US EPA RECORDS CENTER REGION 5
1013528

SOLUTIA - 210

Kenneth
Bardo/R5/USEPA/US

09/19/2005 03:59 PM

To sdsmit@solutia.com

cc George Hamper/R5/USEPA/US@EPA, briller_dan@bah.com

bcc

Subject ISTD Treatability Test

Steve Smith - This e-mail is a follow-up to our phone conversation this afternoon. We discussed the action necessary to complete the ISTD treatability tests (see my September 13 e-mail in response to your September 9 e-mail). EPAs goal is to move forward in a timely manner to evaluate ISTD technology and determine the feasibility of ISTD for stabilizing releases of PCBs at the Former PCB Manufacturing Area. You estimate that it would take approximately 2 months to mobilize, collect, and analyze new baseline soil samples in an attempt to achieve historical high concentrations of PCBs found at sample location S0825. Based on your time estimate of two months for new sample results, and the possibility that the new data would still not achieve the historical highs, we discussed and agreed that:

> Solutia will immediately contact TerraTherm and Kemron Environmental Services and request that ISTD treatability tests be implemented immediately using the basline soil sample from location S0825 that has a defined PCB concentration of 2,447 mg/kg.

Implementation of the treatability test should be performed as described in Section 2.4 of the *In -Situ Thermal Desoprtion Work Plan* (dated May 27, 2005), incorporating EPA comments from June 23, 2005. As soon as possible, please provide a brief discussion of the significance, if any, in using a baseline soil sample with a PCB concentration of 2,447 mg/kg PCB. I would also like to request a conference call the first week of October for an update on the action performed to date on the ISTD and Enhanced Aerobic Bioremediation treatability tests. - Ken Bardo

SOLUTIA - 211

Kenneth Bardo/R5/USEPA/US
09/21/2005 11:27 AM

To "Smith, Steven D" <sdsmit@solutia.com>
cc
bcc
Subject Supplemental Information

Steve - Please send the basic data transmittal report as soon as possible. As you know, we first requested supplemental information in our November 18, 2004, comment letter on the Solutia CMS Report. On May 4, 2005, we again requested supplemental information (which was focused and prioritized) pertaining to the Route 3 Drum Site, Lot F, Former Chlor-Alkali Production Area, and certain soil sample locations. We requested that work begin immediately and the information be submitted as a CMS Addendum due September 1, 2005. This request was reiterated in our June 23, 2005, letter. Any interpretive work requested in our May 4 or June 23 letters should be included in the basic data transmittal report.

I can be reached at 847-741-6838 the rest of the week if you have any questions. - Ken

-----"Smith, Steven D" <sdsmit@solutia.com> wrote: -----

To: Kenneth Bardo/R5/USEPA/US@EPA
From: "Smith, Steven D" <sdsmit@solutia.com>
Date: 09/20/2005 06:27PM
Subject:

Ken
I request your approval to send in a basic data transmittal report - data tables, figures, and data validation summary for the recent supplemental sampling done at WGK. I spoke with URS and they believe they can have such a report to you by the end of next week.
The original work plan also included some interpretive work - conclusions regarding extent of impact, comparison to TACO criteria, Lot F information, etc - all of which is very far from any critical path & more of an RI update issue.
What do you think?
Steve
This electronic mail message is intended exclusively for the individual or entity to which it is addressed. This message, together with any attachment, may contain Solutia confidential and privileged information. The recipient is hereby put on notice to treat the information as confidential and privileged and to not disclose or use the information except as authorized by Solutia. Any unauthorized review, printing, retention, copying, disclosure, distribution, retransmission, dissemination or other use of, or taking of any action in reliance upon, this information by persons or entities other than the intended recipient is prohibited. If you received this message in error, please immediately contact the sender by reply email and delete all copies of the material from any computer. Thank you for your cooperation.

SOLUTIA - 212

Kenneth
Bardo/R5/USEPA/US

10/03/2005 10:23 AM

To sdsmit@solutia.com

cc bsyare@solutia.com

bcc

Subject PCB Plan

Steve - Attached are EPA comments (in Word) on the *PCB Mobility and Migration Investigation Plan* submitted on September 16, 2005. Solutia should make the recommended revisions and submit a revised plan (2 copies) for the Administrative Record. Please call if we need to discuss any of the comments. - Ken

Comments on PCB Mobility and Migration Investigation Plan.doc

Comments on PCB Mobility and Migration Investigation Plan

General Comments:

1) Boring logs provided in CMS Addendum I show that saturated (wet) conditions exist at many of the borings advanced at the Former PCB Manufacturing Area in October 2003. For example:

S-08-09 - At 3.5', becomes **wet**, black, coarse-grained gravel fill.
S-08-10 - At 3.5', fill becomes **wet** and coarse-grained.
S-08-11 - At 4', silty sand becomes **wet**.
S-08-12 - At 3.5', fill becomes **wet** and coarse grained.
S-08-15 - At 3.5', silty sand becomes **wet** and black with gravel.
S-08-16 - At 4', fill becomes **wet**; at 11', silty sand becomes **wet** and gray with more silt.
S-08-18 - At 6.5', **wet**, brown/black silty clay fill; at 8', **wet**, dark brown gravel fill.
S-08-19 - At 6', **wet**, dark brown gravel fill.
S-08-22 - At 10', black/dark gray silty clay becomes **very wet**.
S-08-23 - At 9', dark gray silty clay becomes soft and **wet**.
S-08-24 - At 8', loose, **wet**, black, coarse grained gravel fill; at 10', soft, **wet**, dark gray silty clay.
S-08-25 - At 3.5', loose, **wet**, black, coarse grained gravel fill; at 9', loose, **wet** coarse grained gravel fill.
S-08-28 - At 5', black silty sand fill becomes **wet** and clayey; at 6', **wet**, black silty clay fill with coarse gravel and brick fragments.
S-08-29 - At 3.5', loose, **wet**, black, coarse grained gravel fill with brick and concrete fragments; at 4.5', stiff, **wet**, dark gray silty clay; at 9.5', soft, **wet**, dark gray silty sandy clay.
S-08-30 - At 1', loose, **wet**, black, coarse gravel fill.
S-08-31 - At 6', black silty sand fill with gravel becomes **wet**.
S-08-32 - At 12', dark gray/gray silty clay fill becomes soft and **wet**; at 13', loose, **wet** black clayey gravel fill; at 16', dark gray sandy silt becomes **wet** and black.
S-08-34 - At 5', brown sandy silt with gravel becomes **wet**.
S-08-35 - At 4', loose, **wet**, black gravel fill; at 13.5', brown clayey silt becomes soft and **wet**/stiff and **wet**, brown silty clay.
S-08-36 - At 4.5', **wet**, black sandy gravel fill with brick fragments; at 11', loose, **wet**, brown clayey silt; at 13', soft, **wet**, dark gray silty clay.

Based on this data, perched water and/or the water table is encountered in the surface fill and deeper silty clay and silty sand layers (SHU). Significant concentrations of PCBs are present within this wet fill/subsurface soil. Historical groundwater contour maps (August 1984 and September 1998) show SHU groundwater elevations at approximately 401' AMSL or 9' bgs. As provided in comments on the CMS Report, the presence of PCBs in subsurface soil within the water table is an uncontrolled release. The water table should be monitored by obtaining water levels and groundwater chemistry at monitoring wells installed in the SHU (see page 3 comment).

2) The investigation does not propose to determine the complete horizontal and vertical extent of PCB contamination. This data gap was identified in comments on the CMS Report. It is necessary to determine the extent of PCB contamination (e.g., assuming low occupancy, the area exceeding the 25 ppm screening criteria) before installing downgradient monitoring wells (see page 3 comment). This would ensure that the wells are located immediately downgradient of the waste boundary. Based on Figure 1 provided in the plan, only sample location S0836 has been identified as having a relatively low PCB concentration (10.6 ppm). Sample locations S0801 and S0803 (located to the south but not depicted) also had relatively low PCB concentrations (i.e., ND and 8 ppm, respectively).

Specific Comments:

Page 1: The data set includes ND for S0801 which was not used to determine the average maximum detected PCB concentration. If it is used, the average is 2,842 mg/kg.

Historical data from well GM-15 is provided. What is the status of well GM-15; describe whether it is still present or has been plugged and abandoned. If abandoned, provide the well abandonment report.

Page 2: Soil sampling is proposed at three former soil sampling locations. Below is a description of each sample location proposed by Solutia:

S0810: The boring was only 4' deep and wet fill was encountered. Samples at 1-2' and 2-3' were analyzed. A duplicate sample at 1-2' found 363 and 3,290 mg/kg PCB. The sample at 2-3' found 725 mg/kg PCB.

S0825: Samples at 1-2', 5-6', and 9-10' were analyzed. A duplicate sample at 1-2' found 3,820 and 22,100 mg/kg PCB. The sample at 5-6' found 57.2 mg/kg PCB and 333 mg/kg PCB was found at 9-10'. The upper 10' of the boring was wet fill and silty clay was encountered at 10-11'.

S0835: Only one sample was analyzed from 13-14' where 9,300 mg/kg PCB was found. Fill is present down to 7.5', silty clay at 7.5 to 11', clayey silt at 11-13.5', silty clay at 13.5-15.5', and sand at 15.5'.

Based on this data, we believe there are more appropriate locations to sample. For example, former soil sample locations that have significant PCBs detected deeper near the underlying sand would best delineate the vertical extent of migration of PCBs. For the three soil sample locations proposed by Solutia, no data exists at S0810 below 3' and PCB concentrations decrease significantly below 2' at S0825. We do agree that S0835 is an appropriate sample location. In addition to sample location S0835, we recommend the following locations and provide the rationale:

S0822: The boring log shows that silty clay was encountered to 12' (bottom of boring), which became wet at 10'. Odors were present and the only sample obtained (9-10') found PCBs at 2,207 mg/kg.

S0826: The boring log shows fill present from 0-8', silty clay from 8-10', and silty sand at 10'. A duplicate sample at 9-10' found PCB concentrations of 3,130 and 2,710 mg/kg. This was the only sampling point.

S0831: The boring log shows fill from 0-10.5', silty sand from 10.5-11.5', silty clay from 11.5-14.5', and sandy silt from 14.5-16'. The only sample obtained (13-14') found PCBs at 2,030 mg/kg.

Solutia proposes to collect soil samples in five foot increments from ground surface to 15' bgs. If groundwater is not encountered at 15', another soil sample should be obtained from 15 to 20' (or to the saturated zone).

EPA Method 1312, Synthetic Precipitation Leaching Procedure (SPLP) is proposed in addition to total VOCs, SVOCs, and PCBs. SPLP is designed for evaluating leaching from the vadose zone from acid rain. However, the water table at Solutia is known to rise in response to river levels and has been documented to be within at least 9' of the land surface, rising into subsurface soils with high concentrations of PCBs (see discussion of borings above). In addition, a large portion of this area is overlain by asphalt and the CCB 811 building. Given these site conditions, SPLP is not applicable. The determination of total organic compounds in soil and groundwater at the Former PCB Manufacturing Area is sufficient to investigate and document the current extent of PCB contamination.

Solutia proposes to collect groundwater samples from 20, 40, and 60' bgs. Provide the length of the discrete interval that the push sampler will sample groundwater from. We recommend that groundwater samples be obtained at minimum 10' intervals (5' intervals if possible) from the first groundwater encountered (or starting at 15' bgs if groundwater is not encountered above) through the MHU. The MHU has been estimated to be 30' thick, from 380-350' elevation. The land surface at the Former PCB Manufacturing Area is approximately 410'. Therefore, we agree extending the push-sampler down to 60' bgs.

Solutia proposes to analyze filtered and unfiltered groundwater samples. Only unfiltered samples are acceptable (TSCA and RCRA programs) for evaluating PCB concentrations in groundwater. As discussed below, properly constructed and developed monitoring wells, along with low flow sampling methods can be used to limit turbidity and provide representative groundwater samples.

Page 3: Groundwater is proposed to be sampled downgradient using push-sampling techniques. Permanent monitoring wells should be installed to obtain reproducible results of representative groundwater samples, and to provide longer term monitoring. Each location should have two nested wells screened in both the SHU (found at ~ 395-380') and MHU (found at ~ 380-350'). Another monitoring well nest should also be located in the middle of the contaminated area at sample location S0805. We recommend well installation techniques that case the upper contaminated fill and silty clays to prevent drag down of contaminants into the SHU and MHU, and sampling techniques such as low flow sampling to minimize turbidity.

SOLUTIA - 213

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October 6, 2005
B-09075-0143-3502
REPA3-3502-214v1

Mr. Bernie Orenstein
Regional Project Officer
U.S. EPA Region 5 (DM-7J)
77 West Jackson Blvd.
Chicago, IL 60604

Re: EPA Contract No. 68-W-02-018, Work Assignment R05802-3, Task 04, TDM No. 13. Revised Sampling and Analysis Plan for Sediment Sampling at Solutia W.G. Krummrich, Sauget, Illinois.

Dear Mr. Orenstein:

In response to Work Assignment R05802-3, Task 04, under EPA Contract No. 68-W-02-018, Booz Allen Hamilton has prepared the attached Revised Sampling and Analysis Plan for Sediment Sampling at Solutia W.G. Krummrich, Sauget, Illinois. This revised Sampling and Analysis Plan reflects comments made by the EPA.

If you have any questions regarding this deliverable, please contact me at (312) 578-4757.

Sincerely,

Frances B. Hodge

BOOZ ALLEN HAMILTON

Frances Hodge,
Work Assignment Manager

cc: Allen Wojtas, EPA Work Assignment Manager
Kenneth Bardo, EPA Technical Advisor
Brian Freeman, EPA QA Officer
Thomas Valentino, EPA Contracting Officer (cover letter only)
LaShawn Smith, EPA Contract Specialist (cover letter only)
BAH EPMT QA/QC Coordinator

SAMPLING AND ANALYSIS PLAN

FOR
SEDIMENT SAMPLING
SOLUTIA W.G. KRUMMRICH
SAUGET, ILLINOIS

IN SUPPORT OF
U.S. ENVIRONMENTAL PROTECTION AGENCY REGION 5

UNDER
RCRA ENFORCEMENT, PERMITTING, AND ASSISTANCE (REPA3)
ZONE 2-REGION 5

DOCUMENT CONTROL NUMBER
REPA3-5802-214v1

REVISION NO: 1
EFFECTIVE DATE: October 6, 2005

Booz | Allen | Hamilton

INTRODUCTION

Under the U.S. Environmental Protection Agency (EPA) Resource Conservation and Recovery Act (RCRA) Enforcement, Permitting, and Assistance (REPA3) Contract, Work Assignment R05802-2, Booz Allen Hamilton (Booz Allen) has been tasked to collect sediment samples along the Mississippi River downstream of the Solutia W. G. Krummrich facility. This site-specific Sampling and Analysis Plan (SAP) has been prepared to document procedures and methods to be used during sample collection, shipping, and analysis and related activities.

The Booz Allen Region 5 Quality Assurance Project Plan (R5 QA Project Plan) presents detailed information about Booz Allen's quality assurance (QA) and quality control (QC) protocols for sampling and analysis activities in Region 5. This site-specific SAP will not duplicate information provided in the R5 QA Project Plan; it will supplement the plan with information that is specific to this project. Both this site-specific SAP and the R5 QA Project Plan are subordinate to, and consistent with, the REPA3 Quality Management Plan (QMP). In this manner, Booz Allen provides a comprehensive and consistent environmental QA/QC program with sufficient flexibility to meet the particular requirements of Region 5 and the circumstances of each project.

The REPA3 QMP establishes Booz Allen's quality system for all REPA3 work assignments. It outlines our corporate quality policy and describes the overall organization and general approach to quality management for these contracts. The QMP also defines requirements for control of accountable documents and records, provides the strategy for assessing the effectiveness and implementation of the overall quality system, describes the roles of and interrelationships between the various QA/QC plans, and describes how the quality of subcontracted work will be controlled.

This SAP is a sub-tier document to the Booz Allen R5 QA Project Plan, which outlines the general requirements and protocols for media sampling and analysis activities performed under REPA3 in EPA Region 5. The R5 QA Project Plan was designed to comply with and support the Region's quality management policies as prescribed in *RCRA QAPP Instructions U.S. EPA Region 5*, Revision April 1998. It was also designed to be consistent with *EPA Requirements for Quality Assurance Project Plans* (QA/R-5), *EPA Guidance for Quality Assurance Project Plans* (QA/G-5), *EPA Quality Manual for Environmental Programs (EPA 5360)*, and *Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs* (ANSI/ASQC E4-1994). In conjunction with each work assignment statement of work (SOW), the R5 QA Project Plan provides guidance and requirements for developing and implementing site SAPs that are also compliant with these reference documents. In the event of conflicting requirements, the order of precedence will be the contract SOW, this site-specific SAP, the R5 QA Project Plan, and the QMP. All of these documents will take precedence over previously existing QA Project Plans or standard operating procedures (SOPs).

ELEMENT 1: TITLE/SIGNATURE PAGE

The following persons approve the contents of this *Sampling and Analysis Plan for Sediment Sampling at The Solutia W.G. Krummrich Facility, in Sauget, Illinois,* and are committed to implementing the provisions described herein:

for Yvonne Fernandez (signature/date)
Booz Allen Hamilton PQAM

Allen Wojtas (signature/date)
EPA Region 5 WAM

Frances Hodge (signature/date)
Booz Allen Hamilton WAM

Brian Freeman (signature/date)
EPA Region 5 Chemist

ELEMENT 2: TABLE OF CONTENTS

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DISTRIBUTION

EPA Region 5 Work Assignment Manager
EPA Region 5 Technical Advisor
Booz Allen Work Assignment Manager
Booz Allen Field Team
Laboratory (sanitized of site-specific information)

ELEMENT 3: PROJECT DESCRIPTION

The Solutia facility is located in Sauget, Illinois and historically engaged in the production of industrial chemicals, chemical intermediates, agricultural intermediates, and rubber chemicals. The terms of the Administrative Order on Consent (AOC) require Solutia to investigate releases and propose final corrective measures necessary to protect human health and the environment.

Sediment in the Mississippi River was investigated in November 2000 and again in 2002. Site-related constituents (i.e., mono- and dichlorobenzenes, p-chloroaniline, various pesticides and herbicides, and PCBs) were found to be present in sediment in the vicinity of and downstream of a groundwater contaminant plume discharging to the Mississippi River. Sediment toxicity was noted within the discharge area. An interim remedy was completed on November 1, 2004, to address the discharge of contaminants to the Mississippi River.

A site reconnaissance has been performed during June 1 to 3, 2005, and pertinent US Army Corp Of Engineers (ACE) files were reviewed to help focus the work to be performed under this sampling event. Additional maps and aerial photographs were obtained from the ACE depicting upstream potential sampling locations. During the site reconnaissance, possible access points to Jefferson Barracks, Jefferson Barracks Chute, and Arsenal Island were determined, as well as access to potential upstream reference sampling locations.

Booz Allen has been tasked to sample, analyze, and ship samples of sediment collected in and along the Mississippi River. These samples will be taken with the use of both Vibracore and Geoprobe sampling tools, which will be operated by the respective subcontractors. It is anticipated that Booz Allen will obtain approximately 23 sediment samples using a Vibracore sampling tool and 15 sediment samples using a Geoprobe sampling tool. The EPA Technical Advisor has the option to add two sediment samples using the Geoprobe sampling tool. These sample numbers do not include QA/QC samples.

3.1 General Requirements

Booz Allen will collect sediment samples along the Mississippi River directly south of the facility, package the samples, and ship them for analysis to the EPA Central Regional Laboratory (EPA CRL) in Chicago, Illinois, and Severn Trent Laboratories (STL) located in Pittsburgh, Pennsylvania. Samples sent to the EPA CRL will be analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), pesticides, total organic carbon (TOC), and grain size (refer to Table 3-1). Samples sent to STL will be analyzed for Herbicides. Booz Allen, EPA CRL and STL will conduct these activities in accordance with the EPA approved Booz Allen Region 5 QA Project Plan, which outlines the general requirements and protocols for media sampling and analysis activities performed under REPA3 in EPA Region 5.

Booz Allen's field team will include one Booz Allen staff and with one staff from MagnaCore Drilling and Environmental Services, Inc., a subcontractor under the REPA 3 contract, acting as the field team leader. Two other subcontractors will conduct field activities as follows: PSA Environmental (PSA) of Lee's Summit, Missouri will perform Geoprobe activities and the ASci Corporation (ASci) of Auburn Hills, Michigan will conduct all Vibracore activities.

Booz Allen will also conduct data validation of 20 percent of the sample results. Data validation of the sediment samples, excluding the sample for herbicide analysis, will be conducted in accordance with EPA CRL internal SOPs. Data validation of the sediment samples for herbicide analysis will be conducted in accordance with current EPA Region 5 CRL protocols and applicable Booz Allen standard operating procedures (SOPs).

3.2 SITE DESCRIPTION

The sediment sampling activities will occur between river miles (RM) 190 and 166 along the sandbars of the eastern bank of the Mississippi River south of Sauget, Illinois. The site reconnaissance conducted in June 2005 indicated that there were access points that are controlled by the Prairie Dupont Levee and Sanitary District. Mike Sullivan is the president of this district and provided access through locked gates controlled by the levy district. Access to the river will be from a boat launching ramp located at Luhr Brothers, a contractor for the ACE. Hydrographic maps provided by the ACE (refer to Attachment A) show regions along the river where all sampling activities will take place.

3.3 SITE HISTORY AND BACKGROUND

On May 3, 2000, the United States Environmental Protection Agency (EPA) issued an AOC to Solutia. The Solutia facility is located in Sauget, Illinois and historically engaged in the production of industrial chemicals, chemical intermediates, agricultural intermediates, and rubber chemicals. The terms of the Order require Solutia to propose final corrective measures necessary to protect human health and the environment.

Sediment in the Mississippi river was investigated in November of 2000 and again in 2002. Site related constituents were found to be present in sediment and the vicinity of, and downstream of, a groundwater contaminant plume discharging to the Mississippi river. Sediment toxicity was also noted in the discharge area. An interim remedy, slurry wall downgradient from site R, was completed on November 1, 2004 to address the discharge of contaminants to the river.

Two natural deposition areas occur downstream of the plume discharge at Arsenal Island (RM 176 to 173) and Jefferson Barracks (RM 171 to 168). The ACE has constructed dikes in both areas to further promote scouring along the west bank to maintain the navigational channel (minimum 300 feet wide and 9 feet deep) and promote sediment deposition along the east bank of the Mississippi River. ACE typically dredges coarse sands from the deeper river channel and deposits the dredged sediment toward the east bank at Arsenal Island and Jefferson Barracks where sand bars are typically present.

At RM 167.5 to 166.5 is Jefferson Barracks Chute, the chute is a backwater area separated from the main flow of the Mississippi River by an island. A backwater environment is likely to contain finer silt sediments and organic matter rather than the clean coarse sands typically present in the main channel and high flow areas of the river.

3.4 PROJECT OBJECTIVES

The purpose of this project is to collect and analyze sediment samples obtained in or along the Mississippi River for the target parameters listed in Table 3-1. The project QA objectives and potential uses of the data are described in Section 5.1 of this SAP. Approximately 38-40 sediment samples will be collected in and along the Mississippi River. The objective of Booz Allen is to collect sediment samples for laboratory analysis. Booz Allen has subcontracted ASci Corporation to operate the Vibracore sampling tool, PSA Environmental to operate the Geoprobe sampling tool, and MagnaCore Company to support the Booz Allen field team leader. Booz Allen's role is coordinate access locations and assist in sample collection, preparation, and shipment, along with data validation and evaluation. Analysis will be completed by STL under a subcontract with Booz Allen and by EPA CRL.

3.5 TARGET PARAMETER LIST

Project samples will be analyzed for the parameters listed in Table 3-1, based on the Booz Allen's EPA-approved *Region 5 Quality Assurance Project Plan* and this *Sediment Sampling and Analysis Plan* or EPA CRL SOPs.

Table 3-1. Target Parameters

CONSTITUENTS			
PESTICIDES			
Aldrin	P,P'-DDE	Atrazine	Endrin Aldehyde
Alpha-BHC	P,P'-DDD	Chlordane,Tech	Endrin Ketone
Beta-BHC	P,P'-DDT	Toxaphene	Heptachlor
Delta-BHC	Dieldrin	Endosulfan Sulfate	Heptachlor Epoxide
Gamma-BHC	Endosulfan I	Endrin	Methoxychlor
Alpha-Chlordane	Gamma-Chlordane	Endosulfan II	
VOCs			
Acetone	Acrylonitrile	Benzene	bis(Chloromethyl)ether
Acrolein	Bromobenzene	Bromochloromethane	Bromodichloromethane
Bromoform	Bromomethane	2-Butanone (MEK)	n-Butylbenzene
sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Carbon tetrachloride
Chlorobenzene	Chloroethane	1,2- Dichlorobenzene	Chloroform
Chloromethane	2-Chlorotoluene	4-Chlorotoluene	Dibromochloromethane
1,2-Dibromo-3-chloropropane	1,3- Dichlorobenzene	1,4- Dichlorobenzene	1,2-Dibromoethane (EDB)
Dibromomethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene
cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,2-Dichloropropane	1,3-Dichloropropane
2,2- Dichloropropane	1,1-Dichloropropene	cis-1,3-Dichloropropene	trans-1,3-Dichloropropene
1,2-Dimethylbenzene (o-xylene)	1,3-Dimethylbenzene (—xylene)	1,4-Dimethylbenzene (p-xylene)	Ethylbenzene
Hexachlorobutadiene	2-Hexanone	Isopropylbenzene	p-Isopropyltoluene
Methylene chloride	4-Methyl-2-pentanone	Vinyl chloride	n-Propylbenzene
Styrene	1,1,1,2-Tetrachloroethane	1,1,2,2-Tetrachloroethane	Tetrachloroethene
Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,1-Trichloroethane
1,1,2-Trichloroethane	Trichloroethene	1,2,3-Trichloropropane	1,2,4-Trimethylbenzene
1,3,5-Trimethylbenzene			

SVOCs*			
Acenaphthene	Acenaphthylene	Anthracene	Benzidine
Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene
Benzo(k)fluroanthene	4-Bromophenyl phenyl ether	Benzyl alcohol	bis(2-Chloroethoxy)methane
bis(2-Chloroethyl)ether	bis(2-Chloroisopropyl) ether	bis(2-Ethylhexyl) phthalate	Butylbenzyl phthalate
Carbazole	2-Chloronaphthalene	2-Chlorophenol	4-Chloro-3-methylphenol
4-Chloroaniline	4-Chlorophenyl phenyl ether	Chrysene	Dibenzo(a,h)anthracene
Dibenzofuran	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene
2,4-Dichlorophenol	3,3-Dichlorobenzidine	Diethyl phthalate	2,4-Dimethylphenol
Dimethyl phthalate	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene
4,6-Dinitro-2-methylphenol	Di-n-butylphthalate	Di-n-octylphthalate	Fluoranthene
Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene
Hexachloroethane	Indeno(1,2,3-cd)pyrene	Isophorone	2-Methylnaphalene
2-Methylphenol	4-Methylphenol	Napthalene	Nitrobenzene
2-Nitroaniline	3-Nitroaniline	4-Nitroaniline	2-Nitrophenol
4-Nitrophenol	N-Nitroso-di-n-propylamine	N-Nitrosodiphenylamine	Pentachlorophenol
Phenanthrene	Phenol	Pyrene	1,2,4-Trichlorobenzene
2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	3-Methylphenol	
PCBs (as Aroclors)			
Aroclor 1016	Aroclor 1248	Aroclor 1262	Aroclor 1260
Aroclor 1232	Aroclor 1254	Aroclor 1268	Aroclor 1242
HERBICIDES			
2,4-dichlorophenoxy Propanoic Acid (2,4 D)	Pentachlorophenol	2-(2,4,5-trichlorophenoxy) Propionic Acid (2,4,5-TP)	Dicamba
2,4-dichlorophenoxy Butyric Acid (2,4 DB)	(2,4,5-trichlorophenoxy) Acetic Acid (2,4,5-T)	Dalapon	Dichloroprop

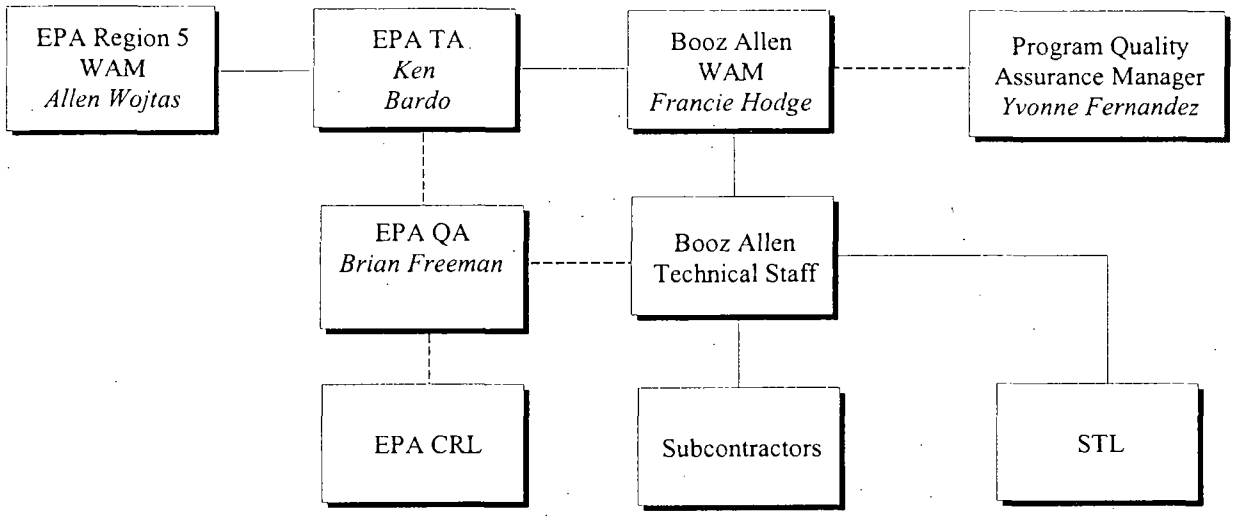
HERBICIDES			
Dinoseb	4-chloro-2-Methylphenoxy Acetic Acid (MCPA)	2-(2-Methyl-4-chlorophenoxy)propionic Acid (MCPP)	
OTHER PARAMETERS			
Total Organic Carbon		Grain Size	

* The following SVOCs will be Tentatively Identified Compounds (TICs) by EPA CRL: 2-chloroaniline, 3-chlororaniline, 4-chlorophenol, 2,6-Dichlorophenol, and Aniline

ELEMENT 4: PROJECT ORGANIZATION AND RESPONSIBILITY

This section identifies the individuals and organizations responsible for the planning and execution of field operations to be performed under this SAP. The project organization is depicted on Figure 4-1. The REPA3 QMP and R5 QA Project Plan provide a full description of all program-level functions.

Figure 4-1. REPA3 Organization for Project Support



——— Line of Authority

- - - - - Line of Communication

4.1 SPECIAL TRAINING/CERTIFICATION

Booz Allen personnel will be trained and certified as prescribed in the QMP. Project personnel will be proficient in relevant aspects of environmental sampling. The Booz Allen technical staff will be provided with, and required to read, the work assignment SOW, QMP, R5 QA Project Plan, site-specific SAP, Health and Safety Plan (HSP), and relevant SOPs. Each member of the Booz Allen technical staff must demonstrate proficiency with their assigned duties, including the preparation of associated documentation.

All subcontractors will provide and follow their own HSP that is site specific to this project.

Field personnel, including subcontractors, will be certified and current in the Occupational Safety and Health Administration (OSHA) Hazardous Material Site Worker Training (40-hour initial training and 8-hour annual refreshers).

ELEMENT 5: QUALITY ASSURANCE OBJECTIVES FOR MEASUREMENT DATA

The scope of work for this task consists of taking sediment samples, conducting laboratory analyses, and completing data validation to determine if site media contain detectable levels of any of the parameters outlined in Table 5-1.

5.1 PROJECT-SPECIFIC QA OBJECTIVES

The sampling data will be used by EPA to evaluate a) whether a release of hazardous constituents has occurred downstream of the contaminated groundwater plume discharging to the Mississippi River; and b) if a release is confirmed, whether the constituents are present above applicable risk-based media standards, for example EPA Region 9 Preliminary Remediation Goals (PRGs) for human health risk or Region 5 Ecological Screening Levels (ESLs). Because of the known abundant use and production of PCBs, herbicides, and pesticides at the facility a release may also be defined as concentrations significantly above background levels in sediment along the river. If the sampling data satisfies all quality objectives for precision and accuracy (view Table 5-1), including reporting limits below the applicable PRGs or ESLs, it will be assumed that the data are valid for potential use in determining a release or identifying a potential risk, at EPA's discretion.

QA/QC samples will be prepared and analyzed in accordance with EPA requirements, as outlined in Section 6.2 of this SAP.

5.2 ANALYTICAL QA OBJECTIVES

Based upon discussion with EPA, it was agreed that SW-846 test methods and EPA CRL's SOPs will provide adequate precision, accuracy, and reporting limits (RLs) for this project. Tables 5-1 and 5-2 describe these criteria.

