenzidine	03-May-94	S		U	ug/L	20	
WEL-04	3,3'-Dimethylbenzidine	03-May-94	S		U	ug/L	200	
WEL-04	3-Methylcholanthrene	03-May-94	S		U	ug/L	10	
WEL-04	4,4'-DDD	03-May-94	S		U	ug/L	0.1	
WEL-04	4,4'-DDE	03-May-94	S		U	ug/L	0.1	
WEL-04	4,4'-DDT	03-May-94	S		U	ug/L	0.1	
WEL-04	4,6-Dinitro-o-cresol	03-May-94	S		U	ug/L	50	
WEL-04	4-Aminobiphenyl	03-May-94	S		U	ug/L	10	
WEL-04	4-Bromophenyl-phenyl ether	03-May-94	S		U	ug/L	10	
WEL-04	4-Chlorophenylphenyl ether	03-May-94	S		U	ug/L	10	
WEL-04	4-Methyl-2-pentanone (MIBK)	03-May-94	S		U	ug/L	50	
WEL-04	4-Nitroquinoline 1-oxide	03-May-94	S		U	ug/L	100	
WEL-04	5-Nitro-o-toluidine	03-May-94	S		U	ug/L	10	
WEL-04	7,12-Dimethylbenz(a)anthracene	03-May-94	S		U	ug/L	10	
WEL-04	a,a-Dimethylphenethylamine	03-May-94	S		U	ug/L	2000	
WEL-04	Acenaphthene	03-May-94	S		U	ug/L	10	
WEL-04	Acenaphthylene	03-May-94	S		U	ug/L	10	
WEL-04	Acetone	03-May-94	S		U	ug/L	50	
WEL-04	Acetonitrile	03-May-94	S		U	ug/L	1000	
WEL-04	Acetophenone	03-May-94	S		U	ug/L	10	
WEL-04	Acrolein	03-May-94	S		U	ug/L	100	
WEL-04	Acrylonitrile	03-May-94	S		U	ug/L	100	
WEL-04	Aldrin	03-May-94	S		U	ug/L	0.05	
WEL-04	Allychloride (3-choropropene)	03-May-94	S		U	ug/L	5	
WEL-04	alpha-BHC	03-May-94	S		U	ug/L	0.05	
WEL-04	Aniline	03-May-94	S		U	ug/L	50	
WEL-04	Anthracene	03-May-94	S		U	ug/L	10	

Location	Parameter	Date Samp	Lab	Q or F?		Result	Unit	PQL	Desc Qual
WEL-04	Antimony	03-May-94	S			U	ug/L	50	
WEL-04	Aramite	03-May-94	S			U	ug/L	10	
WEL-04	Aroclor 1016	03-May-94	S			U	ug/L	1	
		15-Oct-98	S			U	ug/L	1	
		15-Oct-98	S		F	U	ug/L	1	
		15-Oct-98	S	Q		U	ug/L	1	
		15-Oct-98	S	Q	F	U	ug/L	1	
WEL-04	Aroclor 1221	03-May-94	S			U	ug/L	2	
		15-Oct-98	S			U	ug/L	1	
		15-Oct-98	S		F	U	ug/L	1	
		15-Oct-98	S	Q		U	ug/L	1	
		15-Oct-98	S	Q	F	U	ug/L	1	
WEL-04	Aroclor 1232	03-May-94	S			U	ug/L	1	
		15-Oct-98	S			U	ug/L	1	
		15-Oct-98	S		F	U	ug/L	1	
		15-Oct-98	S	Q		U	ug/L	1	
		15-Oct-98	S	Q	F	U	ug/L	1	
WEL-04	Aroclor 1242	03-May-94	S			U	ug/L	1	
		15-Oct-98	S			U	ug/L	1	
		15-Oct-98	S		F	U	ug/L	1	
		15-Oct-98	S	Q		U	ug/L	1	
		15-Oct-98	S	Q	F	U	ug/L	1	
WEL-04	Aroclor 1248	03-May-94	S			U	ug/L	1	
		15-Oct-98	S			U	ug/L	1	
		15-Oct-98	S		F	U	ug/L	1	
		15-Oct-98	S	Q		U	ug/L	1	
		15-Oct-98	S	Q	F	U	ug/L	1	
WEL-04	Aroclor 1254	03-May-94	S			U	ug/L	1	
		15-Oct-98	S			U	ug/L	1	
		15-Oct-98	S		F	U	ug/L	1	
		15-Oct-98	S	Q		U	ug/L	1	
		15-Oct-98	S	Q	F	U	ug/L	1	
WEL-04	Aroclor 1260	03-May-94	S			U	ug/L	1	
		15-Oct-98	S			U	ug/L	1	
		15-Oct-98	S		F	U	ug/L	1	
		15-Oct-98	S	Q		U	ug/L	1	
		15-Oct-98	S	Q	F	U	ug/L	1	
WEL-04	Arsenic	03-May-94	S			U	ug/L	10	
		15-Oct-98	S			U	mg/L	0.01	
		15-Oct-98	S		F	U	mg/L	0.01	

Location	Parameter	Date Samp	Lab	Q or F?		Result	Unit	PQL	Desc	Qual
WEL-04	Arsenic	15-Oct-98	S	Q		U	mg/L	0.01		
		15-Oct-98	S	Q	F	U	mg/L	0.01		
WEL-04	Barium	03-May-94	S			1,100	ug/L	10		
		15-Oct-98	S			0.074	mg/L	0.01		J
		15-Oct-98	S		F	0.012	mg/L	0.01		
		15-Oct-98	S	Q		0.010	mg/L	0.01		
		15-Oct-98	S	Q	F	0.011	mg/L	0.01		
WEL-04	Benzene	03-May-94	S			U	ug/L	5		
WEL-04	Benzo(a)anthracene	03-May-94	S			U	ug/L	10		
WEL-04	Benzo(a)pyrene	03-May-94	S			U	ug/L	10		
WEL-04	Benzo(b)fluoranthene	03-May-94	S			U	ug/L	10		
WEL-04	Benzo(g,h,i)perylene	03-May-94	S			U	ug/L	10		
WEL-04	Benzo(k)fluoranthene	03-May-94	S			U	ug/L	10		
WEL-04	Benzyl alcohol	03-May-94	S			U	ug/L	10		
WEL-04	Beryllium	03-May-94	S			31	ug/L	5		
		15-Oct-98	S			U	mg/L	0.004		
		15-Oct-98	S		F	U	mg/L	0.004		
		15-Oct-98	S	C		U	mg/L	0.004		
		15-Oct-98	S	C	F	U	mg/L	0.004		
WEL-04	beta-BHC	03-May-94	S			U	ug/L	0.05		
WEL-04	bis(2-Chloroethoxy)methane	03-May-94	S			U	ug/L	10		
WEL-04	bis(2-Chloroethyl)ether	03-May-94	S			U	ug/L	10		
WEL-04	bis(2-Chloroisopropyl)ether	03-May-94	S			U	ug/L	10		
WEL-04	bis(2-Ethylhexyl)phthalate	03-May-94	S			5.3	ug/L	10		J
WEL-04	Bromodichloromethane	03-May-94	S			U	ug/L	5		
WEL-04	Bromoform	03-May-94	S			U	ug/L	5		
WEL-04	Bromomethane (methyl bromide)	03-May-94	S			U	ug/L	10		
WEL-04	Butylbenzylphthalate	03-May-94	S			U	ug/L	10		
WEL-04	Cadmium	03-May-94	S			U	ug/L	5		
		15-Oct-98	S			U	mg/L	0.005		
		15-Oct-98	S		F	U	mg/L	0.005		
		15-Oct-98	S	Q		U	mg/L	0.005		
		15-Oct-98	S	Q	F	U	mg/L	0.005		
WEL-04	Carbon disulfide	03-May-94	S			U	ug/L	5		

Location	Parameter	Date Samp	Lab	Q or F?		Result	Unit	PQL	Desc	Qual
WEL-04	Carbon tetrachloride	03-May-94	S			U	ug/L	5		
WEL-04	Chlordane	03-May-94	S			U	ug/L	0.5		
WEL-04	Chlorobenzene	03-May-94	S			U	ug/L	5		
		15-Oct-98	S			U	ug/L	5		
		15-Oct-98	S	Q		U	ug/L	5		
WEL-04	Chlorobenzilate	03-May-94	S			U	ug/L	0.5		
WEL-04	Chloroethane	03-May-94	S			U	ug/L	10		
WEL-04	Chloroform	03-May-94	S			U	ug/L	5		
WEL-04	Chloromethane (methyl chloride)	03-May-94	S			U	ug/L	10		
WEL-04	Chloroprene	03-May-94	S			U	ug/L	5		
WEL-04	Chromium	03-May-94	S			130	ug/L	10		
		15-Oct-98	S			0.012	mg/L	0.01		
		15-Oct-98	S		F	U	mg/L	0.01		
		15-Oct-98	S	Q		U	mg/L	0.01		
		15-Oct-98	S	Q	F	U	mg/L	0.01		
WEL-04	Chrysene	03-May-94	S			U	ug/L	10		
WEL-04	cis-1,3-Dichloropropene	03-May-94	S			U	ug/L	5		
WEL-04	Cobalt	03-May-94	S			200	ug/L	10		
		15-Oct-98	S			0.012	mg/L	0.01		
		15-Oct-98	S		F	U	mg/L	0.01		
		15-Oct-98	S	Q		U	mg/L	0.01		
		15-Oct-98	S	Q	F	U	mg/L	0.01		
WEL-04	Copper	03-May-94	S			270	ug/L	25		
WEL-04	Cresol, m&p	03-May-94	S			U	ug/L	10		
WEL-04	delta-BHC	03-May-94	S			U	ug/L	0.05		
WEL-04	di-N-Butylphthalate	03-May-94	S			6.1	ug/L	10		J
WEL-04	di-N-Octylphthalate	03-May-94	S			U	ug/L	10		
WEL-04	Diallate	03-May-94	S			U	ug/L	10		
WEL-04	Dibenz(a,h)anthracene	03-May-94	S			U	ug/L	10		
WEL-04	Dibenzofuran	03-May-94	S			U	ug/L	10		
WEL-04	Dibromochloromethane	03-May-94	S			U	ug/L	5		
WEL-04	Dichlorodifluoromethane	03-May-94	S			U	ug/L	5		
WEL-04	Dieldrin	03-May-94	S			U	ug/L	0.1		

Location	Farameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
WEL-04	Diethylphthalate	03-May-94	S		2.4	ug/L	10		J
WEL-04	Dimethoate	03-May-94	S		U	ug/L	10		
WEL-04	Dimethylphthalate	03-May-94	S		U	ug/L	10		
WEL-04	Dioxin-2,3,7,8-TCDD	03-May-94	S		U	ug/L	0.005		
WEL-04	Dissolved Oxygen	10-Nov-98			5.4	mg/L			
WEL-04	Disulfoton	03-May-94	S		U	ug/L	2		
WEL-04	Endosulfan I	03-May-94	S		U	ug/L	0.05		
WEL-04	Endosulfan II	03-May-94	S		U	ug/L	0.1		
WEL-04	Endosulfan sulfate	03-May-94	S		U	ug/L	0.1		
WEL-04	Endrin	03-May-94	S		U	ug/L	0.1		
WEL-04	Endrin Aldehyde	03-May-94	S		U	ug/L	0.1		
WEL-04	Ethyl methacrylate	03-May-94	S		U	ug/L	5		
WEL-04	Ethyl methanesulfonate	03-May-94	S		U	ug/L	10		
WEL-04	Ethylbenzene	03-May-94	S		U	ug/L	5		
WEL-04	Famphur	03-May-94	S		U	ug/L	2		
WEL-04	Fluoranthene	03-May-94	S		U	ug/L	10		
WEL-04	Fluorene	03-May-94	S		U	ug/L	10		
WEL-04	gamma-BHC (Lindane)	03-May-94	S		U	ug/L	0.05		
WEL-04	Heptachlor	03-May-94	S		U	ug/L	0.05		
WEL-04	Heptachlor epoxide	03-May-94	S		U	ug/L	0.05		
WEL-04	Hexa CDD	03-May-94	S		U	ug/L	0.005		
WEL-04	Hexa CDF	03-May-94	S		U	ug/L	0.005		
WEL-04	Hexachlorobenzene	03-May-94	S		U	ug/L	10		
WEL-04	Hexachlorobutadiene	03-May-94	S		U	ug/L	10		
WEL-04	Hexachlorocyclopentadiene	03-May-94	S		U	ug/L	10		
WEL-04	Hexachloroethane	03-May-94	S		U	ug/L	10		
WEL-04	Hexachloropropene	03-May-94	S		U	ug/L	10		
WEL-04	Indeno(1,2,3-cd)pyrene	03-May-94	S		U	ug/L	10		
WEL-04	Isobutyl alcohol	03-May-94	S		U	ug/L	1000		
WEL-04	Isodrin	03-May-94	S		U	ug/L	0.05		
WEL-04	Isophorone	03-May-94	S		U	ug/L	10		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
WEL-04	Isopropylbenzene	15-Oct-98	S		U	ug/L	5		
		15-Oct-98	S	Q	U	ug/L	5		
WEL-04	Kepone	03-May-94	S		U	ug/L	10		
WEL-04	Lead	03-May-94	S		120	ug/L	5		
		15-Oct-98	S		0.016	mg/L	0.005		
		15-Oct-98	S	F	U	mg/L	0.005		
		15-Oct-98	S	Q	U	mg/L	0.005		
		15-Oct-98	S	Q F	U	mg/L	0.005		
WEL-04	m-Dinitrobenzene	03-May-94	S		U	ug/L	10		
WEL-04	m-Nitroaniline	03-May-94	S		U	ug/L	50		
WEL-04	Manganese	15-Oct-98	S		1.1	mg/L	0.01		
		15-Oct-98	S	F	0.058	mg/L	0.01		
		15-Oct-98	S	Q	0.053	mg/L	0.01		
		15-Oct-98	S	Q F	0.055	mg/L	0.01		
WEL-04	Mercury	03-May-94	S		0.86	ug/L	0.2		
		15-Oct-98	S		U	mg/L	0.0002		
		15-Oct-98	S	F	U	mg/L	0.0002		
		15-Oct-98	S	Q	U	mg/L	0.0002		
		15-Oct-98	S	Q F	U	mg/L	0.0002		
WEL-04	Methacrylonitrile	03-May-94	S		U	ug/L	100		
WEL-04	Methapyrilene	03-May-94	S		U	ug/L	2000		
WEL-04	Methoxychlor	03-May-94	S		U	ug/L	0.5		
WEL-04	Methyl ethyl ketone (MEK)	03-May-94	S		U	ug/L	50		
WEL-04	Methyl iodide	03-May-94	S		U	ug/L	5		
WEL-04	Methyl methacrylate	03-May-94	S		U	ug/L	5		
WEL-04	Methyl methanesulfonate	03-May-94	S		U	ug/L	10		
WEL-04	Methyl parathion	03-May-94	S		U	ug/L	0.5		
		15-Oct-98	S		U	mg/L	0.0005		
		15-Oct-98	S	Q	U	mg/L	0.0005		
WEL-04	Methylene bromide	03-May-94	S		U	ug/L	10		
WEL-04	Methylene chloride (dichloromethane)	03-May-94	S		U	ug/L	5		
		15-Oct-98	S		U	ug/L	5		
		15-Oct-98	S	Q	U	ug/L	5		
WEL-04	N-Nitroso-di-n-butylamine	03-May-94	S		U	ug/L	10		
WEL-04	N-Nitroso-di-n-propylamine	03-May-94	S		U	ug/L	10		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
WEL-04	N-Nitrosodiethylamine	03-May-94	S		U	ug/L	10	
WEL-04	N-Nitrosodimethylamine	03-May-94	S		U	ug/L	10	
WEL-04	N-Nitrosodiphenylamine	03-May-94	S		U	ug/L	10	
WEL-04	N-Nitrosomethylethylamine	03-May-94	S		U	ug/L	10	
WEL-04	N-Nitrosomorpholine	03-May-94	S		U	ug/L	10	
WEL-04	N-Nitrosopiperidine	03-May-94	S		U	ug/L	10	
WEL-04	N-Nitrosopyrrolidine	03-May-94	S		U	ug/L	10	
WEL-04	Naphthalene	03-May-94	S		U	ug/L	10	
WEL-04	Nickel	03-May-94	S		320	ug/L	40	
		15-Oct-98	S		0.025	mg/L	0.04	
		15-Oct-98	S	F	U	mg/L	0.004	
		15-Oct-98	S	Q	U	mg/L	0.004	
		15-Oct-98	S	Q F	U	mg/L	0.004	
WEL-04	Nitrobenzene	03-May-94	S		U	ug/L	10	
WEL-04	o,o,o-Triethylphosphorothioate	03-May-94	S		U	ug/L	10	
		15-Oct-98	S		U	ug/L	10	
		15-Oct-98	S	Q	U	ug/L	10	
WEL-04	oo-Diethyl-o-2-pyrazinylphoshorothioate	03-May-94	S		U	ug/L	1	
WEL-04	oCresol	03-May-94	S		U	ug/L	10	
WEL-04	oNitroaniline	03-May-94	S		U	ug/L	50	
WEL-04	oNitrophenol (2-Nitropherol)	03-May-94	S		U	ug/L	10	
WEL-04	oToluidine	03-May-94	S		U	ug/L	10	
WEL-04	p (Dimethylamino)azobenzene	03-May-94	S		U	ug/L	10	
WEL-04	pChloro-m-cresol	03-May-94	S		U	ug/L	10	
WEL-04	pChloroaniline	03-May-94	S		U	ug/L	20	
WEL-04	pNitroaniline	03-May-94	S		U	ug/L	50	
WEL-04	pPhenylenediamine	03-May-94	S		U	ug/L	2000	
WEL-04	Penta CDD	03-May-94	S		U	ug/L	0.005	
WEL-04	Penta CDF	03-May-94	S		U	ug/L	0.005	
WEL-04	Pentachlorobenzene	03-May-94	S		U	ug/L	10	
WEL-04	Pentachloroethane	03-May-94	S		U	ug/L	25	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
WEL-04	Pentachloronitrobenzene	03-May-94	S		U	ug/L	10	
WEL-04	Pentachlorophenol	03-May-94	S		U	ug/L	50	
		15-Oct-98	S		U	ug/L	1	
		15-Oct-98	S	Q	U	ug/L	1	
WEL-04	Phenacetin	03-May-94	S		U	ug/L	10	
WEL-04	Phenanthrene	03-May-94	S		U	ug/L	10	
WEL-04	Phenol	03-May-94	S		U	ug/L	10	
		15-Oct-98	S		U	ug/L	10	
		15-Oct-98	S	Q	U	ug/L	10	
WEL-04	Phorate	03-May-94	S		U	ug/L	1	
WEL-04	Pronamide	03-May-94	S		U	ug/L	10	
WEL-04	Propionitrile	03-May-94	S		U	ug/L	100	
WEL-04	Pyrene	03-May-94	S		U	ug/L	10	
WEL-04	Pyridine	03-May-94	S		U	ug/L	200	
WEL-04	Redox	10-Nov-98			130	mV		
WEL-04	Safrole	03-May-94	S		U	ug/L	10	
WEL-04	Selenium	03-May-94	S		U	ug/L	20	
WEL-04	Silver	03-May-94	S		U	ug/L	10	
WEL-04	Styrene	03-May-94	S		U	ug/L	5	
WEL-04	Sulfide	03-May-94	S		U	ug/L	400	
WEL-04	Tetra CDD	03-May-94	S		U	ug/L	0.005	
WEL-04	Tetra CDF	03-May-94	S		U	ug/L	0.005	
WEL-04	Tetraethyldithiopyrophosphate (Sulfotepp)	03-May-94	S		U	ug/L	0.5	
		15-Oct-98	S		U	mg/L	0.0005	
		15-Oct-98	S	Q	U	mg/L	0.0005	
WEL-04	Thallium	03-May-94	S		U	ug/L	10	
WEL-04	Tin	03-May-94	S		U	ug/L	50	
WEL-04	Toluene	03-May-94	S		U	ug/L	5	
WEL-04	Total Cyanide	03-May-94	S		U	ug/L	10	
WEL-04	Total PCBs	15-Oct-98	S		U	ug/L	1	
		15-Oct-98	S	F	U	ug/L	1	
		15-Oct-98	S	Q	U	ug/L	1	
		15-Oct-98	S	Q F	U	ug/L	1	

Location	Parameter	Date Samp	Lab	C or F?		Result	Unit	PQL	Desc	Qual
WEL-04	Toxaphene	03-May-94	S			U	ug/L	5		
WEL-04	trans-1,2-Dichloroethene	03-May-94	S			U	ug/L	5		
WEL-04	trans-1,3-Dichloropropene	03-May-94	S			U	ug/L	5		
WEL-04	trans-1,4-Dichloro-2-butene	03-May-94	S			U	ug/L	10		
WEL-04	Trichloroethene	03-May-94	S			U	ug/L	5		
WEL-04	Trichlorofluoromethane	03-May-94	S			U	ug/L	5		
WEL-04	Vanadium	03-May-94	S			400	ug/L	10		
		15-Oct-98	S			0.027	mg/L	0.01		
		15-Oct-98	S		F	U	mg/L	0.01		
		15-Oct-98	S	0		U	mg/L	0.01		
		15-Oct-98	S	0	F	U	mg/L	0.01		
WEL-04	Vinyl acetate	03-May-94	S			U	ug/L	10		
WEL-04	Vinyl chloride	03-May-94	S			U	ug/L	10		
WEL-04	Xylenes	03-May-94	S			U	ug/L	5		
WEL-04	Zinc	03-May-94	S			820	ug/L	20		

TABLE L-2
Historic Chemistry Data
(Parathion and 4-Nitrophenol only)

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
BR-01	4-Nitrophenol (Paanitrophenol)				U	ug/L	3.7		Y
BR-01	Parathion				U	ug/L	1.1		
BR-03	4-Nitrophenol (Paanitrophenol)				U	ug/L	3.7		Y
BR-03	Parathion				U	ug/L	1.1		
CB-85	4-Nitrophenol (Paanitrophenol)	28-Jul-98	S		U	ug/L	50		
CB-85	Parathion	28-Jul-98	S		U	ug/L	1		
DOP-01	4-Nitrophenol (Paanitrophenol)				U	ug/L	4		
DOP-01	Parathion				U	ug/L	0.6		
DSN-004	4-Nitrophenol (Paranitrophenol)	05-Jun-98	S		U	ug/L	10		
		05-Jun-98	S		U	ug/L	50		
DSN-004	Parathion	05-Jun-98	S		U	ug/L	1		
DSN-005	4-Nitrophenol (Paranitrophenol)	05-Jun-98	S		U	ug/L	50		
DSN-005	Parathion	05-Jun-98	S		U	ug/L	1		
DW-01	4-Nitrophenol (Paranitrophenol)				4,000	ug/L	4		
					1,200	ug/L	4		
DW-01	Parathion				1,300	ug/L	0.6		
					220,000	ug/L	0.6		
IW-01	4-Nitrophenol (Paranitrophenol)	01-Jan-87			U	ug/L	3.7		
		01-Feb-87			U	ug/L	3.7		
		01-Mar-87			U	ug/L	3.7		
		01-Apr-87			U	ug/L	3.7		
		01-May-87			U	ug/L	3.7		
		01-Jun-87			U	ug/L	3.7		
		01-Jul-87			U	ug/L	3.7		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
IW-01	4-Nitrophenol (Paranitrophenol)	01-Aug-87			U	ug/L	3.7		
		01-Sep-87			U	ug/L	3.7		
		01-Oct-87			U	ug/L	3.7		
		01-Dec-87			U	ug/L	37		
		01-Jan-88			U	ug/L	3.7		
		01-Feb-88			U	ug/L	3.7		
		01-Mar-88			U	ug/L	3.7		
		01-Apr-88			14	ug/L	3.7		
		01-May-88			76	ug/L	3.7		
		01-Jun-88			U	ug/L	3.7		
		01-Jul-88			U	ug/L	3.7		
		01-Aug-88			U	ug/L	3.7		
		01-Sep-88			U	ug/L	3.7		
		01-Oct-88			U	ug/L	3.7		
		01-Nov-88			93	ug/L	3.7		
		01-Dec-88			U	ug/L	3.7		
		01-Jan-89			U	ug/L	3.7		
		01-Feb-89			U	ug/L	3.7		
		01-Mar-89			U	ug/L	3.7		
		01-Apr-89			U	ug/L	3.7		
		01-May-89			U	ug/L	3.7		
		01-Jun-89			U	ug/L	3.7		
		01-Jul-89			U	ug/L	3.7		
		01-Aug-89			U	ug/L	3.7		
		01-Sep-89			U	ug/L	3.7		
		01-Oct-89			U	ug/L	3.7		
		01-Nov-89			U	ug/L	3.7		
		01-Dec-89			U	ug/L	3.7		
		01-Jan-90			U	ug/L	3.7		
		01-Feb-90			U	ug/L	3.7		
		01-Mar-90			U	ug/L	3.7		
		01-Apr-90			U	ug/L	3.7		
		01-May-90			U	ug/L	3.7		
		01-Jun-90			U	ug/L	3.7		
		01-Jul-90			U	ug/L	3.7		
		01-Aug-90			U	ug/L	3.7		
		01-Sep-90			U	ug/L	3.7		
		01-Oct-90			U	ug/L	3.7		
		01-Nov-90			U	ug/L	3.7		
		01-Dec-90			U	ug/L	3.7		
		01-Jan-91			U	ug/L	3.7		
		01-Feb-91			U	ug/L	3.7		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
IW-01	4-Nitrophenol (Paranitrophenol)	01-Oct-91			U	ug/L	3.7		
		01-Mar-92			U	ug/L	3.7		
		01-Sep-92			U	ug/L	3.7		
		01-Mar-93			U	ug/L	3.7		
		01-Sep-93			U	ug/L	3.7		
		01-Mar-94			U	ug/L	3.7		
		01-Sep-94			U	ug/L	3.7		
		01-Mar-95			U	ug/L	3.7		
		01-Sep-95			U	ug/L	3.7		
		01-Mar-96			U	ug/L	3.7		
IW-01	Parathion	01-Jan-87			U	ug/L	1.1		
		01-Feb-87			U	ug/L	1.1		
		01-Mar-87			U	ug/L	1.1		
		01-Apr-87			U	ug/L	1.1		
		01-May-87			U	ug/L	1.1		
		01-Jun-87			U	ug/L	1.1		
		01-Jul-87			1.7	ug/L	1.1		
		01-Aug-87			1.7	ug/L	1.1		
		01-Sep-87			U	ug/L	1.1		
		01-Oct-87			U	ug/L	1.1		
		01-Dec-87			U	ug/L	74		
		01-Jan-88			U	ug/L	1.1		
		01-Feb-88			2.5	ug/L	1.1		
		01-Mar-88			U	ug/L	1.1		
		01-Apr-88			U	ug/L	1.1		
		01-May-88			U	ug/L	1.1		
		01-Jun-88			U	ug/L	1.1		
		01-Jul-88			U	ug/L	1.1		
		01-Aug-88			U	ug/L	1.1		
		01-Sep-88			U	ug/L	1.1		
		01-Oct-88			U	ug/L	1.1		
		01-Nov-88			U	ug/L	1.1		
		01-Dec-88			U	ug/L	1.1		
		01-Jan-89			U	ug/L	1.1		
		01-Feb-89			U	ug/L	1.1		
		01-Mar-89			U	ug/L	1.1		
		01-Apr-89			U	ug/L	1.1		
		01-May-89			U	ug/L	1.1		
		01-Jun-89			U	ug/L	1.1		
		01-Jul-89			21	ug/L	1.1		
		01-Aug-89			1.5	ug/L	1.1		
		01-Sep-89			U	ug/L	1.1		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
IW-01	Parathion	01-Oct-89			U	ug/L	1.1		
		01-Nov-89			U	ug/L	1.1		
		01-Dec-89			U	ug/L	1.1		
		01-Jan-90			U	ug/L	1.1		
		01-Feb-90			U	ug/L	1.1		
		01-Mar-90			U	ug/L	1.1		
		01-Apr-90			U	ug/L	1.1		
		01-May-90			U	ug/L	1.1		
		01-Jun-90			U	ug/L	1.1		
		01-Jul-90			U	ug/L	1.1		
		01-Aug-90			U	ug/L	1.1		
		01-Sep-90			U	ug/L	1.1		
		01-Oct-90			U	ug/L	1.1		
		01-Nov-90			U	ug/L	1.1		
		01-Dec-90			U	ug/L	1.1		
		01-Jan-91			U	ug/L	1.1		
		01-Feb-91			U	ug/L	1.1		
		01-Oct-91			U	ug/L	1.1		
		01-Mar-92			U	ug/L	1.1		
		01-Sep-92			U	ug/L	1.1		
		01-Mar-93			U	ug/L	1.1		
		01-Sep-93			U	ug/L	1.1		
		01-Mar-94			U	ug/L	1.1		
		01-Sep-94			U	ug/L	1.1		
		01-Mar-95			U	ug/L	1.1		
		01-Sep-95			U	ug/L	1.1		
		01-Mar-96			U	ug/L	1.1		
IW-02	4-Nitrophenol (Paranitrophenol)	01-Jan-87			U	ug/L	3.7		
		01-Feb-87			U	ug/L	3.7		
		01-Mar-87			U	ug/L	3.7		
		01-Apr-87			U	ug/L	3.7		
		01-May-87			U	ug/L	3.7		
		01-Jun-87			U	ug/L	3.7		
		01-Jul-87			U	ug/L	3.7		
		01-Aug-87			U	ug/L	3.7		
		01-Sep-87			U	ug/L	3.7		
		01-Oct-87			U	ug/L	3.7		
		01-Dec-87			U	ug/L	37		
		01-Jan-88			U	ug/L	3.7		
		01-Feb-88			U	ug/L	3.7		
		01-Mar-88			U	ug/L	3.7		
		01-Apr-88			17	ug/L	3.7		

Location	Parameter	Date Samp	Lab	Qor F?	Result	Unit	PQL	Desc	Qual
IW-02	4-Nitrophenol (Paranitrophenol)	01-May-88			200	ug/L	3.7		
		01-Jun-88			U	ug/L	3.7		
		01-Jul-88			U	ug/L	3.7		
		01-Aug-88			U	ug/L	3.7		
		01-Sep-88			U	ug/L	3.7		
		01-Oct-88			U	ug/L	3.7		
		01-Nov-88			4.0	ug/L	3.7		
		01-Dec-88			U	ug/L	3.7		
		01-Jan-89			U	ug/L	3.7		
		01-Feb-89			U	ug/L	3.7		
		01-Mar-89			U	ug/L	3.7		
		01-Apr-89			U	ug/L	3.7		
		01-May-89			U	ug/L	3.7		
		01-Jun-89			U	ug/L	3.7		
		01-Jul-89			U	ug/L	3.7		
		01-Aug-89			U	ug/L	3.7		
		01-Sep-89			U	ug/L	3.7		
		01-Oct-89			U	ug/L	3.7		
		01-Nov-89			U	ug/L	3.7		
		01-Dec-89			U	ug/L	3.7		
		01-Jan-90			U	ug/L	3.7		
		01-Feb-90			U	ug/L	3.7		
		01-Mar-90			U	ug/L	3.7		
		01-Apr-90			U	ug/L	3.7		
		01-May-90			U	ug/L	3.7		
		01-Jun-90			U	ug/L	3.7		
		01-Jul-90			U	ug/L	3.7		
		01-Aug-90			U	ug/L	3.7		
		01-Sep-90			U	ug/L	3.7		
		01-Oct-90			U	ug/L	3.7		
		01-Nov-90			U	ug/L	3.7		
		01-Dec-90			U	ug/L	3.7		
		01-Jan-91			U	ug/L	3.7		
		01-Feb-91			40	ug/L	3.7		
		01-Oct-91			U	ug/L	3.7		
		01-Mar-92			U	ug/L	3.7		
		01-Sep-92			U	ug/L	3.7		
		01-Mar-93			6.7	ug/L	3.7		
		01-Sep-93			U	ug/L	3.7		
		01-Mar-94			U	ug/L	3.7		
		01-Sep-94			U	ug/L	3.7		
		01-Mar-95			U	ug/L	3.7		

Locaton	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
IW-02	4-Nitrophenol (Paranitrophenol)	01-Sep-95			U	ug/L	3.7		
		01-Mar-96			4.1	ug/L	3.7		
		13-Sep-96	S		U	ug/L	3.7		
IW-02	Parathion	01-Jan-87			U	ug/L	1.1		
		01-Feb-87			U	ug/L	1.1		
		01-Mar-87			U	ug/L	1.1		
		01-Apr-87			U	ug/L	1.1		
		01-May-87			U	ug/L	1.1		
		01-Jun-87			U	ug/L	1.1		
		01-Jul-87			1.1	ug/L	1.1		
		01-Aug-87			U	ug/L	1.1		
		01-Sep-87			U	ug/L	1.1		
		01-Oct-87			1.1	ug/L	1.1		
		01-Dec-87			U	ug/L	7.4		
		01-Jan-88			U	ug/L	1.1		
		01-Feb-88			U	ug/L	1.1		
		01-Mar-88			U	ug/L	1.1		
		01-Apr-88			U	ug/L	1.1		
		01-May-88			U	ug/L	1.1		
		01-Jun-88			U	ug/L	1.1		
		01-Jul-88			U	ug/L	1.1		
		01-Aug-88			U	ug/L	1.1		
		01-Sep-88			U	ug/L	1.1		
		01-Oct-88			U	ug/L	1.1		
		01-Nov-88			U	ug/L	1.1		
		01-Dec-88			U	ug/L	1.1		
		01-Jan-89			U	ug/L	1.1		
		01-Feb-89			U	ug/L	1.1		
		01-Mar-89			U	ug/L	1.1		
		01-Apr-89			U	ug/L	1.1		
		01-May-89			U	ug/L	1.1		
		01-Jun-89			U	ug/L	1.1		
		01-Jul-89			25	ug/L	1.1		
		01-Aug-89			2.1	ug/L	1.1		
		01-Sep-89			U	ug/L	1.1		
		01-Oct-89			U	ug/L	1.1		
		01-Nov-89			U	ug/L	1.1		
		01-Dec-89			U	ug/L	1.1		
		01-Jan-90			U	ug/L	1.1		
		01-Feb-90			1.5	ug/L	1.1		
		01-Mar-90			3.9	ug/L	1.1		
		01-Apr-90			U	ug/L	1.1		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
IW-02	Parathion	01-May-90			U	ug/L	1.1		
		01-Jun-90			U	ug/L	1.1		
		01-Jul-90			U	ug/L	1.1		
		01-Aug-90			U	ug/L	1.1		
		01-Sep-90			U	ug/L	1.1		
		01-Oct-90			U	ug/L	1.1		
		01-Nov-90			U	ug/L	1.1		
		01-Dec-90			U	ug/L	1.1		
		01-Jan-91			U	ug/L	1.1		
		01-Feb-91			U	ug/L	1.1		
		01-Oct-91			U	ug/L	1.1		
		01-Mar-92			U	ug/L	1.1		
		01-Sep-92			U	ug/L	1.1		
		01-Mar-93			U	ug/L	1.1		
		01-Sep-93			U	ug/L	1.1		
		01-Mar-94			U	ug/L	1.1		
		01-Sep-94			U	ug/L	1.1		
		01-Mar-95			U	ug/L	1.1		
		01-Sep-95			U	ug/L	1.1		
		01-Mar-96			1.1	ug/L	1.1		
		13-Sep-96	S		U	ug/L	1		
IW-03	4-Nitrophenol (Paanitrophenol)	01-Jan-87			U	ug/L	3.7		
		01-Feb-87			U	ug/L	3.7		
		01-Mar-87			U	ug/L	3.7		
		01-Apr-87			U	ug/L	3.7		
		01-May-87			U	ug/L	3.7		
		01-Jun-87			U	ug/L	3.7		
		01-Jul-87			U	ug/L	3.7		
		01-Aug-87			U	ug/L	3.7		
		01-Sep-87			U	ug/L	3.7		
		01-Oct-87			U	ug/L	3.7		
		01-Dec-87			U	ug/L	37		
		01-Jan-88			U	ug/L	3.7		
		01-Feb-88			5.7	ug/L	3.7		
		01-Mar-88			U	ug/L	3.7		
		01-Apr-88			16	ug/L	3.7		
		01-May-88			67	ug/L	3.7		
		01-Jun-88			U	ug/L	3.7		
		01-Jul-88			U	ug/L	3.7		
		01-Aug-88			U	ug/L	3.7		
		01-Sep-88			U	ug/L	3.7		
		01-Oct-88			5.5	ug/L	3.7		

See Table L-3 for Abbreviations and Qualifiers.