Table 5-1. Reporting Limits and Quality Control Acceptance Criteria for EPA CRL

PARAMETER	EPA CRL SOP	MATRIX	UNIT	RL	ACCURACY (%R)		PRECISION (%RPD)
Particle Grain Size	AIG038	Sediment	mm	0.074	NA	NA	NA
Total Organic Carbon	AIG009	Sediment	% C	1	86	130	20
Acetone	GCMS001	Sediment	ug/kg	10	NA	NA	NA
Acrolein	GCMS001	Sediment	ug/kg	10	NA	NA	NA
Acrylonitrile	GCMS001	Sediment	ug/kg	5	NA	NA	NA
Benzene	GCMS001	Sediment	ug/kg	5	60	140	40
bis(Chloromethyl)ether	GCMS001	Sediment	ug/kg	NT	NT	NT	NT
Bromobenzene	GCMS001	Sediment	ug/kg	5	60	140	40
Bromochloromethane	GCMS001	Sediment	ug/kg	5	60	140	40
Bromodichloromethane	GCMS001	Sediment	ug/kg	5	60	140	40
Bromoform	GCMS001	Sediment	ug/kg	5	60	140	40
Bromomethane	GCMS001	Sediment	ug/kg	5	NA	NA	NA
2-Butanone (MEK)	GCMS001	Sediment	ug/kg	5	NA	NA	NA
n-Butylbenzene	GCMS001	Sediment	ug/kg	5	60	140	40
sec-Butylbenzene	GCMS001	Sediment	ug/kg	5	60	140	40
tert-Butylbenzene	GCMS001	Sediment	ug/kg	5	60	140	40
Carbon disulfide	GCMS001	Sediment	ug/kg	5	NA	NA	NA
Carbon tetrachloride	GCMS001	Sediment	ug/kg	5	60	140	40
Chlorobenzene	GCMS001	Sediment	ug/kg	5	60	140	40
Chloroethane	GCMS001	Sediment	ug/kg	5	NA	NA	NA
1,2-Dichlorobenzene	GCMS001	Sediment	ug/kg	5	60	140	40
Chloroform	GCMS001	Sediment	ug/kg	5	60	140	40
Chloromethane	GCMS001	Sediment	ug/kg	5	NA	NA	NA
2-Chlorotoluene	GCMS001	Sediment	ug/kg	5	60	140	40
4-Chlorotoluene	GCMS001	Sediment	ug/kg	5	60	140	40
Dibromochloromethane	GCMS001	Sediment	ug/kg	5	60	140	40
1,2-Dibromo-3-chloropropane	GCMS001	Sediment	ug/kg	5	60	140	40

PARAMETER	EPA CRL SOP	MATRIX	UNIT	RL	ACCURACY (%R)		PRECISION (%RPD)
1,2-Dibromoethane (EDB)	GCMS001	Sediment	ug/kg	5	60	140	40
Dibromomethane	GCMS001	Sediment	ug/kg	5	60	140	40
1,3-Dichlorobenzene	GCMS001	Sediment	ug/kg	5	60	140	40
1,4-Dichlorobenzene	GCMS001	Sediment	ug/kg	5	60	140	40
1,1-Dichloroethane	GCMS001	Sediment	ug/kg	5	60	140	40
1,2-Dichloroethane	GCMS001	Sediment	ug/kg	5	60	140	40
1,1-Dichloroethene	GCMS001	Sediment	ug/kg	5	60	140	40
cis-1,2-Dichloroethene	GCMS001	Sediment	ug/kg	5	60	140	40
trans-1,2-Dichloroethene	GCMS001	Sediment	ug/kg	5	60	140	40
1,2-Dichloropropane	GCMS001	Sediment	ug/kg	5	60	140	40
1,3-Dichloropropane	GCMS001	Sediment	ug/kg	5	60	140	40
2,2-Dichloropropane	GCMS001	Sediment	ug/kg	5	60	140	40
1,1-Dichloropropene	GCMS001	Sediment	ug/kg	5	60	140	40
cis-1,3-Dichloropropene	GCMS001	Sediment	ug/kg	5	60	140	40
trans-1,3-Dichloropropene	GCMS001	Sediment	ug/kg	5	60	140	40
1,2-Dimethylbenzene (o-xylene	GCMS001	Sediment	ug/kg	5	60	140	40
1,3-Dimethylbenzene (m-xylene)	GCMS001	Sediment	ug/kg	5	60	140	40
1,4-Dimethylbenzene (p-xylene)	GCMS001	Sediment	ug/kg	5	60	140	40
Ethylbenzene	GCMS001	Sediment	ug/kg	5	60	140	40
Hexachlorobutadiene	GCMS001	Sediment	ug/kg	5	60	140	40
2-Hexanone	GCMS001	Sediment	ug/kg	10	NA	NA	NA
Isopropylbenzene	GCMS001	Sediment	ug/kg	5	60	140	40
p-Isopropyltoluene	GCMS001	Sediment	ug/kg	5	60	140	40
Methylene chloride	GCMS001	Sediment	ug/kg	5	60	140	40
4-Methyl-2-pentanone	GCMS001	Sediment	ug/kg	5	NA	NA	NA
n-Propylbenzene	GCMS001	Sediment	ug/kg	5	60	140	40

PARAMETER	EPA CRL SOP	MATRIX	UNIT	RL	ACCURACY (%R)		PRECISION (%RPD)
Styrene	GCMS001	Sediment	ug/kg	5	60	140	40
1,1,1,2-Tetrachloroethane	GCMS001	Sediment	ug/kg	5	60	140	40
1,1,2,2-Tetrachloroethane	GCMS001	Sediment	ug/kg	5	60	140	40
Tetrachloroethene	GCMS001	Sediment	ug/kg	5	60	140	40
Toluene	GCMS001	Sediment	ug/kg	5	60	140	40
1,2,3-Trichlorobenzene	GCMS001	Sediment	ug/kg	5	60	140	40
1,2,4-Trichlorobenzene	GCMS001	Sediment	ug/kg	5	60	140	40
1,1,1-Trichloroethane	GCMS001	Sediment	ug/kg	5	60	140	40
1,1,2-Trichloroethane	GCMS001	Sediment	ug/kg	5	60	140	40
Trichloroethene	GCMS001	Sediment	ug/kg	5	60	140	40
1,2,3-Trichloropropane	GCMS001	Sediment	ug/kg	5	60	140	40
1,2,4-Trimethylbenzene	GCMS001	Sediment	ug/kg	5	60	140	40
1,3,5-Trimethylbenzene	GCMS001	Sediment	ug/kg	5	60	140	40
Vinyl chloride	GCMS001	Sediment	ug/kg	5	60	140	40
1,2,4-Trichlorobenzene	GCMS026	Sediment	ug/kg	330	69	81	12
1,2-Dichlorobenzene	GCMS026	Sediment	ug/kg	330	57	74	20
1,3-Dichlorobenzene	GCMS026	Sediment	ug/kg	330	54	71	22
1,4-Dichlorobenzene	GCMS026	Sediment	ug/kg	330	56	72	22
2,4,6-Trichlorophenol	GCMS026	Sediment	ug/kg	330	80	93	12
2,4,5-Trichlorophenol	GCMS026	Sediment	ug/kg	830	87	105	12
2,4-Dichlorophenol	GCMS026	Sediment	ug/kg	330	80	90	13
2,4-Dimethylphenol	GCMS026	Sediment	ug/kg	330	58	68	11
2,4-Dinitrophenol	GCMS026	Sediment	ug/kg	800	63	87	57
2,4-Dinitrotoluene	GCMS026	Sediment	ug/kg	330	98	113	12
2,6-Dinitrotoluene	GCMS026	Sediment	ug/kg	330	95	107	1
2-Chloronaphthalene	GCMS026	Sediment	ug/kg	330	58	93	10
2-Chlorophenol	GCMS026	Sediment	ug/kg	330	59	74	16
2-Methylnapthalene	GCMS026	Sediment	ug/kg	330	55	95	22
2-Nitroaniline	GCMS026	Sediment	ug/kg	330	94	109	12
2-Nitrophenol	GCMS026	Sediment	ug/kg	330	72	85	11

PARAMETER	EPA CRL SOP	MATRIX	UNIT	RL	ACCURACY (%R)		PRECISION (%RPD)
3,3-Dichlorobenzidine	GCMS026	Sediment	ug/kg	800	82	122	13
3-Nitroaniline	GCMS026	Sediment	ug/kg	800	114	127	15
4,6-Dinitro-2-methylphenol	GCMS026	Sediment	ug/kg	800	88	101	21
4-Bromophenylphenyl ether	GCMS026	Sediment	ug/kg	330	93	106	12
4-Chloroaniline	GCMS026	Sediment	ug/kg	330	91	114	14
4-Chloro-3-methylphenol	GCMS026	Sediment	ug/kg	330	90	105	10
4-Chlorophenyl phenyl ether	GCMS026	Sediment	ug/kg	330	90	98	11
4-Nitrophenol	GCMS026	Sediment	ug/kg	800	99	107	34
Acenaphthene	GCMS026	Sediment	ug/kg	330	62	96	18
Acenaphthylene	GCMS026	Sediment	ug/kg	330	51	97	19
Anthracene	GCMS026	Sediment	ug/kg	330	73	97	11
Benzo(a)anthracene	GCMS026	Sediment	ug/kg	330	82	105	12
Benzo(a)pyrene	GCMS026	Sediment	ug/kg	330	78	105	10
Benzo(b)fluoranthene	GCMS026	Sediment	ug/kg	330	78	108	12
Benzo(g,h,i)perylene	GCMS026	Sediment	ug/kg	330	59	107	15
Benzo(k)fluoranthene	GCMS026	Sediment	ug/kg	330	74	108	12
Benzyl alcohol	GCMS026	Sediment	ug/kg	330	77	90	16
Bis(2-chloroethoxy) methane	GCMS026	Sediment	ug/kg	330	77	84	11
Bis(2-chloroethyl)ether	GCMS026	Sediment	ug/kg	330	63	74	15
Bis(2-ethylhexl) phthalate	GCMS026	Sediment	ug/kg	500	79	109	11
Bis(2-chloroisopropyl)ether	GCMS026	Sediment	ug/kg	330	73	86	10
Butyl benzyl phthalate	GCMS026	Sediment	ug/kg	330	79	112	14
Carbazole	GCMS026	Sediment	ug/kg	330	73	102	12
Chrysene	GCMS026	Sediment	ug/kg	330	80	105	13
Dibenzo(a,h)anthracene	GCMS026	Sediment	ug/kg	330	67	120	43
Dibenzofuran	GCMS026	Sediment	ug/kg	330	63	100	17

PARAMETER	EPA CRL SOP	MATRIX	UNIT	RL	ACCURACY (%R)		PRECISION (%RPD)
Diethyl phthalate	GCMS026	Sediment	ug/kg	500	75	105	10
Dimethyl phthalate	GCMS026	Sediment	ug/kg	500	74	105	10
Di-n-butyl phthalate	GCMS026	Sediment	ug/kg	500	69	112	14
Di-n-octylphthalate	GCMS026	Sediment	ug/kg	500	65	118	16
Fluoranthene	GCMS026	Sediment	ug/kg	330	77	100	10
Fluorene	GCMS026	Sediment	ug/kg	330	65	101	19
Hexachlorobenzene	GCMS026	Sediment	ug/kg	330	88	105	9
Hexachlorobutadiene	GCMS026	Sediment	ug/kg	330	63	75	13
Hexachloro cyclopentadiene	GCMS026	Sediment	ug/kg	800	62	79	39
Hexachloroethane	GCMS026	Sediment	ug/kg	330	54	71	29
Indeno(1,2,3-cd)pyrene	GCMS026	Sediment	ug/kg	330	69	134	14
Isophorone	GCMS026	Sediment	ug/kg	330	77	90	13
2-Methylphenol	GCMS026	Sediment	ug/kg	330	67	80	15
3-Methylphenol	GCMS026	Sediment	ug/kg	330	76	89	15
4-Methylphenol	GCMS026	Sediment	ug/kg	330	76	89	15
Naphthalene	GCMS026	Sediment	ug/kg	330	47	94	21
Nitrobenzene	GCMS026	Sediment	ug/kg	330	74	83	13
n-Nitroso-di-n-propylamine	GCMS026	Sediment	ug/kg	330	75	87	14
n-Nitrosodiphenylamine	GCMS026	Sediment	ug/kg	330	96	108	12
Pentachlorophenol	GCMS026	Sediment	ug/kg	800	93	106	33
Phenanthrene	GCMS026	Sediment	ug/kg	330	73	98	13
Phenol	GCMS026	Sediment	ug/kg	330	64	78	14
Pyrene	GCMS026	Sediment	ug/kg	330	76	109	14
Aldrin	GC001	Sediment	ug/g	0.005	50	150	30
Alpha-BHC	GC001	Sediment	ug/g	0.005	50	150	30
Beta-BHC	GC001	Sediment	ug/g	0.005	50	150	30
Delta-BHC	GC001	Sediment	ug/g	0.005	50	150	30
Gamma-BHC	GC001	Sediment	ug/g	0.005	50	150	30

PARAMETER	EPA CRL SOP	MATRIX	UNIT	RL	ACCURACY (%R)		PRECISION (%RPD)
Alpha-Chlordane	GC001	Sediment	ug/g	0.005	50	150	30
P,P'-DDE	GC001	Sediment	ug/g	0.005	50	150	30
P,P'-DDD	GC001	Sediment	ug/g	0.005	50	150	30
P,P'-DDT	GC001	Sediment	ug/g	0.005	50	150	30
Dieldrin	GC001	Sediment	ug/g	0.005	50	150	30
Endosulfan I	GC001	Sediment	ug/g	0.005	50	150	30
Gamma-Chlordane	GC001	Sediment	ug/g	0.005	50	150	30
Atrazine	GC001	Sediment	ug/g	0.005	50	150	30
Chlordane,Tech	GC001	Sediment	ug/g	0.1	50	150	30
Toxaphene	GC001	Sediment	ug/g	0.1	50	150	30
Endosulfan Sulfate	GC001	Sediment	ug/g	0.005	50	150	30
Endrin	GC001	Sediment	ug/g	0.005	50	150	30
Endosulfan II	GC001	Sediment	ug/g	0.005	50	150	30
Endrin Aldehyde	GC001	Sediment	ug/g	0.005	50	150	30
Endrin Ketone	GC001	Sediment	ug/g	0.005	50	150	30
Heptachlor	GC001	Sediment	ug/g	0.005	50	150	30
Heptachlor Epoxide	GC001	Sediment	ug/g	0.005	50	150	30
Methoxychlor	GC001	Sediment	ug/g	0.005	50	150	30
Aroclor 1016	GC002	Sediment	ug/g	0.1	50	150	30
Aroclor 1232	GC002	Sediment	ug/g	0.1	50	150	30
Aroclor 1248	GC002	Sediment	ug/g	0.1	50	150	30
Aroclor 1254	GC002	Sediment	ug/g	0.1	50	150	30
Aroclor 1262	GC002	Sediment	ug/g	0.1	50	150	30
Aroclor 1268	GC002	Sediment	ug/g	0.1	50	150	30
Aroclor 1260	GC002	Sediment	ug/g	0.1	50	150	30
Aroclor 1242	GC002	Sediment	ug/g	0.1	50	150	30

NA Standards Not Available

NT Not a Target Compound of this Method

*Reported in mg/L to account for variations in sample weights.

** LCS/LCSD accuracy (%R) and precision (%RPD) were used for Method GCMS026 due to lower than 50% accuracy levels for MS/MSD (%R) and higher than 50% RPD levels.

Table 5-2. Reporting Limits and Quality Control Acceptance Criteria for STL

PARAMETER	METHOD	MATRIX	UNIT	RL	ACCURACY (%R)		PRECISION (%RPD)
2,4-dichlorophenoxy Propanoic Acid (2,4 D)	SW8151A	Sediment	ug/kg	20	28	136	20
2,4-dichlorophenoxy Butyric Acid (2,4 DB)	SW8151A	Sediment	ug/kg	20	38	125	30
Pentachlorophenol	SW8151A	Sediment	ug/kg	10	NA	NA	NA
2,4,5-trichlorophenoxy Acentic Acid (2,4,5-T)	SW8151A	Sediment	ug/kg	5	40	127	20
2,4,5-trichlorophenoxy Propanic Acid (2,4,5-TP)	SW8151A	Sediment	ug/kg	5	50	128	20
Dalapon	SW8151A	Sediment	ug/kg	10	18	125	30
Dicamba	SW8151A	Sediment	ug/kg	10	68	110	32
Dichloroprop	SW8151A	Sediment	ug/kg	10	30	130	50
Dinoseb	SW8151A	Sediment	ug/kg	3	10	115	50
4-chloro-2-Methylphenoxy Acetic Acid (MCPA)	SW8151A	Sediment	ug/kg	2000	30	130	30
2-(4-chloro-2-Methylphenoxy) Propionic Acid	SW8151A	Sediment	ug/kg	2000	30	130	30

NA Standards Not Available

5.3 Non-Direct Measurements

Non-direct measurements will not be required for this project.

ELEMENT 6: SAMPLING PROCEDURES

Booz Allen will be responsible for sampling sediment from the 38 off-site locations along and in the Mississippi River. Based on the proposed sampling locations depicted in the aerial photos and hydraulic survey maps the use of Vibracore and Geoprobe sampling tools is appropriate. The number of samples will be approximately 23 sediment samples using a Vibracore drilling tool, and 15 sediment samples using a Geoprobe drilling tool. An additional two sediment samples with the Geoprobe drilling tool may be added at the EPA TA's discretion. For sample locations that are buried sediment channels, shoreline, or sand bars potentially accessible from the shoreline, the use of a Geoprobe drilling tool will be used. For sample locations that are sand bars, potentially underwater, along the Illinois side of the Mississippi river a Vibracore drilling tool will be used. The Vibracore drilling tool will be mounted on to a boat operated by ASci Incorporated. The sampling method to be used at each location will be decided at the discretion of the Booz Allen onsite team field leader, based on accessability and the above criteria for each sampling tool. The EPA TA has provided hydrographic survey maps, attached in Attachment A, with 29 pre-selected sample locations . The Booz Allen team leader will interoperate the location of each sample location stated within the attached hydrographic survey maps (Attachment A).

All field sampling activities will be conducted in accordance with applicable Booz Allen SOPs, as described in Table 6-1.

Table 6-1. Applicable Booz Allen SOPs

DCN	TITLE
T-1	Field Measurement and Test Equipment
T-2	IDW Management Procedures
T-3	Equipment Decontamination
T-8	Water Level Measurement
T-11	Sediment Sampling
T-17	Sample Management
M-8	Readiness Review
M-11	Data Validation
M-15	Field Documentation

6.1 SAMPLING METHODS

Booz Allen will take approximately 38 sediment samples with an additional 2 samples upon direction of the EPA TA. The samples will be collected from locations in or along the Mississippi River from RM 166 to RM 190. Each of the sample locations has been identified in the Hydraulic Survey Maps, Attachment A, provided by ACE which have been attached. Each sample location will be located and documented with use of a Global Positioning System(GPS). The Booz Allen field sampler will fill all sample jars stated in Table 6-2 for all sample locations unless otherwise instructed by the EPA TA. All sediment samples, except EnCore® VOC samples, will be collected as composite samples taken from intervals of each core sampled. EnCore® VOC samples will be collected as grab samples from sections of the sediment core believed to have high VOC containment levels. These section believed to be have high VOC levels will be identified for sampling by the use of a PID. The intervals at which samples will be taken from each core will be based on the presence of fine grained materials, odor, and organic matter. The intervals at which samples will be taken from each core will be the discretion of the EPA TA and Booz Allen field sampler. In the case

that sample cores are not sufficiently solid for an EnCore® sampler to be utilized, a 4 oz. jar with no preservative will be used to collect the VOC sample. Filled sample containers will be labeled and placed into iced coolers. At the completion of each day's sampling activities, the coolers will be sealed with custody seals, packaged and shipped to STL in Pittsburgh, Pennsylvania or to EPA CRL in Chicago, Illinois.

The Booz Allen field sampler will complete a chain-of-custody form for all samples collected, to accompany the samples to the laboratory, as described in Section 7.4. The actual location sampled, field observations, number and type of containers, and requested analyses will be recorded in the field notebook and on the chain-of-custody form. These QA/QC records will be managed and retained as prescribed in the REPA3 QMP. Samples will be handled under formal chain of custody from the time the samples are collected through their final disposition.

6.2 FIELD QC SAMPLES

Field QC samples to be collected during this sampling event include field duplicate samples, matrix spikes, and trip blank samples. All field QC samples will be collected at random sampling locations as determined by the EPA TA and Booz Allen field sampler. Because of the volume requirements for field duplicate and matrix spike samples, the locations for these samples will be selected in part based on the amount of sample material available.

Field duplicates will be collected in a similar manner to collection of the samples. Field duplicates are collected to demonstrate the reproducibility of the sampling system, which includes the field conditions as well as the sampling equipment, personnel, and procedures. Hence, field duplicate pairs will be collected consecutively on the same day and by the same personnel using the same equipment, procedures, and sample containers. Field duplicates will be collected at a frequency of at least 10 percent (one per 10 project samples). This is a separate duplicate and cannot be replaced by a laboratory-generated duplicate. Each field duplicate will be assigned a unique sample number and submitted blind to the laboratory.

Sufficient sample material will be collected and provided to the laboratory so that it can prepare matrix spike samples at a frequency of at least 10 percent (one per 10 project samples). Matrix spike samples will collect double the volume of all sample containers, except EnCore® VOC samples which will collect five 5g samples for each matrix spike sample.

Trip blank samples will be prepared using deionized, distilled water and submitted for analysis at a frequency of one per cooler of samples submitted for VOC analysis. The trip blank samples will be prepared by Environmental Sampling Services (ESS) and provided to the Booz Allen sampling team when containers and ice chests are sent to the sampling location.

6.3 SAMPLE CONTAINERS

ESS will prepare a complete set of pre-cleaned sample containers and ship the containers to Booz Allen in advance of the sampling event. Booz Allen will prepare all coolers prior to the sampling event. A sufficient number of sample containers will be obtained so that field QC samples may be collected. Table 6-2 below lists sample container requirements for the specified analyses.

Table 6-2. Sample Preservation, Containers, and Holding Times

NAME	STL ANALYTICAL METHOD/ EPA CRL SOP #	CONTAINER	MINIMUM SAMPLE VOLUME	MAXIMUM HOLDING TIME
VOCs (Sediment using Encore®)	EPA CRL SOP # GCMS001	3 Encore® Samplers and a 4-oz Glass Jar, Teflon-lined septum. Cool to 4±2 degrees C.	5 g	48 hrs from sampling to $Na_2S_2O_3$ preservation in the lab; 14 days from sampling to analysis
VOCs (Sediment)	EPA CRL SOP # GCMS001	4 oz. Glass jar, Teflon-lined cap. Cool to 4 ±2 degrees C.	4 oz.	14 days until extraction
Grain Size (Sediment)	EPA CRL SOP # AIG038	32 oz. Glass jar. Cool to 4±2 degrees C.	30g	NA
SVOCs (Sediment)	EPA CRL SOP # GCMS026	8 oz. Glass jar with a Teflon-lined cap. Cool to 4±2 degrees C.	8 oz.	14 days until extraction and 40 days after extraction
Pesticides (Sediment)	EPA CRL SOP # GC001	8 oz. Glass jar. Cool to 4±2 degrees C.	8 oz.	14 days until extraction and 40 days after extraction
Total Organic Carbon (Sediment)	EPA CRL SOP # AIG009	4 oz. wide mouth Glass, with Teflon-lined lid. Cool to 4±2 degrees C.	4 oz.	28 days
Polychlorinated Biphenyls PCBs (Sediment)	EPA CRL SOP # GC002	8 oz. Glass jar. Cool to 4±2 degrees C.	8 oz.	14 days until extraction and 40 days after extraction
Chlorinated Herbicides (Sediment)	SW846 Method 8151	8oz. Glass jar. Cool to 4±2 degrees C.	4 oz.	14 days until extraction and 40 days after extraction

Extra containers will be available as contingency for damaged or potentially contaminated containers. All sample containers will be kept away from fuels and solvents. The Booz Allen WAM will retain records concerning the transport of containers in project files.

6.4 EQUIPMENT DECONTAMINATION

Booz Allen personnel will decontaminate all non-disposable field sampling equipment and other items in accordance with SOP T-3, *Equipment Decontamination*. This includes scrubbing soiled surfaces using a non-phosphate detergent and clean water mixture, followed by a deionized water rinse and air drying. Cleaned equipment will be wrapped in aluminum foil and stored on clean plastic sheeting while awaiting use. All cleaned equipment will be handled wearing nitrile gloves. Large equipment will be pressure-washed or steam-cleaned prior to bringing to the sampling location by the geoprobe and vibracore contractors. Equipment that comes into contact with the sampled media will be decontaminated between samples by the Booz Allen, the vibracore consultant, or the geoprobe consultant. It is anticipated that dedicated sampling tools such as scoops will be used and should require no equipment decontamination.

6.5 IDW MANAGEMENT

Investigation derived waste (IDW) will be containerized and disposed of as prescribed in Booz Allen SOP T-2: *IDW Management Procedures*. Disposable items (e.g., used nitrile gloves, paper towels) will be collected in a heavy-duty trash bag and disposed of as solid waste by the subcontractor onsite. A permit with the ACE has been obtained allowing sediment cores extracted from the river to be returned to river prior to sample collection.

ELEMENT 7: CUSTODY PROCEDURES

The Booz Allen field sampling individual will take responsibility for sample identification, handling, management, documentation, document control, and custody.

7.1 SAMPLE IDENTIFICATION

Booz Allen will provide the sample labels and chain-of-custody forms for all samples to be collected during this sampling event. Each sample container will be labeled and dated. Each sample will be identified and labeled according to a confidential letter code for the site and the order in which the sample was collected; for instance, the first sample collected will be labeled "S-01" and the fourth sample collected will be labeled "S-04." The sample ID number for the field duplicates will use the next corresponding numerical identification and will be noted in the field log book. Trip blanks will be labeled with a TB in the label instead of an S, the first trip blank will be labeled "TB-01" and the fourth trip blank will be label "TB-04". Once assigned, the sample ID number will be included on the sample label and referenced on the chain-of-custody form, the field logbook, and all data reports related to the sample.

The field personnel will affix a label to each sample container before collecting the sample. Information on the sampling labels will include the sample ID number, sampler's name or initials, chemical/physical preservative used, analyses requested, date/time collected, and type of sample (i.e., grab or composite).

7.2 SAMPLE DELIVERY

Booz Allen will ship the samples from the field to STL and EPA CRL at the end of each day of sampling. Ms. Tara Martz will serve as the primary point of contact (POC) at STL for sample delivery. Mr. Bill Sargent will serve as the primary POC at EPA CRL for sample delivery. At least one week prior to the first day of sampling, Ms. Martz will be contacted at (412) 963-2430 or Mr. Sargent will be contacted at (312) 353-9083 to discuss the sampling event and sample shipping options, and to request a blank Sample Scheduling Form, which will be prepared according to their instructions and returned to them prior to the day of sampling. Note that EPA CRL is not open to accept samples after 4 P.M. on weekdays or on Saturdays, Sundays, or Federal holidays.

At Booz Allen, the primary POC for sample shipping will be the Booz Allen field team member, Sean Westropp who will also have primary responsibility for sample labeling and identification.

7.3 SCHEDULING

The Booz Allen Technical Lead and field team leader will coordinate the scheduling of sample collection with the laboratory POC so as to minimize sample transport and holding time. Other considerations involved in scheduling include prompt preservation of VOC sample aliquots because EnCore® samplers will be used.

7.4 SAMPLE CUSTODY

Booz Allen will ensure the integrity and security of all samples under REPA3 control using a stringent chain-of-custody protocol, as specified in the Region 5 QA Project Plan. Chain-of-custody, which begins with sample collection and terminates upon sample disposal, will be documented throughout the life cycle of each sample. A chain-of-custody form will be initiated during sample collection and will include the sample numbers, date and time of collection, sampling locations, name of the person who collected the samples, preservatives used, and the analyses required. Each sample transfer will then be documented on the chain-of-custody form.

7.7.2 Field Forms

Sample-specific information will be recorded on separate chain-of-custody forms and referenced in the field notebook. Booz Allen SOPs provide instructions and define responsibilities for completing and archiving each form.

7.7.3 Photographs

Photographs will be taken to document field activities, when required. In accordance with the EPA National Enforcement Investigation Center (NEIC) *Multi-Media Investigation Manual*, March 1992, the following information will be recorded in the field notebook as the photographs are taken:

- Name of photographer
- Date, time, location, and direction the photograph was taken
- Description of the photograph
- Reason for taking the photograph
- Sequential number of the photograph and the film roll number or disk number/name if a digital camera is used.

After the photograph is developed, the information recorded in the field notebook will be transferred to the back of each picture. If a digital camera is used, Booz Allen will create a photographic log and include it in the trip report submitted to the EPA. Film used for aerial photography, confidential information, or enforcement investigations requires chain-of-custody documentation (e.g., log book notations and receipts).

7.8 Final Evidence Files

The final evidence file will include the REPA deliverables, site plans and procedures, field logbooks, completed field forms, photographs, field data, and facility documents provided for review or as a source of information. The Booz Allen WAM will retain these files until project closeout. At project closeout, Booz Allen will provide EPA with a list of the materials in the file and return to EPA copies of any and all documents requested from the list. The remaining materials will be packaged and shipped to the Booz Allen offices in McLean, Virginia, for archiving in accordance with the established protocols for the REPA3 contract.

ELEMENT 8: CALIBRATION PROCEDURES AND FREQUENCY

Field equipment to be used during this sampling event includes a photo-ionization detector (PID) for air monitoring during sampling. The PID will be calibrated according to Booz Allen SOP T-1: *Field Measurement and Test Equipment.*

STL will implement the requisite calibration procedures at the required frequencies for each analysis as prescribed in the laboratory's SOPs and the cited methods. EPA CRL will implement the requisite calibration procedures at the required frequencies for each analysis as prescribed in EPA CRL internal SOPs.

ELEMENT 9: ANALYTICAL PROCEDURES

Booz Allen will follow routine analytical requirements and procedures during this project. The sample preparation and analysis methods that will be used for sediment samples at STL are listed in Table 9-1. The sample preparation and analysis methods that will be used for sediment samples at EPA CRL are listed in Table 9-2.

Table 9-1. Sediment Sample Preparation and Analysis Methods at STL

ANALYTICAL METHOD	PARAMETER	PREPARATORY/ ANALYTICAL METHODS
SW8151	Chlorinated Herbicides	Gas Chromatography and Capillary Column

Table 9-2. Sediment Sample Preparation and Analysis Methods at EPA CRL

EPA CRL SOP # / METHOD BASED ON	PARAMETER	PREPARATORY/ ANALYTICAL METHODS
GC001/ SW 846 Method 8085	Pesticides	Gas Chromatography-Electron Capture Detection
AIG009/ SW 846 Method 415.1	Total Organic Carbon	Dry combustion with a non-dispersive, infrared carbon analyzer
GC002/ SW 846 Method 8082	PCBs	Gas Chromatography-Electron Capture Detection
GCMS001/ SW 846 Method 8260B	VOCs	Mini-Bore Capillary Column Gas Chromatography/ Mass Spectroscopy
GCMS026/ SW 846 Method 8270C	SVOCs	Gas Chromatography/ Mass Spectroscopy
AIG038	Particle/Grain Size	Sieve Filter

Booz Allen will ship the samples directly to STL and EPA CRL using FedEx overnight delivery service at the end of each day of sampling. For each cooler that contains samples, Booz Allen will sign a chain-of-custody form under "Relinquished by", and document the contents. Booz Allen with then enclose each chain-of-custody form in its specified sample cooler, and seal it with custody seals to ensure no break in custody while in transit. Upon arrival at STL or EPA CRL, a STL or EPA CRL representative will sign under "Received by," and document the date and time of arrival. Under no circumstance is there to be a break in custody.

7.5 Sample Disposition

STL and EPA CRL will be responsible for the proper disposal of all samples.

7.6 Shipping

Samples will be shipped to STL and EPA CRL using FedEx priority overnight.

7.7 Documents and Records

Project documents and records will be prepared or generated, reviewed, approved, and controlled as prescribed in Section 2.5 of the QMP and in accordance with EPA's direction.

7.7.1 Field Notebooks

Booz Allen will record field notes to document sampling activities using indelible black or blue ink in permanently bound notebooks with numbered pages. The person recording the notes will sign and date the bottom of every page in the field notebook. Changes will be crossed out with a single line so that the original text remains legible, and the change will be initialed and dated. Unused portions of logbook pages will be crossed out, signed, and dated by the assigned individual at the end of each workday.

The field notes will include the following information, as appropriate for each task:

- Location, date, and time
- Personnel performing the activity
- Type of personal protective equipment (PPE) used
- Weather conditions
- Sample type and sample collection method
- The unique sample number
- Description of the sample (i.e. color, odor, clarity)
- Identification of conditions that might affect the representativeness of the sample.

Booz Allen field notebooks will be labeled with the contract name, the name of the individual to whom the notebook has been assigned, and sequential notebook number. Upon contract closeout, used field notebooks will be archived with the contract files.

ELEMENT 10: INTERNAL QUALITY CONTROL CHECKS

Routine QC procedures anticipated to be employed under the REPA3 contract are described in detail in the R5 QA Project Plan.

Prior to implementation of field activities, Booz Allen conducts internal readiness reviews to verify that work prerequisites have been satisfied. The readiness review provides a systematic process for assessing, verifying, and ensuring the readiness of the project team to proceed with field activities. The focus of the readiness review is to ensure that technical and quality procedures have been reviewed for adequacy and appropriateness and approved for implementation; personnel are suitably qualified for the work; and the proper equipment, materials, and resources are identified and available. The readiness review specifically addresses readiness issues during project planning (before deployment), and when resuming field work after a quality-mandated stop work order is lifted or after a prolonged period of stop work due to other causes.

Field logbooks, SOPs, and records are QA/QC records and subject to relevant requirements as established in the REPA3 QMP.

ELEMENT 11: DATA REDUCTION, VALIDATION, AND REPORTING

In accordance with EPA direction, Booz Allen will conduct 20 percent data validation on the analytical data set. Booz Allen personnel will validate project data as outlined in Booz Allen SOP M–11: *Data Validation*, the EPA National Functional Guidelines, EPA QA/G-9, and applicable Region 5 or EPA CRL protocols. VOC, SVOC, TOC, Pesticides, PCBs, and Particle Grain Size analyses will be validation using EPA CRL SOPs (see Table 9-2). Herbicides analyses will be validated using SW-846 methods (see Table 9-1). STL and EPA CRL should run the analyses in the same sample delivery group (SDG). Upon receipt all of the results, Booz Allen will coordinate with the EPA TA to determine which samples will be validated. An attempt will be made to evaluate samples that have high concentrations and non-detect results for analyses in the samples. Based on those results, Booz Allen will infer the quality of the entire data set. The data package Booz Allen will receive from the laboratories will be a fully validatable data package, including the raw data.

Booz Allen will submit a sampling report to the EPA within 30 days of completion of data validation. The sampling report will include a description of the sampling event, photographic documentation, a diagram of the sampling area with GPS coordinates, data validation report, and tabulated results tables comparing to ESL and PRG screening criteria to analytical results.

ELEMENT 12: PERFORMANCE AND SYSTEM AUDITS

Booz Allen's overall assessment program is described in the REPA3 QMP.

ELEMENT 13: PREVENTIVE MAINTENANCE

13.1 EQUIPMENT USE AND MANAGEMENT

Equipment selected and used in the execution of work will be appropriate and approved for its intended use, and will be operated, handled, maintained, and stored in accordance with the manufacturer's specifications. Sample collection and storage equipment will be cleaned, stored, and handled using the necessary precautions against cross-contamination, corrosion, and damage. Table 13-1 provides restrictions for field equipment selection and use.

Table 13-1. Field Equipment Selection and Use

EQUIPMENT	USE	RESTRICTIONS
Level B, C, and D PPE	Protect sampling personnel from exposure to site chemicals	Compatible with site conditions and investigations
Sample collection equipment for solids, including stainless steel scoops and bowls	Collect solid samples	Properly decontaminated between sampling locations or use disposable equipment
Air monitoring equipment (PID)	Air monitoring for safety of sampling personnel, screening sediment cores for VOCs	Properly calibrated
Disposable towels, trash bags, plastic zip-lock bags	Clean and contain disposable sampling equipment	Properly disposed
Sample containers	Contain samples	Compatible with analyses of concern and acceptable to STL and EPA CRL, as applicable
Sample delivery containers (i.e., coolers)	Contain sample containers for transport from the field to the laboratory	Properly cleaned prior to use

13.2 INSPECTION AND TESTING

Field measurement and testing equipment to be used during this sampling event includes the use of a PID for air monitoring. All air monitoring will be conducted according to Booz Allen SOP T-13: *General Air Monitoring and Sampling Procedures.*

13.3 PREVENTIVE AND REMEDIAL MAINTENANCE

All field and laboratory equipment will be maintained on routine preventive maintenance schedules. Preventive and remedial maintenance will be performed and verified by qualified personnel and in accordance with approved procedures and manufacturer's recommendations.

13.4 Storage and Disposal

The Booz Allen field team individual will ensure the secure and appropriate storage and/or disposal of project equipment and materials.

ELEMENT 14: SPECIFIC ROUTINE PROCEDURES USED TO ASSESS DATA QUALITY

Booz Allen's protocols and responsibilities for reporting and implementing procedures used to assess data quality are defined in the R5 QA Project Plan. Booz Allen will collect 38-40 sediment samples, which will be analyzed for VOCs, SVOCs, PCBs and other parameters. The laboratories will be required to run the analyses in the same SDG. From the SDG, Booz Allen will select three sample results, the highest value, the lowest value, and one value in between the highest and lowest, verify the results, and trace the analytical process for all the analytical parameters. Based on those results, Booz Allen will infer the quality of the entire data set.

ELEMENT 15: CORRECTIVE ACTION

The R5 QA Project Plan defines Booz Allen's protocols and responsibilities for reporting and implementing corrective actions.