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
IW-03	4-Nitrophenol (Paranitrophenol)	01-Nov-88			5.8	ug/L	3.7		
		01-Dec-88			U	ug/L	3.7		
		01-Jan-89			U	ug/L	3.7		
		01-Feb-89			U	ug/L	3.7		
		01-Mar-89			U	ug/L	3.7		
		01-Apr-89			4.6	ug/L	3.7		
		01-May-89			U	ug/L	3.7		
		01-Jun-89			U	ug/L	3.7		
		01-Jul-89			U	ug/L	3.7		
		01-Aug-89			3.9	ug/L	3.7		
		01-Sep-89			U	ug/L	3.7		
		01-Oct-89			U	ug/L	3.7		
		01-Nov-89			U	ug/L	3.7		
		01-Dec-89			U	ug/L	3.7		
		01-Jan-90			U	ug/L	3.7		
		01-Feb-90			U	ug/L	3.7		
		01-Mar-90			U	ug/L	3.7		
		01-Apr-90			U	ug/L	3.7		
		01-May-90			U	ug/L	3.7		
		01-Jun-90			4.1	ug/L	3.7		
		01-Jul-90			U	ug/L	3.7		
		01-Aug-90			U	ug/L	3.7		
		01-Sep-90			U	ug/L	3.7		
		01-Oct-90			U	ug/L	3.7		
		01-Nov-90			U	ug/L	3.7		
		01-Dec-90			U	ug/L	3.7		
		01-Jan-91			U	ug/L	3.7		
		01-Feb-91			U	ug/L	3.7		
		01-Oct-91			U	ug/L	3.7		
		01-Mar-92			U	ug/L	3.7		
		01-Sep-92			U	ug/L	3.7		
		01-Mar-93			U	ug/L	3.7		
		01-Sep-93			U	ug/L	3.7		
		01-Mar-94			U	ug/L	3.7		
		01-Sep-94			U	ug/L	3.7		
		01-Mar-95			U	ug/L	3.7		
		01-Sep-95			U	ug/L	3.7		
		01-Mar-96			U	ug/L	3.7		
		13-Sep-96	S		U	ug/L	3.7		
IW-03	Parathion	01-Jan-87			U	ug/L	1.1		
		01-Feb-87			U	ug/L	1.1		
		01-Mar-87			U	ug/L	1.1		

See Table L-3 for Abbreviations andQualifiers.

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
IW-03	Parathion	01-Apr-87			2.6	ug/L	1.1		
		01-May-87			1.7	ug/L	1.1		
		01-Jun-87			U	ug/L	1.1		
		01-Jul-87			1.3	ug/L	1.1		
		01-Aug-87			1.4	ug/L	1.1		
		01-Sep-87			U	ug/L	1.1		
		01-Oct-87			U	ug/L	1.1		
		01-Dec-87			U	ug/L	74		
		01-Jan-88			U	ug/L	1.1		
		01-Feb-88			U	ug/L	1.1		
		01-Mar-88			U	ug/L	1.1		
		01-Apr-88			U	ug/L	1.1		
		01-May-88			U	ug/L	1.1		
		01-Jun-88			U	ug/L	1.1		
		01-Jul-88			U	ug/L	1.1		
		01-Aug-88			U	ug/L	1.1		
		01-Sep-88			U	ug/L	1.1		
		01-Oct-88			U	ug/L	1.1		
		01-Nov-88			U	ug/L	7.4		
		01-Dec-88			U	ug/L	1.1		
		01-Jan-89			U	ug/L	1.1		
		01-Feb-89			U	ug/L	1.1		
		01-Mar-89			U	ug/L	1.1		
		01-Apr-89			U	ug/L	1.1		
		01-May-89			U	ug/L	1.1		
		01-Jun-89			U	ug/L	1.1		
		01-Jul-89			29	ug/L	1.1		
		01-Aug-89			2.0	ug/L	1.1		
		01-Sep-89			U	ug/L	1.1		
		01-Oct-89			U	ug/L	1.1		
		01-Nov-89			U	ug/L	1.1		
		01-Dec-89			U	ug/L	1.1		
		01-Jan-90			U	ug/L	1.1		
		01-Feb-90			U	ug/L	1.1		
		01-Mar-90			U	ug/L	1.1		
		01-Apr-90			U	ug/L	1.1		
		01-May-90			U	ug/L	1.1		
		01-Jun-90			U	ug/L	1.1		
		01-Jul-90			U	ug/L	1.1		
		01-Aug-90			U	ug/L	1.1		
		01-Sep-90			U	ug/L	1.1		
		01-Oct-90			U	ug/L	1.1		
		01-Nov-90			U	ug/L	1.1		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
IW-03	Parathion	01-Dec-90			U	ug/L	1.1		
		01-Jan-91			U	ug/L	1.1		
		01-Feb-91			U	ug/L	1.1		
		01-Oct-91			U	ug/L	1.1		
		01-Mar-92			U	ug/L	1.1		
		01-Sep-92			U	ug/L	1.1		
		01-Mar-93			U	ug/L	1.1		
		01-Sep-93			U	ug/L	1.1		
		01-Mar-94			U	ug/L	1.1		
		01-Sep-94			U	ug/L	1.1		
		01-Mar-95			U	ug/L	1.1		
		01-Sep-95			U	ug/L	1.1		
		01-Mar-96			U	ug/L	1.1		
		13-Sep-96		S	U	ug/L	1		
IW-04	4-Nitrophenol (Paranitrophenol)	01-Jan-87			U	ug/L	3.7		
		01-Feb-87			U	ug/L	3.7		
		01-Mar-87			U	ug/L	3.7		
		01-Apr-87			U	ug/L	3.7		
		01-May-87			U	ug/L	3.7		
		01-Jun-87			U	ug/L	3.7		
		01-Jul-87			U	ug/L	3.7		
		01-Aug-87			U	ug/L	3.7		
		01-Sep-87			U	ug/L	3.7		
		01-Oct-87			U	ug/L	3.7		
		01-Jan-88			U	ug/L	3.7		
		01-Feb-88			7.2	ug/L	3.7		
		01-Mar-88			U	ug/L	3.7		
		01-Apr-88			20	ug/L	3.7		
		01-May-88			74	ug/L	3.7		
		01-Jun-88			U	ug/L	3.7		
		01-Jul-88			U	ug/L	3.7		
		01-Aug-88			U	ug/L	3.7		
		01-Sep-88			U	ug/L	3.7		
		01-Oct-88			4.4	ug/L	3.7		
		01-Nov-88			23	ug/L	3.7		
		01-Dec-88			U	ug/L	3.7		
		01-Jan-89			U	ug/L	3.7		
		01-Feb-89			U	ug/L	3.7		
		01-Mar-89			U	ug/L	3.7		
		01-Apr-89			6.0	ug/L	3.7		
		01-May-89			970	ug/L	3.7		
		01-Jun-89			U	ug/L	3.7		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
IW-04	4-Nitrophenol (Paranitrophenol)	01-Jul-89			54	ug/L	3.7		
		01-Aug-89			6.6	ug/L	3.7		
		01-Sep-89			U	ug/L	3.7		
		01-Oct-89			U	ug/L	3.7		
		01-Nov-89			U	ug/L	3.7		
		01-Dec-89			U	ug/L	3.7		
		01-Jan-90			U	ug/L	3.7		
		01-Feb-90			U	ug/L	3.7		
		01-Mar-90			U	ug/L	3.7		
		01-Apr-90			U	ug/L	3.7		
		01-May-90			U	ug/L	3.7		
		01-Jun-90			100	ug/L	3.7		
		01-Jul-90			U	ug/L	3.7		
		01-Aug-90			U	ug/L	3.7		
		01-Sep-90			U	ug/L	3.7		
		01-Oct-90			U	ug/L	3.7		
		01-Nov-90			U	ug/L	3.7		
		01-Dec-90			U	ug/L	3.7		
		01-Jan-91			U	ug/L	3.7		
		01-Feb-91			U	ug/L	3.7		
		01-Oct-91			U	ug/L	3.7		
		01-Mar-92			U	ug/L	3.7		
		01-Sep-92			6.9	ug/L	3.7		
		01-Mar-93			U	ug/L	3.7		
		01-Sep-93			U	ug/L	3.7		
		01-Mar-94			U	ug/L	3.7		
		01-Sep-94			U	ug/L	3.7		
		01-Mar-95			U	ug/L	3.7		
		01-Sep-95			U	ug/L	3.7		
		01-Mar-96			U	ug/L	3.7		
		13-Sep-96	S		U	ug/L	3.7		
IW-04	Parathion	01-Jan-87			U	ug/L	1.1		
		01-Feb-87			U	ug/L	1.1		
		01-Mar-87			U	ug/L	1.1		
		01-Apr-87			U	ug/L	1.1		
		01-May-87			U	ug/L	1.1		
		01-Jun-87			U	ug/L	1.1		
		01-Jul-87			U	ug/L	1.1		
		01-Aug-87			U	ug/L	1.1		
		01-Sep-87			U	ug/L	1.1		
		01-Oct-87			U	ug/L	1.1		
		01-Nov-87			1.8	ug/L	1.1		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
IW-04	Parathion	01-Dec-87			U	ug/L	1.1		
		01-Jan-88			U	ug/L	1.1		
		01-Feb-88			U	ug/L	1.1		
		01-Mar-88			U	ug/L	1.1		
		01-Apr-88			U	ug/L	1.1		
		01-May-88			U	ug/L	1.1		
		01-Jun-88			U	ug/L	1.1		
		01-Jul-88			U	ug/L	1.1		
		01-Aug-88			U	ug/L	1.1		
		01-Sep-88			U	ug/L	1.1		
		01-Oct-88			U	ug/L	1.1		
		01-Nov-88			U	ug/L	1.1		
		01-Dec-88			U	ug/L	1.1		
		01-Jan-89			U	ug/L	1.1		
		01-Feb-89			U	ug/L	1.1		
		01-Mar-89			U	ug/L	1.1		
		01-Apr-89			U	ug/L	1.1		
		01-May-89			2.9	ug/L	1.1		
		01-Jun-89			1.6	ug/L	1.1		
		01-Jul-89			20	ug/L	1.1		
		01-Aug-89			1.5	ug/L	1.1		
		01-Sep-89			U	ug/L	1.1		
		01-Oct-89			U	ug/L	1.1		
		01-Nov-89			U	ug/L	1.1		
		01-Dec-89			U	ug/L	1.1		
		01-Jan-90			U	ug/L	1.1		
		01-Feb-90			U	ug/L	1.1		
		01-Mar-90			U	ug/L	1.1		
		01-Apr-90			26	ug/L	1.1		
		01-May-90			5.0	ug/L	1.1		
		01-Jun-90			U	ug/L	1.1		
		01-Jul-90			U	ug/L	1.1		
		01-Aug-90			U	ug/L	1.1		
		01-Sep-90			U	ug/L	1.1		
		01-Oct-90			U	ug/L	1.1		
		01-Nov-90			U	ug/L	1.1		
		01-Dec-90			U	ug/L	1.1		
		01-Jan-91			U	ug/L	1.1		
		01-Feb-91			U	ug/L	1.1		
		01-Oct-91			U	ug/L	1.1		
		01-Mar-92			U	ug/L	1.1		
		01-Sep-92			U	ug/L	1.1		
		01-Mar-93			U	ug/L	1.1		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
IW-04	Parathion	01-Sep-93			U	ug/L	1.1	
		01-Mar-94			U	ug/L	1.1	
		01-Sep-94			U	ug/L	1.1	
		01-Mar-95			U	ug/L	1.1	
		01-Sep-95			U	ug/L	1.1	
		01-Mar-96			U	ug/L	1.1	
		13-Sep-96	S		U	ug/L	1	
IW-05	4-Nitrophenol (Paranitrophenol)	01-Jan-87			U	ug/L	3.7	
		01-Feb-87			U	ug/L	3.7	
		01-Mar-87			U	ug/L	3.7	
		01-Apr-87			U	ug/L	3.7	
		01-May-87			U	ug/L	3.7	
		01-Jun-87			U	ug/L	3.7	
		01-Jul-87			U	ug/L	3.7	
		01-Aug-87			U	ug/L	3.7	
		01-Sep-87			380	ug/L	3.7	
		01-Oct-87			U	ug/L	3.7	
		01-Dec-87			U	ug/L	37	
		01-Jan-88			U	ug/L	3.7	
		01-Feb-88			34	ug/L	3.7	
		01-Mar-88			11	ug/L	3.7	
		01-Apr-88			41	ug/L	3.7	
		01-May-88			1,600	ug/L	3.7	
		01-Jun-88			U	ug/L	3.7	
		01-Jul-88			U	ug/L	3.7	
		01-Aug-88			U	ug/L	3.7	
		01-Sep-88			U	ug/L	3.7	
		01-Oct-88			U	ug/L	3.7	
		01-Nov-88			180	ug/L	3.7	
		01-Dec-88			U	ug/L	3.7	
		01-Jan-89			U	ug/L	3.7	
		01-Feb-89			4.5	ug/L	3.7	
		01-Mar-89			U	ug/L	3.7	
		01-Apr-89			210	ug/L	3.7	
		01-May-89			970	ug/L	3.7	
		01-Jun-89			1,100	ug/L	3.7	
		01-Jul-89			3.6	ug/L	3.7	
		01-Aug-89			15,000	ug/L	3.7	
		01-Sep-89			7,600	ug/L	3.7	
		01-Oct-89			130	ug/L	3.7	
		01-Dec-89			U	ug/L	3.7	
		01-Apr-90			22	ug/L	3.7	

See Table L-3 for Abbreviations and Qualifiers.

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
IW-05	4-Nitrophenol (Paranitrophenol)	01-May-90			26	ug/L	3.7	
		01-Jun-90			14	ug/L	3.7	
		01-Jul-90			12	ug/L	3.7	
		01-Nov-90			4.3	ug/L	3.7	
		01-Dec-90			U	ug/L	3.7	
		01-Jan-91			2,600	ug/L	3.7	
		01-Feb-91			U	ug/L	3.7	
		01-Oct-91			U	ug/L	3.7	
		01-Mar-92			U	ug/L	3.7	
		01-Sep-92			23	ug/L	3.7	
		01-Mar-93			4.2	ug/L	3.7	
		01-Sep-93			23	ug/L	3.7	
		01-Mar-94			12	ug/L	3.7	
		01-Sep-94			18	ug/L	3.7	
		01-Mar-95			33	ug/L	3.7	
		01-Sep-95			7.3	ug/L	3.7	
		01-Mar-96			14	ug/L	3.7	
		13-Sep-96	S		170	ug/L	3.7	
IW-05	Parathion	01-Jan-87			U	ug/L	1.1	
		01-Feb-87			1.1	ug/L	1.1	
		01-Mar-87			U	ug/L	1.1	
		01-Apr-87			4.7	ug/L	1.1	
		01-May-87			U	ug/L	1.1	
		01-Jun-87			U	ug/L	1.1	
		01-Jul-87			1.2	ug/L	1.1	
		01-Aug-87			1.5	ug/L	1.1	
		01-Sep-87			U	ug/L	1.1	
		01-Oct-87			U	ug/L	1.1	
		01-Dec-87			U	ug/L	7.4	
		01-Jan-88			U	ug/L	1.1	
		01-Feb-88			U	ug/L	1.1	
		01-Mar-88			U	ug/L	1.1	
		01-Apr-88			U	ug/L	1.1	
		01-May-88			7.2	ug/L	1.1	
		01-Jun-88			U	ug/L	1.1	
		01-Jul-88			U	ug/L	1.1	
		01-Aug-88			U	ug/L	1.1	
		01-Sep-88			U	ug/L	1.1	
		01-Oct-88			U	ug/L	1.1	
		01-Nov-88			U	ug/L	1.1	
		01-Dec-88			U	ug/L	1.1	
		01-Jan-89			U	ug/L	1.1	

See Table L-3 for Abbreviations and Qualifiers.

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
IW-05	Parathion	01-Feb-89			U	ug/L	1.1		
		01-Mar-89			U	ug/L	1.1		
		01-Apr-89			27	ug/L	1.1		
		01-May-89			2.9	ug/L	1.1		
		01-Jun-89			5.0	ug/L	1.1		
		01-Jul-89			25	ug/L	1.1		
		01-Aug-89			12	ug/L	1.1		
		01-Sep-89			33	ug/L	1.1		
		01-Oct-89			U	ug/L	1.1		
		01-Dec-89			U	ug/L	1.1		
		01-Apr-90			U	ug/L	1.1		
		01-May-90			U	ug/L	1.1		
		01-Jun-90			U	ug/L	1.1		
		01-Jul-90			U	ug/L	1.1		
		01-Nov-90			U	ug/L	1.1		
		01-Dec-90			U	ug/L	1.1		
		01-Jan-91			10	ug/L	1.1		
		01-Feb-91			U	ug/L	1.1		
		01-Oct-91			U	ug/L	1.1		
		01-Mar-92			7.3	ug/L	1.1		
		01-Sep-92			U	ug/L	1.1		
		01-Mar-93			U	ug/L	1.1		
		01-Sep-93			U	ug/L	1.1		
		01-Mar-94			U	ug/L	1.1		
		01-Sep-94			U	ug/L	1.1		
		01-Mar-95			U	ug/L	1.1		
		01-Sep-95			U	ug/L	1.1		
		01-Mar-96			U	ug/L	1.1		
		13-Sep-96	S		U	ug/L	1		
IW-06	4-Nitrophenol (Paranitrophenol)	01-Jan-87			U	ug/L	3.7		
		01-Feb-87			U	ug/L	3.7		
		01-Mar-87			U	ug/L	3.7		
		01-Apr-87			U	ug/L	3.7		
		01-May-87			U	ug/L	3.7		
		01-Jun-87			U	ug/L	3.7		
		01-Jul-87			U	ug/L	3.7		
		01-Aug-87			U	ug/L	3.7		
		01-Sep-87			1,400	ug/L	3.7		
		01-Oct-87			1,100	ug/L	3.7		
		01-Dec-87			940	ug/L	3.7		
		01-Jan-88			1,600	ug/L	3.7		
		01-Feb-88			530	ug/L	3.7		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
IW-06	4-Nitrophenol (Paranitrophenol)	01-Mar-88			520	ug/L	3.7		
		01-Apr-88			9.7	ug/L	3.7		
		01-May-88			1,800	ug/L	3.7		
		01-Jun-88			8.0	ug/L	3.7		
		01-Jul-88			1,200	ug/L	3.7		
		01-Aug-88			610	ug/L	3.7		
		01-Sep-88			510	ug/L	3.7		
		01-Oct-88			690	ug/L	3.7		
		01-Nov-88			220	ug/L	3.7		
		01-Dec-88			1,300	ug/L	3.7		
		01-Jan-89			79	ug/L	3.7		
		01-Feb-89			400	ug/L	3.7		
		01-Mar-89			5.7	ug/L	3.7		
		01-Apr-89			570	ug/L	3.7		
		01-May-89			820	ug/L	3.7		
		01-Jun-89			170	ug/L	3.7		
		01-Jul-89			1,500	ug/L	3.7		
		01-Aug-89			1,100	ug/L	3.7		
		01-Sep-89			1,100	ug/L	3.7		
		01-Oct-89			960	ug/L	3.7		
		01-Nov-89			50	ug/L	3.7		
		01-Dec-89			29	ug/L	3.7		
		01-Jan-90			1,000	ug/L	3.7		
		01-Feb-90			51	ug/L	3.7		
		01-Mar-90			370	ug/L	3.7		
		01-Apr-90			18	ug/L	3.7		
		01-May-90			660	ug/L	3.7		
		01-Jun-90			570	ug/L	3.7		
		01-Jul-90			110	ug/L	3.7		
		01-Aug-90			120	ug/L	3.7		
		01-Sep-90			16,000	ug/L	3.7		
		01-Oct-90			550	ug/L	3.7		
		01-Nov-90			740	ug/L	3.7		
		01-Dec-90			120	ug/L	3.7		
		01-Jan-91			730	ug/L	3.7		
		01-Feb-91			4.6	ug/L	3.7		
		01-Oct-91			1,400	ug/L	3.7		
		01-Mar-92			510	ug/L	3.7		
		01-Sep-92			13,000	ug/L	3.7		
		01-Mar-93			560	ug/L	3.7		
		01-Sep-93			830	ug/L	3.7		
		01-Mar-94			230	ug/L	3.7		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
IW-06	4-Nitrophenol (Paranitrophenol)	01-Sep-94			570	ug/L	3.7		
		01-Mar-95			360	ug/L	3.7		
		01-Sep-95			210	ug/L	3.7		
		01-Mar-96			180	ug/L	3.7		
		13-Sep-96	S		480	ug/L	3.7		
IW-06	Parathion	01-Jan-87			U	ug/L	1.1		
		01-Feb-87			U	ug/L	1.1		
		01-Mar-87			U	ug/L	1.1		
		01-Apr-87			U	ug/L	1.1		
		01-May-87			U	ug/L	1.1		
		01-Jun-87			U	ug/L	1.1		
		01-Jul-87			U	ug/L	1.1		
		01-Aug-87			U	ug/L	1.1		
		01-Sep-87			U	ug/L	1.1		
		01-Oct-87			3.8	ug/L	1.1		
		01-Jan-88			U	ug/L	1.1		
		01-Feb-88			2.7	ug/L	1.1		
		01-Mar-88			2.5	ug/L	1.1		
		01-Apr-88			2.4	ug/L	1.1		
		01-May-88			U	ug/L	1.1		
		01-Jun-88			U	ug/L	1.1		
		01-Jul-88			13	ug/L	1.1		
		01-Aug-88			3.9	ug/L	1.1		
		01-Sep-88			U	ug/L	1.1		
		01-Oct-88			U	ug/L	1.1		
		01-Nov-88			U	ug/L	1.1		
		01-Dec-88			U	ug/L	1.1		
		01-Jan-89			U	ug/L	1.1		
		01-Feb-89			U	ug/L	1.1		
		01-Mar-89			U	ug/L	1.1		
		01-Apr-89			13	ug/L	1.1		
		01-May-89			U	ug/L	1.1		
		01-Jun-89			4.5	ug/L	1.1		
		01-Jul-89			11	ug/L	1.1		
		01-Aug-89			7.8	ug/L	1.1		
		01-Sep-89			1.6	ug/L	1.1		
		01-Oct-89			U	ug/L	1.1		
		01-Nov-89			U	ug/L	1.1		
		01-Dec-89			U	ug/L	1.1		
		01-Jan-90			U	ug/L	1.1		
		01-Feb-90			U	ug/L	1.1		
		01-Mar-90			U	ug/L	1.1		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
IW-06	Parathion	01-Apr-90			1.2	ug/L	1.1		
		01-May-90			1.6	ug/L	1.1		
		01-Jun-90			U	ug/L	1.1		
		01-Jul-90			U	ug/L	1.1		
		01-Aug-90			U	ug/L	1.1		
		01-Sep-90			U	ug/L	1.1		
		01-Oct-90			U	ug/L	1.1		
		01-Nov-90			1.2	ug/L	1.1		
		01-Dec-90			U	ug/L	1.1		
		01-Jan-91			1.5	ug/L	1.1		
		01-Feb-91			U	ug/L	1.1		
		01-Oct-91			U	ug/L	1.1		
		01-Mar-92			U	ug/L	1.1		
		01-Sep-92			U	ug/L	1.1		
		01-Mar-93			U	ug/L	1.1		
		01-Sep-93			U	ug/L	1.1		
		01-Mar-94			U	ug/L	1.1		
		01-Sep-94			U	ug/L	1.1		
		01-Mar-95			U	ug/L	1.1		
		01-Sep-95			U	ug/L	1.1		
		01-Mar-96			U	ug/L	1.1		
		13-Sep-96	S		2.1	ug/L	1		
IW-07	4-Nitrophenol (Paranitrophenol)	01-Jan-88			U	ug/L	3.7		
		01-Feb-88			18	ug/L	3.7		
		01-Mar-88			2,700	ug/L	3.7		
		01-Apr-88			26	ug/L	3.7		
		01-May-88			U	ug/L	3.7		
		01-Jun-88			U	ug/L	3.7		
		01-Jul-88			5.0	ug/L	3.7		
		01-Aug-88			U	ug/L	3.7		
		01-Jan-89			U	ug/L	3.7		
		01-Feb-89			U	ug/L	3.7		
		01-Mar-89			U	ug/L	3.7		
		01-Apr-89			U	ug/L	3.7		
		01-May-89			12	ug/L	3.7		
		01-Jun-89			U	ug/L	3.7		
		01-Jul-89			U	ug/L	3.7		
		01-Aug-89			540	ug/L	3.7		
		01-Sep-89			14	ug/L	3.7		
		01-Oct-89			6.4	ug/L	3.7		
		01-Nov-89			U	ug/L	3.7		
		01-Dec-89			U	ug/L	3.7		

Location	Parameter	Date Samp	Lab	Qor F?	Result	Unit	PQL	Desc	Qual
IW-07	4-Nitrophenol (Paranitrophenol)	01-Jan-90			13,000	ug/L	3.7		
		01-May-90			11,000	ug/L	3.7		
		01-Jun-90			9,600	ug/L	3.7		
		01-Jul-90			170	ug/L	3.7		
		01-Feb-91			12	ug/L	3.7		
		01-Mar-93			4,300	ug/L	3.7		
		01-Mar-94			4,500	ug/L	3.7		
		01-Mar-95			6,300	ug/L	3.7		
		01-Mar-96			850	ug/L	3.7		
IW-07	Parathion	01-Jan-88			8.2	ug/L	1.1		
		01-Feb-88			2.7	ug/L	1.1		
		01-Mar-88			48	ug/L	1.1		
		01-Apr-88			8.1	ug/L	1.1		
		01-May-88			3.5	ug/L	1.1		
		01-Jun-88			U	ug/L	1.1		
		01-Jul-88			45	ug/L	1.1		
		01-Aug-88			U	ug/L	1.1		
		01-Jan-89			U	ug/L	1.1		
		01-Feb-89			U	ug/L	1.1		
		01-Mar-89			82	ug/L	1.1		
		01-Apr-89			240	ug/L	1.1		
		01-May-89			10	ug/L	1.1		
		01-Jun-89			22	ug/L	1.1		
		01-Jul-89			480	ug/L	1.1		
		01-Aug-89			52	ug/L	1.1		
		01-Sep-89			3.3	ug/L	1.1		
		01-Oct-89			U	ug/L	1.1		
		01-Nov-89			U	ug/L	1.1		
		01-Dec-89			3.3	ug/L	1.1		
		01-Jan-90			55	ug/L	1.1		
		01-May-90			27	ug/L	1.1		
		01-Jun-90			U	ug/L	1.1		
		01-Jul-90			1.5	ug/L	1.1		
		01-Feb-91			1.2	ug/L	1.1		
		01-Mar-93			99	ug/L	1.1		
		01-Mar-94			28	ug/L	1.1		
		01-Mar-95			93	ug/L	1.1		
		01-Mar-96			37	ug/L	1.1		
IW-08	4-Nitrophenol (Paranitrophenol)	01-Jan-88			U	ug/L	3.7		
		01-Feb-88			240	ug/L	3.7		

See Table L-3 for Abbreviations and Qualifiers.

Locaton	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
IW-08	4-Nitrophenol (Paranitrophenol)	01-Mar-88			3,500	ug/L	3.7		
		01-Apr-88			U	ug/L	3.7		
		01-May-88			5,500	ug/L	3.7		
		01-Jun-88			78	ug/L	3.7		
		01-Jul-88			39	ug/L	3.7		
		01-Aug-88			U	ug/L	3.7		
		01-Jan-89			1,500	ug/L	3.7		
		01-Feb-89			U	ug/L	3.7		
		01-Mar-89			46,000	ug/L	37		
		01-Apr-89			110,000	ug/L	3.7		
		01-May-89			500,000	ug/L	3.7		
		01-Jun-89			6,900	ug/L	3.7		
		01-Jul-89			19,000	ug/L	3.7		
		01-Aug-89			38,000	ug/L	3.7		
		01-Sep-89			76,000	ug/L	3.7		
		01-Oct-89			4,100	ug/L	3.7		
		01-Nov-89			U	ug/L	3.7		
		01-Dec-89			U	ug/L	3.7		
		01-Jan-90			21,000	ug/L	3.7		
		01-Feb-90			1,300	ug/L	3.7		
		01-Mar-90			24,000	ug/L	3.7		
		01-Apr-90			8,200	ug/L	3.7		
		01-May-90			100,000	ug/L	3.7		
		01-Jun-90			22,000	ug/L	3.7		
		01-Jul-90			540	ug/L	3.7		
		01-Oct-90			430	ug/L	3.7		
		01-Nov-90			U	ug/L	3.7		
		01-Dec-90			120	ug/L	3.7		
		01-Jan-91			U	ug/L	3.7		
		01-Feb-91			500	ug/L	3.7		
		01-Oct-91			U	ug/L	3.7		
		01-Mar-92			25	ug/L	3.7		
		01-Sep-92			1,400	ug/L	3.7		
		01-Mar-93			5,200	ug/L	3.7		
		01-Mar-94			71	ug/L	3.7		
		01-Sep-94			U	ug/L	3.7		
		01-Mar-95			7,700	ug/L	3.7		
		01-Mar-96			810	ug/L	1.1		
		13-Sep-96	S		5.9	ug/L	3.7		
IW-08	Parathion	01-Jan-88			52	ug/L	1.1		
		01-Feb-88			32	ug/L	1.1		
		01-Mar-88			5.3	ug/L	1.1		

See Table L-3 for Abbreviations and Qualifiers.

Location	Parameter	Date Samp	Lab	Qor F?	Result	Unit	PQL	Desc	Qual
IW-08	Parathion	01-Apr-88			5.8	ug/L	1.1		
		01-May-88			17	ug/L	1.1		
		01-Jun-88			8.7	ug/L	1.1		
		01-Jul-88			U	ug/L	1.1		
		01-Aug-88			U	ug/L	1.1		
		01-Jan-89			3.0	ug/L	1.1		
		01-Feb-89			U	ug/L	1.1		
		01-Mar-89			42	ug/L	74		
		01-Apr-89			150	ug/L	1.1		
		01-May-89			3.9	ug/L	1.1		
		01-Jun-89			13	ug/L	1.1		
		01-Jul-89			13	ug/L	1.1		
		01-Aug-89			4.9	ug/L	1.1		
		01-Sep-89			2.3	ug/L	1.1		
		01-Oct-89			U	ug/L	1.1		
		01-Nov-89			U	ug/L	1.1		
		01-Dec-89			U	ug/L	1.1		
		01-Jan-90			29	ug/L	1.1		
		01-Feb-90			3.6	ug/L	1.1		
		01-Mar-90			6.6	ug/L	1.1		
		01-Apr-90			1.4	ug/L	1.1		
		01-May-90			U	ug/L	1.1		
		01-Jun-90			U	ug/L	1.1		
		01-Jul-90			U	ug/L	1.1		
		01-Oct-90			U	ug/L	1.1		
		01-Nov-90			U	ug/L	1.1		
		01-Dec-90			U	ug/L	1.1		
		01-Jan-91			U	ug/L	1.1		
		01-Feb-91			3.9	ug/L	1.1		
		01-Oct-91			U	ug/L	1.1		
		01-Mar-92			1.9	ug/L	1.1		
		01-Sep-92			U	ug/L	1.1		
		01-Mar-93			3.8	ug/L	1.1		
		01-Mar-94			4.7	ug/L	1.1		
		01-Sep-94			U	ug/L	1.1		
		01-Mar-95			3.5	ug/L	1.1		
		01-Mar-96			1.8	ug/L	3.7		
		13-Sep-96	S		U	ug/L	1		
IW-09	4-Nitrophenol (Paranitrophenol)	01-Apr-88			130	ug/L	1.1		
		01-May-88			U	ug/L	1.1		
		01-Jun-88			U	ug/L	1.1		
		01-Mar-89			89	ug/L	3.7		

Locaton	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
IW-09	4-Nitrophenol (Paranitrophenol)	01-Apr-89			83	ug/L	3.7		
		01-May-89			14	ug/L	3.7		
		01-Jun-89			6.1	ug/L	3.7		
		01-Jul-89			50	ug/L	3.7		
		01-Aug-89			32	ug/L	3.7		
		01-Sep-89			15	ug/L	3.7		
		01-Oct-89			14	ug/L	3.7		
		01-Nov-89			U	ug/L	3.7		
		01-Dec-89			U	ug/L	3.7		
		01-Feb-90			120	ug/L	3.7		
		01-Mar-90			76	ug/L	3.7		
		01-Apr-90			100	ug/L	3.7		
		01-May-90			91	ug/L	3.7		
		01-Jun-90			U	ug/L	3.7		
		01-Jul-90			26	ug/L	3.7		
		01-Aug-90			6.7	ug/L	3.7		
		01-Sep-90			6.1	ug/L	3.7		
		01-Oct-90			26	ug/L	3.7		
		01-Nov-90			8.0	ug/L	3.7		
		01-Feb-91			U	ug/L	3.7		
		01-Oct-91			U	ug/L	3.7		
		01-Mar-92			U	ug/L	3.7		
		01-Sep-92			26	ug/L	3.7		
		01-Mar-93			95	ug/L	3.7		
		01-Sep-93			12	ug/L	3.7		
		01-Mar-94			U	ug/L	3.7		
		01-Sep-94			49	ug/L	3.7		
		01-Mar-95			26	ug/L	3.7		
		01-Mar-96			20	ug/L	3.7		
		13-Sep-96	S		U	ug/L	3.7		
IW-09	Parathion	01-Apr-88			1.7	ug/L	3.7		
		01-May-88			U	ug/L	3.7		
		01-Jun-88			U	ug/L	3.7		
		01-Mar-89			U	ug/L	3.7		
		01-Apr-89			170	ug/L	1.1		
		01-May-89			U	ug/L	1.1		
		01-Jun-89			U	ug/L	1.1		
		01-Jul-89			14	ug/L	1.1		
		01-Aug-89			30	ug/L	1.1		
		01-Sep-89			8.2	ug/L	1.1		
		01-Oct-89			U	ug/L	1.1		
		01-Nov-89			U	ug/L	1.1		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
IW-09	Parathion	01-Dec-89			U	ug/L	1.1		
		01-Feb-90			U	ug/L	1.1		
		01-Mar-90			U	ug/L	1.1		
		01-Apr-90			U	ug/L	1.1		
		01-May-90			U	ug/L	1.1		
		01-Jun-90			U	ug/L	1.1		
		01-Jul-90			U	ug/L	1.1		
		01-Aug-90			U	ug/L	1.1		
		01-Sep-90			U	ug/L	1.1		
		01-Oct-90			U	ug/L	1.1		
		01-Nov-90			1.6	ug/L	1.1		
		01-Feb-91			3.3	ug/L	1.1		
		01-Oct-91			U	ug/L	1.1		
		01-Mar-92			U	ug/L	1.1		
		01-Sep-92			U	ug/L	1.1		
		01-Mar-93			U	ug/L	1.1		
		01-Sep-93			U	ug/L	1.1		
		01-Mar-94			U	ug/L	1.1		
		01-Sep-94			U	ug/L	1.1		
		01-Mar-95			U	ug/L	1.1		
		01-Mar-96			U	ug/L	1.1		
		13-Sep-96	S		U	ug/L	1		
IW-10	4-Nitrophenol (Paranitrophenol)	01-Jan-88			150	ug/L	3.7		
		01-Feb-88			4.0	ug/L	3.7		
		01-Mar-88			U	ug/L	3.7		
		01-Apr-88			97	ug/L	3.7		
		01-May-88			88,000	ug/L	3.7		
		01-Jun-88			U	ug/L	3.7		
		01-Jul-88			31	ug/L	3.7		
		01-Aug-88			5.8	ug/L	3.7		
		01-Sep-88			1,600	ug/L	3.7		
		01-Oct-88			3,700	ug/L	3.7		
		01-Nov-88			1,200	ug/L	3.7		
		01-Dec-88			2,700	ug/L	3.7		
		01-Jan-89			230	ug/L	3.7		
		01-Feb-89			U	ug/L	3.7		
		01-Mar-89			19,000	ug/L	3.7		
		01-Apr-89			30,000	ug/L	3.7		
		01-May-89			35,000	ug/L	3.7		
		01-Jun-89			19,000	ug/L	3.7		
		01-Jul-89			45,000	ug/L	3.7		
		01-Aug-89			56,000	ug/L	3.7		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
IW-10	4-Nitrophenol (Paranitrophenol)	01-Sep-89			13	ug/L	3.7		
		01-Oct-89			35,000	ug/L	3.7		
		01-Nov-89			37	ug/L	3.7		
		01-Dec-89			9,200	ug/L	3.7		
		01-Feb-90			5.5	ug/L	3.7		
		01-Mar-90			8,400	ug/L	3.7		
		01-Apr-90			900	ug/L	3.7		
		01-May-90			14,000	ug/L	3.7		
		01-Jun-90			6,600	ug/L	3.7		
		01-Aug-90			17,000	ug/L	3.7		
		01-Sep-90			1,100,000	ug/L	3.7		
		01-Oct-90			13,000	ug/L	3.7		
		01-Nov-90			17,000	ug/L	3.7		
		01-Dec-90			240	ug/L	3.7		
		01-Jan-91			10,000	ug/L	3.7		
		01-Feb-91			2,800	ug/L	3.7		
		01-Oct-91			9,400	ug/L	3.7		
		01-Mar-92			5,900	ug/L	3.7		
		01-Sep-92			5,700	ug/L	3.7		
		01-Mar-93			3,900	ug/L	3.7		
		01-Sep-93			3,600	ug/L	3.7		
		01-Mar-94			1,900	ug/L	3.7		
		01-Sep-94			3,000	ug/L	3.7		
		01-Mar-95			6,100	ug/L	3.7		
		01-Sep-95			1,400	ug/L	3.7		
		01-Mar-96			770	ug/L	3.7		
		13-Sep-96	$	Q	3,800	ug/L	3.7		
		13-Sep-96	$	Q	4,700	ug/L	3.7		Q
IW-10	Parathion	01-Jan-88			4.2	ug/L	1.1		
		01-Feb-88			7.7	ug/L	1.1		
		01-Mar-88			5.7	ug/L	1.1		
		01-Apr-88			18	ug/L	1.1		
		01-May-88			7.0	ug/L	1.1		
		01-Jun-88			6.6	ug/L	1.1		
		01-Jul-88			1.7	ug/L	1.1		
		01-Aug-88			U	ug/L	1.1		
		01-Sep-88			15	ug/L	1.1		
		01-Oct-88			U	ug/L	1.1		
		01-Nov-88			U	ug/L	1.1		
		01-Dec-88			U	ug/L	1.1		
		01-Jan-89			22	ug/L	1.1		
		01-Feb-89			14	ug/L	1.1		