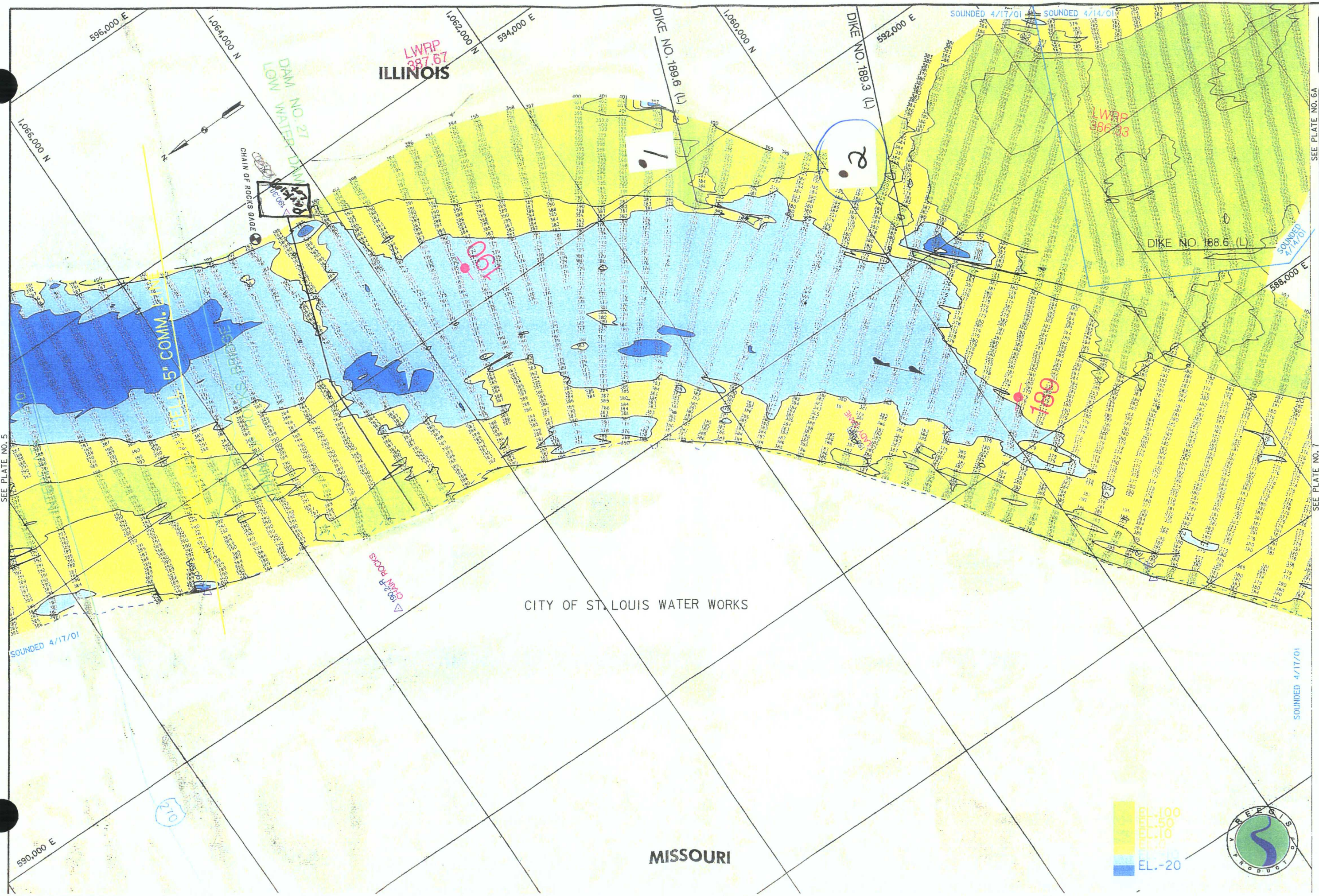
ELEMENT 16: QUALITY ASSURANCE REPORTS TO MANAGEMENT

The R5 QA Project Plan defines the type and routine frequency of project-level REPA3 quality system reports to management.

APPENDIX A - PROJECT SAMPLES TYPE AND QUANTITY

MATRIX	ANALYTE	ANALYTICAL METHOD	NUMBER OF ENVIRON-MENTAL SAMPLES	QC SAMPLES				TOTAL NUMBER OF SAMPLES
				FIELD DUPLICATES	EQUIPMENT RINSATES	MS/ MSDs	TRIP BLANKS	
Sediment	PCBs	EPA CRL SOP # GC002	38-40	4	0	4	0	46-48
	Pesticides	EPA CRL SOP # GC001	38-40	4	0	4	0	46-48
	Particle/Grain Size	EPA CRL SOP # AIG038	38-40	4	0	4	0	46-48
	VOCs	EPA CRL SOP # GCMS001	38-40	4	0	4	10	56-58
	SVOCs	EPA CRL SOP # GCMS026	38-40	4	0	4	0	46-48
	Total Organic Carbon	EPA CRL SOP # AIG009	38-40	4	0	4	0	46-48
	Chlorinate Herbicides	SW-846 Method 8151	38-40	4	0	4	0	46-48

ATTACHMENT A- HYDRAULIC SURVEY MAPS



US Army Corps of Engineers
St. Louis District

GAGE RECORD

	HARTFORD	CHAIN OF ROCKS,L	BISSELLS POINT	ST. LOUIS
ZERO N.G.V.D.	350.0	409.63	381.90	379.94
MLLE	196.8	190.3	183.4	179.6
L.W.R.P.	386.2	386.5	379.25	376.4
14 APR 01		403.7	405.9	384.85
17 APR 01		409.2	406.5	395.35
	X	X	X	X

ELEVATIONS ARE REFERRED TO N.G.V.D. - CONTOURS ARE BELOW 1984-91 LOW WATER REFERENCE PLANE, N.G.V.D.(ASSUMED DATA)

U.S. ARMY ENGINEER DIVISION
CORPS OF ENGINEERS
ST. LOUIS, MISSOURI

UPPER MISSISSIPPI RIVER BASIN
HYDROGRAPHIC SURVEY
RIVER MILES 188.4 – 190.7

Surveyed by:
MASON ENGINEERING

Drawn by: Chd by:
V BERMANN K

Reviewed by:
X

APPROVED:
BRADFORD M. STRAUSER
Project Geomorphologist

Survey Date:

SUBMITTED:
JAMES L. KEIM
Chief, Engr/Data Mngt. Sect.

File name:
T:\BJ_INTRO\W1200-BUDGN\BJHT08.

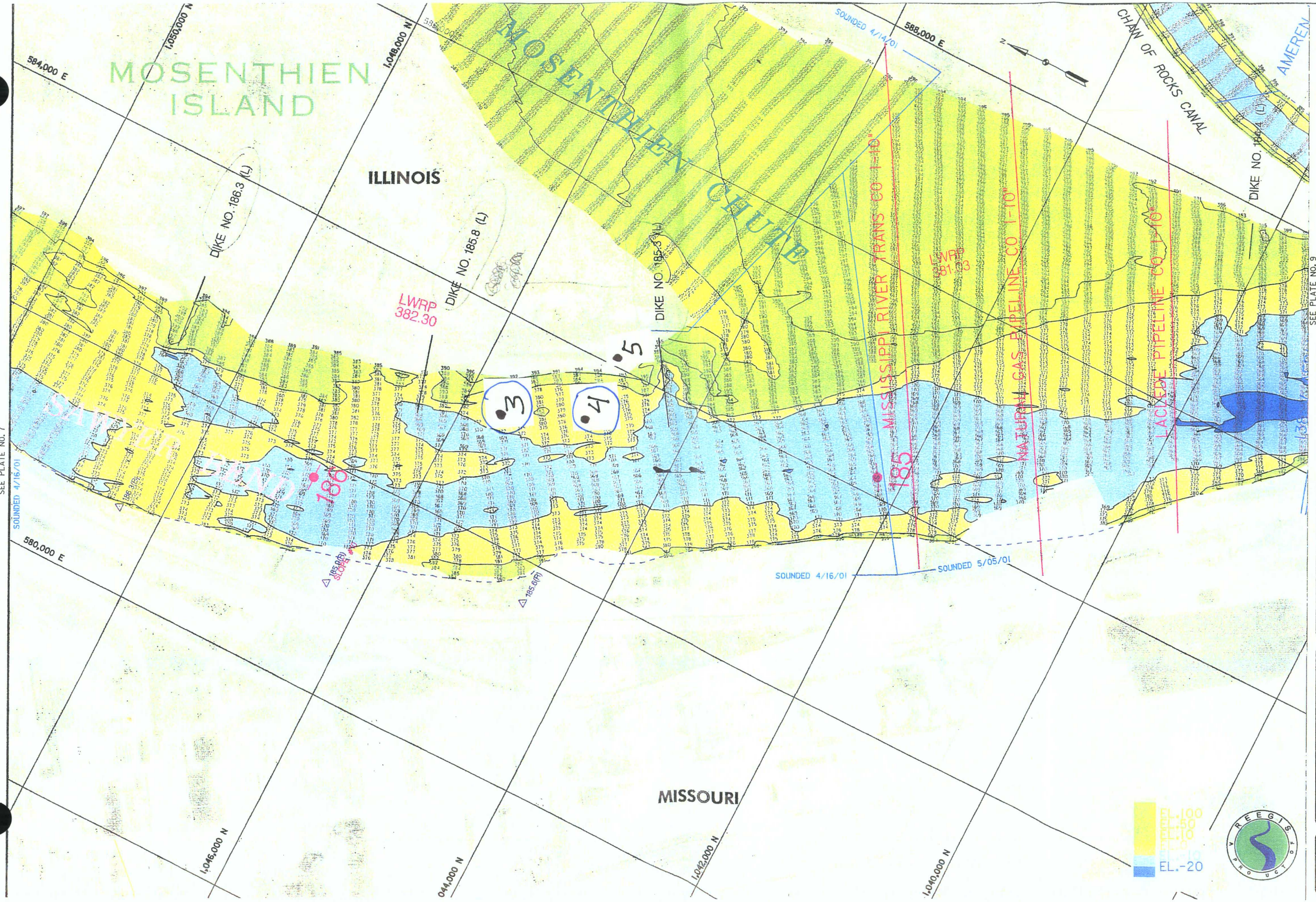
Plot date: 30-SEP-2003 14:33
Plot scale:

120 0 120 240 METERS
400 0 400 800 FEET

THE LOCATION LINES ON THIS MAP REPRESENT THE APPROXIMATE LOCATION OF THE LEAST SOUNDED PATH ON THE RIVER AS OBSERVED ON THE DATE SHOWN.

DATE OF PHOTO MOSAIC: 27 MAR 1996
ST. LOUIS GAGE: 9.1
CAIRO GAGE: 88.8

PLATE NUMBER
6



US Army Corps of Engineers
St. Louis District

GAGE	BISSELLS POINT	CHAIN OF ROCKS (IL)	ST. LOUIS
ZERO M.S.V.D.	381.9	409.63	379.94
WATER SURFACE	383.4	390.3	379.6
MILE	373.25	388.5	376.4
L. & R. P.	405.9	408.7	X
14 APR 01	X	409.0	X
16 APR 01	X	408.7	405.8
17 APR 01	408.2	409.9	

ELEVATIONS ARE REFERRED TO N.A.V.D. - CONVERT UP FROM 1954-91 LWP WATER REFERENCE PLANE (L.A.D.J.U.S.G.S. C.F.J.)

Survey Date:

Surveyed by: HANSON ENGINEERING
Drawn by: Ckd by: Y. BERRMANN X
Reviewed by: X
File name: 0101BRDNH1209-8\DDRNAHTROB.
Plot date: 30-SEP-2003 14:51
Plot scale:

SUBMITTED: JAMES L. REIM
Chief, Engr., Data Mngt. Sect.

APPROVED: BRADFORD M. STRAUSER
Chief, Geospatial Branch

U.S. ARMY ENGINEER DIVISION
CORPS OF ENGINEERS
ST. LOUIS, MISSOURI

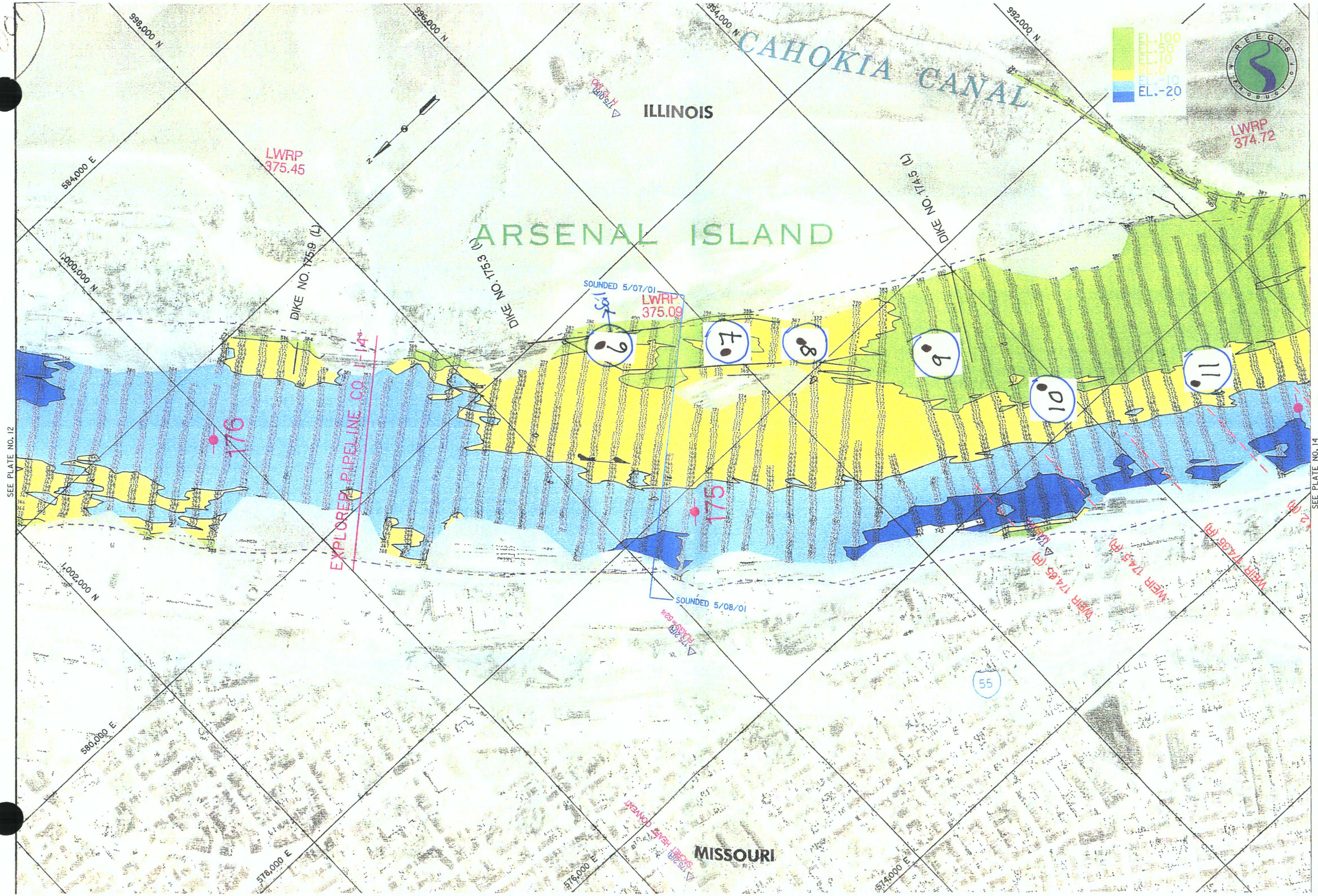
UPPER MISSISSIPPI RIVER BASIN
HYDROGRAPHIC SURVEY
RIVER MILES 184.8 - 186.4

120 0 120 240 METERS
400 0 400 800 FEET

INFORMATION PROVIDED IN THIS MAP IS FOR THE CONVENIENCE OF THE USER. THE CORPS OF ENGINEERS ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY OR USE FOR OTHER THAN GENERAL CONDITIONS OF NAVIGATION.

DATE OF PHOTO MOSAIC: 27 MAR 1998
ST. LOUIS GAGE: 9.1
CAIRO GAGE: 38.8

PLATE NUMBER
8



US Army Corps of Engineers
St. Louis District

GAGE RECORD				
	WATER SURFACE	ENGINEER'S DEPOT	JEFFERSON BARRACKS	ST. LOUIS
ZERO N.G.V.D.		379.58	379.69	379.94
MILE		176.8	168.7	173.6
L.W.R.P.		375.7	372.8	376.4
7 MAY 01	X	403.8	X	405.6
8 MAY 01	X	404.2	400.6	406.1
X	X	X	X	X

ELEVATIONS ARE REFERRED TO N.G.V.D. - CONTOURS ARE BELOW 1956-57 LOW WATER REFERENCE PLANE G:\RAD\15\LOG CF.SJ

Survey Date:

Surveyed by: HANSON ENGINEERING
Drawn by: Cxd by: V BEHRMANN X
Reviewed by: X
APPROVED: BRADFORD A. STRAUSER, Chief, GeospatialBranch

SUBMITTED: JAMES L. KEIM, Chief, Engr. Data Mngt. Sect.
File name: T:\GIS_HYDRO\H1293-R\DGN\BUHY03.DGN
Plot date: 30-SEP-2003 14:48
Plot scale:

U.S. ARMY ENGINEER DIVISION
CORPS OF ENGINEERS
ST. LOUIS, MISSOURI

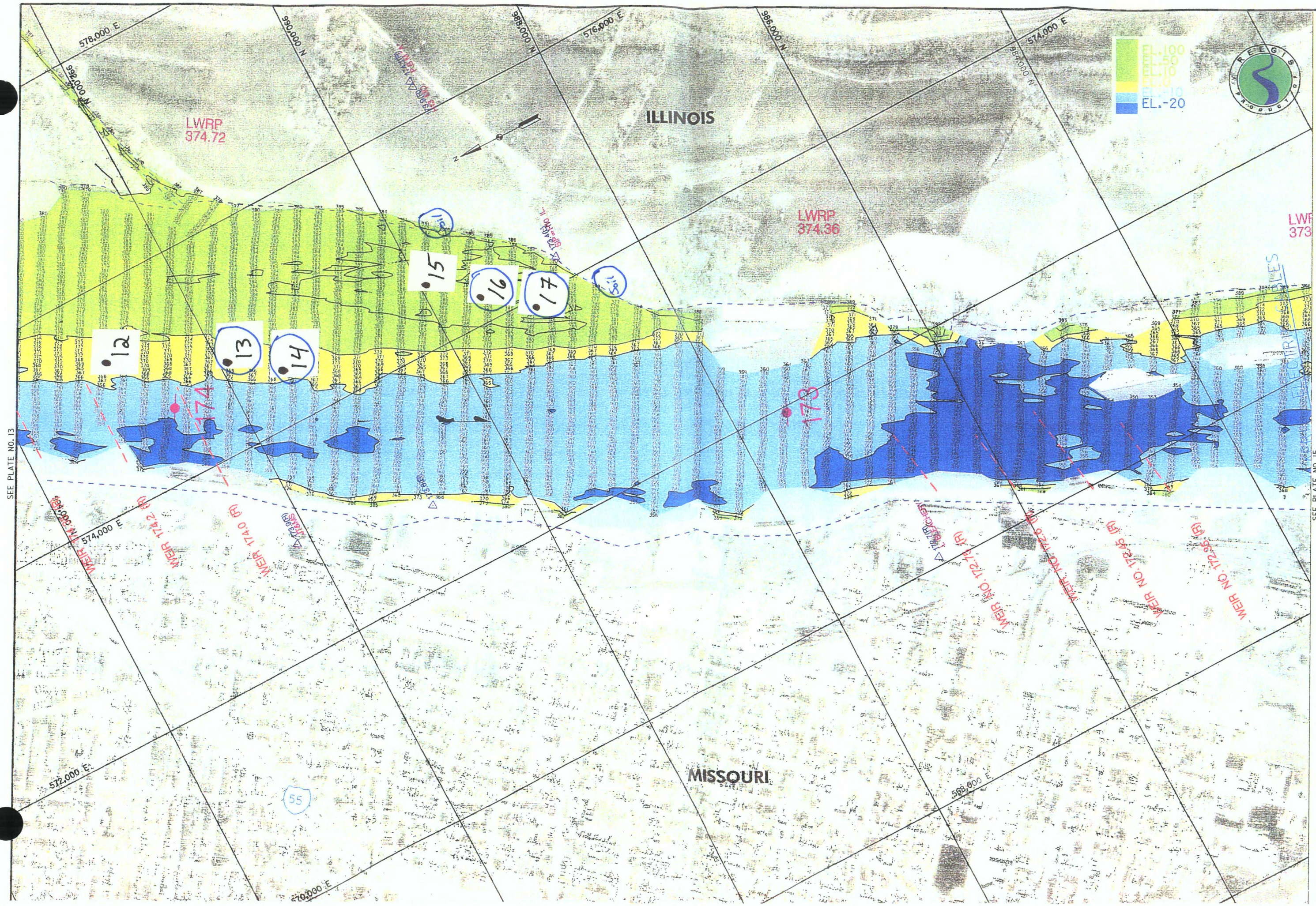
UPPER MISSISSIPPI RIVER BASIN
HYDROGRAPHIC SURVEY
RIVER MILES 174.1 – 176.2

120 0 120 240 METERS
400 0 400 800 FEET

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE BY THE ST. LOUIS DISTRICT, CORPS OF ENGINEERS AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME.

DATE OF PHOTO MOSAIC: 27 MAR 1996
ST. LOUIS GAGE: 9.1
CAIRO GAGE: 88.6

PLATE NUMBER
13



US Army Corps of Engineers
St. Louis District

GAGE RECORD

	WATER SURFACE	ENGINEER'S DEPOT	JEFFERSON BARRACKS	ST. LOUIS
ZERO N.G.V.D.		379.58	377.69	379.94
MILE		176.8	168.7	179.6
L. W. R. P.		375.7	372.8	376.4
8 MAY 01	X	404.2	400.6	406.1
X	X	X	X	X
X	X	X	X	X

ELEVATIONS ARE REFERRED TO N.G.V.D. - CONTOURS ARE BELOW 1956-57 LOW WATER REFERENCE PLANE N.W.R.P. (15,000 C.F.S.)

Survey Date: MAY 8, 2001

SUBMITTED:
JAMES L. KEIM
Chief, Engr. Data Mngt. Sect.

File name:
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Plot date: 30-SEP-2003 15:09
Plot scale:

Surveyed by:
HANSON ENGINEERING

Drawn by: V BEHRMANN
Ckd by: X

Reviewed by:
X

APPROVED:
BRADFORD M. STRAUSER
Chief, Geospatial Branch

U.S. ARMY ENGINEER DIVISION
CORPS OF ENGINEERS
ST. LOUIS, MISSOURI

UPPER MISSISSIPPI RIVER BASIN
HYDROGRAPHIC SURVEY
RIVER MILES 172.2 - 174.1

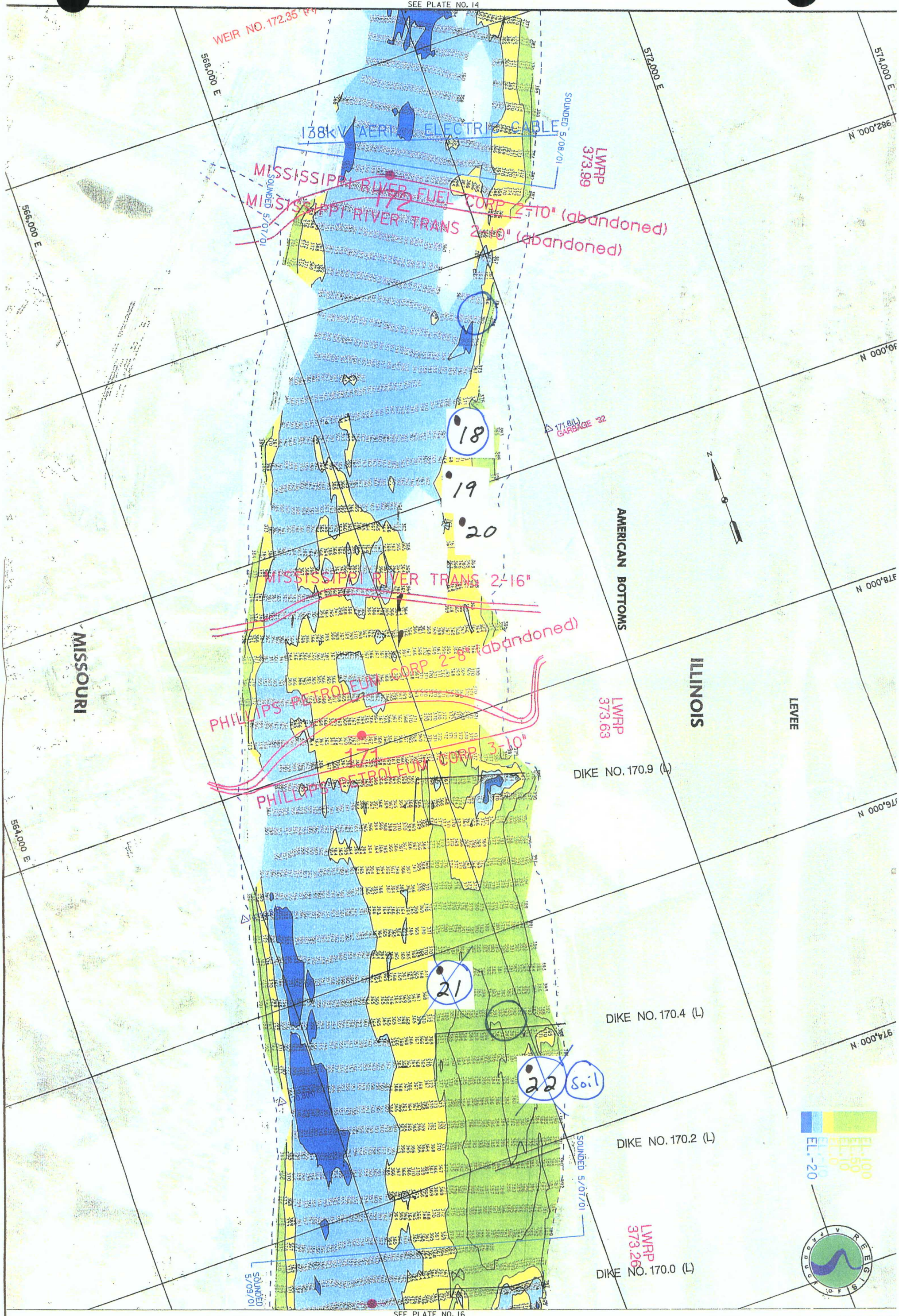
120 0 120 240 METERS
400 0 400 800 FEET

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME

DATE OF PHOTO MOSAIC: 27 MAR 1996
ST. LOUIS GAGE: 9.1
CAIRO GAGE: 38.6

PLATE NUMBER
14

SEE PLATE NO. 14



SEE PLATE NO. 16

PLATE NUMBER 15

120 0 120 240 METERS
400 0 400 800 FEET

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME

DATE OF PHOTO MOSAIC: 27 MAR 1996
ST. LOUIS GAGE: 9.1
CAIRO GAGE: 38.6

U.S. ARMY ENGINEER DIVISION
CORPS OF ENGINEERS
ST. LOUIS, MISSOURI

UPPER MISSISSIPPI RIVER BASIN
HYDROGRAPHIC SURVEY
RIVER MILES 170.1 – 172.2

Surveyed by: HANSON ENGINEERING
Survey Date:
Drawn by: V BEHRMANN
Ckd by: X
SUBMITTED: JAMES L. KEIM, Chief, Engr. Data Mngt. Sect.
Reviewed by: X
APPROVED: BRADFORD M. STRAUSER, Chief, Geospatial Branch
File name: T:\01_HYDRO\MI200-0\DGN\01HYD05.DGN
Plot date: 30-SEP-2003 15:06
Plot scale:

GAGE RECORD

	WATER SURFACE	ENGINEER'S DEPOT	JEFFERSON BARRACKS	ST. LOUIS
ZERO N.G.V.D.		379.58	377.69	379.94
MILE		176.8	168.7	179.6
L. W. R. P.		375.7	372.8	376.4
7 MAY 01	X	404.3	400.3	405.6
8 MAY 01	X	404.2	400.6	406.1
9 MAY 01	X	405.0	401.4	407.0

ELEVATIONS ARE REFERRED TO N.G.V.D. - CONTOURS ARE BELOW 1956-57 LOW WATER REFERENCE PLANE (L.W.R.P.) (54,000 C.F.S.)

US Army Corps of Engineers
St. Louis District

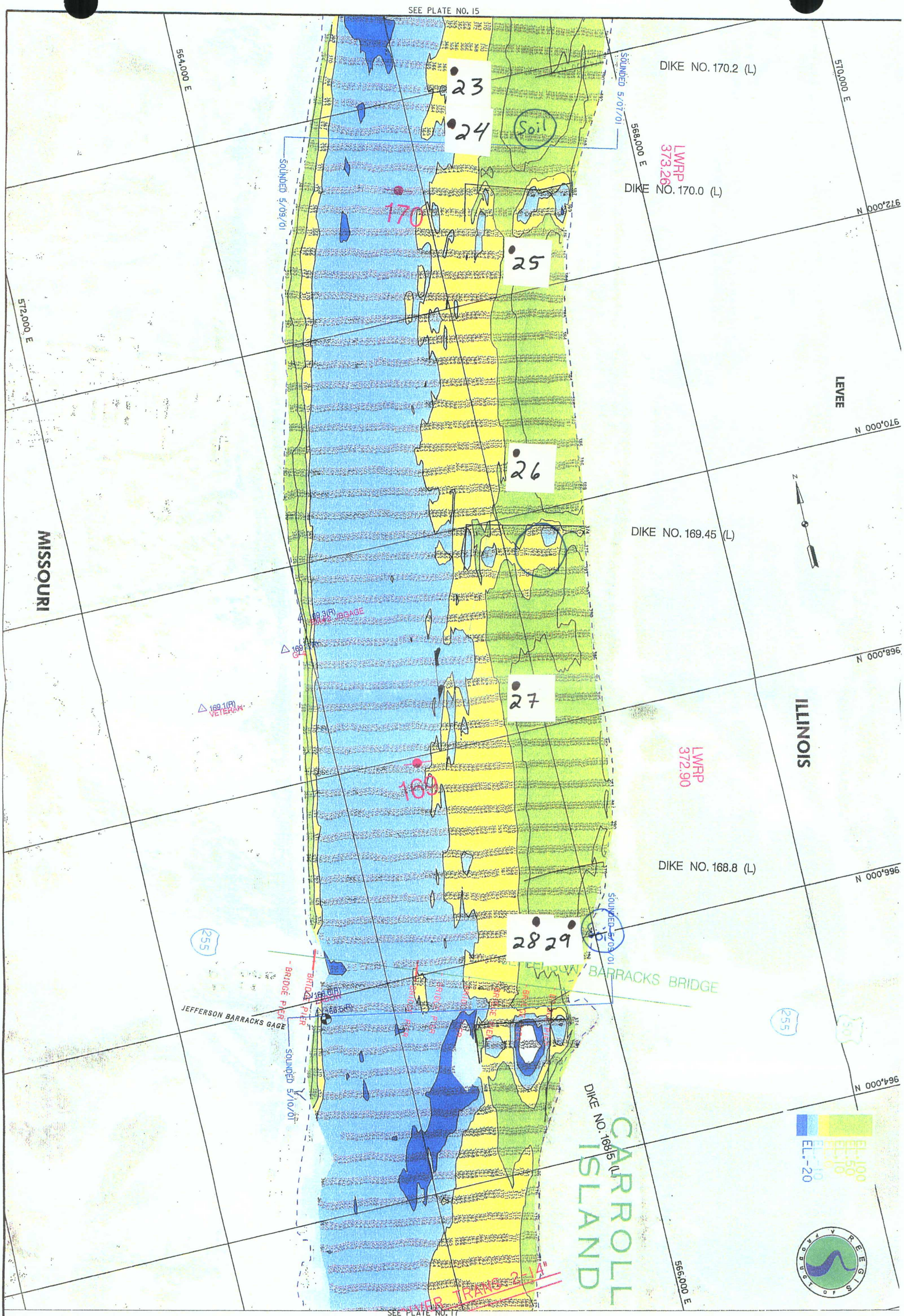


PLATE NUMBER 16

120 0 120 240 METERS
400 0 400 800 FEET

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME

DATE OF PHOTO MOSAIC: 2 MAR 1998
ST. LOUIS GAGE: 27.0
CAIRO GAGE: 39.9

U.S. ARMY ENGINEER DIVISION
CORPS OF ENGINEERS
ST. LOUIS, MISSOURI

UPPER MISSISSIPPI RIVER BASIN
HYDROGRAPHIC SURVEY
RIVER MILES 168.2 – 170.1

Surveyed by: HANSON ENGINEERS
Drawn by: V BEHRMANN
Ckd by: X
Reviewed by: X
APPROVED: BRADFORD M. STRAUSER, Chief, Geospatial Branch
Survey Date:

GAGE RECORD	ENGINEER DEPOT	JEFFERSON BARRACKS	WATER'S POINT	ST. LOUIS
ZERO M.G.V.D.	379.58	377.69	370.39	379.94
		168.7	158.5	179.6
		372.8	367.4	376.4
		400.3		405.6
		401.4	396.4	407.0
		402.8	397.3	408.3

M.G.V.D. - CONTOURS ARE BELOW 1956-57 LOW WATER REFERENCE PLANE (L.W.R.P.) (54,000 C.F.S.)

US Army Corps of Engineers
St. Louis District

SOLUTIA - 214

SOLUTIA. *Solutions for a better life.*

October 7th, 2005

Mr. Kenneth Bardo
U.S. EPA Region V
Corrective Action Section
Enforcement Compliance Branch
77 West Jackson Boulevard DE-J9
Chicago, IL 60604-3507

Re: Solutia Inc. – W. G. Krummrich Plant, RCRA
Supplemental Soil and Groundwater Investigation
RCRA Corrective Measures Study Addendum III

Dear Ken:

Enclosed is the Supplemental Soil and Groundwater Investigation Report (CMS Addendum III) for the W. G. Krummrich Plant.

We look forward to discussing this document with you in the near future.

Sincerely,

Steven D. Smith
Project Manager

cc: Distribution List on Following Page

Distribution list for the October 7, 2005 CMS Addendum III

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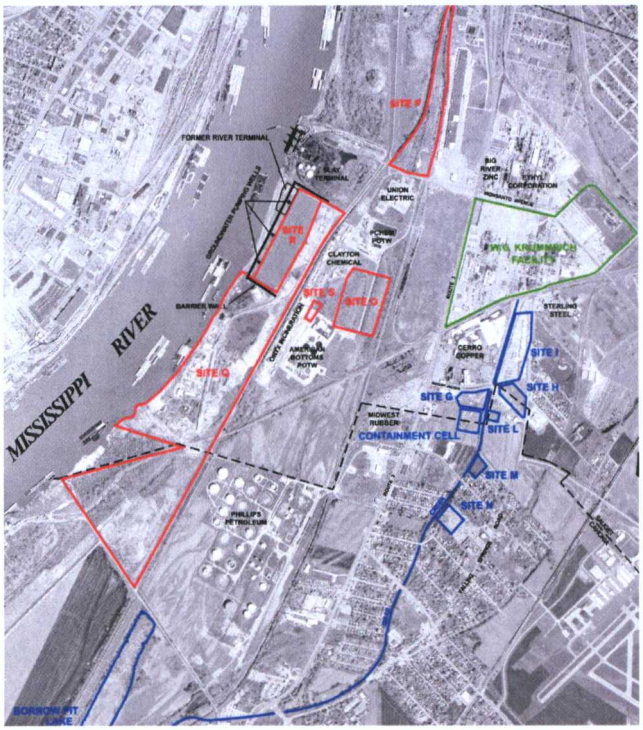
SOLUTIA-219

RCRA CORRECTIVE MEASURES STUDY (CMS) ADDENDUM III

SUPPLEMENTAL SOIL AND GROUNDWATER INVESTIGATION

SOLUTIA INC.
W.G. KRUMMRICH FACILITY
SAUGET, ILLINOIS



Prepared for:
Solutia Inc.
575 Maryville Centre Dr.
St. Louis, Missouri 63141

SOLUTIA

URS

October 7, 2005

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1.0 INTRODUCTION

On May 3, 2000, United States Environmental Protection Agency (USEPA) executed a Resource Conservation and Recovery Act (RCRA) 3008(h) Administrative Order on Consent (AOC) for Solutia Inc.'s W.G. Krummrich facility in Sauget, Illinois (Figures 1.1 and 1.2). Solutia Inc. signed the Administrative Order on Consent, Docket No. R8H-5-00-003, on May 26, 2000. Sections VI.1a, 1b, 2, 3 and 5, respectively, required Solutia to submit a Description of Current Conditions Report, investigate the nature and extent of any releases at or from the W.G. Krummrich facility, stabilize groundwater migration and show that any discharge of groundwater to surface water is either insignificant or currently acceptable, control completed pathway human exposures to contamination and propose final corrective measures for the site.

To fulfill the requirements of the AOC Solutia submitted a Description of Current Conditions Report, performed site investigations for air, soil, DNAPL and groundwater, completed Environmental Indicator Determinations for Migration of Contaminated Groundwater under Control (CA750) and Current Human Exposure Under Control (CA725) and submitted a Final Corrective Measures Study as summarized in the following table:

Summary of Work Performed to Fulfill the Requirements of the W.G. Krummrich RCRA AOC (Docket No. R8H-5-00-003)

• Description of Current Conditions Report	August 1, 2000
• Sediment, Surface Water and Fish Tissue Sampling	October and November 2000
• Ecological Risk Assessment	June 1, 2001
• CA750 Migration of Contaminated Groundwater Under Control Environmental Indicator Determination	May 26, 2004
• CA725 Current Human Exposure Under Control Environmental Indicator Determination	May 26, 2004
• Air, Soil, DNAPL and Groundwater Investigation	2003 and 2004
• Corrective Measures Study	August 27, 2004
• Mass Removal Treatability Studies	May 27, 2005

In addition to these actions, Solutia implemented or planned a number of removal and remedial actions at Sauget Area 1, Sauget Area 2 and the W.G. Krummrich Facility prior to and after the May 26, 2000 RCRA AOC. A time line of the various removal actions and remedial actions and estimated expenditures for each action are given below:

Time Line of Sauget Area 1, Sauget Area 2 and W.G. Krummrich Removal/Remedial Actions and Estimated Expenditures

Sauget Area 1	2001	Dead Creek Culvert Replacement Removal Action	$750,000
	2002	Dead Creek Time Critical Sediment Removal Action	12,300,000
	2004	Dead Creek Segment B, D and F Soil Removal Action Plan	
Sauget Area 2	1979	Site R Capping	
	1985	Site R Riverbank Stabilization	750,000
	2003/4	Groundwater Migration Control System	25,400,000
W.G. Krummrich	1987	Route 3 Drum Site Impermeable Cap	
	2000	Sewer System Improvements	17,100,000
	2001	Chlorobenzene Process Area Spill	
	2003	Plant Process Area Permeable Covers	310,000
		Estimated Total Expenditure	$56,610,000

In comments provided by USEPA in May 2005 regarding the Corrective Measures Study, the Agency identified specific supplemental investigations necessary to further characterize potential source areas and associated risks. These areas include the Route 3 Drum Site, Lot F, Former Chlor-Alkali Production

Area, North Central Plant Process Area, and the Former Coal Storage Area. Solutia submitted the Supplemental Soil and Groundwater Sampling Plan to USEPA on July 5, 2005. Field sampling activities were conducted in July and August 2005. The results of this work are presented in this report, which includes the following sections:

Section 1.0	**Introduction**
Section 2.0	**Supplemental Investigation and Evaluation Procedures**
Section 3.0	**Supplemental Investigation Results**
Section 4.0	**Conclusions**
Section 5.0	**References**

The sections describe the locations for sampling, sampling procedures, laboratory analytical program, data validation, and results. Figures and Tables follow the text. Soil boring logs, field information sheets, data validation report, and photos are included in Appendices A, B, C, and D respectively.

2.0 SUPPLEMENTAL INVESTIGATION AND EVALUATION PROCEDURES

2.1 Soil Sampling Procedures

Borings for soil sample collection were advanced at the locations shown on Figure 2.1 using direct push technology (Geoprobe®). Boring locations were identified prior to drilling by measuring distance from known locations. The Geoprobe® hydraulically drove a stainless steel, acetate-lined MacroCore® sampler (2-inch diameter by 4-foot length) to the desired subsurface sample depths. Continuous soil samples were collected from the surface to the planned sampling depths. The subsurface stratigraphy was logged during drilling operations by a qualified URS Corporation (URS) field scientist in accordance with the Unified Soil Classification System (USCS) protocols and URS procedures. The field scientist noted soil attributes such as color, particle size, consistency, moisture content, structure, plasticity, odor (if obvious) and organic content (if visible). Soil samples from each boring were visually evaluated for evidence of impact and screened in the field using a photoionization detector (PID). Color digital photographs were taken of selected soil sample intervals to provide a record of materials present at this site (Appendix D). At the completion of each soil boring, the boreholes were backfilled with bentonite chips. Soil boring logs are included in Appendix A.

Quality assurance/quality control (QA/QC) samples consisting of equipment blanks, duplicates, and matrix spike/matrix spike duplicate (MS/MSD) samples were collected and submitted to the laboratory. Trip blanks were included with each shipment of samples planned for volatile organic compound (VOC) analysis.

For proper identification in the field and proper tracking by the analytical laboratory, investigative and QC samples were labeled in a clear and consistent fashion. Sample labels were wrapped in clear tape for waterproofing, and glass sample containers were sealed in plastic bags.

A completed sample label was attached to each investigative or QC sample. The sample labels included the project name and number, sample number identification, initials of sampler, sampling location, required analysis, date and time of sample collection, space for laboratory sample number, and preservative used, if applicable.

The sample identification system for soil involved the following nomenclature "SAABB-C-D-EEE" where:

"S" denoted soil sample

"AA" denoted

- ## - Sample Area (designated for CMS sampling)

"BB" denoted

- ##- Sample Number

"C" denoted

- #- Initial Sample Depth

"D" denoted

- #- Final Sample Depth

"EEE" denoted a QA/QC sample

- DUP- analytical duplicate
- MS or MSD – Matrix Spike or Matrix Spike Duplicate
- EB – Equipment blank

For example, S0418-1-2 indicated the soil sample was obtained from sample area 4, the North Production Area, for boring number 18, from 1 to 2 feet below ground surface (bgs).

Samples were placed on ice inside a cooler immediately following sampling. Sampling containers were packed in such a way as to help prevent breakage and cross-contamination. Samples were shipped in coolers, each containing ice and ice packs to maintain inside temperature at approximately 4°C. Sample coolers were then sealed between the lid and sides of the cooler with a custody seal prior to shipment.

Field personnel maintained a sample log book and soil boring data sheets to record information sufficient to allow reconstruction of the sample collection and handling procedures at a later time. Chain-of-custody procedures were instituted and followed throughout the sampling activities. Samples were handled according to chain-of-custody protocols; the field sampler was personally responsible for the care and custody of the sample until transferred.

Field personnel recorded the project identification and number, sample description/location, required analysis, date and time of sample collection, type and matrix of sample, number of sample containers, analysis requested/comments, and sampler signature/date/time, with permanent ink on the chain-of-custody. COC forms are included in Appendix C.

Samples remained in the custody of the sampler until the transfer of custody was completed. Transfer consisted of:

- Delivery of samples to the laboratory sample custodian, and
- Signature of the laboratory sample custodian on the chain-of-custody document as receiving the samples, and signature of sampler, as relinquishing the samples.

The samples were transferred from the URS field sampler to a representative of Severn Trent Laboratories (STL) in person after samples were collected and packaged for analysis. When transferring the possession of samples, the individuals relinquishing and receiving signed, dated, and noted the time on the chain-of-custody. The field sampler signed the chain-of-custody form when relinquishing custody, made a copy to keep with the field logbook, and provided the original chain-of-custody to the STL representative with the associated samples. Soil samples were shipped to STL in Savannah, Georgia on the same day they were sampled by means of an overnight courier.

The laboratory assigns a number for each sample upon receipt. That sample number is placed on the sample label.

Additional documentation procedures are described in Section 2.3. See Section 2.4 for decontamination and investigation derived waste management procedures.

2.2 Groundwater Data Collection Procedures

As directed by USEPA, Solutia collected groundwater samples from wells in the area of the Route 3 Drum Site. The additional characterization included redeveloping and sampling eight existing monitoring wells.

2.2.1 Monitoring Well Redevelopment

Monitoring Wells GM-8, GM-31A, GM-31B, GM-31C, GM-54A, GM-54B, GM-58A, and GM-59A were redeveloped to remove any accumulated sediment. The locations of these wells are shown on Figure 2.2.

Before well redevelopment began, the wells were inspected for security, damage, and evidence of tampering. Well GM-58A was discovered to be damaged at the ground surface. The well was repaired on July 29, 2005 by removing and replacing the damaged riser pipe at approximately 3 feet bgs. The affected length of riser pipe was measured and replaced to the nearest 1/100 foot using a polyvinyl chloride (PVC) coupling and riser.

Prior to sampling, groundwater depths were measured to the nearest 1/100 foot and the presence of separate phase product was evaluated using an electronic interface probe. In addition, the total depth of the existing monitoring wells was gauged and compared to historic depths to determine if sediment accumulated in the wells. This information is summarized in Table 2.1 and on the redevelopment sheets in Appendix B.

Monitoring wells GM-8, GM-31B, GM-31C, GM-54B and GM-59A were redeveloped using air-lift purging equipment mounted on a trailer. Monitoring wells GM-31A, GM-54A and GM-58A were developed using a submersible pump due to the limited volume of water in the wells. The air-lift purging equipment consisted of 1-inch diameter polyethylene tubing fastened to a 2 foot section of PVC pipe that was lowered into the screened portion of the well. A ¼-inch diameter air line (rubber hose) was fastened alongside the polyethylene tubing and extended to the bottom. A U-tube was connected to the bottom of the air line such that the other end was directed up into the PVC pipe. Air was introduced into the rubber hose at the well head using a ten Standard Cubic Feet per Minute (SCFM) compressor with a hydrocarbon filter. Air directed through the U-tube and up into the PVC pipe caused a suction and lifting of the sediment and water. Development water traveled up the tube and was discharged via a short hose into a 55-gallon drum located near the well. Typically, the tube was raised and lowered (surged) several times throughout the screened interval to ensure that sediment was removed.

Each monitoring well was developed until the temperature, specific conductance, and pH parameters stabilized over a minimum of two successive well volumes and a minimum of five well volumes had been removed. The criteria used to determine stabilization is provided below:

- ± 10% for pH
- ± 10% for specific conductance
- ± 10% for temperature

Development continued until the purge water was clear and free of sediment for turbidity (based on visual observation).

Monitoring well development data sheets are included in Appendix B.

Field test instruments were calibrated prior to use in accordance with the manufacturer's specifications.

See Section 2.4 for decontamination and investigation derived waste management procedures.

2.2.2 Groundwater Sampling Procedures

Groundwater sampling was conducted at Monitoring Wells GM-8, GM-31A, GM-31B, GM-31C, GM-54A, GM-54B, GM-58A and GM-59A. Equipment used for sampling that could contact groundwater was properly decontaminated before each use. Field instruments were calibrated prior to use each day in accordance with the manufacturer's specifications. Clean plastic sheeting was placed around the well and ambient VOC background levels in the immediate vicinity of the well were measured using a PID. Once the well cap was removed, VOCs were measured at the rim of the well and the readings recorded in the logbook or on the groundwater sampling form. Prior to sampling each monitoring well, groundwater depths and possibly the presence of any NAPL were measured to the nearest 1/100 ft using an electronic interface probe and documented. NAPL was not present in any of the groundwater wells for this sampling project. The groundwater elevations, screened intervals, and monitoring well information are summarized on Table 2.1. Sample collection sheets are included in Appendix B.

The wells were sampled using low-flow techniques. For monitoring wells GM-8, GM-31A, GM-31B, GM-31C, GM-54A, GM-54B, GM-58A and GM-59A, URS placed a Proactive SS Mega-Monsoon pump connected to 3/8 inch diameter polyethylene tubing into the well and the pump intake was set near the middle or slightly above the middle of the screened interval. If the top of water was within the screen zone, such as for GM-8 and GM-31A, the pump was placed in the middle of the water column. For monitoring wells GM-54A and GM-58A polyethylene tubing was placed down the well with the intake set near the middle or slightly above the middle of the screened interval and attached to a Geopump 2 peristaltic pump. In both cases, the tubing extended out of the well and was then connected to a flow-through cell for the In-Situ Troll 9000 that would monitor the groundwater quality parameters.

The pump was started at a flow rate of approximately 100 mL/min. Water level measurements continued during the purging of the well. Once it was established that significant drawdown was not occurring in a well, the flow was increased, but remained at or less than 250 mL/min. The output from the In-Situ Troll 9000 appeared on a PDA and the parameters were recorded by URS personnel on the sampling forms, which can be found in Appendix B. Parameters were taken at approximately every flow-through cell volume (250 ml). Each monitoring well was purged until dissolved oxygen (DO), oxidation reduction potential (ORP), pH, and specific conductance readings were stable over a minimum of three successive flow-through cell volumes. The criteria used to determine stabilization included:

- $\pm$ 0.2 units for pH
- $\pm$ 3% for specific conductance
- $\pm$ 10% or $\pm$ 0.2 mg/L for DO
- $\pm$ 20 mV for ORP

In addition, temperature and turbidity were also recorded, however they were not used as stability criteria.

After the relevant parameters stabilized, the flow-through cell was bypassed for sampling. Groundwater samples were collected at flow rate not exceeding 250 mL/min or the rate at which the parameters stabilized. The appropriate sample containers were filled in the order below:

- Semivolatile organic compounds (SVOCs) – 2, 1-liter amber bottles
- Polychlorinated biphenyls (PCBs) – 2, 1-liter amber bottles

QA/QC samples consisting of duplicate samples, MS/MSD samples, and equipment blanks were collected and submitted to the laboratory.

Samples were placed on ice inside a cooler immediately following sampling. Sampling containers were packed in such a way as to help prevent breakage and cross-contamination. Samples were shipped in coolers, each containing ice and ice packs to maintain inside temperature at approximately 4°C. Sample coolers were then sealed between the lid and sides of the cooler with a custody seal prior to shipment. The custody seal was an adhesive-backed tape that easily ripped if it was disturbed.

Field personnel maintained a sample log book and sampling data sheets to record information sufficient to allow reconstruction of the sample collection and handling procedures at a later time. Chain-of-custody procedures were instituted and followed throughout the sampling activities. Samples were handled according to chain-of-custody protocols; the field sampler was personally responsible for the care and custody of the sample until transferred.

Field personnel recorded the project identification and number, well ID/sample location, required analysis, date and time of sample collection, type and matrix of sample, number of sample containers, analysis requested/comments, and sampler signature/date/time, with permanent ink on the chain-of-custody.

Chain of custody procedures for groundwater are the same as described in Section 2.1.

Field instruments were calibrated prior to use in accordance with the manufacturer's specifications.

See Section 2.4 for decontamination and investigation derived waste management procedures.

2.3 Field Documentation

URS personnel kept a bound field notebook and sampling forms while performing sampling and oversight activities on-site. The field logbooks recorded the following:

- Personnel conducting the site activities, their arrival and departure times and their destination at the site;
- Location where the work was performed;
- Date, time, weather conditions, equipment, and personnel on site;
- Daily information such as:
  - Work accomplished and the current site status,
  - Site work zones.

The following sampling-related information was recorded in the field logbook or on sampling data sheets by the field sampling team:

- Sample number,
- Project identification,
- Sampling location,
- Required analysis,
- Date and time of sample collection,
- Type and matrix of sample,
- Sampling technique,
- Preservative used, if applicable,
- Sampling conditions,
- Observations,
- Initials of the sampler,
- Samples collected,
- Water level (groundwater only),
- Product level if necessary (groundwater only), and
- Depth to bottom of well (groundwater only).

Entries were signed and dated, and any entry deleted has a single cross out which is signed and dated. Photographic records were kept through the use of digital photographs, showing the boring core from which the soil samples were collected.

Procedures to evaluate field data for this project primarily included checking for transcription errors on the part of field crew members and review of field notebooks. This task was the responsibility of the URS Field Leader.

Equipment calibrations, repairs and adjustments were document in the calibration log sheet completed daily. Air monitoring was performed during various times of sampling and recorded on an air monitoring log sheet.

Headspace readings were included on the boring log for the boring locations and depths.

2.4 Decontamination and Investigation Derived Waste

During well redevelopment and soil and groundwater sampling, field personnel and equipment underwent decontamination procedures to ensure the health and safety of those present, to maintain sample integrity, and to minimize the movement of contamination between the work area and off-site locations. Equipment used on-site was decontaminated prior to beginning work, between sampling locations and/or

uses, and prior to demobilizing from the site. Non-disposable purging and sampling equipment was decontaminated between each sample acquisition by washing with an Alconox® equivalent detergent wash and a distilled water rinse. Personnel and small equipment decontamination was performed at the sample locations. Disposable sampling equipment, such as gloves were collected and bagged on a daily basis and managed in accordance with Solutia procedures. Soil, redevelopment water and purge water were containerized and handled in accordance with Solutia Procedures.

2.5 Analytical Procedures

STL of Savannah, Georgia analyzed the soil and groundwater samples for combinations of VOCs, SVOCs, lead, mercury, PCBs, pesticides, and herbicides as specified for each sample using the following methods:

Parameter	Analytical Method
VOCs	**USEPA Method 8260B**
SVOCs	**USEPA Method 8270C**
Lead	**USEPA Method 6010B**
Mercury	**USEPA Method 7471A**
PCBs	**USEPA Method 8082**
Pesticides	**USEPA Method 8081A**
Herbicides	**USEPA Method 8151A**

Laboratory standards were not readily available for the following SVOCs:

- 1-Chloro-2,4-Dinitrobenzene
- 2-Nitrobiphenyl
- 2-Nitrochlorobenzene
- 3,4-Dichloronitrobenzene
- 3-Nitrobiphenyl
- 3-Nitrochlorobenzene
- 4-Nitrobiphenyl
- 4-Nitrochlorobenzene

STL reported the results for these constituents via library search, as Tentatively Identified Compounds (TICs).

2.6 Quality Assurance and Data Validation

A total of 72 samples (including investigative samples, field duplicates, trip blanks, equipment blanks, and matrix spike and matrix spike duplicates) were analyzed by STL. These samples were submitted in 4 Sample Delivery Groups (SDGs), KRM48 through KRM51.

One hundred percent of the data were subjected to a data quality review (Level III validation). In addition, eleven percent were also subjected to a full (Level IV) validation. Data validation was performed by URS in accordance with QA/QC criteria established in the Supplemental Soil and Groundwater Plan (July

2005). Data excursions from QA/QC criteria were qualified based on guidance provided in the following documents where applicable to the reference methods:

- USEPA Contract Laboratory Program National Functional Guidelines for Low Concentration Organic Data Review. USEPA 540/R-94/012 (USEPA, 2001)
- USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review. USEPA 540/R-94/013 (USEPA, 2004)

Based on the validation performed, it is recommended that the results reported for the analyses be accepted for their intended use. Acceptable levels of accuracy, precision, and representativeness were achieved for this data set. PCB data for two samples were rejected due to low surrogate recoveries. This is further discussed in Appendix C. In addition, analytical completeness, defined to be the percentage of analytical results which are judged to be valid, including estimated (J) or estimated non-detect (UJ) values was 99 percent, which exceeds the completeness goal of 95 percent.

Qualifiers assigned by the data reviewer have been transcribed onto the laboratory reporting forms (Form-1s), which are included in Appendix C.

The data were also provided to URS in an electronic format. The data were uploaded into a database to facilitate evaluation and data review. The report tables were generated from the database. These tables include the data flags provided by STL as well as the data validation qualifiers assigned by URS. The hard copy data was compared to the data provided in electronic format. No discrepancies were found.

2.7 Data Screening

Concentrations of detected constituents were compared with published soil screening levels. The primary source of screening criteria for soil was the Illinois Environmental Protection Agency (IEPA) Tiered Approach to Corrective Action Objectives (TACO) Tier 1 lookup tables (35 IAC 742, Appendix B, Tables B and C). For the direct contact pathway, we used the most conservative screening value from the Industrial-Commercial and Construction Worker Ingestion or Inhalation scenarios. Screening values for the soil component of groundwater ingestion (i.e., soil to groundwater) pathway were based on Class I groundwater. To evaluate this pathway for mercury, we used the pH-based screening values. Eight soil samples were obtained from two borings in the former Chlor-Alkali area, at depths from 0 to 16 feet bgs, and tested for pH. The pH results ranged from 7.95 to 11.5. This corresponds to a screening value of 8.0 mg/kg.

In addition, values for certain constituents were obtained from IEPA's "non-TACO" lookup tables accessed through IEPA's internet website at: http://www.epa.state.il.us/land/taco/soil-remediation-objectives-for-industrial-commercial-properties.pdf.

The following approach was used to screen PCB results. Detected aroclors were summed to derive total PCBs. The total PCB value was then compared to the screening level of 25 mg/kg from the USEPA Toxic Substances Control Act (TSCA), 40 CFR 761.61(a)(4)(i)(B), which is specific to bulk PCB remediation (including soil) at moderately sized sites in low occupancy areas. For certain locations, based on USEPA's comments, data were also screened against the TACO Tier 1 direct contact criterion of 1 mg/kg.

As presented in Section 2.5, certain SVOCs were reported as TICs. Because of the inherent uncertainty in this identification method, detections for these constituents were not screened.

Groundwater screening criteria were IEPA TACO Class I values (35 IAC 742 Appendix B, Table E).

The table below presents screening criteria for constituents detected in soil.

Constituent	Units	Screening Value	Class I Soil to GW	Direct Contact Reference
2-Butanone (MEK)	ug/kg	140000	17000	IEPA Non-TACO Construction Inhalation
4-Methyl-2-pentanone (MIBK)	ug/kg	90000	2500	IEPA Non-TACO Construction Inhalation
Benzene	ug/kg	1600	30	IEPA TACO Industrial Inhalation
Chlorobenzene	ug/kg	1300	1000	IEPA TACO Construction Inhalation
Fluoranthene	ug/kg	82000000	4300000	IEPA TACO Industrial Ingestion
Lead	mg/kg	400	-	IEPA TACO Industrial and Construction Ingestion
Methyl N-Butyl Ketone (2-Hexanone)	ug/kg	720	1300	IEPA non-TACO Construction Inhalation
Pyrene	ug/kg	61000000	4200000	IEPA TACO Construction Ingestion
Tetrachloroethene	ug/kg	20000	60	IEPA TACO Industrial Inhalation
Toluene	ug/kg	42000	12000	IEPA TACO Construction Inhalation
Total PCBs	ug/kg	25000	18000	TSCA Regulations 40 CFR 761.61 (a)(4)(i)(B)
Xylenes, Total	ug/kg	320000	150000	IEPA TACO Industrial and Construction Inhalation
Mercury	mg/kg	61	8	IEPA TACO Construction Ingestion

The table below presents screening values for constituents detected in groundwater.

Constituent	Units	Class I	Reference
2,4,6-Trichlorophenol	ug/l	10	IEPA TACO Class I
2,4-Dichlorophenol	ug/l	21	IEPA TACO Class I
bis(2-Ethylhexyl)phthalate	ug/l	6	IEPA TACO Class I
Nitrobenzene	ug/l	3.5	IEPA TACO Class I
P-Chloroaniline	ug/l	28	IEPA TACO Class I
Pentachlorophenol	ug/l	1	IEPA TACO Class I

3.0 SUPPLEMENTAL INVESTIGATION RESULTS

This section presents the results of the soil and groundwater sampling. For organization and presentation purposes soil samples are grouped by the following areas: Lot F, Former Chlor-Alkalai Production Area, North Central Plant Process Area, and Former Coal Storage Area. This is consistent with the presentation in USEPA's May 4th comment letter. The areas are shown on Figure 2.1.

3.1 Soil Sampling Results

3.1.1 Lot F

S0110

As requested by USEPA, additional sampling was conducted in the vicinity of former sample location S0110 to assess the areal extent of SVOC (specifically PAHs) and lead-containing fill. Borings were advanced at sample locations S0115 through S0120 to a depth of 2 feet bgs. Samples were collected from 0 to 2 feet bgs and analyzed for SVOCs. Additionally, the samples from borings S0119 and S0120 were analyzed for lead. The results are summarized below.

- SVOCs – Fluoranthene was detected in samples S0118-0-2 and S0120-0-2. Pyrene was detected in sample S0120-0-2. The concentrations found in both samples were below IEPA screening criteria for both constituents.
- Lead was detected in both S0119 and S0120. Concentrations were below the IEPA TACO screening criteria for direct contact.

The analytical results are presented on Table 3.1.

S0205, S0206, and S0208

As requested by USEPA, additional samples were collected in the vicinity of sample locations S0205, S0206, and S0208. Concentrations of PCBs found in this area during previous investigations exceeded the TACO Tier 1 criteria for direct contact with soil. Borings were advanced at locations S0214 through S0217 to a depth of 2 feet bgs. Samples were collected from 0 to 2 feet bgs and analyzed for PCBs. The results are summarized below.

- PCBs were detected in samples S0215-0-2, S0216-0-2, and S0217-0-2. Concentrations were below the TSCA screening criteria for direct contact and TACO Tier 1 direct contact screening criterion.

The analytical results are presented on Table 3.1.

LF-4

The areal and vertical extent of VOC and SVOC-containing soils that exceed the TACO Tier I criteria for soil to groundwater leaching were determined in the vicinity of sample location LF-4. Borings were advanced at locations S0121 through S0124 to a depth of 20 feet bgs. Samples were collected from 18 to 20 feet bgs and analyzed for VOCs and SVOCs. The results are summarized below.

- VOCs – 2-Butanone (MEK) was detected in sample S0133-18-20. Benzene and Tetrachloroethene were detected in sample S0124-18-20. Concentrations in both samples were below IEPA TACO screening criteria.
- SVOCs were not detected in the samples from these locations.

The analytical results are presented on Table 3.1.

3.1.2 Former Chlor-Alkali Production Area

As requested by USEPA, the areal and vertical extent of soils containing mercury at concentrations higher than the TACO Tier I criteria for direct contact with soils or the soil to groundwater leaching criteria were determined in the area of locations S0916, S0917, S0919, and S0920 through additional sampling and analysis.

Sample locations S0925 through S0928 were advanced to a depth of 10 to 12 feet bgs and sampled from 2 to 3 feet bgs, 6 to 7 feet bgs, and 9 to 10 foot bgs. Borings were also advanced at former locations S0916, S0919, and S0920 to a depth of 16 feet bgs and sampled from 13 to 15 feet bgs in order to assess the vertical extent of mercury concentrations. The results are summarized below.

- Mercury was detected in all 15 samples collected.
- Samples S0925-2-3, S0926-6-7, S0927-6-7, and S0927-9-10 exceeded the screening criteria for the soil to groundwater pathway.
- Sample S0927-6-7 exceeded the screening criteria for direct soil contact.

The analytical results are presented on Table 3.1. Figure 3.1 shows the extent of data results (supplemental and CMS) that exceeded screening criteria, including prior samples (CMS) that were the basis for the comments.

In the area of sample locations S0904 and S0905, soils were sampled and analyzed to confirm whether PCB concentrations are consistently less than the 25 mg/kg screening criterion. Borings were advanced at former locations S0902 to 8 feet bgs (sampled at 4 to 6 feet bgs and 6 to 8 feet bgs), S0903 to 4 feet bgs (sampled at 2 to 4 feet bgs), S0907 to 12 feet bgs (sampled at 10 to 12 feet bgs), S1003 to 6 feet bgs (sampled at 4 to 6 feet bgs), and S1004 to 6 feet bgs (sampled at 3 to 5 feet bgs). Borings were also advanced at the new locations: S0929 to 8 feet bgs (sampled at 5 to 7 feet bgs within the fill); S0930 to 4 feet bgs (sampled at 2 to 4 feet bgs within the fill); and S0931 to 8 feet bgs (sampled at 3 to 5 feet bgs within the fill). The results are summarized below.

- PCBs were detected in eight of the nine samples. PCBs were not detected in sample S0907-10-12.
- The detected concentrations were all below the screening criterion for direct contact of 25 mg/kg.

The analytical results are presented on Table 3.1.

3.1.3 North Central Plant Process Area

As requested by USEPA, soil samples were collected to assess the presence of VOCs or SVOCs in the area of S0403. The areal extent of VOCs that exceed either the TACO Tier I criteria for direct contact with soils or the soil to groundwater leaching criteria were assessed in the area of S0408 and S0409.

S0403

The boring was advanced to a depth of 12 feet bgs. As per the sampling plan, samples were collected from depths of 1 to 3 feet and 10 to 12 feet bgs and analyzed for VOCs, SVOCs, Pesticides, Herbicides, and PCBs. The results are summarized below.

- VOCs – Benzene, Toluene and Xylenes were detected in the 1 to 3 ft sample. The concentration of Benzene exceeded the screening criteria for the soil to groundwater pathway. 4-Methyl-2-pentanone (MIBK) and Methyl N-Butyl Ketone (2-Hexanone) were detected in the 10 to 12 foot sample. The 2-Hexanone detection exceeded the screening criterion for the direct contact and soil to groundwater pathways.
- SVOCs, Pesticides, Herbicides, and PCBs were not detected in either the 1 to 3 feet or 10 to 12 feet samples.

The analytical results are presented on Table 3.1.

S0408 and S0409

Borings S0430 through S0433 were advanced to a depth of 16 feet bgs at the specified locations surrounding S0408 as stated in the sampling plan. Samples were collected from depths of 13 to 15 feet at each location based on the highest PID reading at each location and analyzed for VOCs. The results are summarized below.

- S0430 – Chlorobenzene was detected in the primary sample. 2-Butanone (MEK) and Methyl N-Butyl Ketone (2-Hexanone) were detected in the duplicate sample. The concentration of 2-Hexanone exceeded the screening criteria for the direct contact and the soil to groundwater pathway.
- S0431 – Methyl N-Butyl Ketone (2-Hexanone) was detected in the sample. The concentration exceeded the screening criteria for the direct contact and the soil to groundwater pathway.
- S0432 – There were no detections of VOCs in the sample.
- S0433 – 2-Butanone (MEK) was detected in the sample. The concentration was below the screening criteria for direct contact and the soil to groundwater pathway.
- The analytical results are presented on Table 3.1.

3.1.4 Former Coal Storage Area

As requested by USEPA, soil samples were collected to determine the presence of SVOCs in surfacial fill in the former coal storage area. Borings were advanced at former locations S1101 through S1103 to a

depth of 2 to 4 feet bgs to collect samples within the surficial fill material. Samples were collected from 0 to 2 feet and analyzed for SVOCs. There were no detections of SVOCs in the samples. The analytical results are presented on Table 3.1.

3.2 Groundwater Sampling Results

As directed by USEPA, additional characterization of groundwater quality at the Route 3 Drum Site was completed. The additional characterization included the redevelopment and sampling of eight existing monitoring wells. Groundwater elevation data are included on Figure 2.2. Monitoring wells GM-8, GM-31A, GM-31B, GM-31C, GM-54A, GM-54B, GM-58A, and GM-59A were sampled and analyzed for SVOCs and PCBs. The results are summarized by hydrostratigraphic unit. Wells GM-8, GM-31A, GM-54A, GM-58A, and GM-59A are screened in the shallow hydrostratigraphic unit (SHU), wells GM-31B and GM-54B are screened in the middle hydrostratigraphic unit (MHU), and well GM-31C is screened in the deep hydrostratigraphic unit (DHU).

- SHU SVOCs – 2,4,6-Trichlorophenol, 2,4-Dichlorophenol, 2-Nitrobiphenyl, Nitrobenzene, 2-Nitrochlorobenzene, 3-Nitrochlorobenzene, and 4-Nitrochlorobenzene, and Pentachlorophenol were detected in GM-31A. Concentrations of 2,4,6-Trichlorophenol, Nitrobenzene, and Pentachlorophenol exceeded the IEPA TACO Class I screening criteria. 2,4,6-Trichlorophenol, 2-Nitrochlorobenzene, and 4-Nitrochlorobenzene were detected in GM-58A. The concentration of 2,4,6-Trichlorophenol exceeded its IEPA TACO Class I screening criteria. There were no SVOC detections in samples from wells GM-8, GM-54A, or GM-59A.
- MHU SVOCs – Bis(2-Ethylhexyl)phthalate was detected in both GM-31B and GM-54B. The concentration exceeded the IEPA TACO Class I screening criteria. Bis(2-Ethylhexyl)phthalate is a common field- or laboratory-induced artifact.
- DHU SVOCs – P-Chloroaniline was detected in Monitoring well GM-31C. The concentration exceeded its IEPA TACO Class I screening criteria.
- PCBs – There were no detections of PCBs in eight wells sampled.

The analytical results are presented on Table 3.2. Figure 3.2 presents the results that exceeded screening criteria, including prior samples (CMS) that were the basis for the comments.

4.0 CONCLUSIONS

The following conclusions are developed based on the supplemental information obtained and described in this report.

Lot F

S0110

Six borings were advanced in the area of sample location S0110 as a result of prior detections of one PAH and lead at concentrations above or near the TACO Tier 1 criteria for direct contact. The results of the additional samples showed only limited detections, and in all cases well below the TACO screening criteria. There was no evidence of fill in these borings. As such, the extent of fill appears to be limited to the immediate vicinity of location S0110. The human health risk should be minimal because the screening level was only marginally exceeded in one location and the area is fenced and access is restricted.

S0205, S0206, and S0208

Four borings were advanced in the area of locations S0205, S0206, and S0208 based on prior detections of PCBs at concentrations above the TACO Tier 1 criterion for direct contact. PCBs were detected in the supplemental samples, but at concentrations well below the TACO Tier 1 criterion for direct contact. The areal extent of impact appears to be less than one acre. Exceedances of screening criteria are limited to location S0205. The potential human health risk should be minimal because only one of the seven samples exceeded the TACO criterion, and the concentration is well below the TSCA screening criterion for low occupancy areas. The area is fenced and access is restricted.

LF-4

Four borings were advanced in the area of former investigation trench LF-4 due to prior concentrations of certain VOCs and SVOCs above the TACO Tier 1 soil to groundwater leaching criteria. None of the detected concentrations exceeded the TACO Tier 1 soil to groundwater leaching criteria. The areal extent of VOCs and SVOCs that exceed the soil to groundwater leaching criteria appears limited to the immediate vicinity of location LF-4.

Former Chlor-Alkali Production Area

Seven borings were advanced in the area of locations S0916, S0917, S0919, and S0920 due to prior concentrations of mercury above the TACO Tier I criteria for direct contact or soil to groundwater leaching criteria. The concentration in one sample exceeded the direct contact criterion and four samples exceeded the soil to groundwater criterion. The areal extent of mercury exceeding the TACO direct contact criterion is limited to an area of approximately 500 ft^2. The areal extent of mercury exceeding the soil to groundwater leaching criterion extends beyond the supplemental sampling locations, but is at least 2,000 ft^2. The vertical extent of mercury exceeding the soil to groundwater leaching criterion is approximately 15 feet at locations S0916 and S0919, but was not defined at the other location that extended to a depth of 16 feet.

Eight borings were advanced in the area of selected former boring locations to assess the extent of PCB impact compared to the TSCA screening criterion of 25 mg/kg. PCBs were detected in eight of the nine samples. The detected concentrations were all below the screening criterion for direct contact of 25 mg/kg.

North Central Plant Process Area

The areal extent of VOCs that exceed either the TACO Tier I criteria for direct contact with soils or the soil to groundwater leaching criteria were assessed in the area of S0408 and S0409.

S0403

Soil samples were collected from location S0403 to obtain deeper samples than were collected previously. Samples were analyzed for VOCs, SVOCs, pesticides, herbicides and PCBs. A few VOCs were detected at concentrations generally below the TACO Tier 1 screening criteria. Benzene was detected in a sample from a depth of 1 to 3 feet at a concentration which exceeded the soil to groundwater leaching criterion. However benzene was not detected in a sample from a depth of 10 to 12 feet. Methyl N-Butyl Ketone (2-Hexanone) was detected in the 10 to 12 foot sample at a concentration which exceeded the direct contact and soil to groundwater pathway criteria. SVOCs, pesticides, herbicides, and PCBs were not detected in these samples. The results confirmed that elevated PID readings correspond to VOC presence.

S0408 and S0409

Four borings were advanced in the area of locations S0408 through S0409 due to prior detections of VOCs. The concentration of Methyl N-Butyl Ketone (2-Hexanone) in samples from locations S0430 and S0431 exceeded the soil to groundwater leaching criterion. The areal extent of VOCs exceeding the direct contact and soil to groundwater leaching criteria appears to be limited to the area containing locations S0408, S0430 and S0431. The vertical extent of impact extends below the depths of the supplemental samples (i.e., below 15 feet).

Former Coal Storage Area

Soil samples were collected from three borings to assess the possible presence of SVOCs in the surficial fill. SVOCs were not detected in any of these surficial fill samples. These data indicate that SVOCs do not pose a potential human health risk in this area.

Groundwater Results for Route 3 Drum Site

The results of the groundwater sampling for the eight wells were presented on Figure 3.2. These results are summarized as follows.

SHU

There were no SVOC or PCB detections in samples from wells GM-8, GM-54A, or GM-59A. Concentrations of 2,4,6-trichlorophenol, nitrobenzene, and pentachlorophenol in well GM-31A exceeded their IEPA TACO Class I screening criteria. The concentration of 2,4,6-trichlorophenol in well GM-58A exceeded its IEPA TACO Class I screening criterion. Well GM-31A is the

monitoring well adjacent to the toe of the capped area. Well GM-58A is approximately 100 feet downgradient of GM-31A.

MHU

The concentration of bis(2-Ethylhexyl)phthalate in samples from wells GM-31B and GM-54B exceeded its IEPA TACO Class I screening criterion. Bis(2-Ethylhexyl)phthalate is a common field- or laboratory-induced artifact.

DHU

P-Chloroaniline was detected in Monitoring well GM-31C. The concentration exceeded its IEPA TACO Class I screening criterion.