Location	Parameter	Date Samp	Lab	Qor F?	Result	Unit	PQL	Desc	Qual
IW-10	Parathion	01-Mar-89			250	ug/L	1.1		
		01-Apr-89			490	ug/L	1.1		
		01-May-89			600	ug/L	1.1		
		01-Jun-89			220	ug/L	1.1		
		01-Jul-89			48	ug/L	1.1		
		01-Aug-89			190	ug/L	1.1		
		01-Sep-89			84	ug/L	1.1		
		01-Oct-89			110	ug/L	1.1		
		01-Nov-89			37	ug/L	1.1		
		01-Dec-89			76	ug/L	1.1		
		01-Feb-90			44	ug/L	1.1		
		01-Mar-90			46	ug/L	1.1		
		01-Apr-90			79	ug/L	1.1		
		01-May-90			110	ug/L	1.1		
		01-Jun-90			110	ug/L	1.1		
		01-Aug-90			51	ug/L	1.1		
		01-Sep-90			89	ug/L	1.1		
		01-Oct-90			64	ug/L	1.1		
		01-Nov-90			23	ug/L	1.1		
		01-Dec-90			35	ug/L	1.1		
		01-Jan-91			65	ug/L	1.1		
		01-Feb-91			76	ug/L	1.1		
		01-Oct-91			110	ug/L	1.1		
		01-Mar-92			90	ug/L	1.1		
		01-Sep-92			130	ug/L	1.1		
		01-Mar-93			11	ug/L	1.1		
		01-Sep-93			10	ug/L	1.1		
		01-Mar-94			2.1	ug/L	1.1		
		01-Sep-94			70	ug/L	1.1		
		01-Mar-95			2.9	ug/L	1.1		
		01-Sep-95			54	ug/L	1.1		
		01-Mar-96			7.1	ug/L	1.1		
		13-Sep-96	S	Q	48	ug/L	1		
		13-Sep-96	S	Q	45	ug/L	1	Q	
IW-11	4-Nitrophenol (Paranitrophenol)	01-Jan-88			16	ug/L	3.7		
		01-Feb-88			13	ug/L	3.7		
		01-Mar-88			9.1	ug/L	3.7		
		01-Apr-88			U	ug/L	3.7		
		01-May-88			22,000	ug/L	3.7		
		01-Jun-88			7,800	ug/L	3.7		
		01-Jul-88			95	ug/L	3.7		
		01-Aug-88			U	ug/L	3.7		

Locaton	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
IW-11-	4-Nitrophenol (Paranitrophenol)	01-Sep-88			4.4	ug/L	3.7		
		01-Oct-88			U	ug/L	3.7		
		01-Nov-88			U	ug/L	3.7		
		01-Dec-88			U	ug/L	3.7		
		01-Jan-89			6.8	ug/L	3.7		
		01-Feb-89			93	ug/L	3.7		
		01-Mar-89			26	ug/L	3.7		
		01-Apr-89			19	ug/L	3.7		
		01-May-89			7,000	ug/L	3.7		
		01-Jun-89			12,000	ug/L	3.7		
		01-Jul-89			26,000	ug/L	3.7		
		01-Aug-89			4,900	ug/L	3.7		
		01-Sep-89			20,000	ug/L	3.7		
		01-Oct-89			37,000	ug/L	3.7		
		01-Nov-89			90	ug/L	3.7		
		01-Dec-89			9,500	ug/L	3.7		
		01-Jan-90			15,000	ug/L	3.7		
		01-Feb-90			U	ug/L	3.7		
		01-Mar-90			12,000	ug/L	3.7		
		01-May-90			18,000	ug/L	3.7		
		01-Jun-90			8,200	ug/L	3.7		
		01-Jul-90			31,000	ug/L	3.7		
		01-Aug-90			32,000	ug/L	3.7		
		01-Sep-90			96,000	ug/L	3.7		
		01-Oct-90			34,000	ug/L	3.7		
		01-Nov-90			18,000	ug/L	3.7		
		01-Dec-90			28,000	ug/L	3.7		
		01-Jan-91			90	ug/L	3.7		
		01-Feb-91			9,800	ug/L	3.7		
		01-Oct-91			11,000	ug/L	3.7		
		01-Mar-92			8,800	ug/L	3.7		
		01-Sep-92			8,200	ug/L	3.7		
		01-Mar-93			2,600	ug/L	3.7		
		01-Sep-93			6,600	ug/L	3.7		
		01-Mar-94			2,900	ug/L	3.7		
		01-Sep-94			5,000	ug/L	3.7		
		01-Mar-95			5,000	ug/L	3.7		
		01-Sep-95			2,000	ug/L	3.7		
		01-Mar-96			5,000	ug/L	3.7		
		13-Sep-96	S		4,700	ug/L	3.7		
IW-11	Parathion	01-Jan-88			U	ug/L	1.1		
		01-Feb-88			U	ug/L	1.1		

Location	Parameter	Date Samp	Lab	Qor F?	Result	Unit	PQL	Desc	Qual
IW-11	Parathion	01-Mar-88			2.1	ug/L	1.1		
		01-Apr-88			1.1	ug/L	1.1		
		01-May-88			U	ug/L	1.1		
		01-Jun-88			2.1	ug/L	1.1		
		01-Jul-88			240	ug/L	1.1		
		01-Aug-88			52	ug/L	1.1		
		01-Sep-88			10	ug/L	1.1		
		01-Oct-88			U	ug/L	1.1		
		01-Nov-88			U	ug/L	1.1		
		01-Dec-88			U	ug/L	1.1		
		01-Jan-89			U	ug/L	1.1		
		01-Feb-89			U	ug/L	1.1		
		01-Mar-89			U	ug/L	1.1		
		01-Apr-89			2.4	ug/L	1.1		
		01-May-89			2.8	ug/L	1.1		
		01-Jun-89			U	ug/L	1.1		
		01-Jul-89			5.0	ug/L	1.1		
		01-Aug-89			33	ug/L	1.1		
		01-Sep-89			U	ug/L	1.1		
		01-Oct-89			U	ug/L	1.1		
		01-Nov-89			U	ug/L	1.1		
		01-Dec-89			U	ug/L	1.1		
		01-Jan-90			U	ug/L	1.1		
		01-Feb-90			U	ug/L	1.1		
		01-Mar-90			U	ug/L	1.1		
		01-May-90			1.3	ug/L	1.1		
		01-Jun-90			U	ug/L	1.1		
		01-Jul-90			U	ug/L	1.1		
		01-Aug-90			U	ug/L	1.1		
		01-Sep-90			U	ug/L	1.1		
		01-Oct-90			U	ug/L	1.1		
		01-Nov-90			U	ug/L	1.1		
		01-Dec-90			1.1	ug/L	1.1		
		01-Jan-91			U	ug/L	1.1		
		01-Feb-91			U	ug/L	1.1		
		01-Oct-91			U	ug/L	1.1		
		01-Mar-92			U	ug/L	1.1		
		01-Sep-92			U	ug/L	1.1		
		01-Mar-93			U	ug/L	1.1		
		01-Sep-93			U	ug/L	1.1		
		01-Mar-94			U	ug/L	1.1		
		01-Sep-94			U	ug/L	1.1		
		01-Mar-95			U	ug/L	1.1		

Locaton	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
IW-11	Parathion	01-Sep-95			U	ug/L	1.1		
		01-Mar-96			U	ug/L	1.1		
		13-Sep-96			U	ug/L	1		
IW-12	4-Nitrophenol (Paranitrophenol)	01-Feb-88			U	ug/L	3.7		
		01-Mar-88			U	ug/L	3.7		
		01-Apr-88			41	ug/L	3.7		
		01-May-88			U	ug/L	3.7		
		01-Jun-88			U	ug/L	3.7		
		01-Jul-88			U	ug/L	3.7		
		01-Aug-88			U	ug/L	3.7		
		01-Sep-88			U	ug/L	3.7		
		01-Oct-88			U	ug/L	3.7		
		01-Mar-89			8.0	ug/L	3.7		
		01-Apr-89			8.3	ug/L	3.7		
		01-May-89			31	ug/L	3.7		
		01-Jun-89			27	ug/L	3.7		
		01-Jul-89			22	ug/L	3.7		
		01-Aug-89			200	ug/L	3.7		
		01-Sep-89			310	ug/L	3.7		
		01-Oct-89			58	ug/L	3.7		
		01-Nov-89			U	ug/L	3.7		
		01-Dec-89			U	ug/L	3.7		
		01-Jan-90			77	ug/L	3.7		
		01-Feb-90			U	ug/L	3.7		
		01-Mar-90			U	ug/L	3.7		
		01-Apr-90			U	ug/L	3.7		
		01-May-90			U	ug/L	3.7		
		01-Jun-90			100	ug/L	3.7		
		01-Jul-90			U	ug/L	3.7		
		01-Aug-90			U	ug/L	3.7		
		01-Sep-90			11	ug/L	3.7		
		01-Oct-90			U	ug/L	3.7		
		01-Nov-90			U	ug/L	3.7		
		01-Feb-91			U	ug/L	3.7		
		01-Oct-91			15	ug/L	3.7		
		01-Mar-92			21	ug/L	3.7		
		01-Sep-92			13	ug/L	3.7		
		01-Mar-93			U	ug/L	3.7		
		01-Sep-93			U	ug/L	3.7		
		01-Mar-94			U	ug/L	3.7		
		01-Sep-94			180	ug/L	3.7		
		01-Mar-95			36	ug/L	3.7		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
IW-12	4-Nitrophenol (Paranitrophenol)	01-Sep-95			U	ug/L	3.7		
		01-Mar-96			17	ug/L	3.7		
		13-Sep-96	S		U	ug/L	3.7		
IW-12	Parathion	01-Feb-88			1.3	ug/L	1.1		
		01-Mar-88			U	ug/L	1.1		
		01-Apr-88			4.6	ug/L	1.1		
		01-May-88			2.9	ug/L	1.1		
		01-Jun-88			U	ug/L	1.1		
		01-Jul-88			U	ug/L	1.1		
		01-Aug-88			U	ug/L	1.1		
		01-Sep-88			U	ug/L	1.1		
		01-Oct-88			U	ug/L	1.1		
		01-Mar-89			U	ug/L	7.4		
		01-Apr-89			1.1	ug/L	1.1		
		01-May-89			1.2	ug/L	1.1		
		01-Jun-89			1.5	ug/L	1.1		
		01-Jul-89			3.2	ug/L	1.1		
		01-Aug-89			29	ug/L	1.1		
		01-Sep-89			1.9	ug/L	1.1		
		01-Oct-89			3.9	ug/L	1.1		
		01-Nov-89			U	ug/L	1.1		
		01-Dec-89			U	ug/L	1.1		
		01-Jan-90			U	ug/L	1.1		
		01-Feb-90			U	ug/L	1.1		
		01-Mar-90			U	ug/L	1.1		
		01-Apr-90			U	ug/L	1.1		
		01-May-90			3.4	ug/L	1.1		
		01-Jun-90			U	ug/L	1.1		
		01-Jul-90			U	ug/L	1.1		
		01-Aug-90			U	ug/L	1.1		
		01-Sep-90			U	ug/L	1.1		
		01-Oct-90			U	ug/L	1.1		
		01-Nov-90			2.3	ug/L	1.1		
		01-Feb-91			U	ug/L	1.1		
		01-Oct-91			U	ug/L	1.1		
		01-Mar-92			U	ug/L	1.1		
		01-Sep-92			U	ug/L	1.1		
		01-Mar-93			U	ug/L	1.1		
		01-Sep-93			U	ug/L	1.1		
		01-Mar-94			U	ug/L	1.1		
		01-Sep-94			U	ug/L	1.1		
		01-Mar-95			U	ug/L	1.1		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
IW-12	Parathion	01-Sep-95			U	ug/L	1.1		
		01-Mar-96			U	ug/L	1.1		
		13-Sep-96	S		U	ug/L	1		
IW-13	4-Nitrophenol (Paranitrophenol)	01-Jan-88			U	ug/L	3.7		
		01-Feb-88			U	ug/L	3.7		
		01-Mar-88			5.4	ug/L	3.7		
		01-Apr-88			23	ug/L	3.7		
		01-May-88			U	ug/L	37		
		01-Jun-88			U	ug/L	37		
		01-Jul-88			U	ug/L	37		
		01-Aug-88			U	ug/L	37		
		01-Sep-88			5.5	ug/L	3.7		
		01-Oct-88			U	ug/L	3.7		
		01-Nov-88			8.9	ug/L	3.7		
		01-Dec-88			U	ug/L	3.7		
		01-Jan-89			110	ug/L	3.7		
		01-Feb-89			60	ug/L	3.7		
		01-Mar-89			U	ug/L	3.7		
		01-Apr-89			15	ug/L	3.7		
		01-May-89			16	ug/L	3.7		
		01-Jun-89			14	ug/L	3.7		
		01-Jul-89			200	ug/L	3.7		
		01-Aug-89			22	ug/L	3.7		
		01-Sep-89			46	ug/L	3.7		
		01-Oct-89			29	ug/L	3.7		
		01-Nov-89			6.2	ug/L	3.7		
		01-Dec-89			U	ug/L	3.7		
		01-Jan-90			U	ug/L	3.7		
		01-Feb-90			U	ug/L	3.7		
		01-Mar-90			U	ug/L	3.7		
		01-Apr-90			4.9	ug/L	3.7		
		01-May-90			15	ug/L	3.7		
		01-Jun-90			64	ug/L	3.7		
		01-Jul-90			39	ug/L	3.7		
		01-Aug-90			7.6	ug/L	3.7		
		01-Sep-90			U	ug/L	3.7		
		01-Oct-90			U	ug/L	3.7		
		01-Nov-90			U	ug/L	3.7		
		01-Dec-90			U	ug/L	3.7		
		01-Jan-91			U	ug/L	3.7		
		01-Oct-91			13	ug/L	3.7		
		01-Mar-92			U	ug/L	3.7		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
IW-13	4-Nitrophenol (Paranitrophenol)	01-Sep-92			U	ug/L	3.7		
		01-Mar-93			U	ug/L	3.7		
		01-Sep-93			U	ug/L	3.7		
		01-Mar-94			U	ug/L	3.7		
		01-Sep-94			19	ug/L	3.7		
		01-Mar-95			U	ug/L	3.7		
		01-Sep-95			U	ug/L	3.7		
		01-Mar-96			20	ug/L	3.7		
		13-Sep-96	S		U	ug/L	3.7		
IW-13	Parathion	01-Jan-88			1.9	ug/L	1.1		
		01-Feb-88			U	ug/L	1.1		
		01-Mar-88			U	ug/L	1.1		
		01-Apr-88			2.2	ug/L	1.1		
		01-May-88			U	ug/L	7.4		
		01-Jun-88			U	ug/L	7.4		
		01-Jul-88			U	ug/L	7.4		
		01-Aug-88			U	ug/L	7.4		
		01-Sep-88			U	ug/L	7.4		
		01-Oct-88			U	ug/L	1.1		
		01-Nov-88			U	ug/L	1.1		
		01-Dec-88			U	ug/L	1.1		
		01-Jan-89			1.4	ug/L	1.1		
		01-Feb-89			U	ug/L	1.1		
		01-Mar-89			U	ug/L	1.1		
		01-Apr-89			3.6	ug/L	1.1		
		01-May-89			1.6	ug/L	1.1		
		01-Jun-89			32	ug/L	1.1		
		01-Jul-89			92	ug/L	1.1		
		01-Aug-89			U	ug/L	1.1		
		01-Sep-89			5.2	ug/L	1.1		
		01-Oct-89			2.7	ug/L	1.1		
		01-Nov-89			U	ug/L	1.1		
		01-Dec-89			U	ug/L	1.1		
		01-Jan-90			U	ug/L	1.1		
		01-Feb-90			U	ug/L	1.1		
		01-Mar-90			U	ug/L	1.1		
		01-Apr-90			1.4	ug/L	1.1		
		01-May-90			U	ug/L	1.1		
		01-Jun-90			U	ug/L	1.1		
		01-Jul-90			U	ug/L	1.1		
		01-Aug-90			U	ug/L	1.1		
		01-Sep-90			U	ug/L	1.1		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
IW-13	Parathion	01-Oct-90			U	ug/L	1.1		
		01-Nov-90			U	ug/L	1.1		
		01-Dec-90			U	ug/L	1.1		
		01-Jan-91			U	ug/L	1.1		
		01-Oct-91			U	ug/L	1.1		
		01-Mar-92			U	ug/L	1.1		
		01-Sep-92			U	ug/L	1.1		
		01-Mar-93			U	ug/L	1.1		
		01-Sep-93			U	ug/L	1.1		
		01-Mar-94			U	ug/L	1.1		
		01-Sep-94			U	ug/L	1.1		
		01-Mar-95			U	ug/L	1.1		
		01-Sep-95			U	ug/L	1.1		
		01-Mar-96			U	ug/L	1.1		
		13-Sep-96	S		U	ug/L	1		
IW-14	4-Nitrophenol (Paranitrophenol)	01-Jan-88			U	ug/L	3.7		
		01-Feb-88			36	ug/L	3.7		
		01-Mar-88			U	ug/L	3.7		
		01-Apr-88			48	ug/L	3.7		
		01-May-88			7.0	ug/L	3.7		
		01-Jun-88			16	ug/L	3.7		
		01-Jul-88			6.3	ug/L	3.7		
		01-Aug-88			4.2	ug/L	3.7		
		01-Sep-88			U	ug/L	3.7		
		01-Oct-88			920	ug/L	3.7		
		01-Nov-88			340	ug/L	3.7		
		01-Dec-88			U	ug/L	3.7		
		01-Jan-89			180	ug/L	3.7		
		01-Feb-89			490	ug/L	3.7		
		01-Mar-89			U	ug/L	3.7		
		01-Apr-89			U	ug/L	3.7		
		01-May-89			U	ug/L	3.7		
		01-Jun-89			15	ug/L	3.7		
		01-Jul-89			21	ug/L	3.7		
		01-Aug-89			U	ug/L	3.7		
		01-Sep-89			U	ug/L	3.7		
		01-Oct-89			40	ug/L	3.7		
		01-Nov-89			U	ug/L	3.7		
		01-Dec-89			U	ug/L	3.7		
		01-Jan-90			U	ug/L	3.7		
		01-Feb-90			U	ug/L	3.7		
		01-Mar-90			U	ug/L	3.7		

Location	Parameter	Date Samp	Lab	Qor F?	Result	Unit	PQL	Desc	Qual
IW-14	4-Nitrophenol (Paranitrophenol)	01-Apr-90			10	ug/L	3.7		
		01-May-90			U	ug/L	3.7		
		01-Jun-90			16	ug/L	3.7		
		01-Jul-90			U	ug/L	3.7		
		01-Aug-90			U	ug/L	3.7		
		01-Sep-90			U	ug/L	3.7		
		01-Oct-90			8.4	ug/L	3.7		
		01-Nov-90			5.3	ug/L	3.7		
		01-Dec-90			U	ug/L	3.7		
		01-Jan-91			U	ug/L	3.7		
		01-Feb-91			U	ug/L	3.7		
		01-Oct-91			42	ug/L	3.7		
		01-Mar-92			24	ug/L	3.7		
		01-Sep-92			U	ug/L	3.7		
		01-Mar-93			U	ug/L	3.7		
		01-Sep-93			17	ug/L	3.7		
		01-Mar-94			U	ug/L	3.7		
		01-Sep-94			21	ug/L	3.7		
		01-Mar-95			32	ug/L	3.7		
		01-Sep-95			26	ug/L	3.7		
		01-Mar-96			8.2	ug/L	3.7		
		13-Sep-96	S		U	ug/L	3.7		
IW-14	Parathion	01-Jan-88			U	ug/L	1.1		
		01-Feb-88			36	ug/L	1.1		
		01-Mar-88			15	ug/L	1.1		
		01-Apr-88			23	ug/L	1.1		
		01-May-88			U	ug/L	1.1		
		01-Jun-88			13	ug/L	1.1		
		01-Jul-88			9.3	ug/L	1.1		
		01-Aug-88			12	ug/L	1.1		
		01-Sep-88			12	ug/L	1.1		
		01-Oct-88			9.4	ug/L	1.1		
		01-Nov-88			6.3	ug/L	1.1		
		01-Dec-88			1.8	ug/L	1.1		
		01-Jan-89			5.1	ug/L	1.1		
		01-Feb-89			4.2	ug/L	1.1		
		01-Mar-89			3.4	ug/L	1.1		
		01-Apr-89			37	ug/L	1.1		
		01-May-89			U	ug/L	1.1		
		01-Jun-89			8.7	ug/L	1.1		
		01-Jul-89			11	ug/L	1.1		
		01-Aug-89			2.1	ug/L	1.1		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
IW-14	Parathion	01-Sep-89			13	ug/L	1.1		
		01-Oct-89			U	ug/L	1.1		
		01-Nov-89			1.7	ug/L	1.1		
		01-Dec-89			U	ug/L	1.1		
		01-Jan-90			U	ug/L	1.1		
		01-Feb-90			2.9	ug/L	1.1		
		01-Mar-90			U	ug/L	1.1		
		01-Apr-90			1.3	ug/L	1.1		
		01-May-90			3.6	ug/L	1.1		
		01-Jun-90			1.1	ug/L	1.1		
		01-Jul-90			U	ug/L	1.1		
		01-Aug-90			U	ug/L	1.1		
		01-Sep-90			U	ug/L	1.1		
		01-Oct-90			U	ug/L	1.1		
		01-Nov-90			U	ug/L	1.1		
		01-Dec-90			U	ug/L	1.1		
		01-Jan-91			1.1	ug/L	1.1		
		01-Feb-91			1.1	ug/L	1.1		
		01-Oct-91			U	ug/L	1.1		
		01-Mar-92			U	ug/L	1.1		
		01-Sep-92			U	ug/L	1.1		
		01-Mar-93			U	ug/L	1.1		
		01-Sep-93			U	ug/L	1.1		
		01-Mar-94			1.4	ug/L	1.1		
		01-Sep-94			U	ug/L	1.1		
		01-Mar-95			1.6	ug/L	1.1		
		01-Sep-95			U	ug/L	1.1		
		01-Mar-96			U	ug/L	1.1		
		13-Sep-96	S		U	ug/L	1		
IW-15	4-Nitrophenol (Paranitrophenol)	01-Jan-88			U	ug/L	3.7		
		01-Feb-88			U	ug/L	3.7		
		01-Mar-88			U	ug/L	3.7		
		01-Apr-88			66	ug/L	3.7		
		01-May-88			U	ug/L	3.7		
		01-Jun-88			U	ug/L	3.7		
		01-Jul-88			26	ug/L	3.7		
		01-Aug-88			U	ug/L	3.7		
		01-Sep-88			9.6	ug/L	3.7		
		01-Oct-88			U	ug/L	3.7		
		01-Nov-88			U	ug/L	3.7		
		01-Dec-88			U	ug/L	3.7		
		01-Jan-89			7.3	ug/L	3.7		

Location	Parameter	Date Samp	Lab	Qor F?	Result	Unit	PQL	Desc	Qual
IW-15	4-Nitrophenol (Paranitrophenol)	01-Feb-89			U	ug/L	3.7		
		01-Mar-89			U	ug/L	3.7		
		01-Apr-89			12	ug/L	3.7		
		01-May-89			U	ug/L	3.7		
		01-Jun-89			9.5	ug/L	3.7		
		01-Jul-89			U	ug/L	3.7		
		01-Aug-89			U	ug/L	3.7		
		01-Sep-89			U	ug/L	3.7		
		01-Oct-89			18	ug/L	3.7		
		01-Nov-89			U	ug/L	3.7		
		01-Dec-89			U	ug/L	3.7		
		01-Jan-90			U	ug/L	3.7		
		01-Feb-90			U	ug/L	3.7		
		01-Mar-90			U	ug/L	3.7		
		01-Apr-90			U	ug/L	3.7		
		01-May-90			U	ug/L	3.7		
		01-Jun-90			4.6	ug/L	3.7		
		01-Jul-90			U	ug/L	3.7		
		01-Aug-90			U	ug/L	3.7		
		01-Sep-90			4.2	ug/L	3.7		
		01-Oct-90			U	ug/L	3.7		
		01-Nov-90			U	ug/L	3.7		
		01-Dec-90			U	ug/L	3.7		
		01-Jan-91			U	ug/L	3.7		
		01-Feb-91			U	ug/L	3.7		
		01-Oct-91			4.1	ug/L	3.7		
		01-Mar-92			U	ug/L	3.7		
		01-Sep-92			U	ug/L	3.7		
		01-Mar-93			U	ug/L	3.7		
		01-Sep-93			U	ug/L	3.7		
		01-Mar-94			U	ug/L	3.7		
		01-Sep-94			U	ug/L	3.7		
		01-Mar-95			U	ug/L	3.7		
		01-Sep-95			U	ug/L	3.7		
		01-Mar-96			U	ug/L	3.7		
		13-Sep-96	S		U	ug/L	3.7		
IW-15	Parathion	01-Jan-88			2.5	ug/L	1.1		
		01-Feb-88			2.3	ug/L	1.1		
		01-Mar-88			3.4	ug/L	1.1		
		01-Apr-88			1.7	ug/L	1.1		
		01-May-88			1.3	ug/L	1.1		
		01-Jun-88			3.1	ug/L	1.1		

Locaton	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
IW-15	Parathion	01-Jul-88			U	ug/L	1.1		
		01-Aug-88			U	ug/L	1.1		
		01-Sep-88			U	ug/L	1.1		
		01-Oct-88			U	ug/L	1.1		
		01-Nov-88			U	ug/L	1.1		
		01-Dec-88			U	ug/L	1.1		
		01-Jan-89			U	ug/L	1.1		
		01-Feb-89			U	ug/L	1.1		
		01-Mar-89			4.0	ug/L	1.1		
		01-Apr-89			9.6	ug/L	1.1		
		01-May-89			U	ug/L	1.1		
		01-Jun-89			2.6	ug/L	1.1		
		01-Jul-89			10	ug/L	1.1		
		01-Aug-89			6.7	ug/L	1.1		
		01-Sep-89			20	ug/L	1.1		
		01-Oct-89			U	ug/L	1.1		
		01-Nov-89			U	ug/L	1.1		
		01-Dec-89			U	ug/L	1.1		
		01-Jan-90			U	ug/L	1.1		
		01-Feb-90			U	ug/L	1.1		
		01-Mar-90			U	ug/L	1.1		
		01-Apr-90			U	ug/L	1.1		
		01-May-90			U	ug/L	1.1		
		01-Jun-90			U	ug/L	1.1		
		01-Jul-90			3.1	ug/L	1.1		
		01-Aug-90			U	ug/L	1.1		
		01-Sep-90			U	ug/L	1.1		
		01-Oct-90			U	ug/L	1.1		
		01-Nov-90			U	ug/L	1.1		
		01-Dec-90			U	ug/L	1.1		
		01-Jan-91			U	ug/L	1.1		
		01-Feb-91			U	ug/L	1.1		
		01-Oct-91			U	ug/L	1.1		
		01-Mar-92			U	ug/L	1.1		
		01-Sep-92			U	ug/L	1.1		
		01-Mar-93			U	ug/L	1.1		
		01-Sep-93			U	ug/L	1.1		
		01-Mar-94			U	ug/L	1.1		
		01-Sep-94			U	ug/L	1.1		
		01-Mar-95			U	ug/L	1.1		
		01-Sep-95			U	ug/L	1.1		
		01-Mar-96			U	ug/L	1.1		
		13-Sep-96	S		U	ug/L	1		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
IW-16	4-Nitrophenol (Paranitrophenol)	01-Mar-89			700	ug/L	3.7		
		01-Apr-89			350	ug/L	3.7		
		01-May-89			260	ug/L	3.7		
		01-Jun-89			U	ug/L	3.7		
		01-Jul-89			10	ug/L	3.7		
		01-Aug-89			U	ug/L	3.7		
		01-Sep-89			U	ug/L	3.7		
		01-Oct-89			32	ug/L	3.7		
		01-Nov-89			21	ug/L	3.7		
		01-Dec-89			U	ug/L	3.7		
		01-Jan-90			U	ug/L	3.7		
		01-Feb-90			26	ug/L	3.7		
		01-Mar-90			27	ug/L	3.7		
		01-Apr-90			10	ug/L	3.7		
		01-May-90			17	ug/L	3.7		
		01-Jun-90			U	ug/L	3.7		
		01-Jul-90			U	ug/L	3.7		
		01-Aug-90			4.0	ug/L	3.7		
		01-Sep-90			U	ug/L	3.7		
		01-Oct-90			U	ug/L	3.7		
		01-Nov-90			U	ug/L	3.7		
		01-Dec-90			U	ug/L	3.7		
		01-Jan-91			U	ug/L	3.7		
		01-Feb-91			U	ug/L	3.7		
		01-Oct-91			9.9	ug/L	3.7		
		01-Mar-92			85	ug/L	3.7		
		01-Sep-92			12	ug/L	3.7		
		01-Mar-93			U	ug/L	3.7		
		01-Sep-93			U	ug/L	3.7		
		01-Mar-94			U	ug/L	3.7		
		01-Sep-94			U	ug/L	3.7		
		01-Mar-95			1,200	ug/L	3.7		
		01-Sep-95			U	ug/L	3.7		
		01-Mar-96			15	ug/L	3.7		
		13-Sep-96	S		U	ug/L	3.7		
IW-16	Parathion	01-May-89			U	ug/L	1.1		
		01-Jun-89			U	ug/L	1.1		
		01-Jul-89			U	ug/L	1.1		
		01-Aug-89			1.3	ug/L	1.1		
		01-Sep-89			U	ug/L	1.1		
		01-Oct-89			U	ug/L	1.1		
		01-Nov-89			U	ug/L	1.1		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
IW-16	Parathion	01-Dec-89			1.2	ug/L	1.1		
		01-Jan-90			U	ug/L	1.1		
		01-Feb-90			U	ug/L	1.1		
		01-Mar-90			U	ug/L	1.1		
		01-Apr-90			12	ug/L	1.1		
		01-May-90			U	ug/L	1.1		
		01-Jun-90			U	ug/L	1.1		
		01-Jul-90			U	ug/L	1.1		
		01-Aug-90			16	ug/L	1.1		
		01-Sep-90			23	ug/L	1.1		
		01-Oct-90			200	ug/L	1.1		
		01-Nov-90			U	ug/L	1.1		
		01-Dec-90			38	ug/L	1.1		
		01-Jan-91			44	ug/L	1.1		
		01-Feb-91			13	ug/L	1.1		
		01-Oct-91			20	ug/L	1.1		
		01-Mar-92			230	ug/L	1.1		
		01-Sep-92			45	ug/L	1.1		
		01-Mar-93			380	ug/L	1.1		
		01-Sep-93			3.1	ug/L	1.1		
		01-Mar-94			19	ug/L	1.1		
		01-Sep-94			15	ug/L	1.1		
		01-Mar-95			360	ug/L	1.1		
		01-Sep-95			3.8	ug/L	1.1		
		01-Mar-96			4.1	ug/L	1.1		
		13-Sep-96	S		U	ug/L	1		
IW-17	4-Nitrophenol (Paranitrophenol)	01-Mar-89			35,000	ug/L	3.7		
		01-Apr-89			1,100	ug/L	3.7		
		01-May-89			100	ug/L	3.7		
		01-Jun-89			U	ug/L	3.7		
		01-Jul-89			27	ug/L	3.7		
		01-Aug-89			U	ug/L	3.7		
		01-Sep-89			U	ug/L	3.7		
		01-Oct-89			90	ug/L	3.7		
		01-Nov-89			U	ug/L	3.7		
		01-Dec-89			U	ug/L	3.7		
		01-Jan-90			U	ug/L	3.7		
		01-Feb-90			11	ug/L	3.7		
		01-Mar-90			470	ug/L	3.7		
		01-Apr-90			25	ug/L	3.7		
		01-May-90			57	ug/L	3.7		
		01-Jun-90			27	ug/L	3.7		