These data, integrated with the results of groundwater sampling conducted since 1983 and related work indicate the following:

- Migration of constituents in groundwater from the Route 3 drum site is limited, as evidenced by the relatively low concentrations of source constituents (e.g., nitrochlorobenzenes) in groundwater.
- The cap and fence are effectively mitigating contact with waste residuals.
- By ordinance, groundwater is not used for consumptive purposes.
- Groundwater modeling indicates that groundwater in the area will be captured by the Sauget Area 2 Groundwater Migration Control System (See Figure 4.1 of the CMS Report (August 2004)).

5.0 REFERENCES

Solutia Inc., 2004. *RCRA Corrective Measures Study (CMS), Solutia Inc., W.G. Krummrich Facility, Sauget, Illinois*. August 27, 2004.

Solutia Inc., 2005. *RCRA Corrective Measures Study (CMS), Response to Comments, Solutia Inc., W.G. Krummrich Facility, Sauget, Illinois*. February 5, 2005.

Solutia Inc., 2005. *RCRA Corrective Measures Study, Response to May 4, 2005 USEPA Comments, Solutia Inc., W.G. Krummrich Facility Investigation, Sauget, Illinois*. May 27, 2005.

Solutia Inc., 2005. *Supplemental Soil and Groundwater Sampling Plan, Solutia Inc.., W.G. Krummrich Facility, Sauget, Illinois*. July 5, 2005.

USEPA, 2001. *Contract Laboratory Program, National Functional Guidelines for Low Concentration Organic Data Review*. USEPA 540/R-94/012.

USEPA, 2004. *Contract Laboratory Program, National Functional Guidelines for Inorganic Data Review*. USEPA 540/R-94/013.

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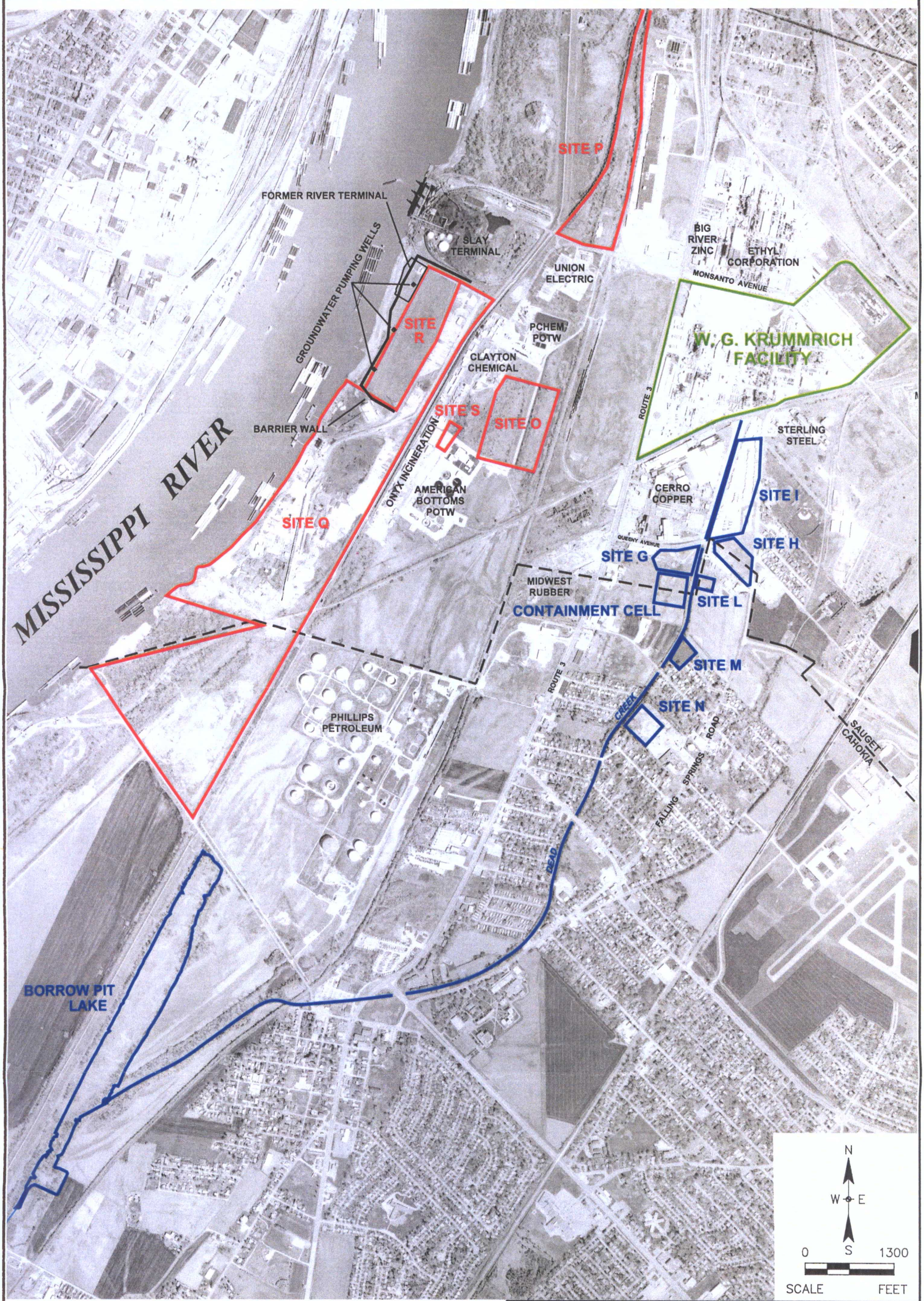

LEGEND

- W.G. KRUMMRICH FACILITY
- SAUGET AREA #1
- SAUGET AREA #2

SUPPLEMENTAL SOIL AND GROUNDWATER INVESTIGATION REPORT W.G. KRUMMRICH FACILITY SAUGET, ILLINOIS	PROJECT NO. 21561601.00000
URS	
DRN. BY: djd 2/9/05 DSGN. BY: tja CHKD. BY:	Site Location Map — FIG. NO. 1.1

SUPPLEMENTAL SOIL AND GROUNDWATER INVESTIGATION REPORT W.G. KRUMMRICH FACILITY SAUGET, ILLINOIS	PROJECT NO. 21561601.00000

URS

DRN. BY: 4/9/05 DSGN. BY: cm CHKD. BY:	Facility Location Map	FIG. NO. 1.2

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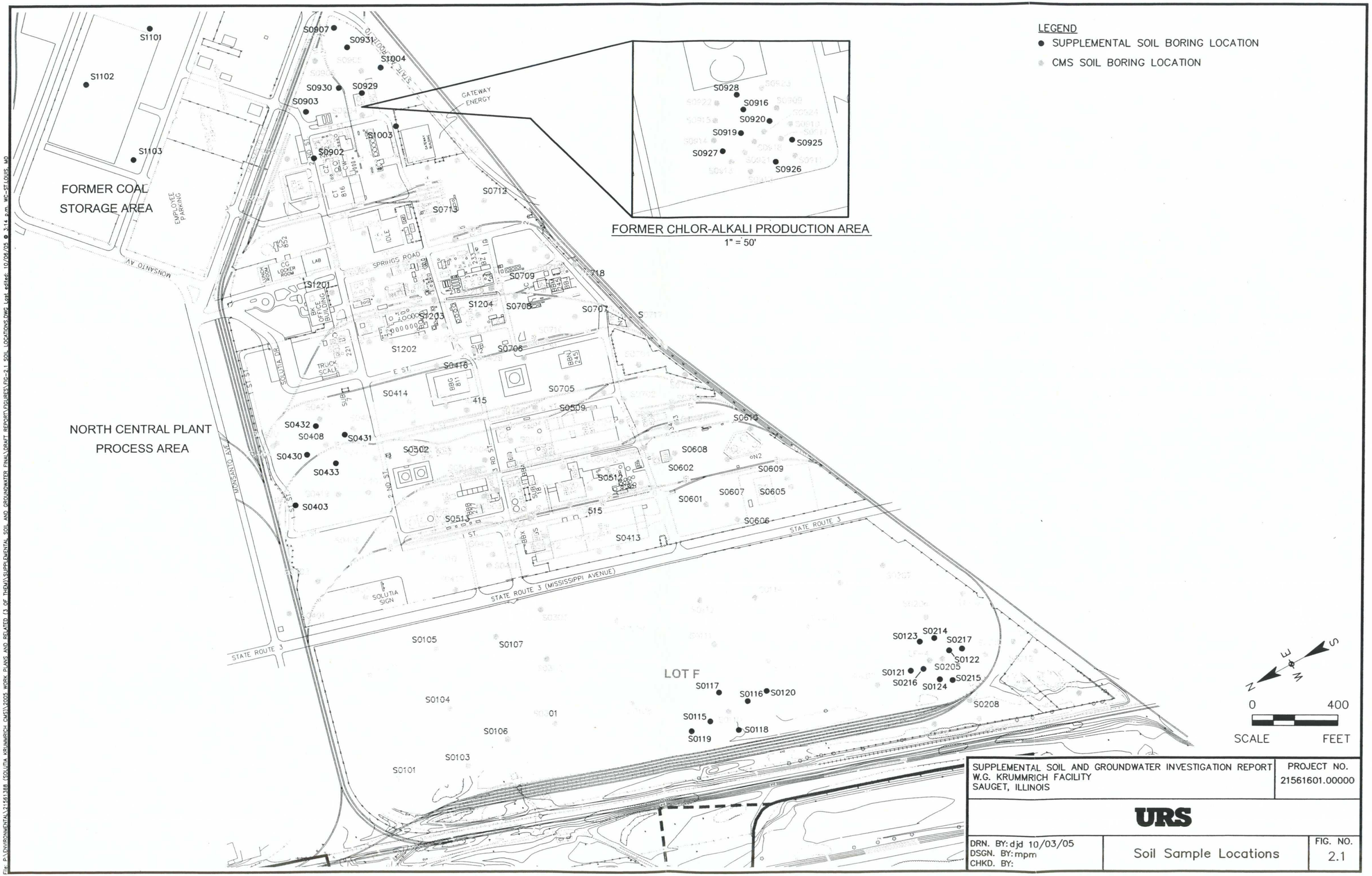


SUPPLEMENTAL SOIL AND GROUNDWATER INVESTIGATION REPORT
W.G. KRUMMRICH FACILITY
SAUGET, ILLINOIS

PROJECT NO. 21561601.00000

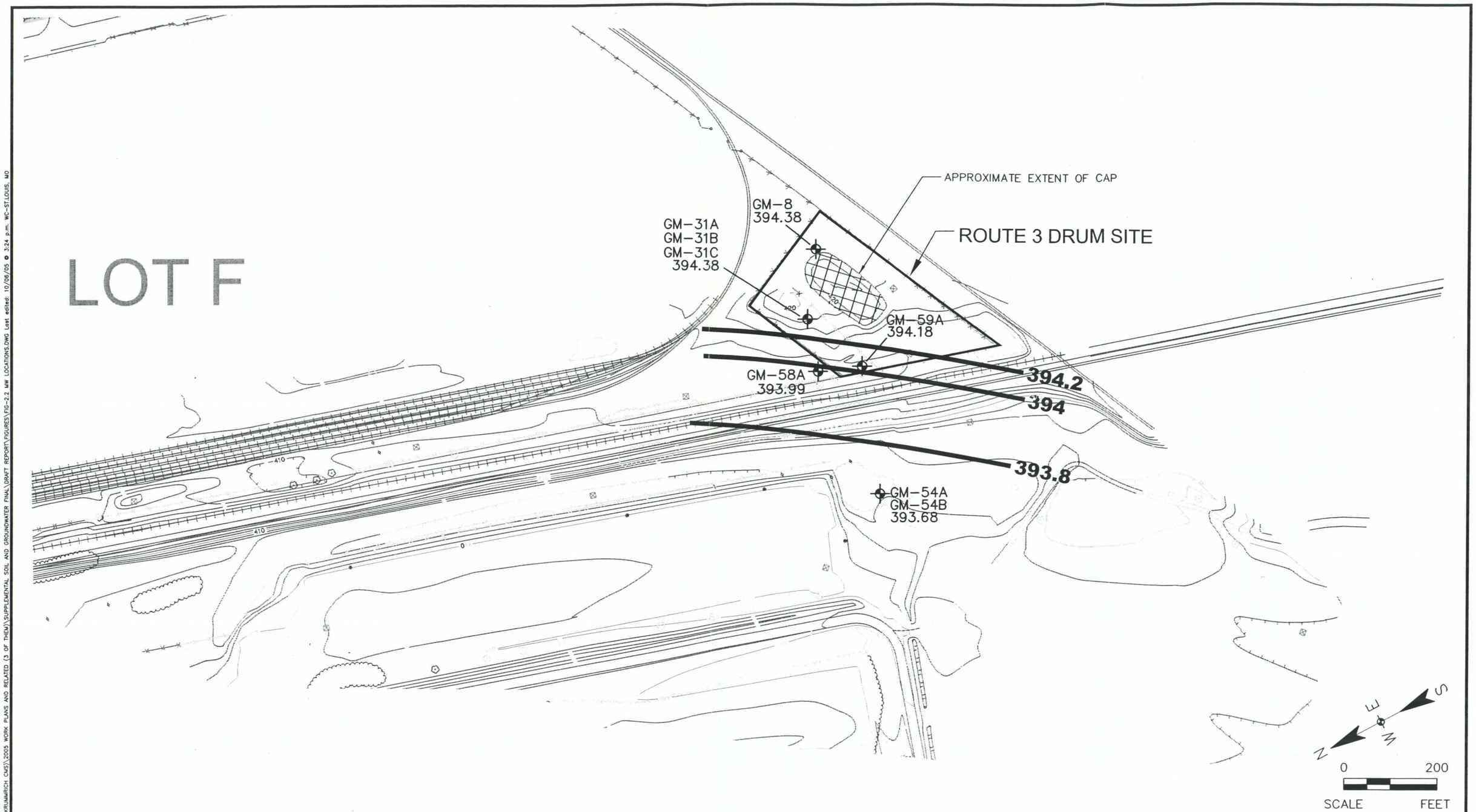
URS

DRN. BY: djd 10/03/05
DSGN. BY: mpm
CHKD. BY:

Soil Sample Locations

FIG. NO. 2.1

Fig: P:\ENVIRONMENTAL\21561368 (SOLUTIA KRUMMRICH OUST)\2005 WORK PLANS AND RELATED (3 OF THEM)\SUPPLEMENTAL SOIL AND GROUNDWATER FINAL\DRAFT REPORT\FIGURES.FIG-2.1 SOIL LOCATIONS.DWG Last edited: 10/06/05 @ 3:14 p.m. WC-ST.LOUIS, MO



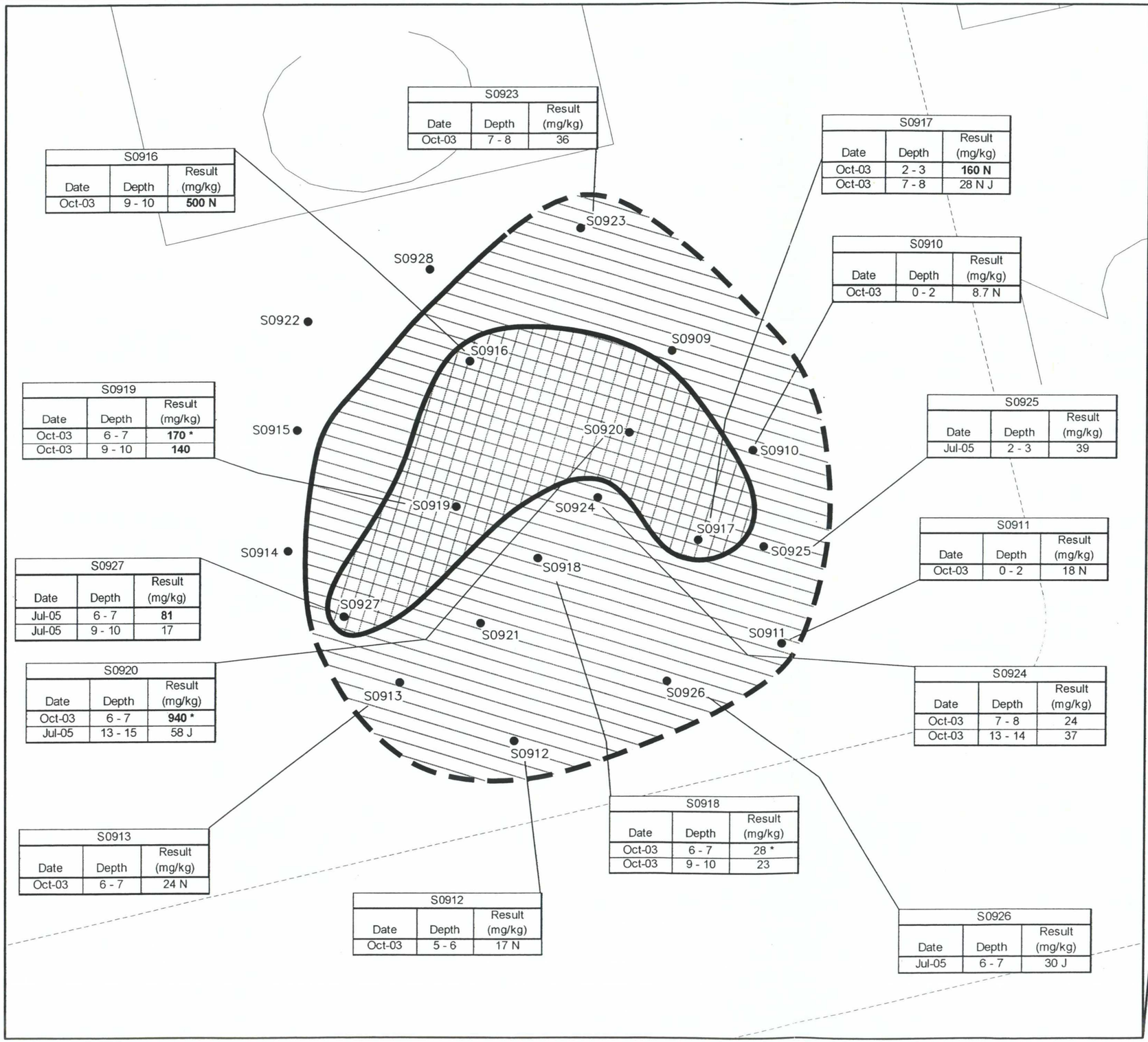
LEGEND

393.8 — SHU GROUNDWATER CONTOUR

MONITORING WELL LOCATION

SUPPLEMENTAL SOIL AND GROUNDWATER INVESTIGATION REPORT W.G. KRUMMRICH FACILITY SAUGET, ILLINOIS		PROJECT NO. 21561601.00000
URS		
DRN. BY: djd 10/03/05 DSGN. BY: mpm CHKD. BY:	Monitoring Well Locations and Groundwater Elevation Contours	FIG. NO. 2.2

File: P:\ENVIRONMENTAL\21561388 (SOLUTIA KRUMMRICH CMS)\2005 WORK PLANS AND RELATED (3 OF THEM)\SUPPLEMENTAL SOIL AND GROUNDWATER FINAL\DRAFT REPORT\FIGURES\FIG-2.2 MW LOCATIONS.DWG Last edited: 10/06/05 @ 3:24 p.m. WC-ST.LOUIS, MO



S0916		
Date	Depth	Result (mg/kg)
Oct-03	9 - 10	**500 N**

S0923		
Date	Depth	Result (mg/kg)
Oct-03	7 - 8	36

S0917		
Date	Depth	Result (mg/kg)
Oct-03	2 - 3	**160 N**
Oct-03	7 - 8	28 N J

S0910		
Date	Depth	Result (mg/kg)
Oct-03	0 - 2	8.7 N

S0919		
Date	Depth	Result (mg/kg)
Oct-03	6 - 7	**170 ***
Oct-03	9 - 10	**140**

S0925		
Date	Depth	Result (mg/kg)
Jul-05	2 - 3	39

S0911		
Date	Depth	Result (mg/kg)
Oct-03	0 - 2	18 N

S0927		
Date	Depth	Result (mg/kg)
Jul-05	6 - 7	**81**
Jul-05	9 - 10	17

S0920		
Date	Depth	Result (mg/kg)
Oct-03	6 - 7	**940 ***
Jul-05	13 - 15	58 J

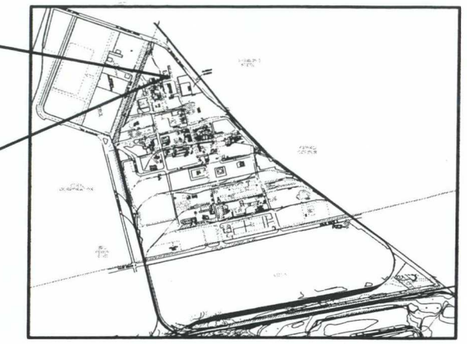
S0924		
Date	Depth	Result (mg/kg)
Oct-03	7 - 8	24
Oct-03	13 - 14	37

S0913		
Date	Depth	Result (mg/kg)
Oct-03	6 - 7	24 N

S0918		
Date	Depth	Result (mg/kg)
Oct-03	6 - 7	28 *
Oct-03	9 - 10	23

S0912		
Date	Depth	Result (mg/kg)
Oct-03	5 - 6	17 N

S0926		
Date	Depth	Result (mg/kg)
Jul-05	6 - 7	30 J



KEYMAP
1" = 2000'

LEGEND

- ● BORING LOCATION
- SOIL TO GROUND WATER EXCEEDING FOR MERCURY (>8mg/kg)
- DIRECT CONTACT EXCEEDING FOR MERCURY (>61mg/kg)

NOTES

1 - Direct Contact Screening Criteria for Mercury is from IEPA TACO. Direct Contact exceedances are shown in bold. All results shown here exceed the soil to groundwater pathway value of 8 mg/kg based on pH.
2 - For duplicate samples, the higher result is shown
3 - Detections at borings S0909 and S0921 did not exceed criteria.
4 - See Table 3.1 for data qualifiers.

N S E W

0 10
SCALE FEET

SUPPLEMENTAL SOIL AND GROUNDWATER INVESTIGATION REPORT
W.G. KRUMMRICH FACILITY
SAUGET, ILLINOIS

PROJECT NO. 21561601.00000

URS

DRN. BY: djd 10/03/05
DSGN. BY: mpm
CHKD. BY:

Mercury Soil Screening Results
Former Chlor-Alkali Production Area

FIG. NO. 3.1

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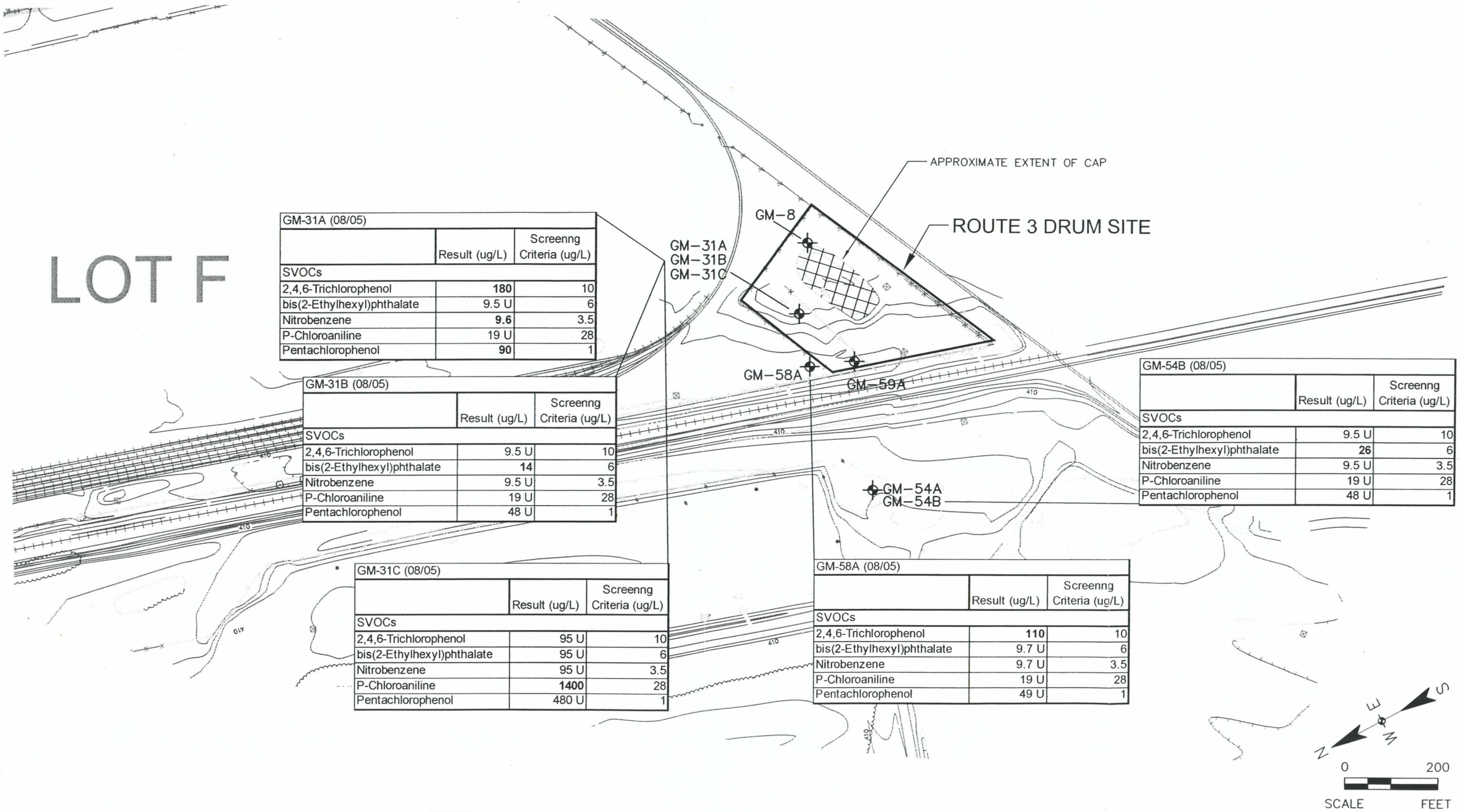

GM-31A (08/05)		
	Result (ug/L)	Screenng Criteria (ug/L)
SVOCs		
2,4,6-Trichlorophenol	**180**	10
bis(2-Ethylhexyl)phthalate	9.5 U	6
Nitrobenzene	**9.6**	3.5
P-Chloroaniline	19 U	28
Pentachlorophenol	**90**	1

GM-31B (08/05)		
	Result (ug/L)	Screenng Criteria (ug/L)
SVOCs		
2,4,6-Trichlorophenol	9.5 U	10
bis(2-Ethylhexyl)phthalate	**14**	6
Nitrobenzene	9.5 U	3.5
P-Chloroaniline	19 U	28
Pentachlorophenol	48 U	1

GM-31C (08/05)		
	Result (ug/L)	Screenng Criteria (ug/L)
SVOCs		
2,4,6-Trichlorophenol	95 U	10
bis(2-Ethylhexyl)phthalate	95 U	6
Nitrobenzene	95 U	3.5
P-Chloroaniline	**1400**	28
Pentachlorophenol	480 U	1

GM-58A (08/05)		
	Result (ug/L)	Screenng Criteria (ug/L)
SVOCs		
2,4,6-Trichlorophenol	**110**	10
bis(2-Ethylhexyl)phthalate	9.7 U	6
Nitrobenzene	9.7 U	3.5
P-Chloroaniline	19 U	28
Pentachlorophenol	49 U	1

GM-54B (08/05)		
	Result (ug/L)	Screenng Criteria (ug/L)
SVOCs		
2,4,6-Trichlorophenol	9.5 U	10
bis(2-Ethylhexyl)phthalate	**26**	6
Nitrobenzene	9.5 U	3.5
P-Chloroaniline	19 U	28
Pentachlorophenol	48 U	1

LEGEND

MONITORING WELL LOCATION

NOTES

1 - Bolded results exceeded screening criteria (IEPA TACO Class I).
2 - For duplicate samples the higher result is shown.
3 - Groundwater detections at Monitoring Wells GM-8, GM-
and GM-59A did not exceed screening criteria
4 - See Table 3.2 for data qualifiers.

SUPPLEMENTAL SOIL AND GROUNDWATER INVESTIGATION REPORT
W.G. KRUMMRICH FACILITY
SAUGET, ILLINOIS

PROJECT NO.
21561601.00000

URS

DRN. BY: djd 10/03/05
DSGN. BY: mpm
CHKD. BY:

Groundwater Screening Results

FIG. NO.
3.2

File: P:\ENVIRONMENTAL\21561388 (SOLUTIA KRUMMRICH CMS)\2005 WORK PLANS AND RELATED (3 OF THEM)\SUPPLEMENTAL SOIL AND GROUNDWATER FINAL\DRAFT REPORT\FIGURES\FIG-3.2 GSR.DWG Last edited: 10/06/05 @ 3:38 p.m. WC-ST.LOUIS, MO

TABLE 2.1
MONITORING WELL COMPLETION SUMMARY
AND GROUNDWATER MEASUREMENTS
ROUTE 3 DRUM SITE

Monitoring Well Identification	Top of Casing Elevation (ft NAVD)	Depth to Water (ft btoc)	Water Level Elevation (ft NAVD)	Total Well Depth (ft btoc)	Bottom of Well Elevation (ft NAVD)	Screened Interval (ft btoc)			Screened Interval Elevation (ft NAVD)		
GM-31A	418.63	24.31	394.32	40.96	377.67	19.00	-	39.00	397.63	-	377.63
GM-31B	418.92	25.55	393.37	86	332.92	65.50	-	85.50	350.92	-	330.92
GM-31C	419.29	25.31	393.98	120.71	298.58	97.00	-	117.00	319.79	-	299.79
GM-54A	404.93	11.25	393.68	40.82	364.11	18.50	-	38.50	383.43	-	363.43
GM-54B	405.11	11.43	393.68	90.43	314.68	66.50	-	86.50	335.81	-	315.81
GM-58A	414.24	20.25	393.99	40.78	373.46	19.40	-	39.40	392.84	-	372.84
GM-59A	413.57	19.38	394.19	40.52	373.05	19.00	-	39.00	392.57	-	372.57
GM-8	418.49	24.05	394.44	36.3	382.19	19.00	-	34.00	397.49	-	382.49

Notes:
1) NAVD = North American Vertical Datum of 1988
2) btoc= below top of casing
3) The depth to water and total well depths shown on the table were measured between August 1 and 3, 2005.
4) Well construction information (top of casing, screened interval) was obtained from well construction logs.

TABLE 3.1
SOIL ANALYTICAL RESULTS
VOCS

Chemical	S0121-18-20 7/25/2005 ug/Kg	S0121-18-20-DUP 7/25/2005 ug/Kg	S0122-18-20 7/25/2005 ug/Kg	S0123-18-20 7/25/2005 ug/Kg	S0124-18-20 7/25/2005 ug/Kg	S0403-1-3 7/26/2005 ug/Kg	S0403-10-12 7/26/2005 ug/Kg	S0430-13-15 7/26/2005 ug/Kg	S0430-13-15-DUP 7/26/2005 ug/Kg	S0431-13-15 7/26/2005 ug/Kg	S0432-13-15 7/26/2005 ug/Kg	S0433-13-15 7/26/2005 ug/Kg
1,1,1-Trichloroethane	5.2 U	4.9 U	4.8 U	5.3 U	5.3 U	250 U	120 U	170 U	140 U UJ	160 U	190 U	160 U
1,1,2,2-Tetrachloroethane	5.2 U	4.9 U	4.8 U	5.3 U	5.3 U	250 U	120 U	170 U	140 U UJ	160 U	190 U	160 U
1,1,2-Trichloroethane	5.2 U	4.9 U	4.8 U	5.3 U	5.3 U	250 U	120 U	170 U	140 U UJ	160 U	190 U	160 U
1,1-Dichloroethane	5.2 U	4.9 U	4.8 U	5.3 U	5.3 U	250 U	120 U	170 U	140 U UJ	160 U	190 U	160 U
1,1-Dichloroethylene	5.2 U	4.9 U	4.8 U	5.3 U	5.3 U	250 U	120 U	170 U	140 U UJ	160 U	190 U	160 U
1,2-Dichloroethane	5.2 U	4.9 U	4.8 U	5.3 U	5.3 U	250 U	120 U	170 U	140 U UJ	160 U	190 U	160 U
1,2-Dichloropropane	5.2 U	4.9 U	4.8 U	5.3 U	5.3 U	250 U	120 U	170 U	140 U UJ	160 U	190 U	160 U
2-Butanone (MEK)	26 U	24 U	24 U	64	27 U	1300 U	600 U	830 U	1500 J	820 U	940 U	950
4-Methyl-2-pentanone (MIBK)	26 U	24 U	24 U	27 U	27 U	1300 U	960	830 U	680 U UJ	820 U	940 U	820 U
Acetone	52 U	49 U	48 U	53 U	53 U	2500 U	1200 U	1700 U	1400 U UJ	1600 U	1900 U	1600 U
Benzene	5.2 U	4.9 U	4.8 U	5.3 U	6.8	570	120 U	170 U	140 U UJ	160 U	190 U	160 U
Bromodichloromethane	5.2 U	4.9 U	4.8 U	5.3 U	5.3 U	250 U	120 U	170 U	140 U UJ	160 U	190 U	160 U
Bromoform	5.2 U	4.9 U	4.8 U	5.3 U	5.3 U	250 U	120 U	170 U	140 U UJ	160 U	190 U	160 U
Bromomethane	5.2 U	4.9 U	4.8 U	5.3 U	5.3 U	250 U	120 U	170 U	140 U UJ	160 U	190 U	160 U
Carbon Disulfide	5.2 U	4.9 U	4.8 U	5.3 U	5.3 U	250 U	120 U	170 U	140 U UJ	160 U	190 U	160 U
Carbon Tetrachloride	5.2 U	4.9 U	4.8 U	5.3 U	5.3 U	250 U	120 U	170 U	140 U UJ	160 U	190 U	160 U
Chlorobenzene	5.2 U	4.9 U	4.8 U	5.3 U	5.3 U	250 U	120 U	220	140 U UJ	160 U	190 U	160 U
Chlorodibromomethane	5.2 U	4.9 U	4.8 U	5.3 U	5.3 U	250 U	120 U	170 U	140 U UJ	160 U	190 U	160 U
Chloroethane	5.2 U	4.9 U	4.8 U	5.3 U	5.3 U	250 U	120 U	170 U	140 U UJ	160 U	190 U	160 U
Chloroform	5.2 U	4.9 U	4.8 U	5.3 U	5.3 U	250 U	120 U	170 U	140 U UJ	160 U	190 U	160 U
Chloromethane	5.2 U	4.9 U	4.8 U	5.3 U	5.3 U	250 U	120 U	170 U R	140 U UJ	160 U	190 U	160 U R
cis-1,2-Dichloroethene	5.2 U	4.9 U	4.8 U	5.3 U	5.3 U	250 U	120 U	170 U	140 U UJ	160 U	190 U	160 U
cis-1,3-Dichloropropene	5.2 U	4.9 U	4.8 U	5.3 U	5.3 U	250 U	120 U	170 U	140 U UJ	160 U	190 U	160 U
Dichloromethane	5.2 U	4.9 U	4.8 U	5.3 U	5.3 U	250 U	120 U	170 U	140 U UJ	160 U	190 U	160 U
Ethylbenzene	5.2 U	4.9 U	4.8 U	5.3 U	5.3 U	250 U	120 U	170 U	140 U UJ	160 U	190 U	160 U
Methyl N-Butyl Ketone (2-Hexanone)	26 U	24 U	24 U	27 U	27 U	1300 U	2100	830 U	1500 J	2000 J	940 U	820 U
Styrene (Monomer)	5.2 U	4.9 U	4.8 U	5.3 U	5.3 U	250 U	120 U	170 U	140 U UJ	160 U	190 U	160 U
Tetrachloroethene	5.2 U	4.9 U	4.8 U	5.3 U	7.1	250 U	120 U	170 U	140 U UJ	160 U	190 U	160 U
Toluene	5.2 U	4.9 U	4.8 U	5.3 U	5.3 U	260	120 U	170 U	140 U UJ	190 J	190 U	160 U
trans-1,2-Dichloroethene	5.2 U	4.9 U	4.8 U	5.3 U	5.3 U	250 U	120 U	170 U	140 U UJ	160 U	190 U	160 U
trans-1,3-Dichloropropene	5.2 U	4.9 U	4.8 U	5.3 U	5.3 U	250 U	120 U	170 U	140 U UJ	160 U	190 U	160 U
Trichloroethylene	5.2 U	4.9 U	4.8 U	5.3 U	5.3 U	250 U	120 U	170 U	140 U UJ	160 U	190 U	160 U
Vinyl chloride	5.2 U	4.9 U	4.8 U	5.3 U	5.3 U	250 U	120 U	170 U R	140 U UJ	160 U	190 U	160 U R
Xylenes, Total	10 U	9.7 U	9.6 U	11 U	11 U	1800	240 U	330 U	270 U UJ	330 U	380 U	330 U