Location	Parameter	Date Samp	Lab	C or F?	Result	Unit	PQL	Desc	Qual
IW-17	4Nitrophenol (Paranitrophenol)	01-Jul-90			64	ug/L	3.7		
		01-Aug-90			19	ug/L	3.7		
		01-Sep-90			220	ug/L	3.7		
		01-Oct-90			U	ug/L	3.7		
		01-Nov-90			44	ug/L	3.7		
		01-Dec-90			17	ug/L	3.7		
		01-Jan-91			U	ug/L	3.7		
		01-Feb-91			U	ug/L	3.7		
		01-Oct-91			16	ug/L	3.7		
		01-Mar-92			32	ug/L	3.7		
		01-Sep-92			U	ug/L	3.7		
		01-Mar-93			U	ug/L	3.7		
		01-Sep-93			U	ug/L	3.7		
		01-Mar-94			U	ug/L	3.7		
		01-Sep-94			U	ug/L	3.7		
		01-Mar-95			U	ug/L	3.7		
		01-Sep-95			U	ug/L	3.7		
		01-Mar-96			5.2	ug/L	3.7		
		13-Sep-96		S	U	ug/L	3.7		
IW-17	Parathion	01-May-89			5.2	ug/L	1.1		
		01-Jun-89			1.3	ug/L	1.1		
		01-Jul-89			2,300	ug/L	1.1		
		01-Aug-89			460	ug/L	1.1		
		01-Sep-89			1.4	ug/L	1.1		
		01-Oct-89			24	ug/L	1.1		
		01-Nov-89			17	ug/L	1.1		
		01-Dec-89			2.8	ug/L	1.1		
		01-Jan-90			8.9	ug/L	1.1		
		01-Feb-90			19	ug/L	1.1		
		01-Mar-90			2.3	ug/L	1.1		
		01-Apr-90			190	ug/L	1.1		
		01-May-90			22	ug/L	1.1		
		01-Jun-90			79	ug/L	1.1		
		01-Jul-90			U	ug/L	1.1		
		01-Aug-90			1,300	ug/L	1.1		
		01-Sep-90			670	ug/L	1.1		
		01-Oct-90			5.7	ug/L	1.1		
		01-Nov-90			26	ug/L	1.1		
		01-Dec-90			U	ug/L	1.1		
		01-Jan-91			7.2	ug/L	1.1		
		01-Feb-91			26	ug/L	1.1		
		01-Oct-91			21	ug/L	1.1		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
IW-17	Parathion	01-Mar-92			48	ug/L	1.1		
		01-Sep-92			76	ug/L	1.1		
		01-Mar-93			2.6	ug/L	1.1		
		01-Sep-93			2.8	ug/L	1.1		
		01-Mar-94			4.2	ug/L	1.1		
		01-Sep-94			U	ug/L	1.1		
		01-Mar-95			1.8	ug/L	1.1		
		01-Sep-95			U	ug/L	1.1		
		01-Mar-96			U	ug/L	1		
		13-Sep-96		S	U	ug/L	1		
IW-18	4-Nitrophenol (Paranitrophenol)	01-Mar-89			440,000	ug/L	3.7		
		01-Apr-89			330,000	ug/L	3.7		
		01-May-89			620,000	ug/L	3.7		
		01-Jun-89			39,000	ug/L	3.7		
		01-Jul-89			370,000	ug/L	3.7		
		01-Aug-89			530,000	ug/L	3.7		
		01-Sep-89			460,000	ug/L	3.7		
		01-Oct-89			220,000	ug/L	3.7		
		01-Nov-89			10,000	ug/L	3.7		
		01-Dec-89			120,000	ug/L	3.7		
		01-Jan-90			140,000	ug/L	3.7		
		01-Feb-90			7,700	ug/L	3.7		
		01-Mar-90			260,000	ug/L	3.7		
		01-Apr-90			400,000	ug/L	3.7		
		01-May-90			320,000	ug/L	3.7		
		01-Jun-90			34,000	ug/L	3.7		
		01-Jul-90			500,000	ug/L	3.7		
		01-Aug-90			510,000	ug/L	3.7		
		01-Sep-90			820,000	ug/L	3.7		
		01-Oct-90			680,000	ug/L	3.7		
		01-Nov-90			310,000	ug/L	3.7		
		01-Dec-90			930	ug/L	3.7		
		01-Jan-91			630,000	ug/L	3.7		
		01-Feb-91			190,000	ug/L	3.7		
		01-Oct-91			400,000	ug/L	3.7		
		01-Mar-92			350,000	ug/L	3.7		
		01-Sep-92			430,000	ug/L	3.7		
		01-Mar-93			240,000	ug/L	3.7		
		01-Sep-93			390,000	ug/L	3.7		
		01-Mar-94			180,000	ug/L	3.7		
		01-Sep-94			380,000	ug/L	3.7		
		01-Mar-95			360,000	ug/L	3.7		

Location	Farameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
IW-18	4Nitrophenol (Paranitrophenol)	01-Sep-95			130,000	ug/L	3.7	
		01-Mar-96			140,000	ug/L	3.7	
		13-Sep-96	S		160,000	ug/L	3.7	
IW-18	Parathion	01-May-89			6,300	ug/L	1.1	
		01-Jun-89			240	ug/L	1.1	
		01-Jul-89			1,500,000	ug/L	1.1	
		01-Aug-89			36,000	ug/L	1.1	
		01-Sep-89			28,000	ug/L	1.1	
		01-Oct-89			55,000	ug/L	1.1	
		01-Nov-89			9.6	ug/L	1.1	
		01-Dec-89			31,000	ug/L	1.1	
		01-Jan-90			2,700	ug/L	1.1	
		01-Feb-90			38,000	ug/L	1.1	
		01-Mar-90			12,000	ug/L	1.1	
		01-Apr-90			76,000	ug/L	1.1	
		01-May-90			11,000	ug/L	1.1	
		01-Jun-90			5,000	ug/L	1.1	
		01-Jul-90			220,000	ug/L	1.1	
		01-Aug-90			76,000	ug/L	1.1	
		01-Sep-90			34,000	ug/L	1.1	
		01-Oct-90			150,000	ug/L	1.1	
		01-Nov-90			120,000	ug/L	1.1	
		01-Dec-90			130,000	ug/L	1.1	
		01-Jan-91			55,000	ug/L	1.1	
		01-Feb-91			8,600	ug/L	1.1	
		01-Oct-91			14,000	ug/L	1.1	
		01-Mar-92			7,300	ug/L	1.1	
		01-Sep-92			9,100	ug/L	1.1	
		01-Mar-93			6,100	ug/L	1.1	
		01-Sep-93			9,900	ug/L	1.1	
		01-Mar-94			10,000	ug/L	1.1	
		01-Sep-94			7,400	ug/L	1.1	
		01-Mar-95			1,800	ug/L	1.1	
		01-Sep-95			3,300	ug/L	1.1	
		01-Mar-96			7,000	ug/L	1	
		13-Sep-96	S		3,700	ug/L	1	
IW-19	4-Nitrophenol (Paranitrophenol)	01-Mar-89			330,000	ug/L	3.7	
		01-Apr-89			440,000	ug/L	3.7	
		01-May-89			780,000	ug/L	3.7	
		01-Jun-89			35,000	ug/L	3.7	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
IW-1	4-Nitrophenol (Paranitrophenol)	01-Jul-89			410,000	ug/L	3.7	
		01-Aug-89			690,000	ug/L	3.7	
		01-Sep-89			530,000	ug/L	3.7	
		01-Oct-89			00,000,00	ug/L	3.7	
		01-Nov-89			13,000	ug/L	3.7	
		01-Dec-89			45,000	ug/L	3.7	
		01-Jan-90			120,000	ug/L	3.7	
		01-Feb-90			5,000	ug/L	3.7	
		01-Mar-90			310,000	ug/L	3.7	
		01-Apr-90			400,000	ug/L	3.7	
		01-May-90			290,000	ug/L	3.7	
		01-Jun-90			120,000	ug/L	3.7	
		01-Jul-90			550,000	ug/L	3.7	
		01-Aug-90			500,000	ug/L	3.7	
		01-Sep-90			490,000	ug/L	3.7	
		01-Oct-90			200,000	ug/L	3.7	
		01-Nov-90			97,000	ug/L	3.7	
		01-Dec-90			330,000	ug/L	3.7	
		01-Jan-91			400,000	ug/L	3.7	
		01-Feb-91			230,000	ug/L	3.7	
		01-Oct-91			120,000	ug/L	3.7	
		01-Mar-92			250,000	ug/L	3.7	
		01-Sep-92			330,000	ug/L	3.7	
		01-Mar-93			230,000	ug/L	3.7	
		01-Sep-93			260,000	ug/L	3.7	
		01-Mar-94			210,000	ug/L	3.7	
		01-Sep-94			220,000	ug/L	3.7	
		01-Mar-95			430,000	ug/L	3.7	
		01-Sep-95			44,000	ug/L	3.7	
		01-Mar-96			260,000	ug/L	3.7	
		13-Sep-96	S		110,000	ug/L	3.7	
IW-19	Parathion	01-May-89			2,500	ug/L	1.1	
		01-Jun-89			39	ug/L	1.1	
		01-Jul-89			44,000	ug/L	1.1	
		01-Aug-89			8,100	ug/L	1.1	
		01-Sep-89			2,000	ug/L	1.1	
		01-Oct-89			4,100	ug/L	1.1	
		01-Nov-89			21	ug/L	1.1	
		01-Dec-89			1,700	ug/L	1.1	
		01-Jan-90			290	ug/L	1.1	
		01-Feb-90			4,400	ug/L	1.1	
		01-Mar-90			310	ug/L	1.1	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
IW-19	Parathion	01-Apr-90			7,200	ug/L	1.1		
		01-May-90			6,800	ug/L	1.1		
		01-Jun-90			5,500	ug/L	1.1		
		01-Jul-90			140,000	ug/L	1.1		
		01-Aug-90			23,000	ug/L	1.1		
		01-Sep-90			21,000	ug/L	1.1		
		01-Oct-90			20,000	ug/L	1.1		
		01-Nov-90			19,000	ug/L	1.1		
		01-Dec-90			15,000	ug/L	1.1		
		01-Jan-91			25,000	ug/L	1.1		
		01-Feb-91			4,100	ug/L	1.1		
		01-Oct-91			6,300	ug/L	1.1		
		01-Mar-92			4,500	ug/L	1.1		
		01-Sep-92			5,200	ug/L	1.1		
		01-Mar-93			5,100	ug/L	1.1		
		01-Sep-93			6,000	ug/L	1.1		
		01-Mar-94			6,700	ug/L	1.1		
		01-Sep-94			4,100	ug/L	1.1		
		01-Mar-95			6,500	ug/L	1.1		
		01-Sep-95			3,200	ug/L	1.1		
		01-Mar-96			10,000	ug/L	1		
		13-Sep-96		S	1,600	ug/L	1		
IW-20	4-Nitrophenol (Paranitrophenol)	01-Mar-89			50,000	ug/L	3.7		
		01-Apr-89			240,000	ug/L	3.7		
		01-May-89			21,000	ug/L	3.7		
		01-Jun-89			12	ug/L	3.7		
		01-Jul-89			250,000	ug/L	3.7		
		01-Aug-89			320,000	ug/L	3.7		
		01-Sep-89			260,000	ug/L	3.7		
		01-Oct-89			240,000	ug/L	3.7		
		01-Nov-89			8,700	ug/L	3.7		
		01-Dec-89			49,000	ug/L	3.7		
		01-Jan-90			160	ug/L	3.7		
		01-Feb-90			4,800	ug/L	3.7		
		01-Mar-90			150,000	ug/L	3.7		
		01-Apr-90			150,000	ug/L	3.7		
		01-May-90			43,000	ug/L	3.7		
		01-Jun-90			97,000	ug/L	3.7		
		01-Aug-90			9,800	ug/L	3.7		
		01-Sep-90			230,000	ug/L	3.7		
		01-Oct-90			340,000	ug/L	3.7		
		01-Nov-90			170,000	ug/L	3.7		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
IW-20	4-Nitrophenol (Paranitrophenol)	01-Dec-90			380,000	ug/L	3.7		
		01-Jan-91			100,000	ug/L	3.7		
		01-Feb-91			100,000	ug/L	3.7		
		01-Oct-91			180,000	ug/L	3.7		
		01-Mar-92			150,000	ug/L	3.7		
		01-Sep-92			160,000	ug/L	3.7		
		01-Mar-93			100,000	ug/L	3.7		
		01-Sep-93			56,000	ug/L	3.7		
		01-Mar-94			58,000	ug/L	3.7		
		01-Sep-94			59,000	ug/L	3.7		
		01-Mar-95			54,000	ug/L	3.7		
		01-Sep-95			13,000	ug/L	3.7		
		01-Mar-96			15,000	ug/L	3.7		
		13-Sep-96		S	71,000	ug/L	3.7		
IW-20	Parathion	01-May-89			2,300	ug/L	1.1		
		01-Jun-89			7.2	ug/L	1.1		
		01-Jul-89			5,000	ug/L	1.1		
		01-Aug-89			4,300	ug/L	1.1		
		01-Sep-89			2,600	ug/L	1.1		
		01-Oct-89			3,100	ug/L	1.1		
		01-Nov-89			6,000	ug/L	1.1		
		01-Dec-89			5,000	ug/L	1.1		
		01-Jan-90			330	ug/L	1.1		
		01-Feb-90			1,700	ug/L	1.1		
		01-Mar-90			1,100	ug/L	1.1		
		01-Apr-90			2,800	ug/L	1.1		
		01-May-90			2,100	ug/L	1.1		
		01-Jun-90			11,000	ug/L	1.1		
		01-Aug-90			5,900	ug/L	1.1		
		01-Sep-90			4,400	ug/L	1.1		
		01-Oct-90			12,000	ug/L	1.1		
		01-Nov-90			7,500	ug/L	1.1		
		01-Dec-90			13,000	ug/L	1.1		
		01-Jan-91			3,000	ug/L	1.1		
		01-Feb-91			2,800	ug/L	1.1		
		01-Oct-91			2,300	ug/L	1.1		
		01-Mar-92			1,800	ug/L	1.1		
		01-Sep-92			2,500	ug/L	1.1		
		01-Mar-93			1,700	ug/L	1.1		
		01-Sep-93			1,500	ug/L	1.1		
		01-Mar-94			1,100	ug/L	1.1		
		01-Sep-94			1,000	ug/L	1.1		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
IW-20	Parathion	01-Mar-95			300	ug/L	1.1	
		01-Sep-95			490	ug/L	1.1	
		01-Mar-96			700	ug/L	1	
		13-Sep-96	S		520	ug/L	1	
IW-21	4-Nitrophenol (Paranitrophenol)	01-Mar-89			50,000	ug/L	3.7	
		01-Apr-89			3,500	ug/L	3.7	
		01-May-89			180	ug/L	3.7	
		01-Jun-89			41	ug/L	3.7	
		01-Jul-89			3,900	ug/L	3.7	
		01-Aug-89			24,000	ug/L	3.7	
		01-Sep-89			13,000	ug/L	3.7	
		01-Oct-89			5,400	ug/L	3.7	
		01-Nov-89			13	ug/L	3.7	
		01-Dec-89			U	ug/L	3.7	
		01-Jan-90			2,400	ug/L	3.7	
		01-Feb-90			U	ug/L	3.7	
		01-Mar-90			15,000	ug/L	3.7	
		01-Apr-90			15,000	ug/L	3.7	
		01-May-90			6,600	ug/L	3.7	
		01-Jun-90			22	ug/L	3.7	
		01-Jul-90			57,000	ug/L	3.7	
		01-Aug-90			9,800	ug/L	3.7	
		01-Sep-90			190	ug/L	3.7	
		01-Oct-90			910	ug/L	3.7	
		01-Nov-90			2,200	ug/L	3.7	
		01-Dec-90			570	ug/L	3.7	
		01-Jan-91			570	ug/L	3.7	
		01-Feb-91			840	ug/L	3.7	
		01-Oct-91			17,000	ug/L	3.7	
		01-Mar-92			15,000	ug/L	3.7	
		01-Sep-92			1,100	ug/L	3.7	
		01-Mar-93			2,700	ug/L	3.7	
		01-Sep-93			190,000	ug/L	3.7	
		01-Mar-94			5,600	ug/L	3.7	
		01-Sep-94			100,000	ug/L	3.7	
		01-Mar-95			9,300	ug/L	3.7	
		01-Sep-95			520	ug/L	3.7	
		01-Mar-96			92,000	ug/L	3.7	
		13-Sep-96	S		700	ug/L	3.7	
IW-21	Parathion	01-May-89			7.8	ug/L	1.1	
		01-Jun-89			U	ug/L	1.1	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
IW-21	Parathion	01-Jul-89			720	ug/L	1.1	
		01-Aug-89			12	ug/L	1.1	
		01-Sep-89			2.5	ug/L	1.1	
		01-Oct-89			56	ug/L	1.1	
		01-Nov-89			3.6	ug/L	1.1	
		01-Dec-89			8.2	ug/L	1.1	
		01-Jan-90			640	ug/L	1.1	
		01-Feb-90			26	ug/L	1.1	
		01-Mar-90			520	ug/L	1.1	
		01-Apr-90			1,100	ug/L	1.1	
		01-May-90			58	ug/L	1.1	
		01-Jun-90			50	ug/L	1.1	
		01-Jul-90			470	ug/L	1.1	
		01-Aug-90			720	ug/L	1.1	
		01-Sep-90			260	ug/L	1.1	
		01-Oct-90			1,500	ug/L	1.1	
		01-Nov-90			24,000	ug/L	1.1	
		01-Dec-90			2,400	ug/L	1.1	
		01-Jan-91			130	ug/L	1.1	
		01-Feb-91			190	ug/L	1.1	
		01-Oct-91			4,600	ug/L	1.1	
		01-Mar-92			420,000	ug/L	1.1	
		01-Sep-92			8,000	ug/L	1.1	
		01-Mar-93			2,900	ug/L	1.1	
		01-Sep-93			5,400	ug/L	1.1	
		01-Mar-94			1,900	ug/L	1.1	
		01-Sep-94			1,400	ug/L	1.1	
		01-Mar-95			1,400	ug/L	1.1	
		01-Sep-95			470	ug/L	1.1	
		01-Mar-96			610	ug/L	1	
		13-Sep-96	S		880	ug/L	1	
MW-01	4-Nitrophenol (Paranitrophenol)		M		U	ug/L	10	
			G		U	ug/L	10	
MW-01B	4-Nitrophenol (Paranitrophenol)	26-Mar-87			U	ug/L	3.7	
		26-Mar-87			U	ug/L	3.7	
		26-Mar-87			U	ug/L	3.7	
		26-Mar-87			U	ug/L	3.7	
		21-Sep-87			U	ug/L	3.7	
		21-Sep-87			U	ug/L	3.7	
		21-Sep-87			U	ug/L	3.7	

Location	Parameter	Date Samp	Lab	C or F?	Result	Unit	PQL	Desc	Qual
MW-01B	4Nitrophenol (Faranitrophenol)	21-Sep-87			U	ug/L	3.7		
		23-Mar-88			U	ug/L	3.7		
		23-Mar-88			U	ug/L	3.7		
		23-Mar-88			U	ug/L	3.7		
		23-Mar-88			U	ug/L	3.7		
		17-Oct-88			U	ug/L	3.7		
		17-Oct-88			U	ug/L	3.7		
		17-Oct-88			U	ug/L	3.7		
		17-Oct-88			U	ug/L	3.7		
		21-Mar-89			U	ug/L	3.7		
		21-Mar-89			U	ug/L	3.7		
		21-Mar-89			U	ug/L	3.7		
		21-Mar-89			U	ug/L	3.7		
		08-Sep-89			U	ug/L	3.7		
		08-Sep-89			U	ug/L	3.7		
		08-Sep-89			U	ug/L	3.7		
		21-Mar-90			U	ug/L	3.7		
		21-Mar-90			U	ug/L	1.1		
		21-Mar-90			U	ug/L	1.1		
		21-Mar-90			U	ug/L	1.1		
		11-Sep-90			U	ug/L	37		
		11-Sep-90			U	ug/L	37		
		11-Sep-90			U	ug/L	37		
		11-Sep-90			U	ug/L	37		
		05-Mar-91			U	ug/L	37		
		16-Sep-91			U	ug/L	37		
		11-Mar-92			U	ug/L	37		
		16-Sep-92			U	ug/L	50		
		24-Mar-93			U	ug/L	50		
		14-Sep-93			U	ug/L	50		
		07-Mar-94			U	ug/L	37		
		03-May-94	S		U	ug/L	50		
		13-Sep-94			U	ug/L	20		
		19-Apr-95			U	ug/L	3.7		
		19-Apr-95			U	ug/L	3.7		
		19-Apr-95			U	ug/L	3.7		
		18-Sep-95			U	ug/L	3.7		
		18-Sep-95			U	ug/L	3.7		
		18-Sep-95			U	ug/L	3.7		
		18-Sep-95			U	ug/L	3.7		
		05-Mar-96			U	ug/L	3.7		
		05-Mar-96	S		U	ug/L	3.7		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-01B	4-Nitrophenol (Paranitrophenol)	11-Sep-96	S		U	ug/L	3.7		
		15-Apr-97	S		U	ug/L	50		
		18-Sep-97	S		U	ug/L	50		
		26-Mar-98	S		U	ug/L	50		
		28-Jul-98	S		U	ug/L	50		
MW-01B	Parathion	26-Mar-87			U	ug/L	1.1		
		26-Mar-87			U	ug/L	1.1		
		26-Mar-87			U	ug/L	1.1		
		26-Mar-87			U	ug/L	1.1		
		21-Sep-87			U	ug/L	1.1		
		21-Sep-87			U	ug/L	1.1		
		23-Mar-88			U	ug/L	1.1		
		23-Mar-88			U	ug/L	1.1		
		23-Mar-88			U	ug/L	1.1		
		17-Oct-88			U	ug/L	1.1		
		17-Oct-88			U	ug/L	1.1		
		17-Oct-88			U	ug/L	1.1		
		17-Oct-88			U	ug/L	1.1		
		21-Mar-89			U	ug/L	1.1		
		21-Mar-89			U	ug/L	1.1		
		21-Mar-89			U	ug/L	1.1		
		21-Mar-89			U	ug/L	1.1		
		08-Sep-89			U	ug/L	1.1		
		08-Sep-89			U	ug/L	1.1		
		08-Sep-89			U	ug/L	1.1		
		21-Mar-90			U	ug/L	1.1		
		21-Mar-90			U	ug/L	1.1		
		21-Mar-90			U	ug/L	1.1		
		21-Mar-90			U	ug/L	1.1		
		11-Sep-90			U	ug/L	7.4		
		11-Sep-90			U	ug/L	0.6		
		11-Sep-90			U	ug/L	0.6		
		11-Sep-90			U	ug/L	0.6		
		05-Mar-91			U	ug/L	7.4		
		16-Sep-91			U	ug/L	0.6		
		11-Mar-92			U	ug/L	7.4		
		16-Sep-92			U	ug/L	1		
		24-Mar-93			U	ug/L	1		
		14-Sep-93			U	ug/L	1		
		07-Mar-94			U	ug/L	7.4		
		03-May-94	S		U	ug/L	1		
		13-Sep-94			U	ug/L	1		

Location	Parameter	Date Samp	Lab	C or F?	Result	Unit	PQL	Desc	Qual
MW-01B	Parathion	19-Apr-95			U	ug/L	1.1		
		19-Apr-95			U	ug/L	1.1		
		19-Apr-95			U	ug/L	1.1		
		19-Apr-95			U	ug/L	1.1		
		18-Sep-95			U	ug/L	1.1		
		18-Sep-95			U	ug/L	1.1		
		18-Sep-95			U	ug/L	1.1		
		05-Mar-96			U	ug/L	1		
		05-Mar-96	S		U	ug/L	1		
		11-Sep-96	S		U	ug/L	1		
		15-Apr-97	S		U	ug/L	1		
		18-Sep-97	G		U	ug/L	1.05		
		26-Mar-98	G		U	ug/L	1.05		
		28-Jul-98	S		U	ug/L	1		
MW-02	4-Nitrophenol (Paranitrophenol)		M		U	ug/L	10		
			G		U	ug/L	10		
		26-Mar-87			5.5	ug/L	3.7		
		26-Mar-87			U	ug/L	3.7		
		26-Mar-87			U	ug/L	3.7		
		26-Mar-87			U	ug/L	3.7		
		21-Sep-87			U	ug/L	3.7		
		21-Sep-87			U	ug/L	3.7		
		21-Sep-87			U	ug/L	3.7		
		21-Sep-87			U	ug/L	3.7		
		23-Mar-88			U	ug/L	3.7		
		23-Mar-88			U	ug/L	3.7		
		23-Mar-88			U	ug/L	3.7		
		23-Mar-88			U	ug/L	3.7		
		17-Oct-88			U	ug/L	3.7		
		17-Oct-88			U	ug/L	3.7		
		17-Oct-88			U	ug/L	3.7		
		17-Oct-88			U	ug/L	3.7		
		21-Mar-89			U	ug/L	3.7		
		21-Mar-89			U	ug/L	3.7		
		21-Mar-89			U	ug/L	3.7		
		21-Mar-89			U	ug/L	3.7		
		08-Sep-89			U	ug/L	3.7		
		08-Sep-89			U	ug/L	3.7		
		08-Sep-89			U	ug/L	3.7		
		08-Sep-89			U	ug/L	3.7		
		21-Mar-90			U	ug/L	3.7		
		21-Mar-90			U	ug/L	3.7		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-02	4-Nitrophenol (Paranitrophenol)	21-Mar-90			U	ug/L	3.7		
		21-Mar-90			U	ug/L	3.7		
		11-Sep-90			U	ug/L	37		
		11-Sep-90			U	ug/L	37		
		11-Sep-90			U	ug/L	37		
		11-Sep-90			U	ug/L	37		
		05-Mar-91			U	ug/L	37		
		16-Sep-91			U	ug/L	28		
		11-Mar-92			U	ug/L	37		
		16-Sep-92			U	ug/L	50		
		24-Mar-93			U	ug/L	50		
		14-Sep-93			U	ug/L	50		
		07-Mar-94			U	ug/L	37		
		13-Sep-94			U	ug/L	20		
		19-Apr-95			U	ug/L	3.7		
		19-Apr-95			U	ug/L	3.7		
		19-Apr-95			U	ug/L	3.7		
		19-Apr-95			U	ug/L	3.7		
		18-Sep-95			U	ug/L	3.7		
		18-Sep-95			U	ug/L	3.7		
		18-Sep-95			U	ug/L	3.7		
		18-Sep-95			U	ug/L	3.7		
		13-Mar-96			U	ug/L	3.7		
MW-02	Parathion	26-Mar-87			U	ug/L	1.1		
		26-Mar-87			U	ug/L	1.1		
		26-Mar-87			U	ug/L	1.1		
		26-Mar-87			U	ug/L	1.1		
		21-Sep-87			U	ug/L	1.1		
		21-Sep-87			U	ug/L	1.1		
		21-Sep-87			U	ug/L	1.1		
		21-Sep-87			U	ug/L	1.1		
		23-Mar-88			U	ug/L	1.1		
		23-Mar-88			U	ug/L	1.1		
		23-Mar-88			U	ug/L	1.1		
		23-Mar-88			U	ug/L	1.1		
		17-Oct-88			U	ug/L	1.1		
		17-Oct-88			U	ug/L	1.1		
		17-Oct-88			U	ug/L	1.1		
		17-Oct-88			U	ug/L	1.1		
		21-Mar-89			U	ug/L	1.1		
		21-Mar-89			U	ug/L	1.1		
		21-Mar-89			U	ug/L	1.1		

Location	Parameter	Date Samp	Lab	C or F?	Result	Unit	PQL	Desc Qual
MW-02	Parathion	21-Mar-89			U	ug/L	1.1	
		08-Sep-89			U	ug/L	1.1	
		08-Sep-89			U	ug/L	1.1	
		08-Sep-89			U	ug/L	1.1	
		08-Sep-89			U	ug/L	1.1	
		21-Mar-90			U	ug/L	1.1	
		21-Mar-90			U	ug/L	1.1	
		21-Mar-90			U	ug/L	1.1	
		21-Mar-90			U	ug/L	1.1	
		11-Sep-90			U	ug/L	0.6	
		11-Sep-90			U	ug/L	7.4	
		11-Sep-90			U	ug/L	0.6	
		11-Sep-90			U	ug/L	7.4	
		05-Mar-91			U	ug/L	7.4	
		16-Sep-91			U	ug/L	0.6	
		11-Mar-92			U	ug/L	0.6	
		16-Sep-92			U	ug/L	1	
		24-Mar-93			U	ug/L	1	
		14-Sep-93			U	ug/L	1	
		07-Mar-94			U	ug/L	7.4	
		13-Sep-94			U	ug/L	1	
		19-Apr-95			U	ug/L	1.1	
		19-Apr-95			U	ug/L	1	
		19-Apr-95			U	ug/L	1.1	
		19-Apr-95			U	ug/L	1.1	
		18-Sep-95			U	ug/L	1.1	
		18-Sep-95			U	ug/L	1.1	
		18-Sep-95			U	ug/L	1.1	
		18-Sep-95			U	ug/L	1.1	
		13-Mar-96			U	ug/L	1	
MW-03	4-Nitrophenol (Paranitrophenol)		M		U	ug/L	10	
MW-04	4-Nitrophenol (Paranitrophenol)		M		U	ug/L	10	
			G		U	ug/L	10	
MW-05	4-Nitrophenol (Paranitrophenol)		G		U	ug/L	10	
			M		U	ug/L	10	
MW-06	4-Nitrophenol (Paranitrophenol)		M		U	ug/L	10	
			G		U	ug/L	10	

See Table L-3 for Abbreviations and Qualifiers.

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
MW-0?	4-Nitrophenol (Paranitrophenol)		M		U	ug/L	10	
			G		U	ug/L	10	
MW-0?	4-Nitrophenol (Paranitrophenol)		G		U	ug/L	10	
			M		U	ug/L	10	
		17-Apr-97	S		U	ug/L	50	
		01-Apr-98	G		U	ug/L	50	
MW-0?	Parathion	17-Apr-97	S		U	ug/L	1	
		01-Apr-98	G		U	ug/L	1.05	
MW-0?	4-Nitrophenol (Paranitrophenol)		M		U	ug/L	10	
			G		U	ug/L	10	
		17-Apr-97	S		U	ug/L	50	
		09-Apr-98	G		U	ug/L	50	
MW-0?	Parathion	17-Apr-97	S		U	ug/L	1	
		09-Apr-98	G		U	ug/L	1.05	
MW-1?	4-Nitrophenol (Paranitrophenol)		S		U	ug/L	10	
			M		U	ug/L	10	
MW-1?	4-Nitrophenol (Paranitrophenol)	26-Mar-87			U	ug/L	3.7	
		26-Mar-87			U	ug/L	3.7	
		26-Mar-87			U	ug/L	3.7	
		26-Mar-87			3.7	ug/L	3.7	
		21-Sep-87			U	ug/L	3.7	
		21-Sep-87			U	ug/L	3.7	
		21-Sep-87			U	ug/L	3.7	
		21-Sep-87			U	ug/L	3.7	
		23-Mar-88			U	ug/L	3.7	
		23-Mar-88			U	ug/L	3.7	
		23-Mar-88			U	ug/L	3.7	
		23-Mar-88			U	ug/L	3.2	
		21-Mar-89			U	ug/L	3.7	
		21-Mar-89			U	ug/L	3.7	
		21-Mar-89			U	ug/L	3.7	
		21-Mar-89			U	ug/L	3.7	
		08-Sep-89			U	ug/L	3.7	
		08-Sep-89			U	ug/L	3.7	

See Table L-3 for Abbreviations and Qualifiers.

Location	Parameter	Date Samp	Lab	C or F?	Result	Unit	PQL	Desc	Qual
MW-11	4Nitrophenol (Paranitrophenol)	08-Sep-89			U	ug/L	3.7		
		08-Sep-89			U	ug/L	3.7		
		21-Mar-90			U	ug/L	3.7		
		21-Mar-90			U	ug/L	3.7		
		21-Mar-90			U	ug/L	3.7		
		21-Mar-90			U	ug/L	3.7		
		11-Sep-90			U	ug/L	37		
		11-Sep-90			U	ug/L	37		
		11-Sep-90			U	ug/L	37		
		11-Sep-90			U	ug/L	37		
MW-11	Parathion	26-Mar-87			U	ug/L	1.1		
		26-Mar-87			U	ug/L	1.1		
		26-Mar-87			U	ug/L	1.1		
		26-Mar-87			U	ug/L	1.1		
		21-Sep-87			U	ug/L	1.1		
		21-Sep-87			U	ug/L	1.1		
		21-Sep-87			U	ug/L	1.1		
		21-Sep-87			U	ug/L	1.1		
		23-Mar-88			U	ug/L	1.1		
		23-Mar-88			U	ug/L	1.1		
		23-Mar-88			U	ug/L	1.1		
		23-Mar-88			U	ug/L	1.1		
		21-Mar-89			U	ug/L	1.1		
		21-Mar-89			U	ug/L	1.1		
		21-Mar-89			U	ug/L	1.1		
		21-Mar-89			U	ug/L	1.1		
		08-Sep-89			U	ug/L	1.1		
		08-Sep-89			U	ug/L	1.1		
		08-Sep-89			U	ug/L	1.1		
		08-Sep-89			U	ug/L	1.1		
		21-Mar-90			U	ug/L	1.1		
		21-Mar-90			U	ug/L	1.1		
		21-Mar-90			U	ug/L	1.1		
		21-Mar-90			U	ug/L	1.1		
		11-Sep-90			U	ug/L	7.4		
		11-Sep-90			U	ug/L	7.4		
		11-Sep-90			U	ug/L	0.6		
		11-Sep-90			U	ug/L	0.6		
MW-11A	4-Nitrophenol (Paranitrophenol)	05-Mar-91			U	ug/L	37		
		16-Sep-91			U	ug/L	37		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-11A	4-Nitrophenol (Paranitrophenol)	11-Mar-92			U	ug/L	37		
		16-Sep-92			U	ug/L	50		
		24-Mar-93			U	ug/L	50		
		14-Sep-93			U	ug/L	50		
		07-Mar-94			U	ug/L	37		
		13-Sep-94			U	ug/L	20		
		19-Apr-95			U	ug/L	3.7		
		19-Apr-95			U	ug/L	3.7		
		19-Apr-95			U	ug/L	3.7		
		19-Apr-95			U	ug/L	3.7		
		18-Sep-95			U	ug/L	3.7		
		18-Sep-95			U	ug/L	3.7		
		18-Sep-95			U	ug/L	3.7		
		18-Sep-95			U	ug/L	3.7		
		05-Mar-96			U	ug/L	3.7		
		05-Mar-96	S		U	ug/L	3.7		
		05-Mar-96	S		U	ug/L	3.7		
		11-Sep-96	S		U	ug/L	3.7		
		11-Sep-96	S		U	ug/L	3.7		
		15-Apr-97	S		U	ug/L	50		
		08-Oct-97	S		U	ug/L	50		
		26-Mar-98	S		U	ug/L	50		
MW-1'A	Parathion	05-Mar-91			U	ug/L	0.6		
		16-Sep-91			U	ug/L	7.4		
		11-Mar-92			U	ug/L	0.6		
		16-Sep-92			U	ug/L	1		
		24-Mar-93			U	ug/L	1		
		14-Sep-93			U	ug/L	1		
		07-Mar-94			U	ug/L	7.4		
		13-Sep-94			U	ug/L	1		
		19-Apr-95			U	ug/L	1.1		
		19-Apr-95			U	ug/L	1.1		
		19-Apr-95			U	ug/L	1.1		
		19-Apr-95			U	ug/L	1.1		
		18-Sep-95			U	ug/L	1.1		
		18-Sep-95			U	ug/L	1.1		
		18-Sep-95			U	ug/L	1.1		
		18-Sep-95			U	ug/L	1.1		
		05-Mar-96			U	ug/L	1		
		05-Mar-96	S		U	ug/L	1		
		11-Sep-96	S		U	ug/L	1		
		11-Sep-96	S		U	ug/L	1		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
MW-11A	Parathion	15-Apr-97	S		U	ug/L	1	
		08-Oct-97	G		U	ug/L	1.05	
		26-Mar-98	G		U	ug/L	1.05	
MW-12	4-Nitrophenol (Paranitrophenol)	26-Mar-87			U	ug/L	3.7	
		26-Mar-87			U	ug/L	3.7	
		26-Mar-87			U	ug/L	3.7	
		26-Mar-87			U	ug/L	3.7	
		21-Sep-87			U	ug/L	3.7	
		21-Sep-87			U	ug/L	3.7	
		21-Sep-87			U	ug/L	3.7	
		21-Sep-87			U	ug/L	3.7	
		23-Mar-88			U	ug/L	3.7	
		23-Mar-88			U	ug/L	3.7	
		23-Mar-88			U	ug/L	3.7	
		23-Mar-88			U	ug/L	3.7	
		21-Mar-89			U	ug/L	3.7	
		21-Mar-89			U	ug/L	3.7	
		21-Mar-89			U	ug/L	3.7	
		21-Mar-89			U	ug/L	3.7	
		08-Sep-89			U	ug/L	3.7	
		08-Sep-89			U	ug/L	3.7	
		08-Sep-89			U	ug/L	3.7	
		08-Sep-89			U	ug/L	3.7	
		21-Mar-90			U	ug/L	3.7	
		21-Mar-90			U	ug/L	3.7	
		21-Mar-90			U	ug/L	3.7	
		21-Mar-90			U	ug/L	3.7	
		11-Sep-90			U	ug/L	37	
		11-Sep-90			U	ug/L	37	
		11-Sep-90			U	ug/L	37	
		11-Sep-90			U	ug/L	37	
MW-12	Parathion	26-Mar-87			U	ug/L	1.1	
		26-Mar-87			U	ug/L	1.1	
		26-Mar-87			U	ug/L	1.1	
		26-Mar-87			U	ug/L	1.1	
		21-Sep-87			U	ug/L	1.1	
		21-Sep-87			U	ug/L	1.1	
		21-Sep-87			U	ug/L	1.1	
		21-Sep-87			U	ug/L	1.1	
		23-Mar-88			U	ug/L	1.1	
		23-Mar-88			U	ug/L	1.1	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
MW-12	Parathion	23-Mar-88			U	ug/L	1.1	
		23-Mar-88			U	ug/L	1.1	
		21-Mar-89			U	ug/L	1.1	
		21-Mar-89			U	ug/L	1.1	
		21-Mar-89			U	ug/L	1.1	
		21-Mar-89			U	ug/L	1.1	
		08-Sep-89			U	ug/L	1.1	
		08-Sep-89			U	ug/L	1.1	
		08-Sep-89			U	ug/L	1.1	
		08-Sep-89			U	ug/L	1.1	
		21-Mar-90			U	ug/L	1.1	
		21-Mar-90			U	ug/L	1.1	
		21-Mar-90			U	ug/L	1.1	
		21-Mar-90			U	ug/L	1.1	
		11-Sep-90			U	ug/L	7.4	
		11-Sep-90			U	ug/L	0.6	
		11-Sep-90			U	ug/L	7.4	
		11-Sep-90			U	ug/L	0.6	
MW-12A	4-Nitrophenol (Paranitrophenol)	11-Mar-92			U	ug/L	37	
		16-Sep-92			U	ug/L	50	
		24-Mar-93			U	ug/L	50	
		14-Sep-93			U	ug/L	50	
		07-Mar-94			U	ug/L	37	
		13-Sep-94			U	ug/L	20	
		19-Apr-95			U	ug/L	3.7	
		19-Apr-95			U	ug/L	3.7	
		19-Apr-95			U	ug/L	3.7	
		19-Apr-95			U	ug/L	3.7	
		18-Sep-95			U	ug/L	3.7	
		18-Sep-95			U	ug/L	3.7	
		18-Sep-95			U	ug/L	3.7	
		18-Sep-95			U	ug/L	3.7	
		05-Mar-96			U	ug/L	3.7	
		15-Apr-97	S		U	ug/L	50	
		15-Apr-97	S	Q	U	ug/L	50	Q
		08-Oct-97	G		U	ug/L	50	
		27-Mar-98	G		U	ug/L	50	
MW-12A	Parathion	05-Mar-91			U	ug/L	0.6	
		16-Sep-91			U	ug/L	0.6	
		11-Mar-92			U	ug/L	7.4	
		16-Sep-92			U	ug/L	1	