Data Qualifier Codes
U - Non-detect
UJ - Estimated non-detect
J - Estimated
R - Rejected

TABLE 3.1
SOIL ANALYTICAL RESULTS
SVOCS

Chemical	S0115-0-2 7/25/2005 ug/Kg	S0115-0-2-DUP 7/25/2005 ug/kg	S0116-0-2 7/25/2005 ug/Kg	S0117-0-2 7/25/2005 ug/Kg	S0118-0-2 7/25/2005 ug/Kg	S0119-0-2 7/25/2005 ug/Kg	S0120-0-2 7/25/2005 ug/Kg	S0121-18-20 7/25/2005 ug/Kg	S0121-18-20-DUP 7/25/2005 ug/Kg
1,2,4-Trichlorobenzene	350 U	350 U	340 U	380 U	360 U	350 U	350 U UJ	350 U	360 U
1,2-Dichlorobenzene	350 U	350 U	340 U	380 U	360 U	350 U	350 U UJ	350 U	360 U
1,3-Dichlorobenzene	350 U	350 U	340 U	380 U	360 U	350 U	350 U UJ	350 U	360 U
1,4-Dichlorobenzene	350 U	350 U	340 U	380 U	360 U	350 U	350 U UJ	350 U	360 U
2,2'-oxybis(2-chloropropane)	350 U	350 U	340 U	380 U	360 U	350 U	350 U UJ	350 U	360 U
2,4,5-Trichlorophenol	350 U	350 U	340 U	380 U	360 U	350 U	350 U UJ	350 U	360 U
2,4,6-Trichlorophenol	350 U	350 U	340 U	380 U	360 U	350 U	350 U UJ	350 U	360 U
2,4-Dichlorophenol	350 U	350 U	340 U	380 U	360 U	350 U	350 U UJ	350 U	360 U
2,4-Dimethylphenol	350 U	350 U	340 U	380 U	360 U	350 U	350 U UJ	350 U	360 U
2,4-Dinitrophenol	1800 U	1800 U	1800 U	1900 U	1900 U	1800 U	1800 U UJ	1800 U	1800 U
2,4-Dinitrotoluene	350 U	350 U	340 U	380 U	360 U	350 U	350 U UJ	350 U	360 U
2,6-Dinitrotoluene	350 U	350 U	340 U	380 U	360 U	350 U	350 U UJ	350 U	360 U
2-Chloronaphthalene	350 U	350 U	340 U	380 U	360 U	350 U	350 U UJ	350 U	360 U
2-Chlorophenol	350 U	350 U	340 U	380 U	360 U	350 U	350 U UJ	350 U	360 U
2-Methylnaphthalene	350 U	350 U	340 U	380 U	360 U	350 U	350 U UJ	350 U	360 U
2-Methylphenol (o-Cresol)	350 U	350 U	340 U	380 U	360 U	350 U	350 U UJ	350 U	360 U
2-Nitroaniline	1800 U	1800 U	1800 U	1900 U	1900 U	1800 U	1800 U UJ	1800 U	1800 U
2-Nitrophenol	350 U	350 U	340 U	380 U	360 U	350 U	350 U UJ	350 U	360 U
3 & 4 Methylphenol	350 U	350 U	340 U	380 U	360 U	350 U	350 U UJ	350 U	360 U
3,3'-Dichlorobenzidine	700 U	690 U	690 U	760 U	720 U	690 U	700 U UJ	690 U	720 U
3-Nitroaniline	1800 U	1800 U	1800 U	1900 U	1900 U	1800 U	1800 U UJ	1800 U	1800 U
4,6-Dinitro-2-methylphenol	1800 U	1800 U	1800 U	1900 U	1900 U	1800 U	1800 U UJ	1800 U	1800 U
4-Bromophenyl Phenyl Ether	350 U	350 U	340 U	380 U	360 U	350 U	350 U UJ	350 U	360 U
4-Chloro-3-methylphenol	350 U	350 U	340 U	380 U	360 U	350 U	350 U UJ	350 U	360 U
4-Chlorophenyl Phenyl Ether	350 U	350 U	340 U	380 U	360 U	350 U	350 U UJ	350 U	360 U
4-Nitrophenol	1800 U	1800 U	1800 U	1900 U	1900 U	1800 U	1800 U UJ	1800 U	1800 U
Acenaphthene	350 U	350 U	340 U	380 U	360 U	350 U	350 U UJ	350 U	360 U
Acenaphthylene	350 U	350 U	340 U	380 U	360 U	350 U	350 U UJ	350 U	360 U
Anthracene	350 U	350 U	340 U	380 U	360 U	350 U	350 U UJ	350 U	360 U
Benzo(a)anthracene	350 U	350 U	340 U	380 U	360 U	350 U	350 U UJ	350 U	360 U
Benzo(a)pyrene	350 U	350 U	340 U	380 U	360 U	350 U	350 U UJ	350 U	360 U
Benzo(b)fluoranthene	350 U	350 U	340 U	380 U	360 U	350 U	350 U UJ	350 U	360 U
Benzo(g,h,i)perylene	350 U	350 U	340 U	380 U	360 U	350 U	350 U UJ	350 U	360 U
Benzo(k)fluoranthene	350 U	350 U	340 U	380 U	360 U	350 U	350 U UJ	350 U	360 U
Benzyl Butyl Phthalate	350 U	350 U	340 U	380 U	360 U	350 U	350 U UJ	350 U	360 U
bis(2-Chloroethoxy)methane	350 U	350 U	340 U	380 U	360 U	350 U	350 U UJ	350 U	360 U

Data Qualifier Codes
U - Non-detect
UJ - Estimated non-detect
J - Estimated
R - Rejected
NA - Reporting limit not available (Tentitively Identified Compound)

TABLE 3.1
SOIL ANALYTICAL RESULTS
SVOCS

Chemical	S0115-0-2 7/25/2005 ug/Kg	S0115-0-2-DUP 7/25/2005 ug/kg	S0116-0-2 7/25/2005 ug/Kg	S0117-0-2 7/25/2005 ug/Kg	S0118-0-2 7/25/2005 ug/Kg	S0119-0-2 7/25/2005 ug/Kg	S0120-0-2 7/25/2005 ug/Kg	S0121-18-20 7/25/2005 ug/Kg	S0121-18-20-DUP 7/25/2005 ug/Kg
bis(2-Chloroethyl)ether	350 U	350 U	340 U	380 U	360 U	350 U	350 U UJ	350 U	360 U
bis(2-Ethylhexyl)phthalate	350 U	350 U	340 U	380 U	360 U	350 U	350 U UJ	350 U	360 U
Carbazole	350 U	350 U	340 U	380 U	360 U	350 U	350 U UJ	350 U	360 U
Chrysene	350 U	350 U	340 U	380 U	360 U	350 U	350 U UJ	350 U	360 U
Dibenzo(a,h)anthracene	350 U	350 U	340 U	380 U	360 U	350 U	350 U UJ	350 U	360 U
Dibenzofuran	350 U	350 U	340 U	380 U	360 U	350 U	350 U UJ	350 U	360 U
Diethyl Phthalate	350 U	350 U	340 U	380 U	360 U	350 U	350 U UJ	350 U	360 U
Dimethyl Phthalate	350 U	350 U	340 U	380 U	360 U	350 U	350 U UJ	350 U	360 U
Di-n-butylphthalate	350 U	350 U	340 U	380 U	360 U	350 U	350 U UJ	350 U	360 U
Di-n-octylphthalate	350 U	350 U	340 U	380 U	360 U	350 U	350 U UJ	350 U	360 U
Fluoranthene	350 U	350 U	340 U	380 U	420	350 U	360 J	350 U	360 U
Fluorene	350 U	350 U	340 U	380 U	360 U	350 U	350 U UJ	350 U	360 U
Hexachlorobenzene	350 U	350 U	340 U	380 U	360 U	350 U	350 U UJ	350 U	360 U
Hexachlorobutadiene	350 U	350 U	340 U	380 U	360 U	350 U	350 U UJ	350 U	360 U
Hexachlorocyclopentadiene	350 U	350 U	340 U	380 U	360 U	350 U	350 U UJ	350 U	360 U
Hexachloroethane	350 U	350 U	340 U	380 U	360 U	350 U	350 U UJ	350 U	360 U
Indeno(1,2,3-cd)pyrene	350 U	350 U	340 U	380 U	360 U	350 U	350 U UJ	350 U	360 U
Isophorone	350 U	350 U	340 U	380 U	360 U	350 U	350 U UJ	350 U	360 U
Naphthalene	350 U	350 U	340 U	380 U	360 U	350 U	350 U UJ	350 U	360 U
Nitrobenzene	350 U	350 U	340 U	380 U	360 U	350 U	350 U UJ	350 U	360 U
N-Nitroso-di-n-propylamine	350 U	350 U	340 U	380 U	360 U	350 U	350 U UJ	350 U	360 U
N-Nitrosodiphenylamine	350 U	350 U	340 U	380 U	360 U	350 U	350 U UJ	350 U	360 U
P-Chloroaniline	700 U	690 U	690 U	760 U	720 U	690 U	700 U UJ	690 U	720 U
Pentachlorophenol	1800 U	1800 U	1800 U	1900 U	1900 U	1800 U	1800 U UJ	1800 U	1800 U
Phenanthrene	350 U	350 U	340 U	380 U	360 U	350 U	350 U UJ	350 U	360 U
Phenol	350 U	350 U	340 U	380 U	360 U	350 U	350 U UJ	350 U	360 U
P-Nitroaniline	1800 U	1800 U	1800 U	1900 U	1900 U	1800 U	1800 U UJ	1800 U	1800 U
Pyrene	350 U	350 U	340 U	380 U	360 U	350 U	670 J	350 U	360 U
1-Chloro-2,4-Dinitrobenzene	NA U	NA U	NA U	NA U	NA U	NA U	NA U	NA U	NA U
2-Nitrobiphenyl	NA U	NA U	NA U	NA U	NA U	NA U	NA U	NA U	NA U
2-Nitrochlorobenzene	NA U	NA U	NA U	NA U	NA U	NA U	NA U	NA U	NA U
3,4-Dichloronitrobenzene	NA U	NA U	NA U	NA U	NA U	NA U	NA U	NA U	NA U
3-Nitrobiphenyl	NA U	NA U	NA U	NA U	NA U	NA U	NA U	NA U	NA U
3-Nitrochlorobenzene	NA U	NA U	NA U	NA U	NA U	NA U	NA U	NA U	NA U
4-Nitrobiphenyl	NA U	NA U	NA U	NA U	NA U	NA U	NA U	NA U	NA U
4-Nitrochlorobenzene	NA U	NA U	NA U	NA U	NA U	NA U	NA U	NA U	NA U

Data Qualifier Codes
U - Non-detect
UJ - Estimated non-detect
J - Estimated
R - Rejected
NA - Reporting limit not available (Tentitively Identified Compound)

TABLE 3.1
SOIL ANALYTICAL RESULTS
SVOCS

Chemical	S0122-18-20 7/25/2005 ug/Kg	S0123-18-20 7/25/2005 ug/Kg	S0124-18-20 7/25/2005 ug/Kg	S0403-1-3 7/26/2005 ug/kg	S0403-10-12 7/26/2005 ug/Kg	S1101-1-3 7/25/2005 ug/Kg	S1102-1.5-3.5 7/25/2005 ug/Kg	S1103-0-2 7/25/2005 ug/Kg
1,2,4-Trichlorobenzene	390 U	420 U	420 U	410 U	410 U	390 U	390 U	420 U
1,2-Dichlorobenzene	390 U	420 U	420 U	410 U	410 U	390 U	390 U	420 U
1,3-Dichlorobenzene	390 U	420 U	420 U	410 U	410 U	390 U	390 U	420 U
1,4-Dichlorobenzene	390 U	420 U	420 U	410 U	410 U	390 U	390 U	420 U
2,2'-oxybis(2-chloropropane)	390 U	420 U	420 U	410 U	410 U	390 U	390 U	420 U
2,4,5-Trichlorophenol	390 U	420 U	420 U	410 U	410 U	390 U	390 U	420 U
2,4,6-Trichlorophenol	390 U	420 U	420 U	410 U	410 U	390 U	390 U	420 U
2,4-Dichlorophenol	390 U	420 U	420 U	410 U	410 U	390 U	390 U	420 U
2,4-Dimethylphenol	390 U	420 U	420 U	410 U	410 U	390 U	390 U	420 U
2,4-Dinitrophenol	2000 U	2200 U	2200 U	2100 U	2100 U	2000 U	2000 U	2200 U
2,4-Dinitrotoluene	390 U	420 U	420 U	410 U	410 U	390 U	390 U	420 U
2,6-Dinitrotoluene	390 U	420 U	420 U	410 U	410 U	390 U	390 U	420 U
2-Chloronaphthalene	390 U	420 U	420 U	410 U	410 U	390 U	390 U	420 U
2-Chlorophenol	390 U	420 U	420 U	410 U	410 U	390 U	390 U	420 U
2-Methylnaphthalene	390 U	420 U	420 U	410 U	410 U	390 U	390 U	420 U
2-Methylphenol (o-Cresol)	390 U	420 U	420 U	410 U	410 U	390 U	390 U	420 U
2-Nitroaniline	2000 U	2200 U	2200 U	2100 U	2100 U	2000 U	2000 U	2200 U
2-Nitrophenol	390 U	420 U	420 U	410 U	410 U	390 U	390 U	420 U
3 & 4 Methylphenol	390 U	420 U	420 U	410 U	410 U	390 U	390 U	420 U
3,3'-Dichlorobenzidine	770 U	840 U	840 U	820 U	820 U	770 U	790 U	840 U
3-Nitroaniline	2000 U	2200 U	2200 U	2100 U	2100 U	2000 U	2000 U	2200 U
4,6-Dinitro-2-methylphenol	2000 U	2200 U	2200 U	2100 U	2100 U	2000 U	2000 U	2200 U
4-Bromophenyl Phenyl Ether	390 U	420 U	420 U	410 U	410 U	390 U	390 U	420 U
4-Chloro-3-methylphenol	390 U	420 U	420 U	410 U	410 U	390 U	390 U	420 U
4-Chlorophenyl Phenyl Ether	390 U	420 U	420 U	410 U	410 U	390 U	390 U	420 U
4-Nitrophenol	2000 U	2200 U	2200 U	2100 U	2100 U	2000 U	2000 U	2200 U
Acenaphthene	390 U	420 U	420 U	410 U	410 U	390 U	390 U	420 U
Acenaphthylene	390 U	420 U	420 U	410 U	410 U	390 U	390 U	420 U
Anthracene	390 U	420 U	420 U	410 U	410 U	390 U	390 U	420 U
Benzo(a)anthracene	390 U	420 U	420 U	410 U	410 U	390 U	390 U	420 U
Benzo(a)pyrene	390 U	420 U	420 U	410 U	410 U	390 U	390 U	420 U
Benzo(b)fluoranthene	390 U	420 U	420 U	410 U	410 U	390 U	390 U	420 U
Benzo(g,h,i)perylene	390 U	420 U	420 U	410 U	410 U	390 U	390 U	420 U
Benzo(k)fluoranthene	390 U	420 U	420 U	410 U	410 U	390 U	390 U	420 U
Benzyl Butyl Phthalate	390 U	420 U	420 U	410 U	410 U	390 U	390 U	420 U
bis(2-Chloroethoxy)methane	390 U	420 U	420 U	410 U	410 U	390 U	390 U	420 U

Data Qualifier Codes
U - Non-detect
UJ - Estimated non-detect
J - Estimated
R - Rejected
NA - Reporting limit not available (Tentitively Identified Compound)

TABLE 3.1
SOIL ANALYTICAL RESULTS
SVOCS

Chemical	S0122-18-20 7/25/2005 ug/Kg	S0123-18-20 7/25/2005 ug/Kg	S0124-18-20 7/25/2005 ug/Kg	S0403-1-3 7/26/2005 ug/kg	S0403-10-12 7/26/2005 ug/Kg	S1101-1-3 7/25/2005 ug/Kg	S1102-1.5-3.5 7/25/2005 ug/Kg	S1103-0-2 7/25/2005 ug/Kg
bis(2-Chloroethyl)ether	390 U	420 U	420 U	410 U	410 U	390 U	390 U	420 U
bis(2-Ethylhexyl)phthalate	390 U	420 U	420 U	410 U	410 U	390 U	390 U	420 U
Carbazole	390 U	420 U	420 U	410 U	410 U	390 U	390 U	420 U
Chrysene	390 U	420 U	420 U	410 U	410 U	390 U	390 U	420 U
Dibenzo(a,h)anthracene	390 U	420 U	420 U	410 U	410 U	390 U	390 U	420 U
Dibenzofuran	390 U	420 U	420 U	410 U	410 U	390 U	390 U	420 U
Diethyl Phthalate	390 U	420 U	420 U	410 U	410 U	390 U	390 U	420 U
Dimethyl Phthalate	390 U	420 U	420 U	410 U	410 U	390 U	390 U	420 U
Di-n-butylphthalate	390 U	420 U	420 U	410 U	410 U	390 U	390 U	420 U
Di-n-octylphthalate	390 U	420 U	420 U	410 U	410 U	390 U	390 U	420 U
Fluoranthene	390 U	420 U	420 U	410 U	410 U	390 U	390 U	420 U
Fluorene	390 U	420 U	420 U	410 U	410 U	390 U	390 U	420 U
Hexachlorobenzene	390 U	420 U	420 U	410 U	410 U	390 U	390 U	420 U
Hexachlorobutadiene	390 U	420 U	420 U	410 U	410 U	390 U	390 U	420 U
Hexachlorocyclopentadiene	390 U	420 U	420 U	410 U	410 U	390 U	390 U	420 U
Hexachloroethane	390 U	420 U	420 U	410 U	410 U	390 U	390 U	420 U
Indeno(1,2,3-cd)pyrene	390 U	420 U	420 U	410 U	410 U	390 U	390 U	420 U
Isophorone	390 U	420 U	420 U	410 U	410 U	390 U	390 U	420 U
Naphthalene	390 U	420 U	420 U	410 U	410 U	390 U	390 U	420 U
Nitrobenzene	390 U	420 U	420 U	410 U	410 U	390 U	390 U	420 U
N-Nitroso-di-n-propylamine	390 U	420 U	420 U	410 U	410 U	390 U	390 U	420 U
N-Nitrosodiphenylamine	390 U	420 U	420 U	410 U	410 U	390 U	390 U	420 U
P-Chloroaniline	770 U	840 U	840 U	820 U	820 U	770 U	790 U	840 U
Pentachlorophenol	2000 U	2200 U	2200 U			2000 U	2000 U	2200 U
Phenanthrene	390 U	420 U	420 U	410 U	410 U	390 U	390 U	420 U
Phenol	390 U	420 U	420 U	410 U	410 U	390 U	390 U	420 U
P-Nitroaniline	2000 U	2200 U	2200 U	2100 U	2100 U	2000 U	2000 U	2200 U
Pyrene	390 U	420 U	420 U	410 U	410 U	390 U	390 U	420 U
1-Chloro-2,4-Dinitrobenzene	NA U	NA U	NA U	NA U	NA U	NA U	NA U	NA U
2-Nitrobiphenyl	NA U	NA U	NA U	NA U	NA U	NA U	NA U	NA U
2-Nitrochlorobenzene	NA U	NA U	NA U	NA U	NA U	NA U	NA U	NA U
3,4-Dichloronitrobenzene	NA U	NA U	NA U	NA U	NA U	NA U	NA U	NA U
3-Nitrobiphenyl	NA U	NA U	NA U	NA U	NA U	NA U	NA U	NA U
3-Nitrochlorobenzene	NA U	NA U	NA U	NA U	NA U	NA U	NA U	NA U
4-Nitrobiphenyl	NA U	NA U	NA U	NA U	NA U	NA U	NA U	NA U
4-Nitrochlorobenzene	NA U	NA U	NA U	NA U	NA U	NA U	NA U	NA U

Data Qualifier Codes
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TABLE 3.1
SOIL ANALYTICAL RESULTS
PESTICIDES

Chemical	S0403-1-3 7/26/2005 ug/Kg	S0403-10-12 7/26/2005 ug/Kg
4,4'-DDD	4.1 U	4.1 U
4,4'-DDE	4.1 U	4.1 U
4,4'-DDT	5.4 J	4.1 U
Aldrin	2.1 U	2.1 U
alpha-BHC	2.1 U	2.1 U
beta-BHC	2.1 U	2.1 U
Chlordane	21 U	21 U
delta-BHC	2.1 U	2.1 U
Dieldrin	4.1 U	4.1 U
Endosulfan I	2.1 U	2.1 U
Endosulfan II	4.1 U	4.1 U
Endosulfan Sulfate	4.1 U	4.1 U
Endrin	4.1 U	4.1 U
Endrin Aldehyde	4.1 U	4.1 U
Endrin Ketone	4.1 U	4.1 U
gamma-BHC (Lindane)	2.1 U	2.1 U
Heptachlor	2.1 U	2.1 U
Heptachlor Epoxide	2.1 U	2.1 U
Methoxychlor	21 U	21 U
Toxaphene	210 U	210 U

Data Qualifier Codes
U - Non-detect
J - Estimated

TABLE 3.1
SOIL ANALYTICAL RESULTS
HERBICIDES

Chemical	S0403-1-3 7/26/2005 ug/Kg	S0403-10-12 7/26/2005 ug/Kg
2,4,5-T	8.3 U	8.3 U
2,4,5-TP (Silvex)	8.3 U	8.3 U
2,4-D	8.3 U	8.3 U
2,4-DB	8.3 U	8.3 U
Dalapon	330 U	330 U
Dicamba	8.3 U	8.3 U
Dichlorprop	100 U	100 U
Dinoseb	100 U	100 U
MCPA (2-Methyl-4-Chlorophenoxyacetic Acid)	2000 U	2000 U
MCPP	2000 U	2000 U
Pentachlorophenol	8.3 U	8.3 U

Data Qualifier Codes
U - Non-detect

TABLE 3.1
SOIL ANAYLYTICAL RESULTS
PCBS

Chemical	S0214-0-2 7/25/2005 ug/Kg	S0214-0-2-DUP 7/25/2005 ug/Kg	S0215-0-2 7/25/2005 ug/Kg	S0216-0-2 7/25/2005 ug/Kg	S0217-0-2 7/25/2005 ug/Kg	S0403-1-3 7/26/2005 ug/Kg	S0403-10-12 7/26/2005 ug/Kg	S0902-4-6 7/27/2005 ug/Kg	S0902-6-8 7/27/2005 ug/Kg
Aroclor 1268	38 U	38 U	70 U	38 U	75 U	41 U	41 U	47 U	45 U
Aroclor-1016	38 U	38 U	70 U	38 U	75 U	41 U	41 U	47 U	45 U
Aroclor-1221	77 U	78 U	140 U	78 U	150 U	83 U	83 U	5100 D J	92 U
Aroclor-1232	38 U	38 U	70 U	38 U	75 U	41 U	41 U	47 U	45 U
Aroclor-1242	38 U	38 U	70 U	38 U	75 U	41 U	41 U	7600 D J	350
Aroclor-1248	38 U	38 U	70 U	320 P	75 U	41 U	41 U	47 U	45 U
Aroclor-1254	38 U	38 U	70 U	38 U	75 U	41 U	41 U	1600 D J	45 U
Aroclor-1260	38 U	38 U	130 P	38 U	320 P	41 U	41 U	330 J	45 U
Total PCBs (Aroclor)	ND	ND	130	320	320	ND	ND	14630	350

Chemical	S0903-2-4 7/27/2005 ug/Kg	S0903-2-4-DUP 7/27/2005 ug/Kg	S0907-10-12 7/27/2005 ug/Kg	S0929-5-7 7/27/2005 ug/Kg	S0930-2-4 7/27/2005 ug/Kg	S0931-3-5 7/27/2005 ug/Kg	S1003-4-6 7/27/2005 ug/Kg	S1004-3-5 7/27/2005 ug/Kg
Aroclor 1268	100 J	85 J	47 U	170 J	7100	740 U	64 J	190 P J
Aroclor-1016	37 U	36 U	47 U	87 U	790 U	740 U	40 U	45 U
Aroclor-1221	76 U	73 U	95 U	180 U	1600 U	1500 U	82 U	92 U
Aroclor-1232	37 U	36 U	47 U	87 U	790 U	740 U	40 U	45 U
Aroclor-1242	37 U	36 U	47 U	87 U	790 U	740 U	40 U	45 U
Aroclor-1248	37 U	36 U	47 U	200 J	790 U	4800 P	40 U	45 U
Aroclor-1254	230 J	120 J	47 U	880 J	790 U	740 U	72 J	45 U
Aroclor-1260	200 J	190 J	47 U	320 J	2300	1300	67 J	67 J
Total PCBs (Aroclor)	530	395	ND	1570	9400	6100	203	257

Highlighted row is Total PCBs

Data Qualifier Codes
U - Non-detect
J - Estimated
D - Diluted
P - 25% difference between the two GC columns

TABLE 3.1
SOIL ANALYTICAL RESULTS
METALS

Chemical	S0119-0-2 7/25/2005 mg/Kg	S0120-0-2 7/25/2005 mg/Kg	S0916-13-15 7/26/2005 mg/Kg	S0919-13-15 7/26/2005 mg/Kg	S0920-13-15 7/27/2005 mg/Kg	S0925-2-3 7/27/2005 mg/Kg	S0925-6-7 7/27/2005 mg/Kg	S0925-9-10 7/27/2005 mg/Kg	S0926-2-3 7/27/2005 mg/Kg	S0926-6-7 7/27/2005 mg/Kg
Lead	70	98 J								
Mercury			0.19	1.6 S	58 J	39	0.55 S	0.092	0.57 S	30 J

Chemical	S0926-6-7-DUP 7/27/2005 mg/Kg	S0926-9-10 7/27/2005 mg/Kg	S0926-9-10-DUP 7/27/2005 mg/Kg	S0927-2-3 7/26/2005 mg/Kg	S0927-6-7 7/26/2005 mg/Kg	S0927-9-10 7/26/2005 mg/Kg	S0928-2-3 7/26/2005 mg/Kg	S0928-6-7 7/26/2005 mg/Kg	S0928-9-10 7/26/2005 mg/Kg
Lead									
Mercury	4.6 J	5.8	3.6	0.034	81	17	0.27	0.71 S	0.21

Data Qualifier Codes
J - Estimated
S - Method of Standard Addition used : Out of range for matrix

TABLE 3.2
GROUNDWATER ANALYTICAL RESULTS
SVOCs

Chemical	GM-31A 8/1/2005 ug/L	GM-31B 8/1/2005 ug/L	GM-31B-DUP 8/1/2005 ug/L	GM-31C 8/2/2005 ug/L	GM-54A-II 8/3/2005 ug/L	GM-54B 8/3/2005 ug/L	GM-58A 8/3/2005 ug/L	GM-59A 8/1/2005 ug/L	GM-8 8/2/2005 ug/L
1,2,4-Trichlorobenzene	9.5 U	9.5 U	9.4 U	95 U	9.5 U	9.5 U	9.7 U	9.6 U	9.9 U
1,2-Dichlorobenzene	9.5 U	9.5 U	9.4 U	95 U	9.5 U	9.5 U	9.7 U	9.6 U	9.9 U
1,3-Dichlorobenzene	9.5 U	9.5 U	9.4 U	95 U	9.5 U	9.5 U	9.7 U	9.6 U	9.9 U
1,4-Dichlorobenzene	9.5 U	9.5 U	9.4 U	95 U	9.5 U	9.5 U	9.7 U	9.6 U	9.9 U
2,2'-oxybis(2-chloropropane)	9.5 U	9.5 U	9.4 U	95 U	9.5 U	9.5 U	9.7 U	9.6 U	9.9 U
2,4,5-Trichlorophenol	9.5 U	9.5 U	9.4 U	95 U	9.5 U	9.5 U	9.7 U	9.6 U	9.9 U
2,4,6-Trichlorophenol	180	9.5 U	9.4 U	95 U	9.5 U	9.5 U	110	9.6 U	9.9 U
2,4-Dichlorophenol	16	9.5 U	9.4 U	95 U	9.5 U	9.5 U	9.7 U	9.6 U	9.9 U
2,4-Dimethylphenol	9.5 U	9.5 U	9.4 U	95 U	9.5 U	9.5 U	9.7 U	9.6 U	9.9 U
2,4-Dinitrophenol	48 U	48 U	47 U	480 U	48 U	48 U	49 U	48 U	50 U
2,4-Dinitrotoluene	9.5 U	9.5 U	9.4 U	95 U	9.5 U	9.5 U	9.7 U	9.6 U	9.9 U
2,6-Dinitrotoluene	9.5 U	9.5 U	9.4 U	95 U	9.5 U	9.5 U	9.7 U	9.6 U	9.9 U
2-Chloronaphthalene	9.5 U	9.5 U	9.4 U	95 U	9.5 U	9.5 U	9.7 U	9.6 U	9.9 U
2-Chlorophenol	9.5 U	9.5 U	9.4 U	95 U	9.5 U	9.5 U	9.7 U	9.6 U	9.9 U
2-Methylnaphthalene	9.5 U	9.5 U	9.4 U	95 U	9.5 U	9.5 U	9.7 U	9.6 U	9.9 U
2-Methylphenol (o-Cresol)	9.5 U	9.5 U	9.4 U	95 U	9.5 U	9.5 U	9.7 U	9.6 U	9.9 U
2-Nitroaniline	48 U	48 U	47 U	480 U	48 U	48 U	49 U	48 U	50 U
2-Nitrophenol	9.5 U	9.5 U	9.4 U	95 U	9.5 U	9.5 U	9.7 U	9.6 U	9.9 U
3 & 4 Methylphenol	9.5 U	9.5 U	9.4 U	95 U	9.5 U	9.5 U	9.7 U	9.6 U	9.9 U
3,3'-Dichlorobenzidine	19 U	19 U	19 U	190 U	19 U	19 U	19 U	19 U	20 U
3-Nitroaniline	48 U	48 U	47 U	480 U	48 U	48 U	49 U	48 U	50 U
4,6-Dinitro-2-methylphenol	48 U	48 U	47 U	480 U	48 U	48 U	49 U	48 U	50 U
4-Bromophenyl Phenyl Ether	9.5 U	9.5 U	9.4 U	95 U	9.5 U	9.5 U	9.7 U	9.6 U	9.9 U
4-Chloro-3-methylphenol	9.5 U	9.5 U	9.4 U	95 U	9.5 U	9.5 U	9.7 U	9.6 U	9.9 U
4-Chlorophenyl Phenyl Ether	9.5 U	9.5 U	9.4 U	95 U	9.5 U	9.5 U	9.7 U	9.6 U	9.9 U
4-Nitrophenol	48 U	48 U	47 U	480 U	48 U	48 U	49 U	48 U	50 U
Acenaphthene	9.5 U	9.5 U	9.4 U	95 U	9.5 U	9.5 U	9.7 U	9.6 U	9.9 U
Acenaphthylene	9.5 U	9.5 U	9.4 U	95 U	9.5 U	9.5 U	9.7 U	9.6 U	9.9 U
Anthracene	9.5 U	9.5 U	9.4 U	95 U	9.5 U	9.5 U	9.7 U	9.6 U	9.9 U

Data Qualifier Codes
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UJ - Estimated non-detect
J - Estimated
NJ - Presumptive evidence of Tentatively Identified Compound, estimated value
NA - Reporting limit not available (Tentitively Identified Compound)

TABLE 3.2
GROUNDWATER ANALYTICAL RESULTS
SVOCs

Chemical	GM-31A 8/1/2005 ug/L	GM-31B 8/1/2005 ug/L	GM-31B-DUP 8/1/2005 ug/L	GM-31C 8/2/2005 ug/L	GM-54A-II 8/3/2005 ug/L	GM-54B 8/3/2005 ug/L	GM-58A 8/3/2005 ug/L	GM-59A 8/1/2005 ug/L	GM-8 8/2/2005 ug/L
Benzo(a)anthracene	9.5 U	9.5 U	9.4 U	95 U	9.5 U	9.5 U	9.7 U	9.6 U	9.9 U
Benzo(a)pyrene	9.5 U	9.5 U	9.4 U	95 U	9.5 U	9.5 U	9.7 U	9.6 U	9.9 U
Benzo(b)fluoranthene	9.5 U	9.5 U	9.4 U	95 U	9.5 U	9.5 U	9.7 U	9.6 U	9.9 U
Benzo(g,h,i)perylene	9.5 U	9.5 U	9.4 U	95 U	9.5 U	9.5 U	9.7 U	9.6 U	9.9 U
Benzo(k)fluoranthene	9.5 U	9.5 U	9.4 U	95 U	9.5 U	9.5 U	9.7 U	9.6 U	9.9 U
Benzyl Butyl Phthalate	9.5 U	9.5 U	9.4 U	95 U	9.5 U	9.5 U	9.7 U	9.6 U	9.9 U
bis(2-Chloroethoxy)methane	9.5 U	9.5 U	9.4 U	95 U	9.5 U	9.5 U	9.7 U	9.6 U	9.9 U
bis(2-Chloroethyl)ether	9.5 U	9.5 U	9.4 U	95 U	9.5 U	9.5 U	9.7 U	9.6 U	9.9 U
bis(2-Ethylhexyl)phthalate	9.5 U	14	11	95 U	9.5 U	26	9.7 U	9.6 U	9.9 U
Carbazole	9.5 U	9.5 U	9.4 U	95 U	9.5 U	9.5 U	9.7 U	9.6 U	9.9 U
Chrysene	9.5 U	9.5 U	9.4 U	95 U	9.5 U	9.5 U	9.7 U	9.6 U	9.9 U
Dibenzo(a,h)anthracene	9.5 U	9.5 U	9.4 U	95 U	9.5 U	9.5 U	9.7 U	9.6 U	9.9 U
Dibenzofuran	9.5 U	9.5 U	9.4 U	95 U	9.5 U	9.5 U	9.7 U	9.6 U	9.9 U
Diethyl Phthalate	9.5 U	9.5 U	9.4 U	95 U	9.5 U	9.5 U	9.7 U	9.6 U	9.9 U
Dimethyl Phthalate	9.5 U	9.5 U	9.4 U	95 U	9.5 U	9.5 U	9.7 U	9.6 U	9.9 U
Di-n-butylphthalate	9.5 U	9.5 U	9.4 U	95 U	9.5 U	9.5 U	9.7 U	9.6 U	9.9 U
Di-n-octylphthalate	9.5 U	9.5 U	9.4 U	95 U	9.5 U	9.5 U	9.7 U	9.6 U	9.9 U
Fluoranthene	9.5 U	9.5 U	9.4 U	95 U	9.5 U	9.5 U	9.7 U	9.6 U	9.9 U
Fluorene	9.5 U	9.5 U	9.4 U	95 U	9.5 U	9.5 U	9.7 U	9.6 U	9.9 U
Hexachlorobenzene	9.5 U	9.5 U	9.4 U	95 U	9.5 U	9.5 U	9.7 U	9.6 U	9.9 U
Hexachlorobutadiene	9.5 U	9.5 U	9.4 U	95 U	9.5 U	9.5 U	9.7 U	9.6 U	9.9 U
Hexachlorocyclopentadiene	9.5 U	9.5 U	9.4 U	95 U	9.5 U	9.5 U	9.7 U	9.6 U	9.9 U
Hexachloroethane	9.5 U	9.5 U	9.4 U	95 U	9.5 U	9.5 U	9.7 U	9.6 U	9.9 U
Indeno(1,2,3-cd)pyrene	9.5 U	9.5 U	9.4 U	95 U	9.5 U	9.5 U	9.7 U	9.6 U	9.9 U
Isophorone	9.5 U	9.5 U	9.4 U	95 U	9.5 U	9.5 U	9.7 U	9.6 U	9.9 U
Naphthalene	9.5 U	9.5 U	9.4 U	95 U	9.5 U	9.5 U	9.7 U	9.6 U	9.9 U
Nitrobenzene	9.6	9.5 U	9.4 U	95 U	9.5 U	9.5 U	9.7 U	9.6 U	9.9 U
N-Nitroso-di-n-propylamine	9.5 U	9.5 U	9.4 U	95 U	9.5 U	9.5 U	9.7 U	9.6 U	9.9 U
N-Nitrosodiphenylamine	9.5 U	9.5 U	9.4 U	95 U	9.5 U	9.5 U	9.7 U	9.6 U	9.9 U

Data Qualifier Codes
U - Non-detect
UJ - Estimated non-detect
J - Estimated
NJ - Presumptive evidence of Tentatively Identified Compound, estimated value
NA - Reporting limit not available (Tentitively Identified Compound)

TABLE 3.2
GROUNDWATER ANALYTICAL RESULTS
SVOCs

Chemical	GM-31A 8/1/2005 ug/L	GM-31B 8/1/2005 ug/L	GM-31B-DUP 8/1/2005 ug/L	GM-31C 8/2/2005 ug/L	GM-54A-II 8/3/2005 ug/L	GM-54B 8/3/2005 ug/L	GM-58A 8/3/2005 ug/L	GM-59A 8/1/2005 ug/L	GM-8 8/2/2005 ug/L
P-Chloroaniline	19 U	19 U	19 U	1400	19 U	19 U	19 U	19 U	20 U
Pentachlorophenol	90	48 U	47 U	480 U	48 U	48 U	49 U	48 U	50 U
Phenanthrene	9.5 U	9.5 U	9.4 U	95 U	9.5 U	9.5 U	9.7 U	9.6 U	9.9 U
Phenol	9.5 U	9.5 U	9.4 U	95 U	9.5 U	9.5 U	9.7 U	9.6 U	9.9 U
P-Nitroaniline	48 U	48 U	47 U	480 U	48 U	48 U	49 U	48 U	50 U
Pyrene	9.5 U	9.5 U	9.4 U	95 U	9.5 U	9.5 U	9.7 U	9.6 U	9.9 U
1-Chloro-2,4-Dinitrobenzene	NA U	NA U	NA U	NA U	NA U	NA U	NA U	NA U	NA U
2-Nitrobiphenyl	51 NJ	NA U	NA U	NA U	NA U	NA U	NA U	NA U	NA U
2-Nitrochlorobenzene	74 NJ	NA U	NA U	NA U	NA U	NA U	9.5 NJ	NA U	NA U
3,4-Dichloronitrobenzene	NA U	NA U	NA U	NA U	NA U	NA U	NA U	NA U	NA U
3-Nitrobiphenyl	NA U	NA U	NA U	NA U	NA U	NA U	NA U	NA U	NA U
3-Nitrochlorobenzene	7.9 NJ	NA U	NA U	NA U	NA U	NA U	NA U	NA U	NA U
4-Nitrobiphenyl	NA U	NA U	NA U	NA U	NA U	NA U	NA U	NA U	NA U
4-Nitrochlorobenzene	11 NJ	NA U	NA U	NA U	NA U	NA U	5 NJ	NA U	NA U

Data Qualifier Codes
U - Non-detect
UJ - Estimated non-detect
J - Estimated
NJ - Presumptive evidence of Tentatively Identified Compound, estimated value
NA - Reporting limit not available (Tentitively Identified Compound)

TABLE 3.2
GROUNDWATER ANALYTICAL RESULTS
PCBs

Chemical	GM-31A 8/1/2005 ug/L	GM-31B 8/1/2005 ug/L	GM-31B-DUP 8/1/2005 ug/L	GM-31C 8/2/2005 ug/L	GM-54A-II 8/3/2005 ug/L	GM-54B 8/3/2005 ug/L	GM-58A 8/3/2005 ug/L	GM-59A 8/1/2005 ug/L	GM-8 8/2/2005 ug/L
Aroclor-1016	0.95 U R	0.94 U R	0.94 U R	0.94 U	0.94 U	0.96 U UJ	0.95 U	0.97 U UJ	0.94 U UJ
Aroclor-1221	1.9 U R	1.9 U R	1.9 U R	1.9 U	1.9 U	1.9 U UJ	1.9 U	1.9 U UJ	1.9 U UJ
Aroclor-1232	0.95 U R	0.94 U R	0.94 U R	0.94 U	0.94 U	0.96 U UJ	0.95 U	0.97 U UJ	0.94 U UJ
Aroclor-1242	0.95 U R	0.94 U R	0.94 U R	0.94 U	0.94 U	0.96 U UJ	0.95 U	0.97 U UJ	0.94 U UJ
Aroclor-1248	0.95 U R	0.94 U R	0.94 U R	0.94 U	0.94 U	0.96 U UJ	0.95 U	0.97 U UJ	0.94 U UJ
Aroclor-1254	0.95 U R	0.94 U R	0.94 U R	0.94 U	0.94 U	0.96 U UJ	0.95 U	0.97 U UJ	0.94 U UJ
Aroclor-1260	0.95 U R	0.94 U R	0.94 U R	0.94 U	0.94 U	0.96 U UJ	0.95 U	0.97 U UJ	0.94 U UJ

Data Qualifier Codes
U - Non-detect
UJ - Estimated non-detect
J - Estimated
R - Rejected

LOG OF BORING
S0115

Completion Date: 7/25/05
Casing Elevation:
Ground Elevation:

Depth In feet	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
	24	24	0.0			SM	Soft, slightly moist to dry, brown, silty fine grained SAND (SM) with roots	0948 Collected samples S0115-0-2 and S0115-0-2-DUP for SVOC analysis
			0.0			SP	Medium dense, dry, light brown, fine grained SAND (SP)	Bottom of Boring at 2 ft bgs Backfilled using granular bentonite
5								

Completion Depth: 2.00 Ft. bgs
Project No.: 21561600.00000
Project Name: Krummrich Supplemental Soil & GW Investigation
Drilling Contractor: REDI
Drilling method: Geoprobe
Logged by: M. Corbett

URS

Water Depth: _____ ft., After _____ hrs.
Water Depth: _____ ft., After _____ hrs.
▼ Water level at time of drilling
▽ Water level after drilling
■ 3" Clear Acetate Liner
Hollow Stem Auger
Rotosonic 3" Core Barrel
ATD - At time of drilling
Geoprobe Macro Sampler
Hand Auger Sampler
Unified Soil Classification based on field visual observations.

URS (ENVIRON) LOG WGK SUPPLEMENTAL 21561600 KRUMMRICH SUPPLEMENTAL.GPJ URSSTLEV.GDT 9/29/05

LOG OF BORING
S0116

Completion Date: 7/25/05
Casing Elevation:
Ground Elevation:

Depth In feet	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
	24	24	0.0			ML	Soft, dry, brown SILT (ML) with roots	0925 Collected sample S0116-0-2 for SVOC analysis
			0.0			SP	Medium dense, dry to slighty moist, light brown, fine grained SAND (SP)	Bottom of Boring at 2 ft bgs Backfilled using granular bentonite
5								

Completion Depth: 2.00 Ft. bgs
Project No.: 21561600.00000
Project Name: Krummrich Supplemental Soil & GW Investigation
Drilling Contractor: REDI
Drilling method: Geoprobe
Logged by: M. Corbett

URS

Water Depth: _____ ft., After _____ hrs.
Water Depth: _____ ft., After _____ hrs.
▼ Water level at time of drilling
▽ Water level after drilling
■ 3" Clear Acetate Liner
Hollow Stem Auger
Rotosonic 3" Core Barrel
ATD - At time of drilling
Geoprobe Macro Sampler
Hand Auger Sampler
Unified Soil Classification based on field visual observations.

URS (ENVIRON) LOG WGK SUPPLEMENTAL 21561600 KRUMMRICH SUPPLEMENTAL.GPJ URSSTLEV.GDT 9/29/05

LOG OF BORING
S0117

Completion Date: 7/25/05
Casing Elevation:
Ground Elevation:

Depth In feet	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
	24	24	0.0			ML	Soft, slightly moist, brown, sandy SILT (ML) trace fine gravel and roots	0940 Collected sample S0117-0-2 for SVOC analysis
			0.0			SP	Medium dense, dry, light brown, fine grained SAND (SP)	Bottom of Boring at 2 ft bgs Backfilled using granular bentonite
5								

Completion Depth: 2.00 Ft. bgs
Project No.: 21561600.00000
Project Name: Krummrich Supplemental Soil & GW Investigation
Drilling Contractor: REDI
Drilling method: Geoprobe
Logged by: M. Corbett

URS

Water Depth: _____ ft., After _____ hrs.
Water Depth: _____ ft., After _____ hrs.
▼ Water level at time of drilling
▽ Water level after drilling
■ 3" Clear Acetate Liner
Hollow Stem Auger
Rotosonic 3" Core Barrel
ATD - At time of drilling
Geoprobe Macro Sampler
Hand Auger Sampler
Unified Soil Classification based on field visual observations.

URS (ENVIRON) LOG WGK SUPPLEMENTAL 21561600 KRUMMRICH SUPPLEMENTAL.GPJ URSSTLEV.GDT 9/29/05

LOG OF BORING
S0118

Completion Date: 7/25/05
Casing Elevation:
Ground Elevation:

Depth In feet	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
	24	24	0.0			ML	Soft, dry to moist, brown SILT (ML) trace gravel and roots	0920 Collected sample S0118-0-2 for SVOC analysis
			0.0			SP	Medium dense, dry to slightly moist, light brown, fine grained SAND (SP)	Bottom of Boring at 2 ft bgs Backfilled using granular bentonite
5								

Completion Depth: 2.00 Ft. bgs
Project No.: 21561600.00000
Project Name: Krummrich Supplemental Soil & GW Investigation
Drilling Contractor: REDI
Drilling method: Geoprobe
Logged by: M. Corbett

URS

Water Depth: _____ ft., After _____ hrs.
Water Depth: _____ ft., After _____ hrs.
Water level at time of drilling
Water level after drilling
3" Clear Acetate Liner
Hollow Stem Auger
Rotosonic 3" Core Barrel
ATD - At time of drilling
Geoprobe Macro Sampler
Hand Auger Sampler
Unified Soil Classification based on field visual observations.

URS (ENVIRON) LOG WGK SUPPLEMENTAL 21561600 KRUMMRICH SUPPLEMENTAL.GPJ URSSTLEV.GDT 9/29/05

LOG OF BORING
S0119

Completion Date: 7/25/05.
Casing Elevation:
Ground Elevation:

Depth In feet	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
	24	24	0.0			ML	Soft, slightly moist, brown sandy SILT (ML) with organic roots	1002 Collected sample S0119-0-2 for SVOC and Lead analysis
			0.0			SP	Medium dense, slightly moist, light brown, fine grained SAND (SP) with roots	Bottom of Boring at 2 ft bgs Backfilled using granular bentonite
5								

Completion Depth: 2.00 Ft. bgs
Project No.: 21561600.00000
Project Name: Krummrich Supplemental Soil & GW Investigation
Drilling Contractor: REDI
Drilling method: Geoprobe
Logged by: M. Corbett

URS

Water Depth: _____ ft., After _____ hrs.
Water Depth: _____ ft., After _____ hrs.
Water level at time of drilling
Water level after drilling
3" Clear Acetate Liner
Hollow Stem Auger
Rotosonic 3" Core Barrel
ATD - At time of drilling
Geoprobe Macro Sampler
Hand Auger Sampler
Unified Soil Classification based on field visual observations.

URS (ENVIRON) LOG WGK SUPPLEMENTAL 21561600 KRUMMRICH SUPPLEMENTAL.GPJ URSSTLEV.GDT 9/29/05

LOG OF BORING
S0120

Completion Date: 7/25/05
Casing Elevation:
Ground Elevation:

Depth In feet	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
	24	24	0.0 0.0			ML	Soft, dry, brown SILT (ML) with roots	0932 Collected sample S0120-0-2 for SVOC and Lead analysis Bottom of Boring at 2 ft bgs Backfilled using granular bentonite
5								

Completion Depth: 2.00 Ft. bgs
Project No.: 21561600.00000
Project Name: Krummrich Supplemental Soil & GW Investigation
Drilling Contractor: REDI
Drilling method: Geoprobe
Logged by: M. Corbett

URS

Water Depth: _____ ft., After _____ hrs.
Water Depth: _____ ft., After _____ hrs.
Water level at time of drilling
Water level after drilling
3" Clear Acetate Liner
Hollow Stem Auger
Rotosonic 3" Core Barrel
ATD - At time of drilling
Geoprobe Macro Sampler
Hand Auger Sampler
Unified Soil Classification based on field visual observations.

LOG OF BORING
S0121

Completion Date: 7/25/05
Casing Elevation:
Ground Elevation:

Depth In feet	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
	48	48	0.0			SP	Medium dense, slightly moist, light brown, very fine grained SAND (SP)	
			0.0				Becomes fine grained	
5	48	48	0.0					
			0.0			SM	Brown, silty fine grained SAND (SM)	
	48	48	0.0			CL	Soft, slightly moist, brown, low plastic, fine grained sandy CLAY (CL)	

Completion Depth: 20.00 Ft. bgs
Project No.: 21561600.00000
Project Name: Krummrich Supplemental Soil & GW Investigation
Drilling Contractor: REDI
Drilling method: Geoprobe
Logged by: M. Corbett

Water Depth: _____ ft., After _____ hrs.
Water Depth: _____ ft., After _____ hrs.
Water level at time of drilling
Water level after drilling
3" Clear Acetate Liner
Hollow Stem Auger
Rotosonic 3" Core Barrel
ATD - At time of drilling
Geoprobe Macro Sampler
Hand Auger Sampler
Unified Soil Classification based on field visual observations.

URS

LOG OF BORING
S0121

Completion Date: 7/25/05
Casing Elevation:
Ground Elevation:

Depth In feet	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
			0.0			SM	Soft, moist, brown, silty fine grained SAND (SM)	
						SP	Medium dense, slightly moist, light brown, fine grained SAND (SP)	
	48	48	0.0			SM	Moist silty SAND (SM)	
						CL	Medium Stiff, moist to wet, brown CLAY (CL)	
15			0.0			SW	Medium dense, slightly moist, light brown, fine grained SAND (SW)	
	48	48	0.0			SW	Becomes moist	1115 Collected samples S0121-18-20 and S0121-18-20-DUP for VOC and SVOC analysis
			0.0					Bottom of Boring at 20 ft bgs Backfilled using granular bentonite

Completion Depth: 20.00 Ft. bgs
Project No.: 21561600.00000
Project Name: Krummrich Supplemental Soil & GW Investigation
Drilling Contractor: REDI
Drilling method: Geoprobe
Logged by: M. Corbett

URS

Water Depth: _____ ft., After _____ hrs.
Water Depth: _____ ft., After _____ hrs.
Water level at time of drilling
Water level after drilling
3" Clear Acetate Liner
Hollow Stem Auger
Rotosonic 3" Core Barrel
ATD - At time of drilling
Geoprobe Macro Sampler
Hand Auger Sampler
Unified Soil Classification based on field visual observations.

URS (ENVIRON) LOG WGK SUPPLEMENTAL 21561600 KRUMMRICH SUPPLEMENTAL.GPJ URSSTLEV.GDT 9/29/05

LOG OF BORING
S0122

Completion Date: 7/25/05
Casing Elevation:
Ground Elevation:

Depth In feet	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
	48	38	0.0			SM	Medium dense, slightly moist, brown, silty fine grained SAND (SM) with roots	
			0.0			ML	Dry, light brown, fine grained sandy SILT (MLS) with organic roots	
5	48	30	1.6			SM	Medium dense, loose, slightly moist, brown, fine grained silty SAND (SM)	
						SP	Medium dense, slightly moist, light brown, fine grained SAND (SP)	
						SM	Medium dense, slightly moist, brown, silty fine grained SAND (SM)	
						ML	Soft, slightly moist, brown, fine grained sandy SILT (ML) with roots Becomes dry	
	48	34				SP	Medium dense, slightly moist, light brown, fine grained SAND (SP)	

Completion Depth: 20.00 Ft. bgs
Project No.: 21561600.00000
Project Name: Krummrich Supplemental Soil & GW Investigation
Drilling Contractor: REDI
Drilling method: Geoprobe
Logged by: M. Corbett

URS

Water Depth: _____ ft., After _____ hrs.
Water Depth: _____ ft., After _____ hrs.
▼ Water level at time of drilling
▽ Water level after drilling
■ 3" Clear Acetate Liner
Hollow Stem Auger
Rotosonic 3" Core Barrel
ATD - At time of drilling
Geoprobe Macro Sampler
Hand Auger Sampler
Unified Soil Classification based on field visual observations.

LOG OF BORING
S0122

Completion Date: 7/25/05
Casing Elevation:
Ground Elevation:

Depth In feet	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
			0..0					
	48	44	0.0			SP		
15							Becomes moist	
						CL	medium stiff, moist, brown, low plastic, fine grained sandy CLAY (CL)	
							Medium dense, moist, light brown, fine grained SAND (SP)	
	48	44	0.0					1340 Collected sample S0122-18-20 for VOC and SVOC analysis
						SP		
							Becomes wet	
								Bottom of Boring at 20 ft bgs Backfilled using granular bentonite

Completion Depth: 20.00 Ft. bgs
Project No.: 21561600.00000
Project Name: Krummrich Supplemental Soil & GW Investigation
Drilling Contractor: REDI
Drilling method: Geoprobe
Logged by: M. Corbett

URS

Water Depth: _____ ft., After _____ hrs.
Water Depth: _____ ft., After _____ hrs.
▼ Water level at time of drilling
▽ Water level after drilling
■ 3" Clear Acetate Liner
Hollow Stem Auger
Rotosonic 3" Core Barrel
ATD - At time of drilling
Geoprobe Macro Sampler
Hand Auger Sampler
Unified Soil Classification based on field visual observations.

URS (ENVIRON) LOG WGK SUPPLEMENTAL 21561600 KRUMMRICH SUPPLEMENTAL.GPJ URSSTLEV.GDT 9/29/05

LOG OF BORING
S0123

Completion Date: 7/25/05
Casing Elevation:
Ground Elevation:

Depth In feet	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
	48	38	0.0			SP	Medium dense, slightly moist to dry, light brown, very fine grained SAND (SP) with roots	
			0.0				Becomes moist	
5	48	28	0.0					
			0.0			SM	Medium dense, moist, light brown, silty SAND (SM)	
						SP	Medium dense, slightly moist, light brown, fine grained SAND (SP)	
	48	34	0.0			SM	Medium dense, slightly moist, brown, silty SAND (SM)	

Completion Depth: 20.00 Ft. bgs
Project No.: 21561600.00000
Project Name: Krummrich Supplemental Soil & GW Investigation
Drilling Contractor: REDI
Drilling method: Geoprobe
Logged by: M. Corbett

URS

Water Depth: _____ ft., After _____ hrs.
Water Depth: _____ ft., After _____ hrs.
▼ Water level at time of drilling
▽ Water level after drilling
■ 3" Clear Acetate Liner
Hollow Stem Auger
Rotosonic 3" Core Barrel
ATD - At time of drilling
Geoprobe Macro Sampler
Hand Auger Sampler
Unified Soil Classification based on field visual observations.

LOG OF BORING
S0123

Completion Date: 7/25/05
Casing Elevation:
Ground Elevation:

Depth In feet	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
						ML	Medium stiff, slightly moist, brown clayey SILT (ML)	
			0.0			SM	Medium dense, slightly moist, light brown, silty fine grained SAND (SM)	
						ML	Medium stiff, slightly moist, brown clayey SILT (ML)	
	48	24	0.0			SM	Medium dense, slightly moist. light brown, fine grained silty SAND (SM)	
15			0.0					
	48	48	0.0			ML	Soft, wet, brown, clayey sandy SILT (ML)	1315 Collected sample S0123-18-20 for VOC and SVOC analysis
			0.0					Bottom of Boring at 20 ft bgs Backfilled using granular bentonite

Completion Depth: 20.00 Ft. bgs
Project No.: 21561600.00000
Project Name: Krummrich Supplemental Soil & GW Investigation
Drilling Contractor: REDI
Drilling method: Geoprobe
Logged by: M. Corbett

URS

Water Depth: _____ ft., After _____ hrs.
Water Depth: _____ ft., After _____ hrs.
▼ Water level at time of drilling
▽ Water level after drilling
■ 3" Clear Acetate Liner
Hollow Stem Auger
Rotosonic 3" Core Barrel
ATD - At time of drilling
Geoprobe Macro Sampler
Hand Auger Sampler
Unified Soil Classification based on field visual observations.

LOG OF BORING
S0124

Completion Date: 7/25/05
Casing Elevation:
Ground Elevation:

Depth In feet	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
							Soft, dry, brown, very fine grained SAND (SP)	
			0.0					
							Becoming medium dense, light brown, fine grained	
	48	48						
			0.0					
5			0.0			SP		
	48	48						
			0.0					
	48	48	0.0					

Completion Depth: 20.00 Ft. bgs
Project No.: 21561600.00000
Project Name: Krummrich Supplemental Soil & GW Investigation
Drilling Contractor: REDI
Drilling method: Geoprobe
Logged by: M. Corbett

URS

Water Depth: _____ ft., After _____ hrs.
Water Depth: _____ ft., After _____ hrs.
▼ Water level at time of drilling
▽ Water level after drilling
■ 3" Clear Acetate Liner
Hollow Stem Auger
Rotosonic 3" Core Barrel
ATD - At time of drilling
Geoprobe Macro Sampler
Hand Auger Sampler
Unified Soil Classification based on field visual observations.

LOG OF BORING
S0124

Completion Date: 7/25/05
Casing Elevation:
Ground Elevation:

Depth In feet	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
						CL	CLAY (CL)	
						SC	Brown, clayey SAND (SC)	
			0.0			CL	CLAY (CL)	
						SP	Medium dense, slightly moist, light brown, fine grained SAND (SP)	
			0.0					
	48	48						
15			0.0					
			0.0					
	48	48					Becomes moist	1035 Collected sample S0124-18-20 for VOC and SVOC analysis
			0.0					
						SM	Wet, brown, silty fine grained silty SAND (SM)	Bottom of Boring at 20 ft bgs Backfilled using granular bentonite

Completion Depth: 20.00 Ft. bgs
Project No.: 21561600.00000
Project Name: Krummrich Supplemental Soil & GW Investigation
Drilling Contractor: REDI
Drilling method: Geoprobe
Logged by: M. Corbett

URS

Water Depth: _____ ft., After _____ hrs.
Water Depth: _____ ft., After _____ hrs.
▼ Water level at time of drilling
▽ Water level after drilling
■ 3" Clear Acetate Liner
Hollow Stem Auger
Rotosonic 3" Core Barrel
ATD - At time of drilling
Geoprobe Macro Sampler
Hand Auger Sampler
Unified Soil Classification based on field visual observations.

URS (ENVIRON) LOG WGK SUPPLEMENTAL 21561600 KRUMMRICH SUPPLEMENTAL.GPJ URSSTLEV.GDT 9/29/05

LOG OF BORING
S0214

Completion Date: 7/25/05
Casing Elevation:
Ground Elevation:

Depth In feet	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
						TOPSOIL	TOPSOIL	1415 Collected sample S0214-0-2 for PCB analysis
						GP	GRAVEL (GP)	
	24	24	13.0			SM	Soft to medium dense, slightly moist, brown, silty fine grained SAND (SM)	Bottom of Boring at 2 ft bgs Backfilled using granular bentonite
5								

Completion Depth: 2.00 Ft. bgs
Project No.: 21561600.00000
Project Name: Krummrich Supplemental Soil & GW Investigation
Drilling Contractor: REDI
Drilling method: Geoprobe
Logged by: M. Corbett

Water Depth: _____ ft., After _____ hrs.
Water Depth: _____ ft., After _____ hrs.
Water level at time of drilling
Water level after drilling
3" Clear Acetate Liner
Hollow Stem Auger
Rotosonic 3" Core Barrel
ATD - At time of drilling
Geoprobe Macro Sampler
Hand Auger Sampler
Unified Soil Classification based on field visual observations.

URS

LOG OF BORING
S0215

Completion Date: 7/25/05
Casing Elevation:
Ground Elevation:

Depth In feet	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
			0.0			SM	Medium dense, slightly moist, brown, silty fine grained SAND (SM) with trace gravel and roots	1025 Collected sample S0215-0-2 for PCB analysis
	24	24	0.0			SP	Medium dense, dry, light brown, fine grained SAND (SP)	Bottom of Boring at 2 ft bgs Backfilled using granular bentonite
5								

Completion Depth: 2.00 Ft. bgs
Project No.: 21561600.00000
Project Name: Krummrich Supplemental Soil & GW Investigation
Drilling Contractor: REDI
Drilling method: Geoprobe
Logged by: M. Corbett

URS

Water Depth: _____ ft., After _____ hrs.
Water Depth: _____ ft., After _____ hrs.
▼ Water level at time of drilling
▽ Water level after drilling
■ 3" Clear Acetate Liner
Hollow Stem Auger
Rotosonic 3" Core Barrel
ATD - At time of drilling
Geoprobe Macro Sampler
Hand Auger Sampler
Unified Soil Classification based on field visual observations.

LOG OF BORING
S0216

Completion Date: 7/25/05
Casing Elevation:
Ground Elevation:

Depth In feet	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
			0.0			SM	Soft, moist, brown, silty SAND (SM) with roots	1100 Collected sample S0216-0-2 for PCB analysis
	24	24	0.0			ML	Soft, moist, black, gravelly SILT (ML)	
						SP	Medium dense, moist, light brown, fine grained SAND (SP)	Bottom of Boring at 2 ft bgs Backfilled using granular bentonite
5								

Completion Depth: 2.00 Ft. bgs
Project No.: 21561600.00000
Project Name: Krummrich Supplemental Soil & GW Investigation
Drilling Contractor: REDI
Drilling method: Geoprobe
Logged by: M. Corbett

URS

Water Depth: _____ ft., After _____ hrs.
Water Depth: _____ ft., After _____ hrs.
▼ Water level at time of drilling
▽ Water level after drilling
■ 3" Clear Acetate Liner
Hollow Stem Auger
Rotosonic 3" Core Barrel
ATD - At time of drilling
Geoprobe Macro Sampler
Hand Auger Sampler
Unified Soil Classification based on field visual observations.

URS (ENVIRON) LOG WGK SUPPLEMENTAL 21561600 KRUMMRICH SUPPLEMENTAL.GPJ URSSTLEV.GDT 9/29/05

LOG OF BORING
S0217

Completion Date: 7/25/05
Casing Elevation:
Ground Elevation:

Depth in feet	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
						GP	GRAVEL (GP) with grass cover	
			0.0			SM	Soft, dry, brown, silty fine grained SAND (SM)	1325 Collected sample S0217-0-2 for PCB analysis
	24	24				CL	Medium stiff, slightly moist, brown, silty sandy CLAY (CL)	
			0.0			SM	Soft, slightly moist, light brown, silty fine grained SAND (SM)	Bottom of Boring at 2 ft bgs Backfilled using granular bentonite
5								

Completion Depth: 2.00 Ft. bgs
Project No.: 21561600.00000
Project Name: Krummrich Supplemental Soil & GW Investigation
Drilling Contractor: REDI
Drilling method: Geoprobe
Logged by: M. Corbett

URS

Water Depth: _____ ft., After _____ hrs.
Water Depth: _____ ft., After _____ hrs.
▼ Water level at time of drilling
▽ Water level after drilling
■ 3" Clear Acetate Liner
Hollow Stem Auger
Rotosonic 3" Core Barrel
ATD - At time of drilling
Geoprobe Macro Sampler
Hand Auger Sampler
Unified Soil Classification based on field visual observations.

LOG OF BORING
S0403

Completion Date: 7/26/05
Casing Elevation:
Ground Elevation:

Depth In feet	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
	48	38	111			FILL	Grey, brown, silty crushed limestone GRAVEL (FILL) Dark grey gravelly SILT (FILL) Stiff, slightly moist, red brown, gravelly CLAY (FILL)	1130 Collected sample S0403-1-3 for VOC, SVOC, PCB, Herbicide, and Pesticide analysis
			582			CL	Soft, moist, gray, fine grained silty sandy CLAY (CL)	
5	48	40	1008			SP	medium dense, moist, gray, fine grained SAND (SP)	With strong product odor from 4 ft to 12 ft
			864			CL	Soft, moist, fine grained sandy CLAY (CL)	
	48	48	1066			SP	medium dense, moist, gray, fine grained SAND (SP) Becomes wet With gravel (1") Becomes moist	

Completion Depth: 12.00 Ft. bgs
Project No.: 21561600.00000
Project Name: Krummrich Supplemental Soil & GW Investigation
Drilling Contractor: REDI
Drilling method: Geoprobe
Logged by: M. Corbett

URS

Water Depth: _____ ft., After _____ hrs.
Water Depth: _____ ft., After _____ hrs.
▼ Water level at time of drilling
▽ Water level after drilling
■ 3" Clear Acetate Liner
Hollow Stem Auger
Rotosonic 3" Core Barrel
ATD - At time of drilling
Geoprobe Macro Sampler
Hand Auger Sampler
Unified Soil Classification based on field visual observations.

URS (ENVIRON) LOG WGK SUPPLEMENTAL 21561600 KRUMMRICH SUPPLEMENTAL.GPJ URSSTLEV.GDT 9/29/05

LOG OF BORING
S0403

Completion Date: 7/26/05
Casing Elevation:
Ground Elevation:

Depth In feet	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
			1605			SP	Becomes wet	1140 Collected sample S0403-10-12 for VOC, SVOC, PCB, Herbicide, and Pesticide analysis Bottom of Boring at 12 ft bgs Backfilled using granular bentonite
15								

Completion Depth: 12.00 Ft. bgs
Project No.: 21561600.00000
Project Name: Krummrich Supplemental Soil & GW Investigation
Drilling Contractor: REDI
Drilling method: Geoprobe
Logged by: M. Corbett

URS

Water Depth: _____ ft., After _____ hrs.
Water Depth: _____ ft., After _____ hrs.
Water level at time of drilling
Water level after drilling
3" Clear Acetate Liner
Hollow Stem Auger
Rotosonic 3" Core Barrel
ATD - At time of drilling
Geoprobe Macro Sampler
Hand Auger Sampler
Unified Soil Classification based on field visual observations.

URS (ENVIRON) LOG WGK SUPPLEMENTAL 21561600 KRUMMRICH SUPPLEMENTAL.GPJ URSSTLEV.GDT 9/29/05

LOG OF BORING
S0430

Completion Date: 7/26/05
Casing Elevation:
Ground Elevation:

Depth In feet	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
	48	36	116			FILL	Dense, dry, light gray 1/2" minus base coarse GRAVEL (FILL) Medium dense, dry, light brown, medium grained SAND (FILL) with trace clay	
						CONCRETE	CONRETE	
			35			FILL	Dense, dry, white to light gray 1/2" minus base coarse GRAVEL (FILL) with trace fine to medium sand	
5	48	44	73.7			SP	Medium dense, dry, light brown to red brown, medium grained SAND (SP)	
						CL	Medium stiff, dry, red brown to brown, low plastic silty CLAY (CL)	
			35.4			SM	Dense, moist to dry, red brown, silty fine grained SAND (SM) Becoming medium dense, wet, black to dark gray, trace clay	
	48	36	148					With product staining from 9 ft to 11 ft

Completion Depth: 16.00 Ft. bgs
Project No.: 21561600.00000
Project Name: Krummrich Supplemental Soil & GW Investigation
Drilling Contractor: REDI
Drilling method: Geoprobe
Logged by: M. Miller

Water Depth: _____ ft., After _____ hrs.
Water Depth: _____ ft., After _____ hrs.

- Water level at time of drilling
- Water level after drilling
- 3" Clear Acetate Liner
- Hollow Stem Auger
- Rotosonic 3" Core Barrel
- ATD - At time of drilling
- Geoprobe Macro Sampler
- Hand Auger Sampler
- Unified Soil Classification based on field visual observations.

URS

LOG OF BORING
S0430

Completion Date: 7/26/05
Casing Elevation:
Ground Elevation:

Depth In feet	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
			184			SM		
							Medium dense, wet, gray to black, fine grained SAND (SP)	
			574			SP		1015 Collected sample S0430-13-15 and S0430-13-15-DUP for VOC analysis
	48	24					Becomes black	With black product staining from 14 ft to 16 ft
15			715					Bottom of Boring at 16 ft bgs Backfilled using granular bentonite

Completion Depth: 16.00 Ft. bgs
Project No.: 21561600.00000
Project Name: Krummrich Supplemental Soil & GW Investigation
Drilling Contractor: REDI
Drilling method: Geoprobe
Logged by: M. Miller

URS

Water Depth: _____ ft., After _____ hrs.
Water Depth: _____ ft., After _____ hrs.
▼ Water level at time of drilling
▽ Water level after drilling
■ 3" Clear Acetate Liner
Hollow Stem Auger
Rotosonic 3" Core Barrel
ATD - At time of drilling
Geoprobe Macro Sampler
Hand Auger Sampler
Unified Soil Classification based on field visual observations.

URS (ENVIRON) LOG WGK SUPPLEMENTAL 21561600 KRUMMRICH SUPPLEMENTAL.GPJ URSSTLEV.GDT 10/4/05

LOG OF BORING
S0431

Completion Date: 7/26/05
Casing Elevation:
Ground Elevation:

Depth in feet	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
	48	40	26.7			FILL	Crushed limestone GRAVEL (FILL) Soft, slightly moist, brown, gravelly CLAY (FILL) with cinders	
			115			GP	Slightly moist, black, silty clayey GRAVEL (GP) Becomes brown	With product odor With sheen on gravel and clay
						CL	Stiff, slightly moist, dark gray silty CLAY (CL)	With strong product odor 4 ft to 16 ft
5			425			SP	Medium dense, moist, light gray to brown, fine to medium grained SAND (SP)	
	48	30	432			SM	Brown, moist, fine grained silty SAND (SM) Becomes grey	With product sheen
	48	40	247			CL	Soft, wet, grey, fine grained silty sandy CLAY (CL)	
						CL	Stiff, slightly moist, dark gray, silty CLAY (CL)	

Completion Depth: 16.00 Ft. bgs
Project No.: 21561600.00000
Project Name: Krummrich Supplemental Soil & GW Investigation
Drilling Contractor: REDI
Drilling method: Geoprobe
Logged by: M. Corbett

URS

Water Depth: _____ ft., After _____ hrs.
Water Depth: _____ ft., After _____ hrs.
▼ Water level at time of drilling
▽ Water level after drilling
■ 3" Clear Acetate Liner
Hollow Stem Auger
Rotosonic 3" Core Barrel
ATD - At time of drilling
Geoprobe Macro Sampler
Hand Auger Sampler
Unified Soil Classification based on field visual observations.

URS (ENVIRON) LOG WGK SUPPLEMENTAL 21561600 KRUMMRICH SUPPLEMENTAL.GPJ URSSTLEV.GDT 9/29/05

LOG OF BORING
S0431

Completion Date: 7/26/05
Casing Elevation:
Ground Elevation:

Depth In feet	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
						SM	Medium dense, moist, dark gray, silty fine to medium grained SAND (SM)	
						CL	Stiff, slightly moist, grayish brown silty CLAY (CL)	
			416			SP	Medium dense, moist, gray, medium grained SAND (SP)	
						SC	Wet, dark gray, clayey fine grained SAND (SC)	
			1147			SP	Medium dense, wet, dark gray, medium grained SAND (SP)	0935 Collected sample S0431-13-15 for VOC analysis
	48	36						
15			784					Bottom of Boring at 16 ft bgs Backfilled using granular bentonite

Completion Depth: 16.00 Ft. bgs
Project No.: 21561600.00000
Project Name: Krummrich Supplemental Soil & GW Investigation
Drilling Contractor: REDI
Drilling method: Geoprobe
Logged by: M. Corbett

URS

Water Depth: _____ ft., After _____ hrs.
Water Depth: _____ ft., After _____ hrs.
Water level at time of drilling
Water level after drilling
3" Clear Acetate Liner
Hollow Stem Auger
Rotosonic 3" Core Barrel
ATD - At time of drilling
Geoprobe Macro Sampler
Hand Auger Sampler
Unified Soil Classification based on field visual observations.