Location	Parameter	Date Samp	Lab	C or F?	Result	Unit	PQL	Desc	Qual
MW-12A	Parathion	24-Mar-93			U	ug/L	1		
		14-Sep-93			U	ug/L	1		
		07-Mar-94			U	ug/L	7.4		
		13-Sep-94			U	ug/L	1		
		19-Apr-95			U	ug/L	1.1		
		19-Apr-95			U	ug/L	1.1		
		19-Apr-95			U	ug/L	1.1		
		19-Apr-95			U	ug/L	1.1		
		18-Sep-95			U	ug/L	1.1		
		18-Sep-95			U	ug/L	1.1		
		18-Sep-95			U	ug/L	1.1		
		18-Sep-95			U	ug/L	1.1		
		05-Mar-96			U	ug/L	1		
		15-Apr-97	S		U	ug/L	1		
		15-Apr-97	S	C	U	ug/L	1		Q
		08-Oct-97	G		U	ug/L	1.05		
		27-Mar-98	G		U	ug/L	1.05		
MW-13	4-Nitrophenol (Paranitrophenol)	26-Mar-87			U	ug/L	3.7		
		26-Mar-87			U	ug/L	3.7		
		26-Mar-87			U	ug/L	3.7		
		26-Mar-87			U	ug/L	3.7		
		21-Sep-87			U	ug/L	3.7		
		21-Sep-87			U	ug/L	3.7		
		21-Sep-87			U	ug/L	3.7		
		21-Sep-87			U	ug/L	3.7		
		23-Mar-88			U	ug/L	3.7		
		23-Mar-88			U	ug/L	3.7		
		23-Mar-88			U	ug/L	3.7		
		23-Mar-88			U	ug/L	3.7		
		17-Oct-88			U	ug/L	3.7		
		17-Oct-88			U	ug/L	3.7		
		17-Oct-88			U	ug/L	3.7		
		17-Oct-88			U	ug/L	3.7		
		21-Mar-89			U	ug/L	3.7		
		21-Mar-89			U	ug/L	3.7		
		21-Mar-89			U	ug/L	3.7		
		21-Mar-89			U	ug/L	3.7		
		08-Sep-89			U	ug/L	3.7		
		08-Sep-89			U	ug/L	3.7		
		08-Sep-89			U	ug/L	3.7		
		08-Sep-89			U	ug/L	3.7		
		21-Mar-90			U	ug/L	3.7		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-13	4-Nitrophenol (Paranitrophenol)	21-Mar-90			U	ug/L	3.7		
		21-Mar-90			U	ug/L	3.7		
		21-Mar-90			U	ug/L	3.7		
		11-Sep-90			U	ug/L	37		
		11-Sep-90			U	ug/L	37		
		11-Sep-90			U	ug/L	37		
		11-Sep-90			U	ug/L	37		
MW-13	Parathion	26-Mar-87			U	ug/L	1.1		
		26-Mar-87			U	ug/L	1.1		
		26-Mar-87			U	ug/L	1.1		
		26-Mar-87			U	ug/L	1.1		
		21-Sep-87			U	ug/L	1.1		
		21-Sep-87			U	ug/L	1.1		
		21-Sep-87			U	ug/L	1.1		
		21-Sep-87			U	ug/L	1.1		
		23-Mar-88			U	ug/L	1.1		
		23-Mar-88			U	ug/L	1.1		
		23-Mar-88			U	ug/L	1.1		
		23-Mar-88			U	ug/L	1.1		
		17-Oct-88			U	ug/L	1.1		
		17-Oct-88			U	ug/L	1.1		
		17-Oct-88			U	ug/L	1.1		
		17-Oct-88			U	ug/L	1.1		
		21-Mar-89			U	ug/L	1.1		
		21-Mar-89			U	ug/L	1.1		
		21-Mar-89			U	ug/L	1.1		
		21-Mar-89			U	ug/L	1.1		
		08-Sep-89			U	ug/L	1.1		
		08-Sep-89			U	ug/L	1.1		
		08-Sep-89			U	ug/L	1.1		
		08-Sep-89			U	ug/L	1.1		
		21-Mar-90			U	ug/L	1.1		
		21-Mar-90			U	ug/L	1.1		
		21-Mar-90			U	ug/L	1.1		
		21-Mar-90			U	ug/L	1.1		
		11-Sep-90			U	ug/L	7.4		
		11-Sep-90			U	ug/L	0.6		
		11-Sep-90			U	ug/L	0.6		
		11-Sep-90			U	ug/L	0.6		
MW-13A	4-Nitrophenol (Paranitrophenol)	11-Mar-92			U	ug/L	37		

Location	Parameter	Date Samp	Lab	C or F?	Result	Unit	PQL	Desc	Qual
MW-13A	4 Nitrophenol (Paranitrophenol)	16-Sep-92			U	ug/L	50		
		24-Mar-93			U	ug/L	50		
		14-Sep-93			U	ug/L	50		
		07-Mar-94			U	ug/L	37		
		13-Sep-94			U	ug/L	20		
		19-Apr-95			U	ug/L	3.7		
		19-Apr-95			U	ug/L	3.7		
		19-Apr-95			U	ug/L	3.7		
		19-Apr-95			U	ug/L	3.7		
		18-Sep-95			U	ug/L	3.7		
		18-Sep-95			U	ug/L	3.7		
		18-Sep-95			U	ug/L	3.7		
		18-Sep-95			U	ug/L	3.7		
		05-Mar-96			U	ug/L	3.7		
		05-Mar-96	S		U	ug/L	3.7		
		11-Sep-96	S		U	ug/L	3.7		
		15-Apr-97	S		U	ug/L	50		
		07-Oct-97	G		U	ug/L	50		
		07-Oct-97	G	C	U	ug/L	50		Q
		26-Mar-98	G		U	ug/L	50		
MW-13A	Parathion	05-Mar-91			U	ug/L	0.6		
		16-Sep-91			U	ug/L	7.4		
		11-Mar-92			U	ug/L	7.4		
		16-Sep-92			U	ug/L	1		
		24-Mar-93			U	ug/L	1		
		14-Sep-93			U	ug/L	1		
		07-Mar-94			U	ug/L	7.4		
		13-Sep-94			U	ug/L	1		
		19-Apr-95			U	ug/L	1.1		
		19-Apr-95			U	ug/L	1.1		
		19-Apr-95			U	ug/L	1.1		
		19-Apr-95			U	ug/L	1.1		
		18-Sep-95			U	ug/L	1.1		
		18-Sep-95			U	ug/L	1.1		
		18-Sep-95			U	ug/L	1.1		
		18-Sep-95			U	ug/L	1.1		
		05-Mar-96			U	ug/L	1		
		11-Sep-96	S		U	ug/L	1		
		15-Apr-97	S		U	ug/L	1		
		07-Oct-97	G		U	ug/L	1.05		
		07-Oct-97	G	Q	U	ug/L	1.05		Q
		26-Mar-98	G		U	ug/L	1.05		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-15	4-Nitrophenol (Paranitrophenol)	26-Mar-87			U	ug/L	3.7		
		26-Mar-87			U	ug/L	3.7		
		26-Mar-87			U	ug/L	3.7		
		26-Mar-87			U	ug/L	3.7		
		17-Oct-88			12	ug/L	3.7		
		17-Oct-88			U	ug/L	3.7		Z
		17-Oct-88			U	ug/L	3.7		Z
		17-Oct-88			11	ug/L	3.7		
		17-Oct-88			U	ug/L	3.7		Z
		17-Oct-88			U	ug/L	3.7		Z
		17-Oct-88			11	ug/L	3.7		
		17-Oct-88			12	ug/L	3.7		
		21-Mar-89			U	ug/L	3.7		
		21-Mar-89			U	ug/L	3.7		
		21-Mar-89			U	ug/L	3.7		
		21-Mar-89			U	ug/L	3.7		
		08-Sep-89			U	ug/L	3.7		
		08-Sep-89			U	ug/L	3.7		
		08-Sep-89			U	ug/L	3.7		
		08-Sep-89			U	ug/L	3.7		
		21-Mar-90			U	ug/L	1.1		
		21-Mar-90			U	ug/L	1.1		
		21-Mar-90			U	ug/L	1.1		
		21-Mar-90			U	ug/L	1.1		
		11-Sep-90			U	ug/L	37		
		11-Sep-90			U	ug/L	37		
		11-Sep-90			U	ug/L	37		
		11-Sep-90			U	ug/L	37		
		16-Sep-91			U	ug/L	37		
		11-Mar-92			U	ug/L	37		
		16-Sep-92			U	ug/L	50		
		24-Mar-93			U	ug/L	50		
		14-Sep-93			U	ug/L	50		
		07-Mar-94			U	ug/L	37		
		13-Sep-94			U	ug/L	20		
		19-Apr-95			U	ug/L	3.7		
		19-Apr-95			U	ug/L	3.7		
		19-Apr-95			U	ug/L	3.7		
		19-Apr-95			U	ug/L	3.7		
		18-Sep-95			U	ug/L	3.7		
		18-Sep-95			U	ug/L	3.7		
		18-Sep-95			U	ug/L	3.7		

Location	Parameter	Date Samp	Lab	C or F?	Result	Unit	PQL	Desc Qual
MW-15	4Nitrophenol (Paranitrophenol)	18-Sep-95			U	ug/L	3.7	
		05-Mar-96	S		U	ug/L	3.7	
		05-Mar-96			U	ug/L	3.7	
		12-Sep-96	S		U	ug/L	3.7	
		12-Sep-96	S	Q	U	ug/L	3.7	Q
		17-Apr-97	S		U	ug/L	50	
		23-Sep-97	G		U	ug/L	50	
		02-Apr-98	G		U	ug/L	50	
MW-15	Parathion	26-Mar-87			U	ug/L	1.1	
		26-Mar-87			U	ug/L	1.1	
		26-Mar-87			U	ug/L	1.1	
		26-Mar-87			U	ug/L	1.1	
		21-Sep-87			U	ug/L	1.1	
		21-Sep-87			U	ug/L	1.1	
		21-Sep-87			U	ug/L	1.1	
		21-Sep-87			U	ug/L	1.1	
		23-Mar-88			U	ug/L	1.1	
		23-Mar-88			U	ug/L	1.1	
		23-Mar-88			U	ug/L	1.1	
		23-Mar-88			U	ug/L	1.1	
		17-Oct-88			U	ug/L	1.1	
		17-Oct-88			U	ug/L	1.1	
		17-Oct-88			U	ug/L	1.1	
		17-Oct-88			U	ug/L	1.1	
		21-Mar-89			U	ug/L	1.1	
		21-Mar-89			U	ug/L	1.1	
		21-Mar-89			U	ug/L	1.1	
		21-Mar-89			U	ug/L	1.1	
		08-Sep-89			U	ug/L	1.1	
		08-Sep-89			U	ug/L	1.1	
		08-Sep-89			U	ug/L	1.1	
		08-Sep-89			U	ug/L	1.1	
		21-Mar-90			U	ug/L	1.1	Z
		21-Mar-90			3.4	ug/L	1.1	
		21-Mar-90			U	ug/L	1.1	Z
		21-Mar-90			U	ug/L	1.1	Z
		21-Mar-90			3.3	ug/L	1.1	
		21-Mar-90			3.5	ug/L	1.1	
		21-Mar-90			3.5	ug/L	1.1	
		21-Mar-90			U	ug/L	1.1	Z
		11-Sep-90			U	ug/L	0.6	
		11-Sep-90			U	ug/L	0.6	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
MW-15	Parathion	11-Sep-90			U	ug/L	0.6	
		11-Sep-90			U	ug/L	7.4	
		05-Mar-91			U	ug/L	7.4	
		16-Sep-91			U	ug/L	0.6	
		11-Mar-92			U	ug/L	0.6	
		16-Sep-92			U	ug/L	1	
		24-Mar-93			U	ug/L	1	
		14-Sep-93			U	ug/L	1	
		07-Mar-94			U	ug/L	7.4	
		13-Sep-94			U	ug/L	1	
		19-Apr-95			U	ug/L	1.1	
		19-Apr-95			U	ug/L	1.1	
		19-Apr-95			U	ug/L	1.1	
		19-Apr-95			U	ug/L	1.1	
		18-Sep-95			U	ug/L	1.1	
		18-Sep-95			U	ug/L	1.1	
		18-Sep-95			U	ug/L	1.1	
		18-Sep-95			U	ug/L	1.1	
		05-Mar-96	S		U	ug/L	1	
		05-Mar-96			U	ug/L	1	
		12-Sep-96	S		U	ug/L	1	
		12-Sep-96	S	Q	U	ug/L	1	Q
		17-Apr-97	S		U	ug/L	1	
		23-Sep-97	G		U	ug/L	1.05	
		02-Apr-98	G		U	ug/L	1.05	
MW-16	4-Nitrophenol (Paranitrophenol)	26-Mar-87			U	ug/L	3.7	
		26-Mar-87			U	ug/L	3.7	
		26-Mar-87			U	ug/L	3.7	
		26-Mar-87		F	U	ug/L	3.7	
		21-Sep-87			U	ug/L	3.7	
		21-Sep-87			U	ug/L	3.7	
		21-Sep-87			U	ug/L	3.7	
		21-Sep-87			U	ug/L	3.7	
		23-Mar-88			U	ug/L	3.7	
		23-Mar-88			U	ug/L	3.7	
		23-Mar-88			U	ug/L	3.7	
		23-Mar-88			U	ug/L	3.7	
		17-Oct-88			U	ug/L	3.7	
		17-Oct-88			U	ug/L	3.7	
		17-Oct-88			U	ug/L	3.7	
		17-Oct-88			U	ug/L	3.7	
		21-Mar-89			U	ug/L	3.7	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
MW-16	4-Nitrophenol (Paranitrophenol)	21-Mar-89			U	ug/L	3.7	
		21-Mar-89			U	ug/L	3.7	
		21-Mar-89			U	ug/L	3.7	
		08-Sep-89			U	ug/L	3.7	
		08-Sep-89			U	ug/L	3.7	
		08-Sep-89			U	ug/L	3.7	
		08-Sep-89			U	ug/L	3.7	
		21-Mar-90			U	ug/L	1.1	
		21-Mar-90			U	ug/L	1.1	
		21-Mar-90			U	ug/L	1.1	
		21-Mar-90			U	ug/L	1.1	
		11-Sep-90			U	ug/L	37	
		11-Sep-90			U	ug/L	37	
		11-Sep-90			U	ug/L	37	
		11-Sep-90			U	ug/L	37	
		16-Sep-91			U	ug/L	37	
		11-Mar-92			U	ug/L	37	
		16-Sep-92			U	ug/L	50	
		24-Mar-93			U	ug/L	50	
		14-Sep-93			U	ug/L	50	
		07-Mar-94			U	ug/L	37	
		13-Sep-94			U	ug/L	20	
		19-Apr-95			U	ug/L	3.7	
		19-Apr-95			U	ug/L	3.7	
		19-Apr-95			U	ug/L	3.7	
		19-Apr-95			U	ug/L	3.7	
		18-Sep-95			U	ug/L	3.7	
		18-Sep-95			U	ug/L	3.7	
		18-Sep-95			U	ug/L	3.7	
		18-Sep-95			U	ug/L	3.7	
		05-Mar-96			U	ug/L	3.7	
		05-Mar-96	S		U	ug/L	3.7	
		12-Sep-96	S		U	ug/L	3.7	
		18-Apr-97	S		U	ug/L	50	
		19-Sep-97	G		U	ug/L	50	
		02-Apr-98	G		U	ug/L	50	
MW-16	Parathion	26-Mar-87			U	ug/L	1.1	
		26-Mar-87			U	ug/L	1.1	
		26-Mar-87			U	ug/L	1.1	
		26-Mar-87		F	U	ug/L	1.1	
		21-Sep-87			U	ug/L	1.1	
		21-Sep-87			U	ug/L	1.1	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
MW-16	Parathion	21-Sep-87			U	ug/L	1.1	
		21-Sep-87			U	ug/L	1.1	
		23-Mar-88			U	ug/L	1.1	
		23-Mar-88			U	ug/L	1.1	
		23-Mar-88			U	ug/L	1.1	
		23-Mar-88			U	ug/L	1.1	
		17-Oct-88			U	ug/L	1.1	
		17-Oct-88			U	ug/L	1.1	
		17-Oct-88			U	ug/L	1.1	
		17-Oct-88			U	ug/L	1.1	
		21-Mar-89			U	ug/L	1.1	
		21-Mar-89			U	ug/L	1.1	
		21-Mar-89			U	ug/L	1.1	
		21-Mar-89			U	ug/L	1.1	
		08-Sep-89			U	ug/L	1.1	
		08-Sep-89			U	ug/L	1.1	
		08-Sep-89			U	ug/L	1.1	
		08-Sep-89			U	ug/L	1.1	
		21-Mar-90			U	ug/L	1.1	
		21-Mar-90			U	ug/L	1.1	
		21-Mar-90			U	ug/L	1.1	
		21-Mar-90			U	ug/L	1.1	
		11-Sep-90			U	ug/L	0.6	
		11-Sep-90			U	ug/L	0.6	
		11-Sep-90			U	ug/L	7.4	
		11-Sep-90			U	ug/L	0.6	
		05-Mar-91			U	ug/L	0.6	
		16-Sep-91			U	ug/L	7.4	
		11-Mar-92			U	ug/L	0.6	
		16-Sep-92			U	ug/L	1	
		24-Mar-93			U	ug/L	1	
		14-Sep-93			U	ug/L	1	
		07-Mar-94			U	ug/L	7.4	
		13-Sep-94			U	ug/L	1	
		19-Apr-95			U	ug/L	1.1	
		19-Apr-95			U	ug/L	1.1	
		19-Apr-95			U	ug/L	1.1	
		19-Apr-95			U	ug/L	1.1	
		18-Sep-95			U	ug/L	1.1	
		18-Sep-95			U	ug/L	1.1	
		18-Sep-95			U	ug/L	1.1	
		18-Sep-95			U	ug/L	1.1	
		05-Mar-96			U	ug/L	1	

Location	Parameter	Date Samp	Lab	C or F?	Result	Unit	PQL	Desc	Qual
MW-16	Parathion	05-Mar-96	S		U	ug/L	1		
		12-Sep-96	S		U	ug/L	1		
		18-Apr-97	S		U	ug/L	1		
		19-Sep-97	G		U	ug/L	1.05		
		02-Apr-98	G		U	ug/L	1.05		
MW-20	4-Nitrophenol (Paranitrophenol)	26-Mar-87			U	ug/L	3.7		
		26-Mar-87			U	ug/L	3.7		
		26-Mar-87			U	ug/L	3.7		
		26-Mar-87			U	ug/L	3.7		
		21-Sep-87			U	ug/L	3.7		
		21-Sep-87			U	ug/L	3.7		
		21-Sep-87			U	ug/L	3.7		
		21-Sep-87			U	ug/L	3.7		
MW-20	Parathion	26-Mar-87			3.6	ug/L	1.1		
		26-Mar-87			3.6	ug/L	1.1		
		26-Mar-87			3.2	ug/L	1.1		
		26-Mar-87			3.0	ug/L	1.1		
		07-Apr-87			1.7	ug/L	1.1		
		07-Apr-87			2.9	ug/L	1.1		
		07-Apr-87			2.5	ug/L	1.1		
		07-Apr-87			2.3	ug/L	1.1		
		09-Apr-87			1.3	ug/L	1.1		
		09-Apr-87			2.9	ug/L	1.1		
		09-Apr-87			1.4	ug/L	1.1		
		09-Apr-87			1.2	ug/L	1.1		
		14-Apr-87			U	ug/L	1.1		
		14-Apr-87			1.1	ug/L	1.1		
		14-Apr-87			U	ug/L	1.1		
		14-Apr-87			U	ug/L	1.1		
		16-Apr-87			U	ug/L	1.1		
		16-Apr-87			U	ug/L	1.1		
		16-Apr-87			U	ug/L	1.1		
		16-Apr-87			U	ug/L	1.1		
		22-Apr-87			U	ug/L	1.1		
		22-Apr-87			U	ug/L	1.1		
		22-Apr-87			1.3	ug/L	1.1		
		22-Apr-87			1.8	ug/L	1.1		
		24-Apr-87			U	ug/L	1.1		
		24-Apr-87			U	ug/L	1.1		
		24-Apr-87			U	ug/L	1.1		
		24-Apr-87			1.3	ug/L	1.1		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-20	Parathion	28-Apr-87			U	ug/L	1.1		
		28-Apr-87			U	ug/L	1.1		
		28-Apr-87			U	ug/L	1.1		
		28-Apr-87			U	ug/L	1.1		
		29-Apr-87			U	ug/L	1.1		
		29-Apr-87			U	ug/L	1.1		
		29-Apr-87			U	ug/L	1.1		
		29-Apr-87			U	ug/L	1.1		
		21-Sep-87			65	ug/L	1.1		
		21-Sep-87			57	ug/L	1.1		
		21-Sep-87			68	ug/L	1.1		
		21-Sep-87			10	ug/L	1.1		
MW-20A	4-Nitrophenol (Paranitrophenol)	23-Mar-88			U	ug/L	3.7		
		23-Mar-88			U	ug/L	3.7		
		23-Mar-88			U	ug/L	3.7		
		23-Mar-88			U	ug/L	3.7		
		17-Oct-88			5.1	ug/L	3.7		
		17-Oct-88			30	ug/L	3.7	Z	
		17-Oct-88			4.4	ug/L	3.7		
		17-Oct-88			5.2	ug/L	3.7		
		17-Oct-88			31	ug/L	3.7	Z	
		17-Oct-88			30	ug/L	3.7	Z	
		17-Oct-88			U	ug/L	3.7		
		17-Oct-88			29	ug/L	3.7	Z	
		30-Nov-88			U	ug/L	3.7		
		07-Dec-88			U	ug/L	3.7		
		14-Dec-88			U	ug/L	3.7		
		21-Dec-88			U	ug/L	3.7		
		28-Dec-88			U	ug/L	3.7		
		05-Jan-89			U	ug/L	3.7		
		21-Mar-89			U	ug/L	3.7		
		21-Mar-89			U	ug/L	3.7		
		21-Mar-89			U	ug/L	3.7		
		21-Mar-89			U	ug/L	3.7		
		08-Sep-89			U	ug/L	3.7		
		08-Sep-89			U	ug/L	3.7		
		08-Sep-89			U	ug/L	3.7		
		08-Sep-89			U	ug/L	3.7		
		21-Mar-90			39	ug/L	1.1	Z	
		21-Mar-90			39	ug/L	1.1	Z	
		21-Mar-90			6.3	ug/L	1.1		
		21-Mar-90			36	ug/L	1.1	Z	

Location	Parameter	Date Samp	Lab	C or F?	Result	Unit	PQL	Desc	Qual
MW-20A	4Nitrophenol (Paranitrophenol)	21-Mar-90			6.6	ug/L	1.1		
		21-Mar-90			6.2	ug/L	1.1		
		21-Mar-90			38	ug/L	1.1		Z
		21-Mar-90			5.7	ug/L	1.1		
		11-Sep-90			110	ug/L	37		
		11-Sep-90			77	ug/L	37		
		11-Sep-90			77	ug/L	37		
		11-Sep-90			110	ug/L	37		
		11-Mar-92			U	ug/L	37		
		16-Sep-92			U	ug/L	50		
		24-Mar-93			U	ug/L	50		
		14-Sep-93			U	ug/L	50		
		07-Mar-94			U	ug/L	37		
		13-Sep-94			U	ug/L	20		
		19-Apr-95			U	ug/L	3.7		
		19-Apr-95			U	ug/L	3.7		
		19-Apr-95			U	ug/L	3.7		
		19-Apr-95			U	ug/L	3.7		Z
		19-Apr-95			U	ug/L	3.7		Z
		19-Apr-95			4.6	ug/L	3.7		
		19-Apr-95			U	ug/L	3.7		Z
		19-Apr-95			U	ug/L	3.7		Z
		18-Sep-95			U	ug/L	3.7		
		18-Sep-95			U	ug/L	3.7		
		18-Sep-95			U	ug/L	3.7		
		18-Sep-95			U	ug/L	3.7		
		05-Mar-96	S		U	ug/L	3.7		
		05-Mar-96	S		U	ug/L	7.4		
		05-Mar-96			U	ug/L	3.7		
		12-Sep-96	S		U	ug/L	3.7		
		17-Apr-97	S	C	U	ug/L	100		Q
		17-Apr-97	S	C	U	ug/L	50		
		23-Sep-97	G		U	ug/L	50		
		02-Apr-98	G		U	ug/L	50		
MW-20A	Parathion	23-Mar-88			U	ug/L	1.1		
		23-Mar-88			U	ug/L	1.1		
		23-Mar-88			U	ug/L	1.1		
		23-Mar-88			U	ug/L	1.1		
		17-Oct-88			U	ug/L	1.1		
		17-Oct-88			U	ug/L	1.1		
		17-Oct-88			U	ug/L	1.1		
		17-Oct-88			U	ug/L	1.1		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
MW-20A	Parathion	21-Mar-89			U	ug/L	1.1		
		21-Mar-89			U	ug/L	1.1		
		21-Mar-89			U	ug/L	1.1		
		21-Mar-89			U	ug/L	1.1		
		08-Sep-89			U	ug/L	1.1		
		08-Sep-89			U	ug/L	1.1		
		08-Sep-89			U	ug/L	1.1		
		08-Sep-89			U	ug/L	1.1		
		21-Mar-90			U	ug/L	1.1		
		21-Mar-90			U	ug/L	1.1		
		21-Mar-90			U	ug/L	1.1		
		21-Mar-90			U	ug/L	1.1		
		11-Sep-90			5.0	ug/L	0.6		
		11-Sep-90			3.2	ug/L	0.6		
		11-Sep-90			4.4	ug/L	0.6		
		11-Sep-90			5.5	ug/L	0.6		
		05-Mar-91			U	ug/L	7.4		
		16-Sep-91			U	ug/L	0.6		
		11-Mar-92			U	ug/L	7.4		
		16-Sep-92			1.1	ug/L	1		
		24-Mar-93			U	ug/L	1		
		14-Sep-93			U	ug/L	1		
		07-Mar-94			U	ug/L	7.4		
		13-Sep-94			U	ug/L	1		
		19-Apr-95			U	ug/L	1.1		
		19-Apr-95			U	ug/L	1.1		
		19-Apr-95			U	ug/L	1.1		
		19-Apr-95			U	ug/L	1.1		
		18-Sep-95			U	ug/L	1.1		
		18-Sep-95			U	ug/L	1.1		
		18-Sep-95			U	ug/L	1.1		
		18-Sep-95			U	ug/L	1.1		
		05-Mar-96	S		U	ug/L	1		
		05-Mar-96			U	ug/L	1		
		12-Sep-96	S		U	ug/L	1		
		17-Apr-97	S	Q	U	ug/L	1		
		23-Sep-97	G		U	ug/L	1.05		
		02-Apr-98	G		U	ug/L	1.05		
OW-01	4-Nitrophenol (Paranitrophenol)	01-Apr-88			U	ug/L	3.7		
		01-Jan-89			U	ug/L	3.7		
		01-Apr-89			U	ug/L	3.7		
		01-Jul-89			U	ug/L	3.7		

Location	Parameter	Date Samp	Lab	C or F?	Result	Unit	PQL	Desc	Qual
OW-01	4Nitrophenol (Paranitrophenol)	01-Oct-89			U	ug/L	3.7		
		01-Jan-90			U	ug/L	3.7		
		01-Apr-90			U	ug/L	3.7		
		01-Jul-90			U	ug/L	3.7		
		01-Oct-90			U	ug/L	3.7		
		01-Apr-91			U	ug/L	3.7		
		01-Jul-91			U	ug/L	3.7		
		01-Oct-91			U	ug/L	3.7		
		01-Dec-91			U	ug/L	3.7		
		01-Mar-92			U	ug/L	3.7		
		01-Jun-92			U	ug/L	3.7		
		01-Sep-92			U	ug/L	3.7		
		01-Dec-92			U	ug/L	3.7		
		01-Mar-93			U	ug/L	3.7		
		01-Jun-93			U	ug/L	3.7		
		01-Sep-93			U	ug/L	3.7		
		01-Mar-94			U	ug/L	3.7		
		01-Jun-94			U	ug/L	3.7		
		01-Sep-94			U	ug/L	3.7		
		01-Dec-94			U	ug/L	3.7		
		01-Mar-95			U	ug/L	3.7		
		01-Jun-95			U	ug/L	3.7		
		01-Sep-95			U	ug/L	3.7		
		01-Dec-95			U	ug/L	3.7		
		01-Mar-96			U	ug/L	3.7		
		01-Jun-96			U	ug/L	3.7		
		06-Aug-96		S	U	ug/L	3.7		
OW-01	Parathion	01-Apr-88			U	ug/L	1.1		
		01-Jan-89			U	ug/L	1.1		
		01-Apr-89			U	ug/L	1.1		
		01-Jul-89			U	ug/L	1.1		
		01-Oct-89			U	ug/L	1.1		
		01-Jan-90			U	ug/L	1.1		
		01-Apr-90			U	ug/L	1.1		
		01-Jul-90			U	ug/L	1.1		
		01-Oct-90			U	ug/L	1.1		
		01-Apr-91			U	ug/L	1.1		
		01-Jul-91			U	ug/L	1.1		
		01-Oct-91			U	ug/L	1.1		
		01-Dec-91			U	ug/L	1.1		
		01-Mar-92			U	ug/L	1.1		
		01-Jun-92			U	ug/L	1.1		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
OW-01	Parathion	01-Sep-92			U	ug/L	1.1		
		01-Dec-92			U	ug/L	1.1		
		01-Mar-93			U	ug/L	1.1		
		01-Jun-93			U	ug/L	1.1		
		01-Sep-93			U	ug/L	1.1		
		01-Mar-94			U	ug/L	1.1		
		01-Jun-94			U	ug/L	1.1		
		01-Sep-94			U	ug/L	1.1		
		01-Dec-94			U	ug/L	1.1		
		01-Mar-95			U	ug/L	1.1		
		01-Jun-95			U	ug/L	1.1		
		01-Sep-95			U	ug/L	1.1		
		01-Dec-95			U	ug/L	1.1		
		01-Mar-96			U	ug/L	1.1		
		01-Jun-96			U	ug/L	1.1		
		06-Aug-96		S	U	ug/L	1		
OW-02	4-Nitrophenol (Paranitrophenol)	01-Apr-88			U	ug/L	3.7		
		01-Jan-89			U	ug/L	3.7		
		01-Apr-89			U	ug/L	3.7		
		01-Jul-89			U	ug/L	3.7		
		01-Oct-89			U	ug/L	3.7		
		01-Jan-90			U	ug/L	3.7		
		01-Apr-90			U	ug/L	3.7		
		01-Jul-90			U	ug/L	3.7		
		01-Oct-90			U	ug/L	3.7		
		01-Apr-91			U	ug/L	3.7		
		01-Jul-91			U	ug/L	3.7		
		01-Oct-91			U	ug/L	3.7		
		01-Dec-91			U	ug/L	3.7		
		01-Mar-92			U	ug/L	3.7		
		01-Jun-92			U	ug/L	3.7		
		01-Sep-92			U	ug/L	3.7		
		01-Dec-92			U	ug/L	3.7		
		01-Mar-93			U	ug/L	3.7		
		01-Jun-93			U	ug/L	3.7		
		01-Sep-93			U	ug/L	3.7		
		01-Mar-94			U	ug/L	3.7		
		01-Jun-94			U	ug/L	3.7		
		01-Sep-94			U	ug/L	3.7		
		01-Dec-94			U	ug/L	3.7		
		01-Mar-95			U	ug/L	3.7		
		01-Jun-95			U	ug/L	3.7		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
OW-02	4-Nitrophenol (Paranitrophenol)	01-Sep-95			U	ug/L	3.7	
		01-Mar-96			U	ug/L	3.7	
		01-Jun-96			U	ug/L	3.7	
		06-Aug-96	S		U	ug/L	3.7	
		22-Apr-97	S		U	ug/L	50	
OW-02	Parathion	01-Apr-88			U	ug/L	1.1	
		01-Jan-89			U	ug/L	1.1	
		01-Apr-89			U	ug/L	1.1	
		01-Jul-89			U	ug/L	1.1	
		01-Oct-89			U	ug/L	1.1	
		01-Jan-90			U	ug/L	1.1	
		01-Apr-90			U	ug/L	1.1	
		01-Jul-90			U	ug/L	1.1	
		01-Oct-90			U	ug/L	1.1	
		01-Apr-91			U	ug/L	1.1	
		01-Jul-91			U	ug/L	1.1	
		01-Oct-91			U	ug/L	1.1	
		01-Dec-91			1.9	ug/L	1.1	
		01-Mar-92			U	ug/L	1.1	
		01-Jun-92			U	ug/L	1.1	
		01-Sep-92			U	ug/L	1.1	
		01-Dec-92			U	ug/L	1.1	
		01-Mar-93			U	ug/L	1.1	
		01-Jun-93			U	ug/L	1.1	
		01-Sep-93			U	ug/L	1.1	
		01-Mar-94			U	ug/L	1.1	
		01-Jun-94			U	ug/L	1.1	
		01-Sep-94			U	ug/L	1.1	
		01-Dec-94			U	ug/L	1.1	
		01-Mar-95			U	ug/L	1.1	
		01-Jun-95			U	ug/L	1.1	
		01-Sep-95			U	ug/L	1.1	
		01-Mar-96			U	ug/L	1.1	
		01-Jun-96			U	ug/L	1.1	
		06-Aug-96	S		U	ug/L	1	
		22-Apr-97	S		U	ug/L	1	
OW-03	4-Nitrophenol (Paranitrophenol)	01-Apr-88			50	ug/L	3.7	
		01-Jan-89			U	ug/L	3.7	
		01-Apr-89			U	ug/L	3.7	
		01-Jul-89			U	ug/L	3.7	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
OW-03	4-Nitrophenol (Paranitrophenol)	01-Oct-89			U	ug/L	3.7	
		01-Jan-90			U	ug/L	3.7	
		01-Apr-90			U	ug/L	3.7	
		01-Jul-90			U	ug/L	3.7	
		01-Jul-91			U	ug/L	3.7	
		01-Oct-91			U	ug/L	3.7	
		01-Mar-92			U	ug/L	3.7	
		01-Jun-92			U	ug/L	3.7	
		01-Sep-92			U	ug/L	3.7	
		01-Dec-92			U	ug/L	3.7	
		01-Mar-93			U	ug/L	3.7	
		01-Jun-93			U	ug/L	3.7	
		01-Sep-93			U	ug/L	3.7	
		01-Mar-94			U	ug/L	3.7	
		01-Jun-94			U	ug/L	3.7	
		01-Sep-94			U	ug/L	3.7	
		01-Mar-95			U	ug/L	3.7	
		01-Jun-95			U	ug/L	3.7	
		01-Mar-96			U	ug/L	3.7	
		01-Jun-96			U	ug/L	3.7	
OW-01	Parathion	01-Apr-88			U	ug/L	1.1	
		01-Jan-89			U	ug/L	1.1	
		01-Apr-89			U	ug/L	1.1	
		01-Jul-89			U	ug/L	1.1	
		01-Oct-89			U	ug/L	1.1	
		01-Jan-90			U	ug/L	1.1	
		01-Apr-90			U	ug/L	1.1	
		01-Jul-90			U	ug/L	1.1	
		01-Jul-91			U	ug/L	1.1	
		01-Oct-91			U	ug/L	1.1	
		01-Mar-92			U	ug/L	1.1	
		01-Jun-92			U	ug/L	1.1	
		01-Sep-92			U	ug/L	1.1	
		01-Dec-92			U	ug/L	1.1	
		01-Mar-93			U	ug/L	1.1	
		01-Jun-93			U	ug/L	1.1	
		01-Sep-93			U	ug/L	1.1	
		01-Mar-94			U	ug/L	1.1	
		01-Jun-94			U	ug/L	1.1	
		01-Sep-94			U	ug/L	1.1	
		01-Mar-95			U	ug/L	1.1	
		01-Jun-95			U	ug/L	1.1	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
OW-03	Parathion	01-Mar-96			U	ug/L	1.1		
		01-Jun-96			U	ug/L	1.1		
OW-04	4Nitrophenol (Paranitrophenol)	01-Apr-88			28	ug/L	3.7		
		01-Jan-89			U	ug/L	3.7		
		01-Apr-89			5.4	ug/L	3.7		
		01-Jul-89			6.3	ug/L	3.7		
		01-Oct-89			U	ug/L	3.7		
		01-Jan-90			U	ug/L	3.7		
		01-Apr-90			U	ug/L	3.7		
		01-Jul-90			U	ug/L	3.7		
		01-Jul-91			U	ug/L	3.7		
		01-Oct-91			U	ug/L	3.7		
		01-Jun-92			U	ug/L	3.7		
		01-Sep-92			U	ug/L	3.7		
		01-Dec-92			U	ug/L	3.7		
		01-Mar-93			U	ug/L	3.7		
		01-Jun-93			U	ug/L	3.7		
		01-Jun-94			U	ug/L	3.7		
		01-Sep-94			U	ug/L	3.7		
		01-Mar-95			U	ug/L	3.7		
		01-Jun-95			U	ug/L	3.7		
		01-Mar-96			U	ug/L	3.7		
		01-Jun-96			U	ug/L	3.7		
		22-Apr-97	S		U	ug/L	50		
OW-04	Parathion	01-Apr-88			U	ug/L	1.1		
		01-Jan-89			U	ug/L	1.1		
		01-Apr-89			U	ug/L	1.1		
		01-Jul-89			U	ug/L	1.1		
		01-Oct-89			U	ug/L	1.1		
		01-Jan-90			U	ug/L	1.1		
		01-Apr-90			U	ug/L	1.1		
		01-Jul-90			19	ug/L	1.1		
		01-Jul-91			U	ug/L	1.1		
		01-Oct-91			U	ug/L	1.1		
		01-Jun-92			U	ug/L	1.1		
		01-Sep-92			U	ug/L	1.1		
		01-Dec-92			U	ug/L	1.1		
		01-Mar-93			2.1	ug/L	1.1		
		01-Jun-93			U	ug/L	1.1		
		01-Sep-93			U	ug/L	1.1		
		01-Jun-94			U	ug/L	1.1		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
OW-04	Parathion	01-Sep-94			U	ug/L	1.1		
		01-Mar-95			U	ug/L	1.1		
		01-Jun-95			U	ug/L	1.1		
		01-Mar-96			U	ug/L	1.1		
		01-Jun-96			U	ug/L	1.1		
		22-Apr-97	S		U	ug/L	1		
OW-05	4-Nitrophenol (Paranitrophenol)	01-Jan-88			U	ug/L	3.7		
		01-Apr-88			21	ug/L	3.7		
		01-Jul-88			U	ug/L	3.7		
		01-Jan-89			U	ug/L	3.7		
		01-Apr-89			7.3	ug/L	3.7		
		01-Jul-89			U	ug/L	3.7		
		01-Oct-89			U	ug/L	3.7		
		01-Jan-90			U	ug/L	3.7		
		01-Apr-90			U	ug/L	3.7		
		01-Jul-90			U	ug/L	3.7		
		01-Oct-90			U	ug/L	3.7		
		01-Jan-91			U	ug/L	3.7		
		01-Apr-91			U	ug/L	3.7		
		01-Jul-91			U	ug/L	3.7		
		01-Oct-91			U	ug/L	3.7		
		01-Dec-91			U	ug/L	3.7		
		01-Mar-92			U	ug/L	3.7		
		01-Jun-92			U	ug/L	3.7		
		01-Sep-92			U	ug/L	3.7		
		01-Dec-92			U	ug/L	3.7		
		01-Mar-93			U	ug/L	3.7		
		01-Jun-93			U	ug/L	3.7		
		01-Sep-93			U	ug/L	3.7		
		01-Dec-93			U	ug/L	3.7		
		01-Mar-94			U	ug/L	3.7		
		01-Jun-94			U	ug/L	3.7		
		01-Sep-94			U	ug/L	3.7		
		01-Dec-94			U	ug/L	3.7		
		01-Mar-95			U	ug/L	3.7		
		01-Jun-95			U	ug/L	3.7		
		01-Sep-95			U	ug/L	3.7		
		01-Dec-95			U	ug/L	3.7		
		01-Mar-96			U	ug/L	3.7		
		01-Jun-96			U	ug/L	3.7		
		13-Aug-96	S		U	ug/L	3.7		
		09-Oct-96	S		U	ug/L	3.7		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
OW-05	Farathion	01-Jan-88			U	ug/L	1.1		
		01-Apr-88			U	ug/L	1.1		
		01-Jul-88			U	ug/L	1.1		
		01-Jan-89			U	ug/L	1.1		
		01-Apr-89			U	ug/L	1.1		
		01-Jul-89			U	ug/L	1.1		
		01-Oct-89			U	ug/L	1.1		
		01-Jan-90			U	ug/L	1.1		
		01-Apr-90			U	ug/L	1.1		
		01-Jul-90			U	ug/L	1.1		
		01-Oct-90			U	ug/L	1.1		
		01-Jan-91			U	ug/L	1.1		
		01-Apr-91			U	ug/L	1.1		
		01-Jul-91			U	ug/L	1.1		
		01-Oct-91			18	ug/L	1.1		
		01-Dec-91			U	ug/L	1.1		
		01-Mar-92			U	ug/L	1.1		
		01-Jun-92			U	ug/L	1.1		
		01-Sep-92			U	ug/L	1.1		
		01-Dec-92			U	ug/L	1.1		
		01-Mar-93			U	ug/L	1.1		
		01-Jun-93			U	ug/L	1.1		
		01-Sep-93			U	ug/L	1.1		
		01-Dec-93			U	ug/L	1.1		
		01-Mar-94			U	ug/L	1.1		
		01-Jun-94			U	ug/L	1.1		
		01-Sep-94			U	ug/L	1.1		
		01-Dec-94			U	ug/L	1.1		
		01-Mar-95			U	ug/L	1.1		
		01-Jun-95			U	ug/L	1.1		
		01-Sep-95			U	ug/L	1.1		
		01-Dec-95			U	ug/L	1.1		
		01-Mar-96			U	ug/L	1.1		
		01-Jun-96			U	ug/L	1.1		
		13-Aug-96	S		U	ug/L	1		
		09-Oct-96	S		U	ug/L	1		
OW-06	4-Nitrophenol (Paranitrophenol)	01-Apr-89			U	ug/L	3.7		
		01-Jul-89			U	ug/L	3.7		
		01-Oct-89			U	ug/L	3.7		
		01-Apr-90			U	ug/L	3.7		
		01-Jul-90			U	ug/L	3.7		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
OW-06	4-Nitrophenol (Paranitrophenol)	01-Oct-90			U	ug/L	3.7		
		01-Jul-91			U	ug/L	3.7		
		01-Oct-91			U	ug/L	3.7		
		01-Jun-92			U	ug/L	3.7		
		01-Sep-92			U	ug/L	3.7		
		01-Dec-92			U	ug/L	3.7		
		01-Mar-93			U	ug/L	3.7		
		01-Jun-93			U	ug/L	3.7		
		01-Sep-93			U	ug/L	3.7		
		01-Dec-93			U	ug/L	3.7		
		01-Jun-94			U	ug/L	3.7		
		01-Sep-94			U	ug/L	3.7		
		01-Dec-94			U	ug/L	3.7		
		01-Mar-95			U	ug/L	3.7		
		01-Jun-95			U	ug/L	3.7		
		01-Sep-95			U	ug/L	3.7		
		01-Mar-96			U	ug/L	3.7		
		01-Jun-96			U	ug/L	3.7		
		06-Aug-96	S		U	ug/L	3.7		
		08-Oct-96	S		U	ug/L	3.7		
		22-Apr-97	S		U	ug/L	50		
		23-Sep-97	G		U	ug/L	50		
OW-05	Parathion	01-Apr-89			U	ug/L	1.1		
		01-Jul-89			U	ug/L	1.1		
		01-Oct-89			U	ug/L	1.1		
		01-Apr-90			U	ug/L	1.1		
		01-Jul-90			U	ug/L	1.1		
		01-Oct-90			U	ug/L	1.1		
		01-Jul-91			U	ug/L	1.1		
		01-Oct-91			U	ug/L	1.1		
		01-Jun-92			U	ug/L	1.1		
		01-Sep-92			U	ug/L	1.1		
		01-Dec-92			U	ug/L	1.1		
		01-Mar-93			U	ug/L	1.1		
		01-Jun-93			U	ug/L	1.1		
		01-Sep-93			U	ug/L	1.1		
		01-Dec-93			U	ug/L	1.1		
		01-Jun-94			U	ug/L	1.1		
		01-Sep-94			U	ug/L	1.1		
		01-Dec-94			U	ug/L	1.1		
		01-Mar-95			U	ug/L	1.1		
		01-Jun-95			U	ug/L	1.1		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
OW-06	Parathion	01-Sep-95			U	ug/L	1.1	
		01-Mar-96			U	ug/L	1.1	
		01-Jun-96			U	ug/L	1.1	
		06-Aug-96	S		U	ug/L	1	
		08-Oct-96	S		U	ug/L	1	
		22-Apr-97	S		U	ug/L	1	
		23-Sep-97	G		U	ug/L	1.05	
OW-06A	4-Nitrophenol (Paranitrophenol)	08-Apr-98	G		U	ug/L	50	
OW-06A	Parathion	08-Apr-98	G		U	ug/L	1.05	
OW-07	4-Nitrophenol (Paranitrophenol)	01-Jan-88			U	ug/L	3.7	
		01-Apr-88			33	ug/L	3.7	
		01-Jul-88			U	ug/L	3.7	
		01-Jan-89			U	ug/L	3.7	
		01-Apr-89			U	ug/L	3.7	
		01-Jul-89			U	ug/L	3.7	
		01-Oct-89			U	ug/L	3.7	
		01-Jan-90			U	ug/L	3.7	
		01-Apr-90			U	ug/L	3.7	
		01-Jul-90			U	ug/L	3.7	
		01-Oct-90			U	ug/L	3.7	
		01-Jan-91			U	ug/L	3.7	
		01-Apr-91			U	ug/L	3.7	
		01-Jul-91			U	ug/L	3.7	
		01-Oct-91			U	ug/L	3.7	
		01-Dec-91			U	ug/L	3.7	
		01-Mar-92			U	ug/L	3.7	
		01-Jun-92			U	ug/L	3.7	
		01-Sep-92			U	ug/L	3.7	
		01-Dec-92			U	ug/L	3.7	
		01-Mar-93			U	ug/L	3.7	
		01-Jun-93			U	ug/L	3.7	
		01-Sep-93			U	ug/L	3.7	
		01-Dec-93			U	ug/L	3.7	
		01-Mar-94			U	ug/L	3.7	
		01-Jun-94			U	ug/L	3.7	
		01-Sep-94			U	ug/L	3.7	
		01-Dec-94			U	ug/L	3.7	
		01-Mar-95			U	ug/L	3.7	
		01-Jun-95			U	ug/L	3.7	
		01-Sep-95			U	ug/L	3.7	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
OW-07	4-Nitrophenol (Paranitrophenol)	01-Dec-95			U	ug/L	3.7	
		01-Mar-96			U	ug/L	3.7	
		01-Jun-96			U	ug/L	3.7	
		06-Aug-96	S		U	ug/L	3.7	
		08-Oct-96	S		U	ug/L	3.7	
		22-Apr-97	S		U	ug/L	50	
		23-Sep-97	G		U	ug/L	50	
		31-Mar-98	G		U	ug/L	50	
OW-07	Parathion	01-Jan-88			U	ug/L	1.1	
		01-Apr-88			U	ug/L	1.1	
		01-Jul-88			U	ug/L	1.1	
		01-Jan-89			U	ug/L	1.1	
		01-Apr-89			U	ug/L	1.1	
		01-Jul-89			U	ug/L	1.1	
		01-Oct-89			U	ug/L	1.1	
		01-Jan-90			U	ug/L	1.1	
		01-Apr-90			U	ug/L	1.1	
		01-Jul-90			U	ug/L	1.1	
		01-Oct-90			U	ug/L	1.1	
		01-Jan-91			U	ug/L	1.1	
		01-Apr-91			U	ug/L	1.1	
		01-Jul-91			U	ug/L	1.1	
		01-Oct-91			U	ug/L	1.1	
		01-Dec-91			U	ug/L	1.1	
		01-Mar-92			U	ug/L	1.1	
		01-Jun-92			U	ug/L	1.1	
		01-Sep-92			U	ug/L	1.1	
		01-Dec-92			U	ug/L	1.1	
		01-Mar-93			U	ug/L	1.1	
		01-Jun-93			U	ug/L	1.1	
		01-Sep-93			U	ug/L	1.1	
		01-Dec-93			U	ug/L	1.1	
		01-Mar-94			U	ug/L	1.1	
		01-Jun-94			U	ug/L	1.1	
		01-Sep-94			U	ug/L	1.1	
		01-Dec-94			U	ug/L	1.1	
		01-Mar-95			U	ug/L	1.1	
		01-Jun-95			U	ug/L	1.1	
		01-Sep-95			U	ug/L	1.1	
		01-Dec-95			U	ug/L	1.1	
		01-Mar-96			U	ug/L	1.1	
		01-Jun-96			U	ug/L	1.1	

Location	Parameter	Date Samp	Lab	C or F?	Result	Unit	PQL	Desc	Qual
OW-07	Parathion	06-Aug-96	S		U	ug/L	1		
		08-Oct-96	S		U	ug/L	1		
		22-Apr-97	S		U	ug/L	1		
		23-Sep-97	G		U	ug/L	1.05		
		31-Mar-98	G		U	ug/L	1.05		
OW-08	4-Nitrophenol (Paranitrophenol)	01-Jan-88			33	ug/L	3.7		
		01-Apr-88			U	ug/L	3.7		
		01-Jul-88			U	ug/L	3.7		
		01-Jan-89			29	ug/L	3.7		
		01-Apr-89			9.5	ug/L	3.7		
		01-Jul-89			11	ug/L	3.7		
		01-Oct-89			41	ug/L	3.7		
		01-Jan-90			2.2	ug/L	3.7		
		01-Apr-90			U	ug/L	3.7		
		01-Jul-90			5.4	ug/L	3.7		
		01-Oct-90			8.4	ug/L	3.7		
		01-Jan-91			U	ug/L	3.7		
		01-Apr-91			U	ug/L	3.7		
		01-Jul-91			U	ug/L	3.7		
		01-Oct-91			U	ug/L	3.7		
		01-Dec-91			U	ug/L	3.7		
		01-Mar-92			U	ug/L	3.7		
		01-Jun-92			U	ug/L	3.7		
		01-Sep-92			4.8	ug/L	3.7		
		01-Dec-92			U	ug/L	3.7		
		01-Mar-93			U	ug/L	3.7		
		01-Jun-93			6.6	ug/L	3.7		
		01-Sep-93			U	ug/L	3.7		
		01-Dec-93			U	ug/L	3.7		
		01-Mar-94			U	ug/L	3.7		
		01-Jun-94			U	ug/L	3.7		
		01-Sep-94			U	ug/L	3.7		
		01-Dec-94			U	ug/L	3.7		
		01-Mar-95			U	ug/L	3.7		
		01-Jun-95			U	ug/L	3.7		
		01-Sep-95			U	ug/L	3.7		
		01-Dec-95			U	ug/L	3.7		
		01-Mar-96			U	ug/L	3.7		
		01-Jun-96			U	ug/L	3.7		
		06-Aug-96	S		U	ug/L	3.7		
		08-Oct-96	S	Q	U	ug/L	3.7		Q
		08-Oct-96	S	Q	U	ug/L	3.7		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
OW-08	4-Nitrophenol (Paranitrophenol)	21-Apr-97	S		U	ug/L	50		
		21-Apr-97	S	Q	U	ug/L	50	Q	
		07-Oct-97	G		U	ug/L	50		
		07-Oct-97	G	Q	U	ug/L	50	Q	
OW-09	Parathion	01-Jan-88			6.1	ug/L	1.1		
		01-Apr-88			U	ug/L	1.1		
		01-Jul-88			U	ug/L	1.1		
		01-Jan-89			6.3	ug/L	1.1		
		01-Apr-89			U	ug/L	1.1		
		01-Jul-89			2.3	ug/L	1.1		
		01-Oct-89			U	ug/L	1.1		
		01-Jan-90			U	ug/L	1.1		
		01-Apr-90			1.6	ug/L	1.1		
		01-Jul-90			U	ug/L	1.1		
		01-Oct-90			U	ug/L	1.1		
		01-Jan-91			U	ug/L	1.1		
		01-Apr-91			U	ug/L	1.1		
		01-Jul-91			U	ug/L	1.1		
		01-Oct-91			U	ug/L	1.1		
		01-Dec-91			1.9	ug/L	1.1		
		01-Mar-92			U	ug/L	1.1		
		01-Jun-92			1.2	ug/L	1.1		
		01-Sep-92			U	ug/L	1.1		
		01-Dec-92			U	ug/L	1.1		
		01-Mar-93			U	ug/L	1.1		
		01-Jun-93			U	ug/L	1.1		
		01-Sep-93			U	ug/L	1.1		
		01-Dec-93			U	ug/L	1.1		
		01-Mar-94			U	ug/L	1.1		
		01-Jun-94			U	ug/L	1.1		
		01-Sep-94			U	ug/L	1.1		
		01-Dec-94			U	ug/L	1.1		
		01-Mar-95			U	ug/L	1.1		
		01-Jun-95			U	ug/L	1.1		
		01-Sep-95			U	ug/L	1.1		
		01-Dec-95			U	ug/L	1.1		
		01-Mar-96			U	ug/L	1.1		
		01-Jun-96			U	ug/L	1.1		
		06-Aug-96	S		U	ug/L	1		
		08-Oct-96	S	Q	U	ug/L	1		
		08-Oct-96	S	Q	U	ug/L	1		Q
		21-Apr-97	S		U	ug/L	1		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
OW-08	Parathion	21-Apr-97	S	Q	U	ug/L	1	Q	
		07-Oct-97	G		7.5	ug/L	1.05		
		07-Oct-97	G	Q	8.4	ug/L	1.05	Q	
OW-08A	4-Nitrophenol (Paranitrophenol)	08-Apr-98	G		U	ug/L	50		
OW-08A	Parathion	08-Apr-98	G		13	ug/L	1.05		
OW-09	4-Nitrophenol (Paranitrophenol)	01-Jan-88			U	ug/L	3.7		
		01-Apr-88			21	ug/L	3.7		
		01-Jul-88			U	ug/L	3.7		
		01-Jan-89			22	ug/L	3.7		
		01-Apr-89			U	ug/L	3.7		
		01-Jul-89			U	ug/L	3.7		
		01-Oct-89			U	ug/L	3.7		
		01-Jan-90			U	ug/L	3.7		
		01-Apr-90			U	ug/L	3.7		
		01-Jul-90			U	ug/L	3.7		
		01-Oct-90			U	ug/L	3.7		
		01-Jan-91			U	ug/L	3.7		
		01-Apr-91			U	ug/L	3.7		
		01-Jul-91			U	ug/L	3.7		
		01-Oct-91			U	ug/L	3.7		
		01-Dec-91			U	ug/L	3.7		
		01-Mar-92			U	ug/L	3.7		
		01-Jun-92			U	ug/L	3.7		
		01-Sep-92			U	ug/L	3.7		
		01-Dec-92			U	ug/L	3.7		
		01-Mar-93			U	ug/L	3.7		
		01-Jun-93			U	ug/L	3.7		
		01-Sep-93			U	ug/L	3.7		
		01-Dec-93			U	ug/L	3.7		
		01-Mar-94			U	ug/L	3.7		
		01-Jun-94			U	ug/L	3.7		
		01-Sep-94			U	ug/L	3.7		
		01-Dec-94			U	ug/L	3.7		
		01-Mar-95			U	ug/L	3.7		
		01-Jun-95			U	ug/L	3.7		
		01-Sep-95			U	ug/L	3.7		
		01-Dec-95			U	ug/L	3.7		
		01-Mar-96			U	ug/L	3.7		
		01-Jun-96			U	ug/L	3.7		
		06-Aug-96	S		U	ug/L	3.7		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
OW-09	4-Nitrophenol (Paranitrophenol)	06-Aug-96	S	Q	U	ug/L	3.7	Q	
		08-Oct-96	S		U	ug/L	3.7		
		28-Jul-98	S		U	ug/L	50		
OW-09	Parathion	01-Jan-88			2.3	ug/L	1.1		
		01-Apr-88			U	ug/L	1.1		
		01-Jul-88			U	ug/L	1.1		
		01-Jan-89			U	ug/L	1.1		
		01-Apr-89			U	ug/L	1.1		
		01-Jul-89			U	ug/L	1.1		
		01-Oct-89			1.4	ug/L	1.1		
		01-Jan-90			U	ug/L	1.1		
		01-Apr-90			U	ug/L	1.1		
		01-Jul-90			U	ug/L	1.1		
		01-Oct-90			U	ug/L	1.1		
		01-Jan-91			U	ug/L	1.1		
		01-Apr-91			U	ug/L	1.1		
		01-Jul-91			U	ug/L	1.1		
		01-Oct-91			U	ug/L	1.1		
		01-Dec-91			U	ug/L	1.1		
		01-Mar-92			U	ug/L	1.1		
		01-Jun-92			U	ug/L	1.1		
		01-Sep-92			U	ug/L	1.1		
		01-Dec-92			U	ug/L	1.1		
		01-Mar-93			U	ug/L	1.1		
		01-Jun-93			U	ug/L	1.1		
		01-Sep-93			U	ug/L	1.1		
		01-Dec-93			U	ug/L	1.1		
		01-Mar-94			U	ug/L	1.1		
		01-Jun-94			U	ug/L	1.1		
		01-Sep-94			U	ug/L	1.1		
		01-Dec-94			U	ug/L	1.1		
		01-Mar-95			U	ug/L	1.1		
		01-Jun-95			U	ug/L	1.1		
		01-Sep-95			U	ug/L	1.1		
		01-Dec-95			U	ug/L	1.1		
		01-Mar-96			U	ug/L	1		
		01-Jun-96			U	ug/L	1		
		06-Aug-96	S		U	ug/L	1		
		06-Aug-96	S	Q	U	ug/L	1	Q	
		08-Oct-96	S		U	ug/L	1		
		28-Jul-98	S		U	ug/L	1		

Location	Parameter	Date Samp	Lab	C or F?	Result	Unit	PQL	Desc	Qual
OW-10	4Nitrophenol (Paranitrophenol)	01-Jan-88			U	ug/L	3.7		
		01-Apr-88			100	ug/L	3.7		
		01-Jul-88			U	ug/L	3.7		
		01-Jan-89			25	ug/L	3.7		
		01-Apr-89			U	ug/L	3.7		
		01-Jul-89			U	ug/L	3.7		
		01-Oct-89			4.2	ug/L	3.7		
		01-Jan-90			U	ug/L	3.7		
		01-Apr-90			U	ug/L	3.7		
		01-Jul-90			U	ug/L	3.7		
		01-Oct-90			U	ug/L	3.7		
		01-Jan-91			U	ug/L	3.7		
		01-Apr-91			U	ug/L	3.7		
		01-Jul-91			U	ug/L	3.7		
		01-Oct-91			U	ug/L	3.7		
		01-Dec-91			U	ug/L	3.7		
		01-Mar-92			U	ug/L	3.7		
		01-Jun-92			U	ug/L	3.7		
		01-Sep-92			U	ug/L	3.7		
		01-Dec-92			U	ug/L	3.7		
		01-Mar-93			U	ug/L	3.7		
		01-Jun-93			U	ug/L	3.7		
		01-Sep-93			U	ug/L	3.7		
		01-Dec-93			U	ug/L	3.7		
		01-Mar-94			U	ug/L	3.7		
		01-Jun-94			U	ug/L	3.7		
		01-Sep-94			U	ug/L	3.7		
		01-Dec-94			U	ug/L	3.7		
		01-Mar-95			U	ug/L	3.7		
		01-Jun-95			U	ug/L	3.7		
		01-Sep-95			U	ug/L	3.7		
		01-Dec-95			U	ug/L	3.7		
		01-Mar-96			U	ug/L	3.7		
		01-Jun-96			U	ug/L	3.7		
		08-Aug-96	S		U	ug/L	3.7		
		09-Oct-96	S		U	ug/L	3.7		
		30-Jul-98	S		U	ug/L	50		
OW-10	Parathion	01-Jan-88			U	ug/L	1.1		
		01-Apr-88			2.5	ug/L	1.1		
		01-Jul-88			U	ug/L	1.1		
		01-Jan-89			U	ug/L	1.1		
		01-Apr-89			1.5	ug/L	1.1		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
OW-10	Parathion	01-Jul-89			U	ug/L	1.1		
		01-Oct-89			1.2	ug/L	1.1		
		01-Jan-90			U	ug/L	1.1		
		01-Apr-90			U	ug/L	1.1		
		01-Jul-90			U	ug/L	1.1		
		01-Oct-90			U	ug/L	1.1		
		01-Jan-91			U	ug/L	1.1		
		01-Apr-91			U	ug/L	1.1		
		01-Jul-91			U	ug/L	1.1		
		01-Oct-91			U	ug/L	1.1		
		01-Dec-91			U	ug/L	1.1		
		01-Mar-92			U	ug/L	1.1		
		01-Jun-92			U	ug/L	1.1		
		01-Sep-92			U	ug/L	1.1		
		01-Dec-92			U	ug/L	1.1		
		01-Mar-93			U	ug/L	1.1		
		01-Jun-93			U	ug/L	1.1		
		01-Sep-93			U	ug/L	1.1		
		01-Dec-93			U	ug/L	1.1		
		01-Mar-94			U	ug/L	1.1		
		01-Jun-94			U	ug/L	1.1		
		01-Sep-94			U	ug/L	1.1		
		01-Dec-94			U	ug/L	1.1		
		01-Mar-95			U	ug/L	1.1		
		01-Jun-95			U	ug/L	1.1		
		01-Sep-95			U	ug/L	1.1		
		01-Dec-95			U	ug/L	1.1		
		01-Mar-96			U	ug/L	1.1		
		01-Jun-96			U	ug/L	1.1		
		08-Aug-96	S		U	ug/L	1		
		09-Oct-96	S		U	ug/L	1		
		30-Jul-98	S		U	ug/L	1		
OW-11	4-Nitrophenol (Paranitrophenol)	01-Jan-88			91	ug/L	3.7		
		01-Apr-88			110	ug/L	3.7		
		01-Jul-88			U	ug/L	3.7		
		01-Jan-89			U	ug/L	3.7		
		01-Apr-89			17	ug/L	3.7		
		01-Jul-89			8.0	ug/L	3.7		
		01-Oct-89			26	ug/L	3.7		
		01-Jan-90			4.5	ug/L	3.7		
		01-Apr-90			4.5	ug/L	3.7		
		01-Jul-90			62	ug/L	3.7		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
OW-11	4-Nitrophenol (Paranitrophenol)	01-Oct-90			U	ug/L	3.7		
		01-Apr-91			U	ug/L	3.7		
		01-Jul-91			34	ug/L	3.7		
		01-Oct-91			U	ug/L	3.7		
		01-Dec-91			95	ug/L	3.7		
		01-Mar-92			U	ug/L	3.7		
		01-Jun-92			U	ug/L	3.7		
		01-Sep-92			9.2	ug/L	3.7		
		01-Dec-92			U	ug/L	3.7		
		01-Mar-93			U	ug/L	3.7		
		01-Jun-93			U	ug/L	3.7		
		01-Sep-93			U	ug/L	3.7		
		01-Dec-93			U	ug/L	3.7		
		01-Mar-94			U	ug/L	3.7		
		01-Jun-94			U	ug/L	3.7		
		01-Sep-94			U	ug/L	3.7		
		01-Dec-94			U	ug/L	3.7		
		01-Mar-95			U	ug/L	3.7		
		01-Jun-95			U	ug/L	3.7		
		01-Sep-95			U	ug/L	3.7		
		01-Dec-95			U	ug/L	3.7		
		01-Mar-96			U	ug/L	3.7		
		01-Jun-96			35	ug/L	3.7		
OW-11	Parathion	01-Jan-88			U	ug/L	1.1		
		01-Apr-88			39	ug/L	1.1		
		01-Jul-88			U	ug/L	1.1		
		01-Jan-89			U	ug/L	1.1		
		01-Apr-89			U	ug/L	1.1		
		01-Jul-89			2.9	ug/L	1.1		
		01-Oct-89			5.8	ug/L	1.1		
		01-Jan-90			1.7	ug/L	1.1		
		01-Apr-90			1.7	ug/L	1.1		
		01-Jul-90			U	ug/L	1.1		
		01-Oct-90			220	ug/L	1.1		
		01-Apr-91			U	ug/L	1.1		
		01-Jul-91			1.7	ug/L	1.1		
		01-Oct-91			U	ug/L	1.1		
		01-Dec-91			U	ug/L	1.1		
		01-Mar-92			U	ug/L	1.1		
		01-Jun-92			U	ug/L	1.1		
		01-Sep-92			U	ug/L	1.1		
		01-Dec-92			U	ug/L	1.1		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
OW-11	Parathion	01-Mar-93			U	ug/L	1.1		
		01-Jun-93			U	ug/L	1.1		
		01-Sep-93			U	ug/L	1.1		
		01-Dec-93			U	ug/L	1.1		
		01-Mar-94			U	ug/L	1.1		
		01-Jun-94			U	ug/L	1.1		
		01-Sep-94			U	ug/L	1.1		
		01-Dec-94			U	ug/L	1.1		
		01-Mar-95			U	ug/L	1.1		
		01-Jun-95			U	ug/L	1.1		
		01-Sep-95			U	ug/L	1.1		
		01-Dec-95			U	ug/L	1.1		
		01-Mar-96			U	ug/L	1.1		
		01-Jun-96			U	ug/L	1.1		
OW-12	4-Nitrophenol (Paranitrophenol)	01-Jan-88			U	ug/L	3.7		
		01-Apr-88			52	ug/L	3.7		
		01-Jul-88			U	ug/L	3.7		
		01-Jan-89			U	ug/L	3.7		
		01-Apr-89			U	ug/L	3.7		
		01-Jul-89			U	ug/L	3.7		
		01-Oct-89			5.1	ug/L	3.7		
		01-Jan-90			U	ug/L	3.7		
		01-Apr-90			U	ug/L	3.7		
		01-Jul-90			U	ug/L	3.7		
		01-Oct-90			U	ug/L	3.7		
		01-Jan-91			U	ug/L	3.7		
		01-Apr-91			U	ug/L	3.7		
		01-Jul-91			U	ug/L	3.7		
		01-Oct-91			U	ug/L	3.7		
		01-Dec-91			U	ug/L	3.7		
		01-Mar-92			U	ug/L	3.7		
		01-Jun-92			U	ug/L	3.7		
		01-Sep-92			U	ug/L	3.7		
		01-Dec-92			U	ug/L	3.7		
		01-Mar-93			U	ug/L	3.7		
		01-Jun-93			U	ug/L	3.7		
		01-Sep-93			U	ug/L	3.7		
		01-Dec-93			U	ug/L	3.7		
		01-Mar-94			U	ug/L	3.7		
		01-Jun-94			U	ug/L	3.7		
		01-Sep-94			U	ug/L	3.7		
		01-Dec-94			U	ug/L	3.7		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
OW-12	4-Nitrophenol (Paranitrophenol)	01-Mar-95			U	ug/L	3.7	
		01-Jun-95			U	ug/L	3.7	
		01-Sep-95			U	ug/L	3.7	
		01-Dec-95			U	ug/L	3.7	
		01-Mar-96			U	ug/L	3.7	
		01-Jun-96			U	ug/L	3.7	
		06-Aug-96	S		U	ug/L	3.7	
		08-Oct-96	S		U	ug/L	3.7	
OW-12	Parathion	01-Jan-88			2.4	ug/L	1.1	
		01-Apr-88			U	ug/L	1.1	
		01-Jul-88			U	ug/L	1.1	
		01-Jan-89			U	ug/L	1.1	
		01-Apr-89			U	ug/L	1.1	
		01-Jul-89			1.6	ug/L	1.1	
		01-Oct-89			11	ug/L	1.1	
		01-Jan-90			U	ug/L	1.1	
		01-Apr-90			U	ug/L	1.1	
		01-Jul-90			60	ug/L	1.1	
		01-Oct-90			U	ug/L	1.1	
		01-Jan-91			U	ug/L	1.1	
		01-Apr-91			1.2	ug/L	1.1	
		01-Jul-91			U	ug/L	1.1	
		01-Oct-91			U	ug/L	1.1	
		01-Dec-91			1.2	ug/L	1.1	
		01-Mar-92			U	ug/L	1.1	
		01-Jun-92			U	ug/L	1.1	
		01-Sep-92			U	ug/L	1.1	
		01-Dec-92			U	ug/L	1.1	
		01-Mar-93			U	ug/L	1.1	
		01-Jun-93			U	ug/L	1.1	
		01-Sep-93			U	ug/L	1.1	
		01-Dec-93			U	ug/L	1.1	
		01-Mar-94			U	ug/L	1.1	
		01-Jun-94			U	ug/L	1.1	
		01-Sep-94			U	ug/L	1.1	
		01-Dec-94			U	ug/L	1.1	
		01-Mar-95			U	ug/L	1.1	
		01-Jun-95			U	ug/L	1.1	
		01-Sep-95			U	ug/L	1.1	
		01-Dec-95			5.5	ug/L	1.1	
		01-Mar-96			2.0	ug/L	1.1	
		01-Jun-96			U	ug/L	1.1	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
OW-12	Parathion	06-Aug-96	S		U	ug/L	1	
		08-Oct-96	S		U	ug/L	1	
OW-13	4-Nitrophenol (Paranitrophenol)	01-Jul-89			U	ug/L	3.7	
OW-13	Parathion	01-Jul-89			U	ug/L	1.1	
OW-15	4-Nitrophenol (Paranitrophenol)	01-Jan-88			U	ug/L	3.7	
		01-Apr-88			4.1	ug/L	3.7	
		01-Jul-88			U	ug/L	3.7	
		01-Jan-89			U	ug/L	3.7	
		01-Apr-89			U	ug/L	3.7	
		01-Jul-89			U	ug/L	3.7	
		01-Oct-89			18	ug/L	3.7	
		01-Jan-90			11	ug/L	3.7	
		01-Apr-90			11	ug/L	3.7	
		01-Jul-90			6.3	ug/L	3.7	
		01-Oct-90			5.2	ug/L	3.7	
		01-Jan-91			6.6	ug/L	3.7	
		01-Apr-91			16	ug/L	3.7	
		01-Jul-91			6.4	ug/L	3.7	
		01-Oct-91			15	ug/L	3.7	
		01-Dec-91			23	ug/L	3.7	
		01-Mar-92			27	ug/L	3.7	
		01-Jun-92			5.8	ug/L	3.7	
		01-Sep-92			4.6	ug/L	3.7	
		01-Dec-92			7.5	ug/L	3.7	
		01-Mar-93			16	ug/L	3.7	
		01-Jun-93			18	ug/L	3.7	
		01-Sep-93			U	ug/L	3.7	
		01-Dec-93			U	ug/L	3.7	
		01-Mar-94			U	ug/L	3.7	
		01-Jun-94			U	ug/L	3.7	
		01-Sep-94			U	ug/L	3.7	
		01-Dec-94			U	ug/L	3.7	
		01-Mar-95			U	ug/L	3.7	
		01-Jun-95			U	ug/L	3.7	
		01-Sep-95			U	ug/L	3.7	
		01-Dec-95			U	ug/L	3.7	
		01-Mar-96			U	ug/L	3.7	
		01-Jun-96			U	ug/L	3.7	
		08-Aug-96	S		28	ug/L	3.7	
		09-Oct-96	S		4.8	ug/L	3.7	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
OW-15	4-Nitrophenol (Paranitrophenol)	22-Apr-97	S		U	ug/L	50		
		26-Sep-97	G		U	ug/L	50		
		31-Mar-98	G		U	ug/L	50		
OW-15	Parathion	01-Jan-88			2.0	ug/L	1.1		
		01-Apr-88			2.6	ug/L	1.1		
		01-Jul-88			U	ug/L	1.1		
		01-Jan-89			U	ug/L	1.1		
		01-Apr-89			U	ug/L	1.1		
		01-Jul-89			U	ug/L	1.1		
		01-Oct-89			U	ug/L	1.1		
		01-Jan-90			U	ug/L	1.1		
		01-Apr-90			U	ug/L	1.1		
		01-Jul-90			U	ug/L	1.1		
		01-Oct-90			U	ug/L	1.1		
		01-Jan-91			U	ug/L	1.1		
		01-Apr-91			U	ug/L	1.1		
		01-Jul-91			U	ug/L	1.1		
		01-Oct-91			U	ug/L	1.1		
		01-Dec-91			U	ug/L	1.1		
		01-Mar-92			U	ug/L	1.1		
		01-Jun-92			U	ug/L	1.1		
		01-Sep-92			U	ug/L	1.1		
		01-Dec-92			U	ug/L	1.1		
		01-Mar-93			U	ug/L	1.1		
		01-Jun-93			U	ug/L	1.1		
		01-Sep-93			U	ug/L	1.1		
		01-Dec-93			U	ug/L	1.1		
		01-Mar-94			U	ug/L	1.1		
		01-Jun-94			U	ug/L	1.1		
		01-Sep-94			U	ug/L	1.1		
		01-Dec-94			U	ug/L	1.1		
		01-Mar-95			U	ug/L	1.1		
		01-Jun-95			U	ug/L	1.1		
		01-Sep-95			U	ug/L	1.1		
		01-Dec-95			U	ug/L	1.1		
		01-Mar-96			U	ug/L	1.1		
		01-Jun-96			U	ug/L	1.1		
		08-Aug-96	S		U	ug/L	1		
		09-Oct-96	S		U	ug/L	1		
		26-Sep-97	G		U	ug/L	1.05		
		31-Mar-98	G		U	ug/L	1.05		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
OW-16	4-Nitrophenol (Paranitrophenol)	01-Jan-88			U	ug/L	3.7		
		01-Apr-88			25	ug/L	3.7		
		01-Jul-88			84	ug/L	3.7		
		01-Jan-89			U	ug/L	3.7		
		01-Apr-89			U	ug/L	3.7		
		01-Jul-89			80	ug/L	3.7		
		01-Oct-89			170	ug/L	3.7		
		01-Jan-90			U	ug/L	3.7		
		01-Apr-90			U	ug/L	3.7		
		01-Jul-90			77	ug/L	3.7		
		01-Oct-90			91	ug/L	3.7		
		01-Jan-91			110	ug/L	3.7		
		01-Apr-91			79	ug/L	3.7		
		01-Jul-91			86	ug/L	3.7		
		01-Oct-91			U	ug/L	3.7		
		01-Dec-91			53	ug/L	3.7		
		01-Mar-92			89	ug/L	3.7		
		01-Jun-92			80	ug/L	3.7		
		01-Sep-92			80	ug/L	3.7		
		01-Dec-92			68	ug/L	3.7		
		01-Mar-93			65	ug/L	3.7		
		01-Jun-93			U	ug/L	3.7		
		01-Sep-93			84	ug/L	3.7		
		01-Dec-93			47	ug/L	3.7		
		01-Mar-94			17	ug/L	3.7		
		01-Jun-94			48	ug/L	3.7		
		01-Sep-94			37	ug/L	3.7		
		01-Dec-94			59	ug/L	3.7		
		01-Mar-95			U	ug/L	3.7		
		01-Jun-95			30	ug/L	3.7		
		01-Sep-95			21	ug/L	3.7		
		01-Dec-95			20	ug/L	3.7		
		01-Mar-96			U	ug/L	3.7		
		01-Jun-96			U	ug/L	3.7		
		07-Aug-96	S		150	ug/L	3.7		
		09-Oct-96	S		180	ug/L	3.7		
		22-Apr-97	S		93	ug/L	50		
		08-Oct-97	G		96	ug/L	50		
OW-16	Parathion	01-Jan-88			1.7	ug/L	1.1		
		01-Apr-88			15	ug/L	1.1		
		01-Jul-88			7.8	ug/L	1.1		
		01-Jan-89			U	ug/L	1.1		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
OW-16	Parathion	01-Apr-89			7.4	ug/L	1.1		
		01-Jul-89			8.9	ug/L	1.1		
		01-Oct-89			17	ug/L	1.1		
		01-Jan-90			1.3	ug/L	1.1		
		01-Apr-90			1.3	ug/L	1.1		
		01-Jul-90			17	ug/L	1.1		
		01-Oct-90			19	ug/L	1.1		
		01-Jan-91			19	ug/L	1.1		
		01-Apr-91			28	ug/L	1.1		
		01-Jul-91			12	ug/L	1.1		
		01-Oct-91			20	ug/L	1.1		
		01-Dec-91			38	ug/L	1.1		
		01-Mar-92			14	ug/L	1.1		
		01-Jun-92			18	ug/L	1.1		
		01-Sep-92			22	ug/L	1.1		
		01-Dec-92			19	ug/L	1.1		
		01-Mar-93			21	ug/L	1.1		
		01-Jun-93			14	ug/L	1.1		
		01-Sep-93			U	ug/L	1.1		
		01-Dec-93			20	ug/L	1.1		
		01-Mar-94			11	ug/L	1.1		
		01-Jun-94			14	ug/L	1.1		
		01-Sep-94			16	ug/L	1.1		
		01-Dec-94			20	ug/L	1.1		
		01-Mar-95			7.1	ug/L	1.1		
		01-Jun-95			14	ug/L	1.1		
		01-Sep-95			6.1	ug/L	1.1		
		01-Dec-95			12	ug/L	1.1		
		01-Mar-96			U	ug/L	1.1		
		01-Mar-96			7.6	ug/L	1.1		
		01-Jun-96			7.6	ug/L	1.1		
		07-Aug-96	S		13	ug/L	1		
		09-Oct-96	S		8.7	ug/L	1		
		22-Apr-97	S		7.2	ug/L	1	P	
		08-Oct-97	G		14	ug/L	1.05		
OW-16A	4-Nitrophenol (Paranitrophenol)	08-Apr-98	G		U	ug/L	50		
OW-16A	Parathion	08-Apr-98	G		69	ug/L	2.1		
OW-17	4-Nitrophenol (Paranitrophenol)	01-Jan-88			U	ug/L	3.7		
OW-17	Parathion	01-Jan-88			U	ug/L	1.1		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
OW-17	Parathion	01-Sep-93			U	ug/L	1.1		
OW-18	4-Nitrophenol (Paranitrophenol)	01-Jul-88			U	ug/L	3.7		
		01-Jan-89			U	ug/L	3.7		
		01-Apr-89			U	ug/L	3.7		
		01-Jul-89			U	ug/L	3.7		
		01-Oct-89			U	ug/L	3.7		
		01-Jan-90			U	ug/L	3.7		
		01-Apr-90			U	ug/L	3.7		
		01-Jul-90			U	ug/L	3.7		
		01-Oct-90			U	ug/L	3.7		
		01-Jan-91			U	ug/L	3.7		
		01-Apr-91			U	ug/L	3.7		
		01-Jul-91			U	ug/L	3.7		
		01-Oct-91			U	ug/L	3.7		
		01-Dec-91			U	ug/L	3.7		
		01-Mar-92			U	ug/L	3.7		
		01-Jun-92			U	ug/L	3.7		
		01-Sep-92			U	ug/L	3.7		
		01-Dec-92			U	ug/L	3.7		
		01-Mar-93			U	ug/L	3.7		
		01-Jun-93			U	ug/L	3.7		
		01-Sep-93			U	ug/L	3.7		
		01-Dec-93			U	ug/L	3.7		
		01-Mar-94			U	ug/L	3.7		
		01-Jun-94			U	ug/L	3.7		
		01-Sep-94			U	ug/L	3.7		
		01-Dec-94			U	ug/L	3.7		
		01-Mar-95			U	ug/L	3.7		
		01-Jun-95			U	ug/L	3.7		
		01-Sep-95			U	ug/L	3.7		
		01-Dec-95			U	ug/L	3.7		
		01-Mar-96			U	ug/L	3.7		
		01-Jun-96			U	ug/L	3.7		
		08-Aug-96	S		U	ug/L	3.7		
		10-Oct-96	S		U	ug/L	3.7		
OW-18	Parathion	01-Jul-88			1.2	ug/L	1.1		
		01-Jan-89			U	ug/L	1.1		
		01-Apr-89			12	ug/L	1.1		
		01-Jul-89			U	ug/L	1.1		
		01-Oct-89			U	ug/L	1.1		
		01-Jan-90			U	ug/L	1.1		

Location	Parameter	Date Samp	Lab	C or F?	Result	Unit	PQL	Desc	Qual
OW-18	Parathion	01-Apr-90			1.6	ug/L	1.1		
		01-Jul-90			U	ug/L	1.1		
		01-Oct-90			U	ug/L	1.1		
		01-Jan-91			U	ug/L	1.1		
		01-Apr-91			U	ug/L	1.1		
		01-Jul-91			1.6	ug/L	1.1		
		01-Oct-91			U	ug/L	1.1		
		01-Dec-91			U	ug/L	1.1		
		01-Mar-92			U	ug/L	1.1		
		01-Jun-92			U	ug/L	1.1		
		01-Sep-92			U	ug/L	1.1		
		01-Dec-92			U	ug/L	1.1		
		01-Mar-93			U	ug/L	1.1		
		01-Jun-93			U	ug/L	1.1		
		01-Sep-93			U	ug/L	1.1		
		01-Dec-93			U	ug/L	1.1		
		01-Mar-94			U	ug/L	1.1		
		01-Jun-94			U	ug/L	1.1		
		01-Sep-94			U	ug/L	1.1		
		01-Dec-94			U	ug/L	1.1		
		01-Mar-95			U	ug/L	1.1		
		01-Jun-95			U	ug/L	1.1		
		01-Sep-95			U	ug/L	1.1		
		01-Dec-95			U	ug/L	1.1		
		01-Mar-96			U	ug/L	1		
		01-Jun-96			U	ug/L	1		
		08-Aug-96	S		2.0	ug/L	1		
		10-Oct-96	S		U	ug/L	1		
OW-19	4-Nitrophenol (Paranitrophenol)	01-Jul-88			U	ug/L	3.7		
		01-Jan-89			U	ug/L	3.7		
		01-Apr-89			140,000	ug/L	3.7		
		01-Jul-89			71,000	ug/L	3.7		
		01-Oct-89			160,000	ug/L	3.7		
		01-Jan-90			56,000	ug/L	3.7		
		01-Apr-90			56,000	ug/L	3.7		
		01-Jul-90			50,000	ug/L	3.7		
		01-Oct-90			54,000	ug/L	3.7		
		01-Jan-91			48,000	ug/L	3.7		
		01-Apr-91			40,000	ug/L	3.7		
		01-Jul-91			27,000	ug/L	3.7		
		01-Oct-91			39,000	ug/L	3.7		
		01-Dec-91			22,000	ug/L	3.7		

See Table L-3 for Abbreviations and Qualifiers.

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
OW-19	4-Nitrophenol (Paranitrophenol)	01-Mar-92			32,000	ug/L	3.7		
		01-Jun-92			20,000	ug/L	3.7		
		01-Sep-92			22,000	ug/L	3.7		
		01-Dec-92			14,000	ug/L	3.7		
		01-Mar-93			15,000	ug/L	3.7		
		01-Jun-93			13,000	ug/L	3.7		
		01-Sep-93			5,200	ug/L	3.7		
		01-Dec-93			6,600	ug/L	3.7		
		01-Mar-94			8,000	ug/L	3.7		
		01-Jun-94			3,800	ug/L	3.7		
		01-Sep-94			3,100	ug/L	3.7		
		01-Dec-94			2,300	ug/L	3.7		
		01-Mar-95			1,300	ug/L	3.7		
		01-Jun-95			1,000	ug/L	3.7		
		01-Sep-95			920	ug/L	3.7		
		01-Dec-95			730	ug/L	3.7		
		01-Mar-96			1.2	ug/L	3.7		
		01-Mar-96			U	ug/L	3.7		
		01-Jun-96			U	ug/L	3.7		
		01-Jun-96			1.5	ug/L	3.7		
		08-Aug-96	S		700	ug/L	3.7		
		10-Oct-96	S		1,300	ug/L	3.7		
		17-Apr-97	S	Q	1,100	ug/L	50		E
		02-Apr-98	S		220	ug/L	50		
OW-19	Parathion	01-Jul-88			U	ug/L	1.1		
		01-Jan-89			U	ug/L	1.1		
		01-Apr-89			97	ug/L	1.1		
		01-Jul-89			57	ug/L	1.1		
		01-Oct-89			140	ug/L	1.1		
		01-Jan-90			93	ug/L	1.1		
		01-Apr-90			93	ug/L	1.1		
		01-Jul-90			37	ug/L	1.1		
		01-Oct-90			53	ug/L	1.1		
		01-Jan-91			42	ug/L	1.1		
		01-Apr-91			51	ug/L	1.1		
		01-Jul-91			31	ug/L	1.1		
		01-Oct-91			67	ug/L	1.1		
		01-Dec-91			67	ug/L	1.1		
		01-Mar-92			14	ug/L	1.1		
		01-Jun-92			21	ug/L	1.1		
		01-Sep-92			18	ug/L	1.1		
		01-Dec-92			16	ug/L	1.1		

See Table L-3 for Abbreviations and Qualifiers.

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
OW-19	Parathion	01-Mar-93			24	ug/L	1.1	
		01-Jun-93			44	ug/L	1.1	
		01-Sep-93			26	ug/L	1.1	
		01-Dec-93			15	ug/L	1.1	
		01-Mar-94			17	ug/L	1.1	
		01-Jun-94			U	ug/L	1.1	
		01-Sep-94			11	ug/L	1.1	
		01-Dec-94			18	ug/L	1.1	
		01-Mar-95			8.0	ug/L	1.1	
		01-Jun-95			1.7	ug/L	1.1	
		01-Sep-95			U	ug/L	1.1	
		01-Dec-95			U	ug/L	1.1	
		01-Mar-96			1.2	ug/L	1	
		01-Jun-96			1.5	ug/L	1	
		08-Aug-96	S		1.6	ug/L	1	
		10-Oct-96	S		2.4	ug/L	1	
		17-Apr-97	S	Q	U	ug/L	1	
		02-Apr-98	G		U	ug/L	1.05	
OW-20	4-Nitrophenol (Paranitrophenol)	01-Jul-88			760	ug/L	3.7	
		01-Jan-89			190,000	ug/L	3.7	
		01-Apr-89			U	ug/L	3.7	
		01-Jul-89			U	ug/L	3.7	
		01-Oct-89			U	ug/L	3.7	
		01-Jan-90			U	ug/L	3.7	
		01-Apr-90			U	ug/L	3.7	
		01-Jul-90			7.5	ug/L	3.7	
		01-Oct-90			U	ug/L	3.7	
		01-Jan-91			4.9	ug/L	3.7	
		01-Apr-91			U	ug/L	3.7	
		01-Jul-91			U	ug/L	3.7	
		01-Oct-91			13	ug/L	3.7	
		01-Dec-91			U	ug/L	3.7	
		01-Mar-92			U	ug/L	3.7	
		01-Jun-92			U	ug/L	3.7	
		01-Sep-92			U	ug/L	3.7	
		01-Dec-92			30	ug/L	3.7	
		01-Mar-93			U	ug/L	3.7	
		01-Jun-93			8.0	ug/L	3.7	
		01-Sep-93			U	ug/L	3.7	
		01-Dec-93			U	ug/L	3.7	
		01-Mar-94			U	ug/L	3.7	
		01-Jun-94			U	ug/L	3.7	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
OW-20	4-Nitrophenol (Paranitrophenol)	01-Sep-94			U	ug/L	3.7	
		01-Dec-94			U	ug/L	3.7	
		01-Mar-95			U	ug/L	3.7	
		01-Jun-95			6.0	ug/L	3.7	
		01-Sep-95			U	ug/L	3.7	
		01-Dec-95			U	ug/L	3.7	
		01-Mar-96			U	ug/L	3.7	
		01-Jun-96			U	ug/L	3.7	
		08-Aug-96	S		U	ug/L	3.7	
		10-Oct-96	S		6.2	ug/L	3.7	
OW-20	Parathion	01-Jul-88			140	ug/L	1.1	
		01-Jan-89			63	ug/L	1.1	
		01-Apr-89			U	ug/L	1.1	
		01-Jul-89			U	ug/L	1.1	
		01-Oct-89			17	ug/L	1.1	
		01-Jan-90			51	ug/L	1.1	
		01-Apr-90			51	ug/L	1.1	
		01-Jul-90			240	ug/L	1.1	
		01-Oct-90			520	ug/L	1.1	
		01-Jan-91			320	ug/L	1.1	
		01-Apr-91			480	ug/L	1.1	
		01-Jul-91			5.3	ug/L	1.1	
		01-Oct-91			980	ug/L	1.1	
		01-Dec-91			U	ug/L	1.1	
		01-Mar-92			310	ug/L	1.1	
		01-Jun-92			72	ug/L	1.1	
		01-Sep-92			160	ug/L	1.1	
		01-Dec-92			910	ug/L	1.1	
		01-Mar-93			50	ug/L	1.1	
		01-Jun-93			250	ug/L	1.1	
		01-Sep-93			210	ug/L	1.1	
		01-Dec-93			17	ug/L	1.1	
		01-Mar-94			19	ug/L	1.1	
		01-Jun-94			11	ug/L	1.1	
		01-Sep-94			96	ug/L	1.1	
		01-Dec-94			210	ug/L	1.1	
		01-Mar-95			20	ug/L	1.1	
		01-Jun-95			52	ug/L	1.1	
		01-Sep-95			U	ug/L	1.1	
		01-Dec-95			17	ug/L	1.1	
		01-Mar-96			68	ug/L	1	
		01-Jun-96			38	ug/L	1	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
OW-20	Parathion	08-Aug-96	S		85	ug/L	1		
		10-Oct-96	S		93	ug/L	1		
OW-21	4Nitrophenol (Paranitrophenol)	01-Jul-88			82	ug/L	3.7		
		01-Jan-89			U	ug/L	3.7		
		01-Apr-89			U	ug/L	3.7		
		01-Jul-89			17	ug/L	3.7		
		01-Oct-89			U	ug/L	3.7		
		01-Jan-90			U	ug/L	3.7		
		01-Apr-90			U	ug/L	3.7		
		01-Jul-90			U	ug/L	3.7		
		01-Oct-90			U	ug/L	3.7		
		01-Jan-91			U	ug/L	3.7		
		01-Apr-91			U	ug/L	3.7		
		01-Jul-91			U	ug/L	3.7		
		01-Oct-91			U	ug/L	3.7		
		01-Dec-91			U	ug/L	3.7		
		01-Mar-92			U	ug/L	3.7		
		01-Jun-92			U	ug/L	3.7		
		01-Sep-92			U	ug/L	3.7		
		01-Dec-92			U	ug/L	3.7		
		01-Mar-93			U	ug/L	3.7		
		01-Jun-93			U	ug/L	3.7		
		01-Sep-93			U	ug/L	3.7		
		01-Dec-93			U	ug/L	3.7		
		01-Mar-94			U	ug/L	3.7		
		01-Jun-94			U	ug/L	3.7		
		01-Sep-94			U	ug/L	3.7		
		01-Dec-94			U	ug/L	3.7		
		01-Mar-95			U	ug/L	3.7		
		01-Jun-95			U	ug/L	3.7		
		01-Sep-95			U	ug/L	3.7		
		01-Dec-95			U	ug/L	3.7		
		01-Mar-96			U	ug/L	3.7		
		01-Jun-96			U	ug/L	3.7		
		06-Aug-96	S		U	ug/L	3.7		
		09-Oct-96	S		U	ug/L	3.7		
		17-Apr-97	S		U	ug/L	50		
		31-Mar-98	G		U	ug/L	50		
OW-21	Parathion	01-Jul-88			U	ug/L	1.1		
		01-Jan-89			U	ug/L	1.1		
		01-Apr-89			U	ug/L	1.1		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
OW-21	Parathion	01-Jul-89			1.2	ug/L	1.1		
		01-Oct-89			U	ug/L	1.1		
		01-Jan-90			1.1	ug/L	1.1		
		01-Apr-90			1.1	ug/L	1.1		
		01-Jul-90			U	ug/L	1.1		
		01-Oct-90			U	ug/L	1.1		
		01-Jan-91			U	ug/L	1.1		
		01-Apr-91			U	ug/L	1.1		
		01-Jul-91			U	ug/L	1.1		
		01-Oct-91			U	ug/L	1.1		
		01-Dec-91			U	ug/L	1.1		
		01-Mar-92			U	ug/L	1.1		
		01-Jun-92			U	ug/L	1.1		
		01-Sep-92			U	ug/L	1.1		
		01-Dec-92			U	ug/L	1.1		
		01-Mar-93			U	ug/L	1.1		
		01-Jun-93			U	ug/L	1.1		
		01-Sep-93			U	ug/L	1.1		
		01-Dec-93			U	ug/L	1.1		
		01-Mar-94			U	ug/L	1.1		
		01-Jun-94			U	ug/L	1.1		
		01-Sep-94			U	ug/L	1.1		
		01-Dec-94			U	ug/L	1.1		
		01-Mar-95			U	ug/L	1.1		
		01-Jun-95			U	ug/L	1.1		
		01-Sep-95			U	ug/L	1.1		
		01-Dec-95			U	ug/L	1.1		
		01-Mar-96			U	ug/L	1		
		01-Jun-96			U	ug/L	1		
		06-Aug-96	S		U	ug/L	1		
		09-Oct-96	S		U	ug/L	1		
		17-Apr-97	S		U	ug/L	1		
		31-Mar-98	S		U	ug/L	1.05		
OW-21	4-Nitrophenol (Paranitrophenol)	01-Jul-88			21	ug/L	3.7		
		01-Jan-89			U	ug/L	3.7		
		01-Apr-89			U	ug/L	3.7		
		01-Jul-89			U	ug/L	3.7		
		01-Oct-89			U	ug/L	3.7		
		01-Jan-90			16	ug/L	3.7		
		01-Apr-90			16	ug/L	3.7		
		01-Jul-90			10	ug/L	3.7		
		01-Oct-90			33	ug/L	3.7		

Location	Parameter	Date Samp	Lab	C or F?	Result	Unit	PQL	Desc	Qual
OW-22	4-Nitrophenol (Paranitrophenol)	01-Jan-91			13	ug/L	3.7		
		01-Apr-91			10	ug/L	3.7		
		01-Jul-91			8.0	ug/L	3.7		
		01-Oct-91			18	ug/L	3.7		
		01-Dec-91			8.9	ug/L	3.7		
		01-Mar-92			7.6	ug/L	3.7		
		01-Jun-92			18	ug/L	3.7		
		01-Sep-92			U	ug/L	3.7		
		01-Dec-92			16	ug/L	3.7		
		01-Mar-93			10	ug/L	3.7		
		01-Jun-93			U	ug/L	3.7		
		01-Sep-93			U	ug/L	3.7		
		01-Dec-93			U	ug/L	3.7		
		01-Mar-94			U	ug/L	3.7		
		01-Jun-94			U	ug/L	3.7		
		01-Sep-94			U	ug/L	3.7		
		01-Dec-94			U	ug/L	3.7		
		01-Mar-95			U	ug/L	3.7		
		01-Jun-95			U	ug/L	3.7		
		01-Sep-95			U	ug/L	3.7		
		01-Dec-95			U	ug/L	3.7		
		01-Mar-96			U	ug/L	3.7		
		01-Jun-96			U	ug/L	3.7		
		06-Aug-96	S		42	ug/L	3.7		
		09-Oct-96	S		18	ug/L	3.7		
		17-Apr-97	S		27	ug/L	50	J	
		17-Apr-97	S	C	26	ug/L	50	JQ	
		31-Mar-98	G		U	ug/L	50		
OW-22	Parathion	01-Jul-88			U	ug/L	1.1		
		01-Jan-89			U	ug/L	1.1		
		01-Apr-89			3.4	ug/L	1.1		
		01-Jul-89			U	ug/L	1.1		
		01-Oct-89			4.5	ug/L	1.1		
		01-Jan-90			1.4	ug/L	1.1		
		01-Apr-90			1.4	ug/L	1.1		
		01-Jul-90			1.2	ug/L	1.1		
		01-Oct-90			U	ug/L	1.1		
		01-Jan-91			U	ug/L	1.1		
		01-Apr-91			U	ug/L	1.1		
		01-Jul-91			U	ug/L	1.1		
		01-Oct-91			U	ug/L	1.1		
		01-Dec-91			U	ug/L	1.1		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc	Qual
OW-22	Parathion	01-Mar-92			U	ug/L	1.1		
		01-Jun-92			U	ug/L	1.1		
		01-Sep-92			U	ug/L	1.1		
		01-Dec-92			U	ug/L	1.1		
		01-Mar-93			U	ug/L	1.1		
		01-Jun-93			U	ug/L	1.1		
		01-Sep-93			U	ug/L	1.1		
		01-Dec-93			U	ug/L	1.1		
		01-Mar-94			U	ug/L	1.1		
		01-Jun-94			U	ug/L	1.1		
		01-Sep-94			U	ug/L	1.1		
		01-Dec-94			U	ug/L	1.1		
		01-Mar-95			U	ug/L	1.1		
		01-Jun-95			U	ug/L	1.1		
		01-Sep-95			U	ug/L	1.1		
		01-Dec-95			U	ug/L	1.1		
		01-Mar-96			U	ug/L	1		
		01-Jun-96			U	ug/L	1		
		06-Aug-96	S		U	ug/L	1		
		09-Oct-96	S		U	ug/L	1		
		17-Apr-97	S		U	ug/L	1		
		17-Apr-97	S	Q	U	ug/L	1	Q	
		31-Mar-98	S		U	ug/L	1.05		
OW-22	4-Nitrophenol (Paranitrophenol)	01-Jul-88			U	ug/L	3.7		
		01-Jan-89			U	ug/L	3.7		
		01-Apr-89			U	ug/L	3.7		
		01-Jul-89			U	ug/L	3.7		
		01-Oct-89			U	ug/L	3.7		
		01-Jan-90			U	ug/L	3.7		
		01-Apr-90			U	ug/L	3.7		
		01-Jul-90			U	ug/L	3.7		
		01-Oct-90			U	ug/L	3.7		
		01-Jan-91			U	ug/L	3.7		
		01-Apr-91			U	ug/L	3.7		
		01-Jul-91			U	ug/L	3.7		
		01-Oct-91			U	ug/L	3.7		
		01-Dec-91			U	ug/L	3.7		
		01-Mar-92			U	ug/L	3.7		
		01-Jun-92			U	ug/L	3.7		
		01-Sep-92			U	ug/L	3.7		
		01-Dec-92			U	ug/L	3.7		
		01-Mar-93			U	ug/L	3.7		

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
OW-23	4-Nitrophenol (Paranitrophenol)	01-Jun-93			U	ug/L	3.7	
		01-Sep-93			U	ug/L	3.7	
		01-Dec-93			U	ug/L	3.7	
		01-Mar-94			U	ug/L	3.7	
		01-Jun-94			U	ug/L	3.7	
		01-Sep-94			U	ug/L	3.7	
		01-Dec-94			U	ug/L	3.7	
		01-Mar-95			U	ug/L	3.7	
		01-Jun-95			U	ug/L	3.7	
		01-Sep-95			U	ug/L	3.7	
		01-Dec-95			U	ug/L	3.7	
		01-Mar-96			U	ug/L	3.7	
		01-Jun-96			U	ug/L	3.7	
		07-Aug-96	S		U	ug/L	3.7	
		10-Oct-96	S		U	ug/L	3.7	
OW-23	Parathion	01-Jul-88			U	ug/L	1.1	
		01-Jan-89			5.6	ug/L	1.1	
		01-Apr-89			2.7	ug/L	1.1	
		01-Jul-89			U	ug/L	1.1	
		01-Oct-89			U	ug/L	1.1	
		01-Jan-90			U	ug/L	1.1	
		01-Apr-90			U	ug/L	1.1	
		01-Jul-90			U	ug/L	1.1	
		01-Oct-90			U	ug/L	1.1	
		01-Jan-91			U	ug/L	1.1	
		01-Apr-91			1.3	ug/L	1.1	
		01-Jul-91			U	ug/L	1.1	
		01-Oct-91			U	ug/L	1.1	
		01-Dec-91			U	ug/L	1.1	
		01-Mar-92			U	ug/L	1.1	
		01-Jun-92			U	ug/L	1.1	
		01-Sep-92			U	ug/L	1.1	
		01-Dec-92			U	ug/L	1.1	
		01-Mar-93			U	ug/L	1.1	
		01-Jun-93			U	ug/L	1.1	
		01-Sep-93			U	ug/L	1.1	
		01-Dec-93			U	ug/L	1.1	
		01-Mar-94			U	ug/L	1.1	
		01-Jun-94			U	ug/L	1.1	
		01-Sep-94			U	ug/L	1.1	
		01-Dec-94			U	ug/L	1.1	
		01-Mar-95			U	ug/L	1.1	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
OW-23	Parathion	01-Jun-95			U	ug/L	1.1	
		01-Sep-95			U	ug/L	1.1	
		01-Dec-95			U	ug/L	1.1	
		01-Mar-96			U	ug/L	1	
		01-Jun-96			U	ug/L	1	
		07-Aug-96	S		U	ug/L	1	
		10-Oct-96	S		U	ug/L	1	
OW-24	4-Nitrophenol (Paranitrophenol)	01-Jul-88			U	ug/L	3.7	
		01-Jan-89			U	ug/L	3.7	
		01-Apr-89			U	ug/L	3.7	
		01-Jul-89			U	ug/L	3.7	
		01-Oct-89			U	ug/L	3.7	
		01-Jan-90			390	ug/L	3.7	
		01-Apr-90			390	ug/L	3.7	
		01-Jul-90			170	ug/L	3.7	
		01-Oct-90			190	ug/L	3.7	
		01-Jan-91			390	ug/L	3.7	
		01-Apr-91			430	ug/L	3.7	
		01-Jul-91			7.5	ug/L	3.7	
		01-Oct-91			420	ug/L	3.7	
		01-Dec-91			91	ug/L	3.7	
		01-Mar-92			25	ug/L	3.7	
		01-Jun-92			14	ug/L	3.7	
		01-Sep-92			14	ug/L	3.7	
		01-Dec-92			140	ug/L	3.7	
		01-Mar-93			23	ug/L	3.7	
		01-Jun-93			75	ug/L	3.7	
		01-Sep-93			28	ug/L	3.7	
		01-Dec-93			6.1	ug/L	3.7	
		01-Mar-94			U	ug/L	3.7	
		01-Jun-94			9.0	ug/L	3.7	
		01-Sep-94			16	ug/L	3.7	
		01-Dec-94			5.9	ug/L	3.7	
		01-Mar-95			U	ug/L	3.7	
		01-Jun-95			3.9	ug/L	3.7	
		01-Sep-95			U	ug/L	3.7	
		01-Dec-95			7.0	ug/L	3.7	
		01-Mar-96			U	ug/L	3.7	
		01-Jun-96			U	ug/L	3.7	
		08-Aug-96	S		62	ug/L	3.7	
		10-Oct-96	S		U	ug/L	3.7	
		17-Apr-97	S		U	ug/L	50	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
OW-24	4-Nitrophenol (Paranitrophenol)	02-Apr-98	G		U	ug/L	50	
OW-24	Parathion	01-Jul-88			U	ug/L	1.1	
		01-Jan-89			8.4	ug/L	1.1	
		01-Apr-89			U	ug/L	1.1	
		01-Jul-89			U	ug/L	1.1	
		01-Oct-89			U	ug/L	1.1	
		01-Jan-90			880	ug/L	1.1	
		01-Apr-90			870	ug/L	1.1	
		01-Jul-90			1,500	ug/L	1.1	
		01-Oct-90			910	ug/L	1.1	
		01-Jan-91			500	ug/L	1.1	
		01-Apr-91			570	ug/L	1.1	
		01-Jul-91			2.9	ug/L	1.1	
		01-Oct-91			720	ug/L	1.1	
		01-Dec-91			17	ug/L	1.1	
		01-Mar-92			33	ug/L	1.1	
		01-Jun-92			31	ug/L	1.1	
		01-Sep-92			42	ug/L	1.1	
		01-Dec-92			190	ug/L	1.1	
		01-Mar-93			21	ug/L	1.1	
		01-Jun-93			140	ug/L	1.1	
		01-Sep-93			7.1	ug/L	1.1	
		01-Dec-93			U	ug/L	1.1	
		01-Mar-94			U	ug/L	1.1	
		01-Jun-94			U	ug/L	1.1	
		01-Sep-94			U	ug/L	1.1	
		01-Dec-94			1.2	ug/L	1.1	
		01-Mar-95			1.2	ug/L	1.1	
		01-Jun-95			U	ug/L	1.1	
		01-Sep-95			U	ug/L	1.1	
		01-Dec-95			U	ug/L	1.1	
		01-Mar-96			U	ug/L	1	
		01-Jun-96			U	ug/L	1	
		08-Aug-96	S		19	ug/L	1	P
		10-Oct-96	S		1.2	ug/L	1	
		17-Apr-97	S		0.97	ug/L	1	J
		02-Apr-98	G		4.4	ug/L	1.05	
OWR-01D	4-Nitrophenol (Paranitrophenol)	03-Aug-98	S		U	ug/L	50	
OWR-01D	Parathion	03-Aug-98	S		U	ug/L	1	

Location	Parameter	Date Samp	lab	Q or F?	Result	Unit	PQL	Desc Qual
OWR01S	4-Nitrophenol (Paranitrophenol)	10-Aug-98	S		U	ug/L	50	
OWR01S	Parathion	10-Aug-98	S		U	mg/L	1	
OWR02D	4-Nitrophenol (Paranitrophenol)	29-Jul-98	S		U	ug/L	50	
		29-Jul-98	S	Q	U	ug/L	50	
OWR02D	Parathion	29-Jul-98	S		U	ug/L	1	
		29-Jul-98	S	Q	U	ug/L	1	
OWR02S	4-Nitrophenol (Paranitrophenol)	03-Aug-98	S		U	ug/L	50	
OWR02S	Parathion	03-Aug-98	S		U	ug/L	1	
OWR03S	4-Nitrophenol (Paranitrophenol)	29-Jul-98	S		U	ug/L	50	
OWR03S	Parathion	29-Jul-98	S		U	ug/L	1	
OWR04D	4-Nitrophenol (Paranitrophenol)	31-Jul-98	S		U	ug/L	50	
OWR04D	Parathion	31-Jul-98	S		U	ug/L	1	
OWR05D	Parathion	10-Aug-98	S		28	ug/L	1	
OWR06D	4-Nitrophenol (Paranitrophenol)	28-Jul-98	S		U	ug/L	50	
OWR06D	Parathion	28-Jul-98	S		U	ug/L	1	
OWR07D	4-Nitrophenol (Paranitrophenol)	05-Aug-98	S		U	ug/L	50	
OWR07D	Parathion	05-Aug-98	S		U	ug/L	1	
OWR08S	4-Nitrophenol (Paranitrophenol)	03-Aug-98	S		390	ug/L	200	
		03-Aug-98	S	Q	340	ug/L	200	
OWR08S	Parathion	03-Aug-98	S		560	ug/L	1	
		03-Aug-98	S	Q	730	ug/L	1	
OWR09S	4-Nitrophenol (Paranitrophenol)	04-Aug-98	S		U	ug/L	50	
OWR09S	Parathion	04-Aug-98	S		U	ug/L	1	

Location	Farameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
SBP-01	4-Nitrophenol (Paranitrophenol)				U	ug/L	4	
SBP-01	Farathion				U	ug/L	1.1	
SBP-02	4-Nitrophenol (Paranitrophenol)				U	ug/L	4	
SBP-02	Parathion				U	ug/L	1.1	
SBP-03	4-Nitrophenol (Paranitrophenol)				U	ug/L	4	
SBP-03	Parathion				U	ug/L	1.1	
SBP-04	4-Nitrophenol (Paranitrophenol)				U	ug/L	4	
SBP-04	Parathion				U	ug/L	1.1	
SBP-05	4-Nitrophenol (Paranitrophenol)				U	ug/L	4	
		22-Apr-97	S		U	ug/L	50	
		24-Sep-97	G		U	ug/L	50	
		06-Apr-98	G		U	ug/L	50	
SBP-05	Parathion				U	ug/L	1.1	
		22-Apr-97	S		U	ug/L	1	
		24-Sep-97	G		U	ug/L	1.05	
		06-Apr-98	G		U	ug/L	1.05	
WEL-01	4-Nitrophenol (Faranitrophenol)	04-May-94	S		U	ug/L	50	
		18-Oct-98	S		U	ug/L	50	
WEL-01	Parathion	04-May-94	S		U	ug/L	1	
		18-Oct-98	S		U	mg/L	0.001	
WEL-02	4-Nitrophenol (Faranitrophenol)	04-May-94	S		U	ug/L	50	
		17-Oct-98	S		U	ug/L	50	
WEL-02	Parathion	04-May-94	S		U	ug/L	1	
		16-Oct-98	S		U	mg/L	0.001	
WEL-03	4-Nitrophenol (Paranitrophenol)	03-May-94	S		U	ug/L	50	
		03-May-94	S	C	U	ug/L	50	Q
		18-Oct-98	S		U	ug/L	50	
WEL-03	Parathion	03-May-94	S		U	ug/L	1	

Location	Parameter	Date Samp	Lab	Q or F?	Result	Unit	PQL	Desc Qual
WEL-03	Parathion	03-May-94	S	Q	U	ug/L	1	Q
		18-Oct-98	S		U	mg/L	0.001	
WEL-04	4-Nitrophenol (Paranitrophenol)	03-May-94	S		U	ug/L	50	
		15-Oct-98	S		U	ug/L	50	
		15-Oct-98	S	Q	U	ug/L	50	
WEL-04	Parathion	03-May-94	S		U	ug/L	1	
		15-Oct-98	S		U	mg/L	0.001	
		15-Oct-98	S	Q	U	mg/L	0.001	

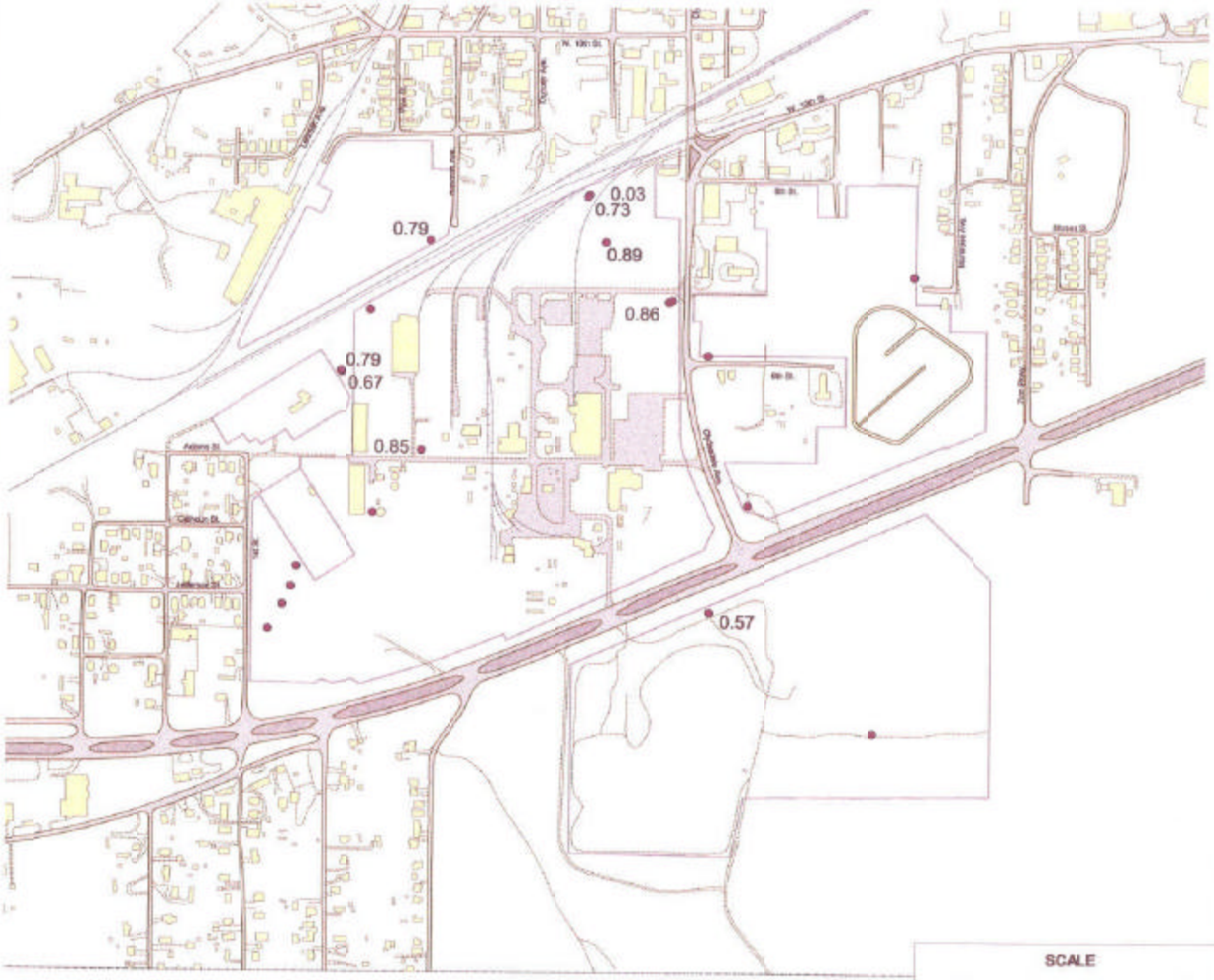
TABLE L-3
Qualifiers and Abbreviations for Historic Chemistry Data

Qualifier	Explanation
A	Indicates that a TIC is a suspected aldol-condensation product.
B	Analyte is found in the associated method blank as well as the sample.
C	Pesticide results where the identification has been confirmed by GC/MS.
D	Identifies all compounds identified in an analysis at a secondary dilution factor.
E	Identifies compounds whose concentrations exceed the calibration range of the GC/MS.
F	Non-detect finding based on qualitative methods. (Same as EPA National Qualifier UJ)
G	Positive finding based on qualitative methods. Use caution.
H	GC result should be confimred by GC/MS. (*F38 is Savannah Labs' internal qualifier.)
I	Immunoassay result.
J	An estimated value; the analyte was positively identified.
K	Aroclors 1248 and 1254 could not be quantitated separately and are reported as a pair.
L	Detection limit elevated due to matrix interference. (*F65 is Savannah Labs' internal qualifier.)
M	Not confirmed when analyzed by GC/MS. (*F46 is Savannah Labs' internal qualifier.)
N	Indicated presumptive evidence of a compound (TIC).
O	Out of hold analysis. Result is considered an estimate.
P	A pesticide/Aroclor target when there is greater than 25% difference for detected concentrations between the two GC columns.
Q	Duplicate. (May be followed by a number to indicate multiple duplicates.)
R	The sample results are rejected due to serious deficiencies. The presence or absence of the analyte cannot be verified.
S	Samples were filtered before extraction and analysis in the field using a 0.45 micron cellulose membrane filter.
T	Samples were not filtered before extraction and analysis
U	Compound was analyzed for but not detected.
X	Re-extract result.
Y	Well was dry.
Z	Resample or Reanalyze.

Abbreviation	Lab Explanations
Q	Duplicate.
F	Filtered sample.
S	Savannah Laboratories, Inc.
G	Gulf Coast Analytical Laboratories, Inc.
M	Metcalf & Eddy (Laboratory)
PQL	Practicle Quantitative Limit (a.k.a. Method Detection Limit)
Desc	The qualifier assigned by the laboratory.
Qual	The qualifier assigned during data validation.

APPENDIX M

Natural Attenuation Analysis



Dissolved Oxygen < 0.9 mg/L

On-Site RFI/CS Program
Solutia Inc., Anniston, Alabama

LEGEND

- Railroad
- Major Roads
- Minor Roads
- East Side Basin
- Property Line
- Buildings
- Paved
- Sampled Well (Results in mg/L)

NOTES

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps

MAP PROJECTION	DATUM
US State Plane	NAD83

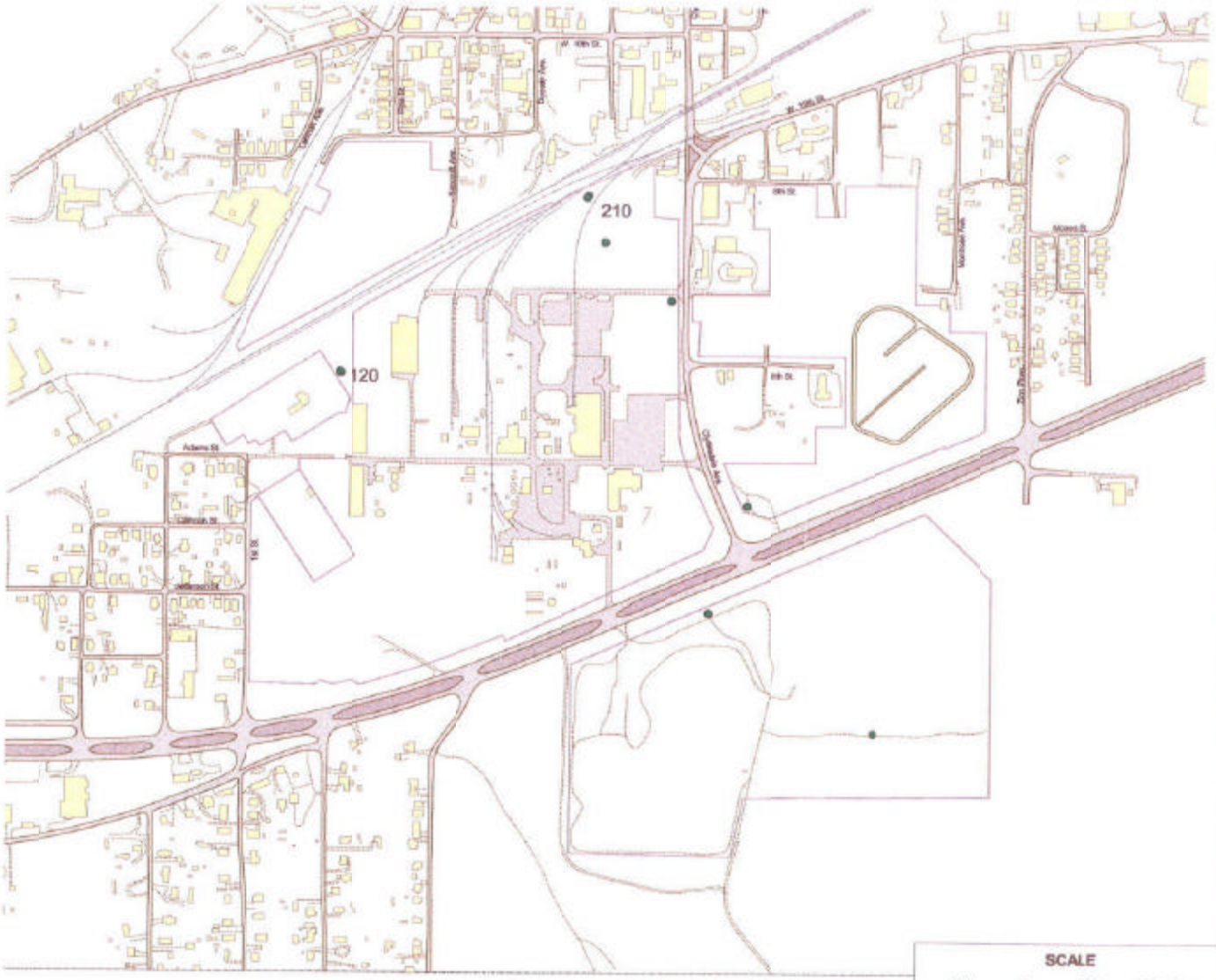
LOCATION MAP



SOLUTIA
Applied Chemistry, Creative Solutions

Golder Associates

DATE:	PRODUCED BY:	PROJECT/FILE No:	FIGURE No:
October 2002	JES	063-3223 Q:\...\rfi-gis\rfi-cjp.apr	M-1



Alkalinity (to pH 4.5) as CaCO3 > 80 mg/L

On-Site RFI/CS Program
Solutia Inc., Anniston, Alabama

LEGEND

- Railroad
- Major Roads
- Minor Roads
- East Side Basin
- Property Line
- Buildings
- Paved
- Sampled Well (Results in mg/L)

NOTES

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps
MAP PROJECTION	**DATUM**
US State Plane	NAD83

LOCATION MAP



N

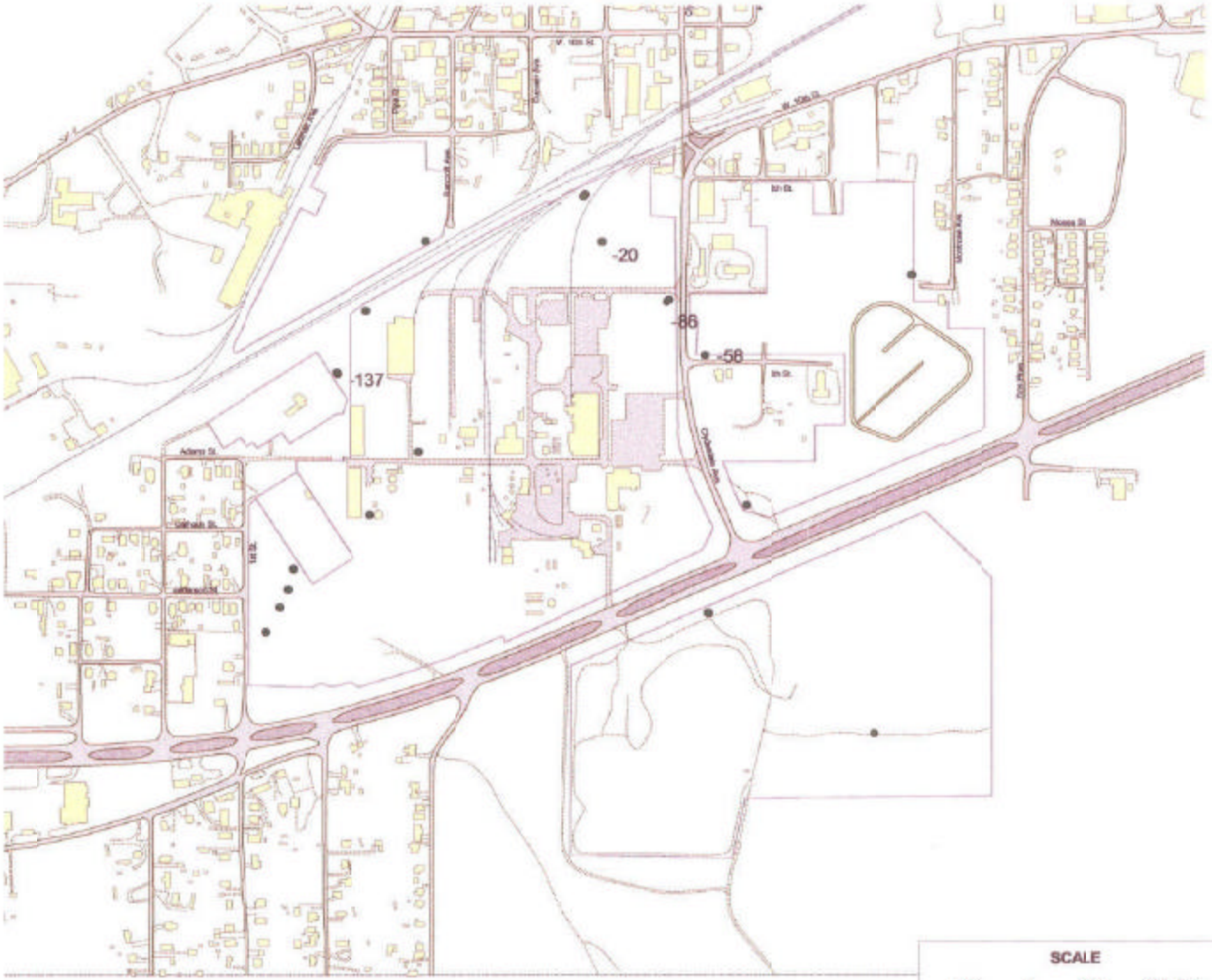
SCALE

300 0 300 600 Feet

SOLUTIA
Applied Chemistry, Creative Solutions

Golder Associates

DATE:	PRODUCED BY:	PROJECT/FILE No:	FIGURE No:
October 2002	JES	963-3223	M-2



Redox < 0 mV

On-Site RFI/CS Program
Solutia Inc., Anniston, Alabama

LEGEND

- Railroad
- Major Roads
- Minor Roads
- East Side Basin
- Property Line
- Buildings
- Paved
- Sampled Well (Results in mV)

NOTES

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps

MAP PROJECTION	DATUM
US State Plane	NAD83

LOCATION MAP



N

SCALE

300 0 300 600 Feet

SOLUTIA
Applied Chemistry, Creative Solutions

Golder Associates

DATE:	PRODUCED BY:	PROJECT/FILE No:	FIGURE No:
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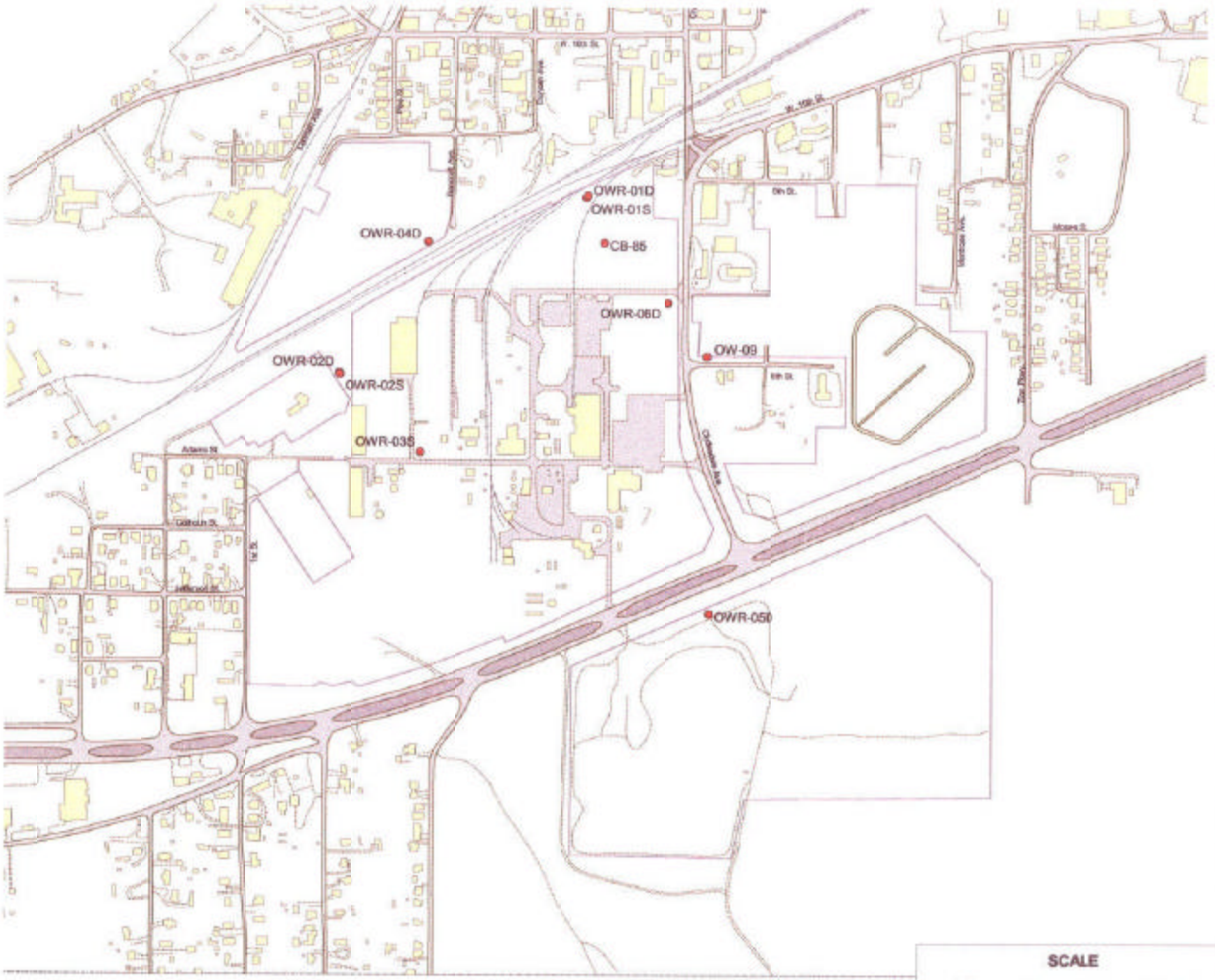


Summary of Well Locations Exhibiting Reducing Conditions

On-Site RFI/CS Program
Solutia Inc., Anniston, Alabama

LEGEND

- Railroad
- Major Roads
- Minor Roads
- East Side Basin
- Property Line
- Buildings
- Paved
- Sampled Well

NOTES

These wells exhibit reducing conditions as shown by Dissolved Oxygen, Redox, Alkalinity, or a combination thereof.

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps

MAP PROJECTION	DATUM
US State Plane	NAD83

LOCATION MAP



SOLUTIA
Applied Chemistry, Creative Solutions

Golder Associates

DATE:	PRODUCED BY:	PROJECT/FILE No:	FIGURE No:
October 2002	JES	983-3223 Q:\...\rfi-plan\fi-qp.apr	M-4

BIOSCREEN Natural Attenuation Decision Support System

Air Force Center for Environmental Excellence — *Version 1.4*

Solutia, Anniston Landfill — Run Name

Data Input Instructions:

1. Enter value directly....or
2. Calculate by filling in grey cells below. (To restore formulas, hit button below).

Variable* ▸ Data used directly in model.

▸ Value calculated by model (Don't enter any data).

1. HYDROGEOLOGY

Seepage Velocity*	Vs	17.0	(ft/yr)
or		or	
Hydraulic Conductivity	K	3.0E-05	(cm/sec)
Hydraulic Gradient	i	0.055	(ft/ft)
Porosity	n	0.1	(-)

2. DISPERSION

Longitudinal Dispersivity*	alpha x	80.0	(ft)
Transverse Dispersivity*	alpha y	8.0	(ft)
Vertical Dispersivity*	alpha z	0.0	(ft)
or		or	
Estimated Plume Length	Lp		(ft)

3. ADSORPTION

Retardation Factor*	R	27.4	(-)
or		or	
Soil Bulk Density	rho	1.64	(kg/l)
Partition Coefficient	Koc	460	(L/kg)
FractionOrganicCarbon	foc	3.5E-3	(-)

4. BIODEGRADATION

1st Order Decay Coeff*	lambda	6.9E-1	(per yr)
or		or	
Solute Half-Life	t-half	1.00	(year)
or Instantaneous Reaction Model			
Delta Oxygen*	DO		(mg/L)
Delta Nitrate*	NO3		(mg/L)
Observed Ferrous Iron*	Fe2+		(mg/L)
Delta Sulfate*	SO4		(mg/L)
Observed Methane*	CH4		(mg/L)

5. GENERAL

Modeled Area Length*	600	(ft)
Modeled Area Width*	800	(ft)
Simulation Time*	38	(yr)



115 or 002

20

6. SOURCE DATA

Source Thickness in Sat.Zone* 50 (ft)

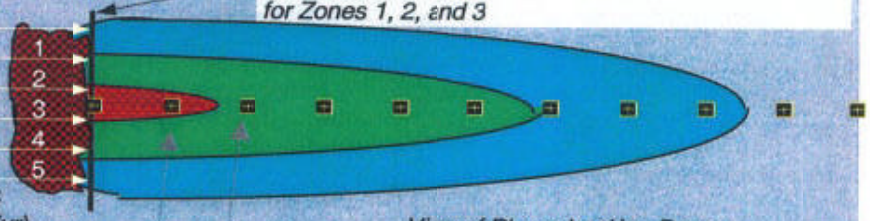
Source Zones:

	Width* (ft)	Conc. (mg/L)*
1	50	0
2	100	0.02
3	100	0.07
4	100	0.02
5	50	0

Source Halflife (see Help):

Infinite	Infinite	(yr)
nst. React.	1st Order	
Soluble Mass	Infinite	(Kg)
n Source NAPL, Soil		

Vertical Plane Source: Look at Plume Cross-Secton and Input Concentrations & Widths for Zones 1, 2, and 3



View of Plume Looking Down

Observed Centerline Concentrations at Monitoring Wells
If No Data Leave Blank or Enter "0"

7. FIELD DATA FOR COMPARISON

Concentration (mg/L)	.069		.0			.0				.0	
Dist. from Source (ft)	0	60	120	180	240	300	360	420	480	540	600

8. CHOOSE TYPE OF OUTPUT TO SEE:

RUN CENTERLINE — **View Output**

RUN ARRAY — **View Output**

Help

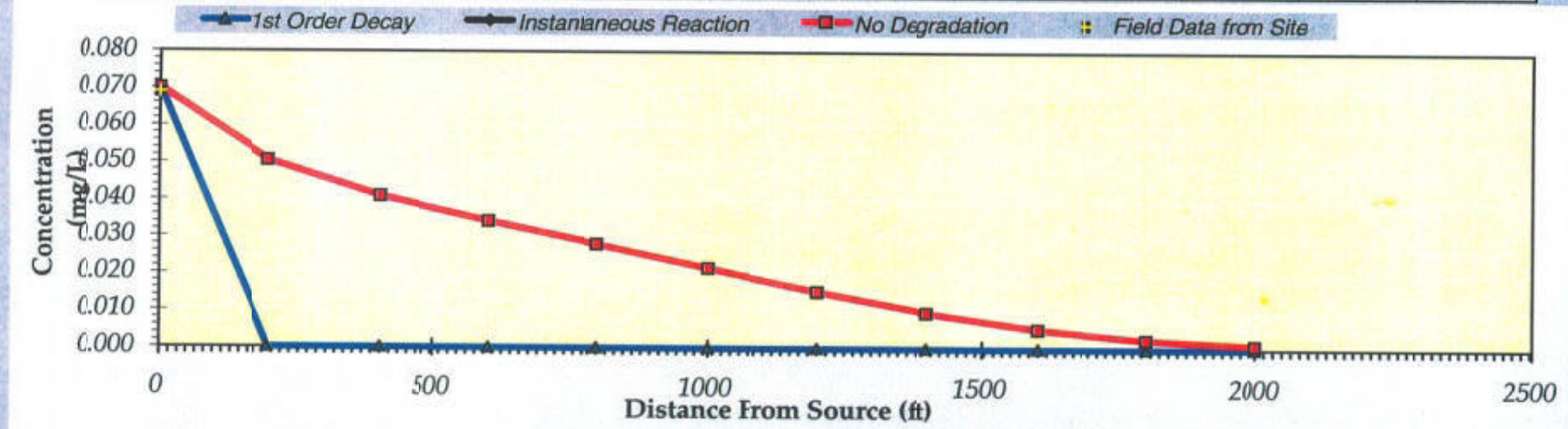
Recalculate This Sheet

Paste Example Dataset

Restore Formulas for Vs, Dispersivities, R, lambda, other

DISSOLVED HYDROCARBON CONCENTRATION ALONG PLUME CENTERLINE (mg/L at Z=0)

TYPE OF MODEL	Distance from Source (ft) 0	200	400	600	800	1000	1200	1400	1600	1800	2000
No Degradation	0.070	0.051	0.041	0.034	0.028	0.022	0.015	0.010	0.005	0.003	0.001
1st Order Decay	0.070	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Inst. Reaction	0.070	0.051	0.041	0.034	0.028	0.022	0.015	0.010	0.005	0.003	0.001
Field Data from Site	0.069										



Calculate Animation

Time: 2,000 Years

Return to Input

Recalculate This Sheet

BIOSCREEN Natural Attenuation Decision Support System

Air Force Center for Environmental Excellence — *Version 1.4*

Solutia, Annston Landfill — Run Name

Data Input Instructions:

115 or 0.02 — 1. Enter value directly....or 2. Calculate by filling in grey cells below. (To restore formulas, hit button below).

Variable* — Data used directly in model.

20 — Value calculated by model. (Don't enter any data).

1. HYDROGEOLOGY

Seepage Velocity*	Vs	17.0	(ft/yr)
or		or	
Hydraulic Conductivity	K	3.0E-05	(cm/sec)
Hydraulic Gradient	i	0.055	(ft/ft)
Porosity	n	0.1	(-)

2. DISPERSION

Longitudinal Dispersivity*	alpha x	80.0	(ft)
Transverse Dispersivity*	alpha y	8.0	(ft)
Vertical Dispersivity*	alpha z	0.0	(ft)
or		or	
Estimated Plume Length	Lp		(ft)

3. ADSORPTION

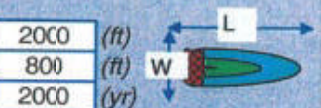
Retardation Factor*	R	27.4	(-)
or		or	
Soil Bulk Density	rho	1.34	(kg/l)
Partition Coefficient	Koc	460	(L/kg)
Fraction Organic Carbon	foc	3.5E-3	(-)

4. BIODEGRADATION

1st Order Decay Coeff*	lambda	6.9E-1	(per yr)
or		or	
Solute Half-Life	t-half	1.00	(year)
or Instantaneous Reaction Model			
Delta Oxygen*	DO		(mg/L)
Delta Nitrate*	NO3		(mg/L)
Observed Ferrous Iron*	Fe2+		(mg/L)
Delta Sulfate*	SO4		(mg/L)
Observed Methane*	CH4		(mg/L)

5. GENERAL

Modeled Area Length*	2000	(ft)
Modeled Area Width*	800	(ft)
Simulation Time*	2000	(yr)



6. SOURCE DATA

Source Thickness in Sat.Zone* 50 (ft)

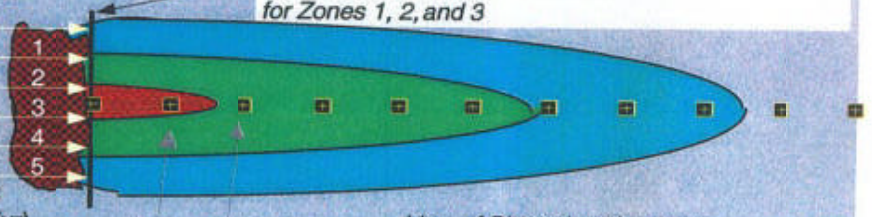
Source Zones:

Width* (ft)	Conc. (mg/L)*
50	0
100	0.02
100	0.07
100	0.02
50	0

Source Halflife (see Help):

Infinite	Infinite	(yr)
Inst. React.	1st Order	
Soluble Mass	Infinite	(Kg)
In Source NAPL, Soil		

Vertical Plane Source: Look at Plume Cross-Section and Input Concentrations & Widths for Zones 1, 2, and 3



View of Plume Looking Down

Observed Centerline Concentrations at Monitoring Wells
If No Data Leave Blank or Enter "0"

7. FIELD DATA FOR COMPARISON

Concentraton (mg/L)	.069		.0			.0				.0	
Dist. from Source (ft)	0	200	400	600	800	1000	1200	1400	1600	1800	2000

8. CHOOSE TYPE OF OUTPUT TO SEE:

RUN CENTERLINE — **View Output**

RUN ARRAY — **View Output**

Help

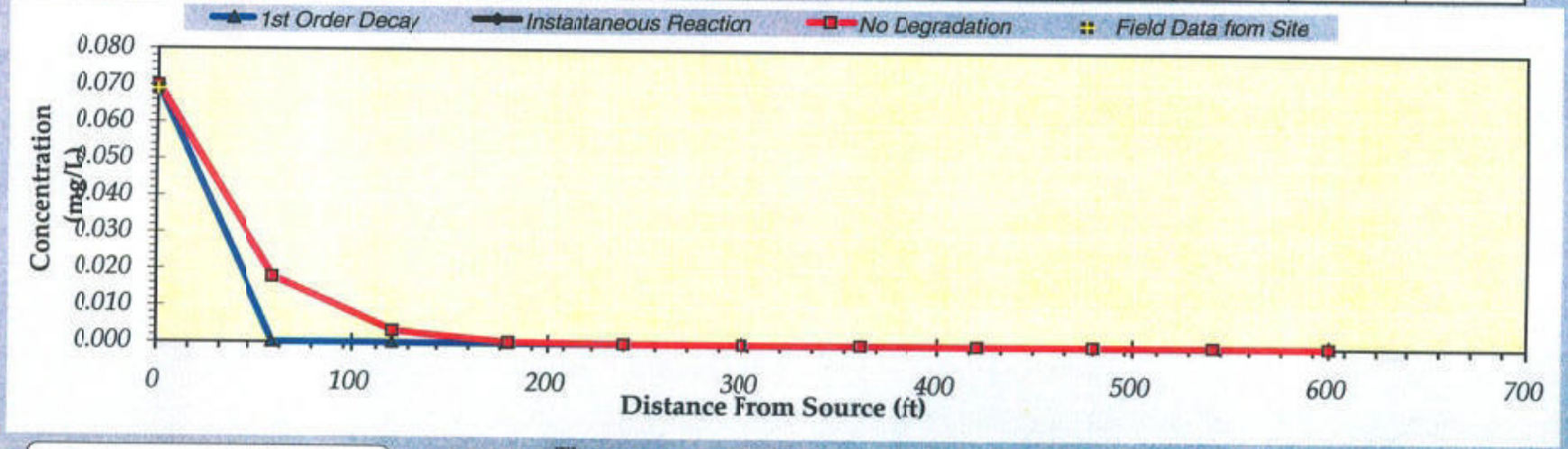
Recalculate This Sheet

Paste Example Dataset

Restore Formulas for Vs, Dispersivities, R, lambda, other

DISSOLVED HYDROCARBON CONCENTRATION ALONG PLUME CENTERLINE (mg/L at Z=0)

TYPE OF MODEL	Distance from Source (ft) 0	60	120	180	240	300	360	420	480	540	600
No Degradation	0.070	0.018	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1st Order Decay	0.070	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Inst. Reaction	0.070	0.018	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Field Data from Site	0.069										



Calculate Animation

Time: 38 Years

Return to Input

Recalculate This Sheet