URS (ENVIRON) LOG WGK SUPPLEMENTAL 21561600 KRUMMRICH SUPPLEMENTAL.GPJ URSSTLEV.GDT 9/29/05

LOG OF BORING
S0432

Completion Date: 7/26/05
Casing Elevation:
Ground Elevation:

Depth In feet	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
	48	42	319			FILL	Crushed limestone GRAVEL (FILL) Soft, slightly moist, brown gravelly SILT (FILL) Crushed limestone GRAVEL (FILL)	
			260			SM	Soft, slightly moist, brown, silty fine grained SAND (SM) with gravel Becomes gray to green	
5	48	24	164			SP	Medium dense, moist, dark gray, fine to medium grained SAND (SP) trace gravel and wood	
			273			CL	Soft, moist, dark gray gravelly CLAY (CL) trace wood	
						SW	Medium dense, moist, gray, fine grained SAND (SW)	
	48	36	290			SC	Medium dense, wet, gray to brown, clayey fine grained SAND (SC)	With product sheen 9 ft to 10.5 ft

Completion Depth: 16.00 Ft. bgs
Project No.: 21561600.00000
Project Name: Krummrich Supplemental Soil & GW Investigation
Drilling Contractor: REDI
Drilling method: Geoprobe
Logged by: M. Corbett

URS

Water Depth: _____ ft., After _____ hrs.
Water Depth: _____ ft., After _____ hrs.
▼ Water level at time of drilling
▽ Water level after drilling
■ 3" Clear Acetate Liner
Hollow Stem Auger
Rotosonic 3" Core Barrel
ATD - At time of drilling
Geoprobe Macro Sampler
Hand Auger Sampler
Unified Soil Classification based on field visual observations.

URS (ENVIRON) LOG WGK SUPPLEMENTAL 21561600 KRUMMRICH SUPPLEMENTAL.GPJ URSSTLEV.GDT 9/29/05

LOG OF BORING
S0432

Completion Date: 7/26/05
Casing Elevation:
Ground Elevation:

Depth In feet	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
						SC		With strong sulphur-like odor
			341			CL	Soft, wet, gray to brown fine grained sandy CLAY (CL)	
	48	26	631			SM	Medium dense, moist, brownish gray, silty fine to medium grained SAND (SM) Becomes wet and gray	0900 Collected sample S0432-13-15 for VOC analysis
15			577					Bottom of Boring at 16 ft bgs Backfilled using granular bentonite

Completion Depth: 16.00 Ft. bgs
Project No.: 21561600.00000
Project Name: Krummrich Supplemental Soil & GW Investigation
Drilling Contractor: REDI
Drilling method: Geoprobe
Logged by: M. Corbett

URS

Water Depth: _____ ft., After _____ hrs.
Water Depth: _____ ft., After _____ hrs.
Water level at time of drilling
Water level after drilling
3" Clear Acetate Liner
Hollow Stem Auger
Rotosonic 3" Core Barrel
ATD - At time of drilling
Geoprobe Macro Sampler
Hand Auger Sampler
Unified Soil Classification based on field visual observations.

URS (ENVIRON) LOG WGK SUPPLEMENTAL 21561600 KRUMMRICH SUPPLEMENTAL.GPJ URSSTLEV.GDT 9/29/05

LOG OF BORING
S0433

Completion Date: 7/26/05
Casing Elevation:
Ground Elevation:

Depth In feet	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
	48	46	63.2			FILL	Silty clayey GRAVEL (FILL)	With product odor
			140			CL	Stiff, slightly moist, dark gray, fine grained silty sandy CLAY (CL) Grades without sand Grades to black to brown with gravel Becomes dark gray silty CLAY (CL)	
5	48	38	450			ML	Medium dense, slightly moist, fine grained, clayey sandy SILT (ML)	
			272			CL	Moist, fine grained sandy CLAY (CL)	
						SM	Medium dense, dry to slightly moist, gray, silty fine to medium grained SAND (SM)	
	48	40	717				Becomes moist	

Completion Depth: 16.00 Ft. bgs
Project No.: 21561600.00000
Project Name: Krummrich Supplemental Soil & GW Investigation
Drilling Contractor: REDI
Drilling method: Geoprobe
Logged by: M. Corbett

URS

Water Depth: _____ ft., After _____ hrs.
Water Depth: _____ ft., After _____ hrs.
▼ Water level at time of drilling
▽ Water level after drilling
■ 3" Clear Acetate Liner
Hollow Stem Auger
Rotosonic 3" Core Barrel
ATD - At time of drilling
Geoprobe Macro Sampler
Hand Auger Sampler
Unified Soil Classification based on field visual observations.

URS (ENVIRON) LOG WGK SUPPLEMENTAL 21561600 KRUMMRICH SUPPLEMENTAL.GPJ URSSTLEV.GDT 9/29/05

LOG OF BORING
S0433

Completion Date: 7/26/05
Casing Elevation:
Ground Elevation:

Depth In feet	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
			482			CL	Medium stiff, moist, dark gray, fine grained, sandy low plastic CLAY (CL)	With strong product odor
			646			SP	Medium dense, moist, gray, fine to medium grained SAND (SP)	With product odor 1055 Collected sample S0433-13-15 for VOC analysis
	48	30						
15			978			SM	Medium dense, moist to wet, gray, silty fine grained SAND (SM)	Bottom of Boring at 16 ft bgs Backfilled using granular bentonite

Completion Depth: 16.00 Ft. bgs
Project No.: 21561600.00000
Project Name: Krummrich Supplemental Soil & GW Investigation
Drilling Contractor: REDI
Drilling method: Geoprobe
Logged by: M. Corbett

URS

Water Depth: _____ ft., After _____ hrs.
Water Depth: _____ ft., After _____ hrs.
▼ Water level at time of drilling
▽ Water level after drilling
■ 3" Clear Acetate Liner
Hollow Stem Auger
Rotosonic 3" Core Barrel
ATD - At time of drilling
Geoprobe Macro Sampler
Hand Auger Sampler
Unified Soil Classification based on field visual observations.

LOG OF BORING
S0902

Completion Date: 7/27/05
Casing Elevation:
Ground Elevation:

Depth In feet	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
						ASPHALT	ASPHALT.	
						CONCRETE	CONCRETE	
			9999+			FILL	Dense, moist, to dry, black sandy GRAVEL (FILL)	
	48	30						
			9999+				Becomes loose to medium dense	
							Becomes wet	1525 Collected sample S0902-4-6 for PCB analysis
5			9999+					
	48	32				SW	Dense, wet, brown, fine to medium grained SAND (SW) with trace gravel	1530 Collected sample S0902-6-8 for PCB analysis
			1872					
						CH	Stiff, wet, brown, high plastic CLAY (CH) with trace sand and silt	Bottom of Boring at 8 ft bgs Backfilled using granular bentonite

Completion Depth: 8.00 Ft. bgs
Project No.: 21561600.00000
Project Name: Krummrich Supplemental Soil & GW Investigation
Drilling Contractor: REDI
Drilling method: Geoprobe
Logged by: M. Miller

URS

Water Depth: _____ ft., After _____ hrs.
Water Depth: _____ ft., After _____ hrs.
▼ Water level at time of drilling
▽ Water level after drilling
■ 3" Clear Acetate Liner
Hollow Stem Auger
Rotosonic 3" Core Barrel
ATD - At time of drilling
Geoprobe Macro Sampler
Hand Auger Sampler
Unified Soil Classification based on field visual observations.

LOG OF BORING
S0903

Completion Date: 7/27/05
Casing Elevation:
Ground Elevation:

Depth In feet	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
	48	40	22.4			FILL	Dense, moist to dry, light gray, sandy GRAVEL (FILL) with crushed stone Dense, dry, gray to black sandy GRAVEL (FILL) Stiff, dry, black, fine grained sandy SILT (FILL) Dense, dry, black, tan, and red gravelly SAND (FILL) with trace brick fragments	1400 Collected sample S0903-2-4 and S0903-2-4-DUP for PCB analysis
						CL	Stiff, moist, gray, low plastic silty CLAY (CL)	Bottom of Boring at 4 ft bgs Backfilled using granular bentonite
5								

Completion Depth: 4.00 Ft. bgs
Project No.: 21561600.00000
Project Name: Krummrich Supplemental Soil & GW Investigation
Drilling Contractor: REDI
Drilling method: Geoprobe
Logged by: M. Miller

URS

Water Depth: _____ ft., After _____ hrs.
Water Depth: _____ ft., After _____ hrs.
▼ Water level at time of drilling
▽ Water level after drilling
■ 3" Clear Acetate Liner
Hollow Stem Auger
Rotosonic 3" Core Barrel
ATD - At time of drilling
Geoprobe Macro Sampler
Hand Auger Sampler
Unified Soil Classification based on field visual observations.

LOG OF BORING
S0907

Completion Date: 7/27/05
Casing Elevation:
Ground Elevation:

Depth In feet	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
			44.6				Dense, dry, light gray, sandy GRAVEL (FILL)	
	48	46					Dense, dry, black gravelly SAND (FILL) with trace cinders	
			127			FILL	Stiff, moist, dark gray, medium plastic silty CLAY (FILL) Dense, dry, black gravelly SAND (FILL)	
5			123				Stiff, moist, dark gray, silty CLAY (FILL) with trace gravel	
	48	30				CONCRETE	CONCRETE	
			65.2			CL	Stiff, moist to wet, black, gravelly CLAY (CL) with fine gravel lenses	
	48		8.1			CH	Stiff, wet, gray to black, high plastic CLAY (CH) with trace silt	With slight sheen at 9 ft

Completion Depth: 12.00 Ft. bgs
Project No.: 21561600.00000
Project Name: Krummrich Supplemental Soil & GW Investigation
Drilling Contractor: REDI
Drilling method: Geoprobe
Logged by: M. Miller

URS

Water Depth: _____ ft., After _____ hrs.
Water Depth: _____ ft., After _____ hrs.
Water level at time of drilling
Water level after drilling
3" Clear Acetate Liner
Hollow Stem Auger
Rotosonic 3" Core Barrel
ATD - At time of drilling
Geoprobe Macro Sampler
Hand Auger Sampler
Unified Soil Classification based on field visual observations.

LOG OF BORING
S0907

Completion Date: 7/27/05
Casing Elevation:
Ground Elevation:

Depth In feet	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
			13.1			CH		1325 Collected sample S0907-10-12 for PCB analysis Bottom of Boring at 12 ft bgs Backfilled using granular bentonite
15								

Completion Depth: 12.00 Ft. bgs
Project No.: 21561600.00000
Project Name: Krummrich Supplemental Soil & GW Investigation
Drilling Contractor: REDI
Drilling method: Geoprobe
Logged by: M. Miller

URS

Water Depth: _____ ft., After _____ hrs.
Water Depth: _____ ft., After _____ hrs.
Water level at time of drilling
Water level after drilling
3" Clear Acetate Liner
Hollow Stem Auger
Rotosonic 3" Core Barrel
ATD - At time of drilling
Geoprobe Macro Sampler
Hand Auger Sampler
Unified Soil Classification based on field visual observations.

URS (ENVIRON) LOG WGK SUPPLEMENTAL 21561600 KRUMMRICH SUPPLEMENTAL.GPJ URSSTLEV.GDT 9/29/05

LOG OF BORING
S0916

Completion Date: 7/26/05
Casing Elevation:
Ground Elevation:

Depth In feet	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
	48	46	35.4			FILL	Crushed limestone GRAVEL (FILL)	
			62.7			CL	Stiff, dry, brown, low plastic silty CLAY (CL)	
						GC	Dark brown, clayey GRAVEL (GC)	
5	48	34	34.4			CL	Soft, moist, dark grayish brown, plastic, fine grained sandy CLAY (CL) with gravel	
			82.4					
	48	37	63.2					

Completion Depth: 16.00 Ft. bgs
Project No.: 21561600.00000
Project Name: Krummrich Supplemental Soil & GW Investigation
Drilling Contractor: REDI
Drilling method: Geoprobe
Logged by: M. Corbett

URS

Water Depth: _____ ft., After _____ hrs.
Water Depth: _____ ft., After _____ hrs.
▼ Water level at time of drilling
▽ Water level after drilling
■ 3" Clear Acetate Liner
Hollow Stem Auger
Rotosonic 3" Core Barrel
ATD - At time of drilling
Geoprobe Macro Sampler
Hand Auger Sampler.
Unified Soil Classification based on field visual observations.

URS (ENVIRON) LOG WGK SUPPLEMENTAL 21561600 KRUMMRICH SUPPLEMENTAL.GPJ URSSTLEV.GDT 9/29/05

LOG OF BORING
S0916

Completion Date: 7/26/05
Casing Elevation:
Ground Elevation:

Depth In feet	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
			8.6				Becomes wet	
	48	36	37.7			CL		1535 Collected sample S0916-13-15 for Mercury analysis
15								Bottom of Boring at 16 ft bgs Backfilled using granular bentonite

Completion Depth: 16.00 Ft. bgs
Project No.: 21561600.00000
Project Name: Krummrich Supplemental Soil & GW Investigation
Drilling Contractor: REDI
Drilling method: Geoprobe
Logged by: M. Corbett

URS

Water Depth: _____ ft., After _____ hrs.
Water Depth: _____ ft., After _____ hrs.
▼ Water level at time of drilling
▽ Water level after drilling
■ 3" Clear Acetate Liner
Hollow Stem Auger
Rotosonic 3" Core Barrel
ATD - At time of drilling
Geoprobe Macro Sampler
Hand Auger Sampler
Unified Soil Classification based on field visual observations.

URS (ENVIRON) LOG WGK SUPPLEMENTAL 21561600 KRUMMRICH SUPPLEMENTAL.GPJ URSSTLEV.GDT 9/29/05

LOG OF BORING
S0919

Completion Date: 7/26/05
Casing Elevation:
Ground Elevation:

Depth In feet	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
							Crushed limestone GRAVEL (FILL)	
			5.8					
							Stiff, dry, brown, low plastic silty CLAY (FILL)	
	48	46						
							Becomes medium stiff	
			7.8				Becomes stiff with trace gravel	
						FILL		
5			9.7				Medium stiff, slightly moist, dark brown, low plastic silty gravelly CLAY (FILL)	
	48	45						
							Crushed limestone GRAVEL (FILL)	
			13.2				Medium stiff, slightly moist, grayish brown, fine grained, gravelly sandy low plastic CLAY (CL)	
						CL		
	48	36	16				Becomes soft	
							Becomes wet and brown, without gravel	

Completion Depth: 16.00 Ft. bgs
Project No.: 21561600.00000
Project Name: Krummrich Supplemental Soil & GW Investigation
Drilling Contractor: REDI
Drilling method: Geoprobe
Logged by: M. Corbett

URS

Water Depth: _____ ft., After _____ hrs.
Water Depth: _____ ft., After _____ hrs.
▼ Water level at time of drilling
▽ Water level after drilling
■ 3" Clear Acetate Liner
Hollow Stem Auger
Rotosonic 3" Core Barrel
ATD - At time of drilling
Geoprobe Macro Sampler
Hand Auger Sampler
Unified Soil Classification based on field visual observations.

URS (ENVIRON) LOG WGK SUPPLEMENTAL 21561600 KRUMMRICH SUPPLEMENTAL.GPJ URSSTLEV.GDT 10/4/05

LOG OF BORING
S0919

Completion Date: 7/26/05
Casing Elevation:
Ground Elevation:

Depth In feet	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
							With gravel	
			12.2				Becomes stiff Becomes medium stiff and moist, without gravel	
							With gravel	
							Becomes soft and wet	
						CL	Increasing gravel	1425 Collected sample S0919-13-15 for Mercury analysis
	48	36						
							Without gravel	
15								Bottom of Boring at 16 ft bgs Backfilled using granular bentonite

Completion Depth: 16.00 Ft. bgs
Project No.: 21561600.00000
Project Name: Krummrich Supplemental Soil & GW Investigation
Drilling Contractor: REDI
Drilling method: Geoprobe
Logged by: M. Corbett

URS

Water Depth: _____ ft., After _____ hrs.
Water Depth: _____ ft., After _____ hrs.
▼ Water level at time of drilling
▽ Water level after drilling
■ 3" Clear Acetate Liner
Hollow Stem Auger
Rotosonic 3" Core Barrel
ATD - At time of drilling
Geoprobe Macro Sampler
Hand Auger Sampler
Unified Soil Classification based on field visual observations.

LOG OF BORING
S0920

Completion Date: 7/27/05
Casing Elevation:
Ground Elevation:

Depth In feet	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
						ASPHALT	ASPHALT	
	48	42	103			FILL	Brown to gray 1/2" minus base coarse GRAVEL (FILL) with trace brick fragments Medium stiff, moist, brown silty CLAY (FILL) with trace gravel Red brick Medium stiff to soft, moist, brown silty CLAY (FILL) with trace gravel	
5	48	30	62.8 772				Medium dense to loose, moist to wet, dark brown, fine to medium grained gravelly SAND (FILL) with silty clay	
	48	42					WOOD (FILL)	

Completion Depth: 16.00 Ft. bgs
Project No.: 21561600.00000
Project Name: Krummrich Supplemental Soil & GW Investigation
Drilling Contractor: REDI
Drilling method: Geoprobe
Logged by: M. Miller

URS

Water Depth: ____ ft., After ____ hrs.
Water Depth: ____ ft., After ____ hrs.
▼ Water level at time of drilling
▽ Water level after drilling
■ 3" Clear Acetate Liner
Hollow Stem Auger
Rotosonic 3" Core Barrel
ATD - At time of drilling
Geoprobe Macro Sampler
Hand Auger Sampler
Unified Soil Classification based on field visual observations.

URS (ENVIRON) LOG WGK SUPPLEMENTAL 21561600 KRUMMRICH SUPPLEMENTAL.GPJ URSSTLEV.GDT 9/29/05

LOG OF BORING
S0920

Completion Date: 7/27/05
Casing Elevation:
Ground Elevation:

Depth In feet	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
			164			FILL		
							Soft, wet, dark gray, clayey SILT (ML) with sand	
			267					0845 Collected sample S0920-13-15 for Mercury analysis
	48	36				ML	Becomes medium stiff	
15								Bottom of Boring at 16 ft bgs Backfilled using granular bentonite

Completion Depth: 16.00 Ft. bgs
Project No.: 21561600.00000
Project Name: Krummrich Supplemental Soil & GW Investigation
Drilling Contractor: REDI
Drilling method: Geoprobe
Logged by: M. Miller

URS

Water Depth: _____ ft., After _____ hrs.
Water Depth: _____ ft., After _____ hrs.
▼ Water level at time of drilling
▽ Water level after drilling
■ 3" Clear Acetate Liner
Hollow Stem Auger
Rotosonic 3" Core Barrel
ATD - At time of drilling
Geoprobe Macro Sampler
Hand Auger Sampler
Unified Soil Classification based on field visual observations.

LOG OF BORING
S0925

Completion Date: 7/27/05
Casing Elevation:
Ground Elevation:

Depth In feet	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
						ASPHALT	ASPHALT	
	48	36	62.8			FILL	Loose, dry, light brown, 1/2" minus base coarse GRAVEL (FILL)	0950 Collected sample S0925-2-3 for Mercury analysis
			76.3			CL	Soft to medium stiff, moist, red brown to brown, low plastic, silty CLAY (CL) with trace gravel	
5	48	30	223			CL		0955 Collected sample S0925-6-7 for Mercury analysis
			152			CLS	Becomes grayish brown and sandy Trace gravel	
	48	46	132			SP	Loose, wet, gray, fine grained SAND (SP)	
						CL	Stiff, moist, red brown and gray, mottled, low plastic silty CLAY (CL)	1000 Collected sample S0925-9-10 for Mercury analysis

Completion Depth: 12.00 Ft. bgs
Project No.: 21561600.00000
Project Name: Krummrich Supplemental Soil & GW Investigation
Drilling Contractor: REDI
Drilling method: Geoprobe
Logged by: M. Miller

URS

Water Depth: _____ ft., After _____ hrs.
Water Depth: _____ ft., After _____ hrs.
▼ Water level at time of drilling
▽ Water level after drilling
■ 3" Clear Acetate Liner
Hollow Stem Auger
Rotosonic 3" Core Barrel
ATD - At time of drilling
Geoprobe Macro Sampler
Hand Auger Sampler
Unified Soil Classification based on field visual observations.

LOG OF BORING
S0925

Completion Date: 7/27/05
Casing Elevation:
Ground Elevation:

Depth In feet	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
						CL		
						ML	Soft, wet, gray, low plastic sandy SILT (ML) trace clay	Bottom of Boring at 12 ft bgs Backfilled using granular bentonite
15								

Completion Depth: 12.00 Ft. bgs
Project No.: 21561600.00000
Project Name: Krummrich Supplemental Soil & GW Investigation
Drilling Contractor: REDI
Drilling method: Geoprobe
Logged by: M. Miller

URS

Water Depth: _____ ft., After _____ hrs.
Water Depth: _____ ft., After _____ hrs.
Water level at time of drilling
Water level after drilling
3" Clear Acetate Liner
Hollow Stem Auger
Rotosonic 3" Core Barrel
ATD - At time of drilling
Geoprobe Macro Sampler
Hand Auger Sampler
Unified Soil Classification based on field visual observations.

LOG OF BORING
S0926

Completion Date: 7/27/05
Casing Elevation:
Ground Elevation:

Depth In feet	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
						ASPHALT	ASPHALT	
	48	30	6800			FILL	Loose, wet, light brown, gravelly medium to fine grained SAND (FILL)	
						ASPHALT	ASPHALT	1010 Collected sample S0926-2-3 for Mercury analysis
			802			FILL	Loose, wet, light brown, sandy fine grained GRAVEL (FILL)	
5	48	18	414			ML	Soft, wet, light brown, clayey SILT (ML) with gravel	1015 Collected sample S0926-6-7 and S0926-6-7-DUP for Mercury analysis
	48	40	43.9			CL	Medium stiff to stiff, moist, dark gray, silty CLAY (CL) trace gravel and sand	1020 Collected sample S0928-9-10 and S0926-9-19-DUP for Mercury analysis

Completion Depth: 12.00 Ft. bgs
Project No.: 21561600.00000
Project Name: Krummrich Supplemental Soil & GW Investigation
Drilling Contractor: REDI
Drilling method: Geoprobe
Logged by: M. Miller

URS

Water Depth: _____ ft., After _____ hrs.
Water Depth: _____ ft., After _____ hrs.
▼ Water level at time of drilling
▽ Water level after drilling
■ 3" Clear Acetate Liner
Hollow Stem Auger
Rotosonic 3" Core Barrel
ATD - At time of drilling
Geoprobe Macro Sampler
Hand Auger Sampler
Unified Soil Classification based on field visual observations.

LOG OF BORING
S0926

Completion Date: 7/27/05
Casing Elevation:
Ground Elevation:

Depth in feet	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
						CL		Bottom of Boring at 12 ft bgs Backfilled using granular bentonite
15								

Completion Depth: 12.00 Ft. bgs
Project No.: 21561600.00000
Project Name: Krummrich Supplemental Soil & GW Investigation
Drilling Contractor: REDI
Drilling method: Geoprobe
Logged by: M. Miller

URS

Water Depth: _____ ft., After _____ hrs.
Water Depth: _____ ft., After _____ hrs.
▼ Water level at time of drilling
▽ Water level after drilling
■ 3" Clear Acetate Liner
Hollow Stem Auger
Rotosonic 3" Core Barrel
ATD - At time of drilling
Geoprobe Macro Sampler
Hand Auger Sampler
Unified Soil Classification based on field visual observations.

LOG OF BORING
S0927

Completion Date: 7/26/05
Casing Elevation:
Ground Elevation:

Depth In feet	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
						FILL	Crushed limestone GRAVEL (FILL)	
	48	47	24.7			CL	Stiff, dry to slightly moist, brown, low plastic silty CLAY (CL)	1345 Collected sample S0927-2-3 for Mercury analysis
			64.9			CL	Becomes medium stiff and slightly moist	
5	48	48	15.4			CL	With 1" gravel seam	
						GC	Dark brown, silty clayey GRAVEL (GC)	1350 Collected sample S0927-6-7 for Mercury analysis
			370			CL	Soft, moist, grayish brown, fine sandy CLAY (CL) trace gravel	
	24	22	21.5			CL	Becomes wet With gravel	With solvent-like odor 1355 Collected sample S0927-9-10 for Mercury analysis Bottom of Boring at 10 ft bgs Backfilled using granular bentonite

Completion Depth: 10.00 Ft. bgs
Project No.: 21561600.00000
Project Name: Krummrich Supplemental Soil & GW Investigation
Drilling Contractor: REDI
Drilling method: Geoprobe
Logged by: M. Corbett

URS

Water Depth: _____ ft., After _____ hrs.
Water Depth: _____ ft., After _____ hrs.
▼ Water level at time of drilling
▽ Water level after drilling
■ 3" Clear Acetate Liner
Hollow Stem Auger
Rotosonic 3" Core Barrel
ATD - At time of drilling
Geoprobe Macro Sampler
Hand Auger Sampler
Unified Soil Classification based on field visual observations.

URS (ENVIRON) LOG WGK SUPPLEMENTAL 21561600 KRUMMRICH SUPPLEMENTAL.GPJ URSSTLEV.GDT 9/29/05

LOG OF BORING
S0928

Completion Date: 7/26/05
Casing Elevation:
Ground Elevation:

Depth In feet	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
						ASPHALT	ASPHALT	
			0.0			FILL	Soft, moist, red brown, low plastic silty CLAY (FILL) with trace gravel	
	48	36					Without gravel	1455 Collected sample S0928-2-3 for Mercury analysis
			1.3				Dense, dry, black, medium to fine grained SAND (FILL) with some gravel	
						CONCRETE	Light brown CONCRETE	
5			17.8			SP	Medium dense, moist, gray to brownish gray, fine to medium grained SAND (SP) trace gravel	
	48	36				ML	Medium stiff to stiff, moist, black to dark gray, clayey SILT (ML) trace fine grained sand and gravel	1500 Collected sample S0928-6-7 for Mercury analysis
			31.8					With hydrocarbon odor at 6 ft to 8 ft
	48	36	32.9					1505 Collected sample S0928-9-10 for Mercury analysis

Completion Depth: 12.00 Ft. bgs
Project No.: 21561600.00000
Project Name: Krummrich Supplemental Soil & GW Investigation
Drilling Contractor: REDI
Drilling method: Geoprobe
Logged by: M. Miller

URS

Water Depth: _____ ft., After _____ hrs.
Water Depth: _____ ft., After _____ hrs.
Water level at time of drilling
Water level after drilling
3" Clear Acetate Liner
Hollow Stem Auger
Rotosonic 3" Core Barrel
ATD - At time of drilling
Geoprobe Macro Sampler
Hand Auger Sampler
Unified Soil Classification based on field visual observations.

LOG OF BORING
S0928

Completion Date: 7/26/05
Casing Elevation:
Ground Elevation:

Depth In feet	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
			20.2			ML	Trace brick fragments Becomes grayish brown and black mottled	With strong hydrocarbon odor at 9 ft With product staining at 10 ft Bottom of Boring at 12 ft bgs Backfilled using granular bentonite
15								

Completion Depth: 12.00 Ft. bgs
Project No.: 21561600.00000
Project Name: Krummrich Supplemental Soil & GW Investigation
Drilling Contractor: REDI
Drilling method: Geoprobe
Logged by: M. Miller

URS

Water Depth: _____ ft., After _____ hrs.
Water Depth: _____ ft., After _____ hrs.
Water level at time of drilling
Water level after drilling
3" Clear Acetate Liner
Hollow Stem Auger
Rotosonic 3" Core Barrel
ATD - At time of drilling
Geoprobe Macro Sampler
Hand Auger Sampler
Unified Soil Classification based on field visual observations.

URS (ENVIRON) LOG WGK SUPPLEMENTAL 21561600 KRUMMRICH SUPPLEMENTAL.GPJ URSSTLEV.GDT 9/29/05

LOG OF BORING
S0929

Completion Date: 7/27/05
Casing Elevation:
Ground Elevation:

Depth in feet	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
						ASPHALT	ASPHALT	
	48	40	21.0			FILL	Dense, moist, light gray to light brown, sandy GRAVEL (FILL) with trace clay	
			701				Soft to medium stiff, moist to dry, red brown silty CLAY (FILL)	
5	48	32	67.1				With trace concrete fragments Soft, wet, gray, fine grained sandy SILT (FILL) trace gravel and concrete fragments	1415 Collected sample S0929-5-7 for PCB analysis Bottom of Boring at 8 ft bgs Backfilled using granular bentonite

Completion Depth: 8.00 Ft. bgs
Project No.: 21561600.00000
Project Name: Krummrich Supplemental Soil & GW Investigation
Drilling Contractor: REDI
Drilling method: Geoprobe
Logged by: M. Miller

URS

Water Depth: _____ ft., After _____ hrs.
Water Depth: _____ ft., After _____ hrs.
▼ Water level at time of drilling
▽ Water level after drilling
■ 3" Clear Acetate Liner
Hollow Stem Auger
Rotosonic 3" Core Barrel
ATD - At time of drilling
Geoprobe Macro Sampler
Hand Auger Sampler
Unified Soil Classification based on field visual observations.

URS (ENVIRON) LOG WGK SUPPLEMENTAL 21561600 KRUMMRICH SUPPLEMENTAL.GPJ URSSTLEV.GDT 9/29/05

LOG OF BORING
S0930

Completion Date: 7/27/05
Casing Elevation:
Ground Elevation:

Depth In feet	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
	48	40	14.3			FILL	Dense, moist, brown, gravelly fine to medium grained SAND (FILL) Dense, moist, gray to brown, sandy GRAVEL (FILL) with trace clay Dense, moist to dry, dark brown, gravelly fine to medium grained SAND (FILL).	1345 Collected sample S0930-2-4 for PCB analysis Bottom of Boring at 4 ft bgs Backfilled using granular bentonite
5								

Completion Depth: 4.00 Ft. bgs
Project No.: 21561600.00000
Project Name: Krummrich Supplemental Soil & GW Investigation
Drilling Contractor: REDI
Drilling method: Geoprobe
Logged by: M. Miller

Water Depth: _____ ft., After _____ hrs.
Water Depth: _____ ft., After _____ hrs.
Water level at time of drilling
Water level after drilling
3" Clear Acetate Liner
Hollow Stem Auger
Rotosonic 3" Core Barrel
ATD - At time of drilling
Geoprobe Macro Sampler
Hand Auger Sampler
Unified Soil Classification based on field visual observations.

URS

LOG OF BORING
S0931

Completion Date: 7/27/05
Casing Elevation:
Ground Elevation:

Depth in feet	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
			417				Dense, moist to dry, light gray, sandy GRAVEL (FILL)	
	48	42					Dense, moist to wet, black, sandy GRAVEL (FILL) trace silt	
			68.3			FILL		1300 Collected sample S0931-3-5 for PCB analysis
5	48	48	61.6				Becomes gravelly SAND (FILL)	
						CL	Stiff, moist, black, medium plastic CLAY (CL)	Bottom of Boring at 8 ft bgs Backfilled using granular bentonite

Completion Depth: 8.00 Ft. bgs
Project No.: 21561600.00000
Project Name: Krummrich Supplemental Soil & GW Investigation
Drilling Contractor: REDI
Drilling method: Geoprobe
Logged by: M. Miller

URS

Water Depth: _____ ft., After _____ hrs.
Water Depth: _____ ft., After _____ hrs.
Water level at time of drilling
Water level after drilling
3" Clear Acetate Liner
Hollow Stem Auger
Rotosonic 3" Core Barrel
ATD - At time of drilling
Geoprobe Macro Sampler
Hand Auger Sampler
Unified Soil Classification based on field visual observations.

URS (ENVIRON) LOG WGK SUPPLEMENTAL 21561600 KRUMMRICH SUPPLEMENTAL.GPJ URSSTLEV.GDT 9/29/05

LOG OF BORING
S1003

Completion Date: 7/27/05
Casing Elevation:
Ground Elevation:

Depth In feet	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
						ASPHALT	ASPHALT	
			164			FILL	Moist, light brown 1/2" minus base coarse GRAVEL (FILL)	
	48	42					Soft, moist, light brown to red brown silty CLAY (FILL)	
			222					
5	24	24	71.5				Loose to medium dense, wet, black GRAVEL (FILL) with gray silty clay	1050 Collected samples S1003-4-6, S1003-4-6-MS, and S1003-4-6-MD for PCB analysis Bottom of Boring at 6 ft bgs Backfilled using granular bentonite

Completion Depth: 6.00 Ft. bgs
Project No.: 21561600.00000
Project Name: Krummrich Supplemental Soil & GW Investigation
Drilling Contractor: REDI
Drilling method: Geoprobe
Logged by: M. Miller

URS

Water Depth: _____ ft., After _____ hrs.
Water Depth: _____ ft., After _____ hrs.
▼ Water level at time of drilling
▽ Water level after drilling
■ 3" Clear Acetate Liner
Hollow Stem Auger
Rotosonic 3" Core Barrel
ATD - At time of drilling
Geoprobe Macro Sampler
Hand Auger Sampler
Unified Soil Classification based on field visual observations.

URS (ENVIRON) LOG WGK SUPPLEMENTAL 21561600 KRUMMRICH SUPPLEMENTAL.GPJ URSSTLEV.GDT 9/29/05

LOG OF BORING
S1004

Completion Date: 7/27/05
Casing Elevation:
Ground Elevation:

Depth In feet	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
	48	36	105 66.7			FILL	Dense, dry, light gray, crushed stone GRAVEL (FILL) Soft, moist, red brown, silty CLAY (FILL) trace gravel and wood Medium stiff, moist, gray to black, fine grained sandy SILT (FILL) trace gravel	1245 Collected sample S1004-3-5 for PCB analysis
						CL	Stiff, moist, gray, medium plastic CLAY (CL) with silt	
5	24	24	30.0			ML	Medium stiff, moist, gray to black, low plastic, clayey SILT (ML) trace fine gravel	Bottom of Boring at 6 ft bgs Backfilled using granular bentonite

Completion Depth: 6.00 Ft. bgs
Project No.: 21561600.00000
Project Name: Krummrich Supplemental Soil & GW Investigation
Drilling Contractor: REDI
Drilling method: Geoprobe
Logged by: M. Miller

URS

Water Depth: _____ ft., After _____ hrs.
Water Depth: _____ ft., After _____ hrs.
Water level at time of drilling
Water level after drilling
3" Clear Acetate Liner
Hollow Stem Auger
Rotosonic 3" Core Barrel
ATD - At time of drilling
Geoprobe Macro Sampler
Hand Auger Sampler
Unified Soil Classification based on field visual observations.

LOG OF BORING
S1101

Completion Date: 7/25/05
Casing Elevation:
Ground Elevation:

Depth In feet	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
	48	36	3.6			FILL	Crushed limestone GRAVEL (FILL) Stiff, dry to slightly moist, brown, mottled silty CLAY (FILL) trace wood	1555 Collected samples S1101-1-3, S1101-1-3-MS, and S1101-1-3-MD for SVOC analysis Bottom of Boring at 4 ft bgs Backfilled using granular bentonite
5								

Completion Depth: 4.00 Ft. bgs
Project No.: 21561600.00000
Project Name: Krummrich Supplemental Soil & GW Investigation
Drilling Contractor: REDI
Drilling method: Geoprobe
Logged by: M. Corbett

URS

Water Depth: _____ ft., After _____ hrs.
Water Depth: _____ ft., After _____ hrs.
▼ Water level at time of drilling
▽ Water level after drilling
■ 3" Clear Acetate Liner
Hollow Stem Auger
Rotosonic 3" Core Barrel
ATD - At time of drilling
Geoprobe Macro Sampler
Hand Auger Sampler
Unified Soil Classification based on field visual observations.

LOG OF BORING
S1102

Completion Date: 7/25/05
Casing Elevation:
Ground Elevation:

Depth in feet	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
						FILL	Crushed, white limestone GRAVEL (FILL)	
							COAL and CINDERS (FILL)	1545 Collected sample S1102-1.5-3.5 for SVOC analysis
	48	42					Stiff, slightly moist to dry, brown, mottled silty CLAY (CL)	
			5.1			CL		Bottom of Boring at 4 ft bgs Backfilled using granular bentonite
5								

Completion Depth: 4.00 Ft. bgs
Project No.: 21561600.00000
Project Name: Krummrich Supplemental Soil & GW Investigation
Drilling Contractor: REDI
Drilling method: Geoprobe
Logged by: M. Corbett

URS

Water Depth: _____ ft., After _____ hrs.
Water Depth: _____ ft., After _____ hrs.
▼ Water level at time of drilling
▽ Water level after drilling
■ 3" Clear Acetate Liner
Hollow Stem Auger
Rotosonic 3" Core Barrel
ATD - At time of drilling
Geoprobe Macro Sampler
Hand Auger Sampler
Unified Soil Classification based on field visual observations.

URS (ENVIRON) LOG WGK SUPPLEMENTAL 21561600 KRUMMRICH SUPPLEMENTAL.GPJ URSSTLEV.GDT 9/29/05

LOG OF BORING
S1103

Completion Date: 7/25/05
Casing Elevation:
Ground Elevation:

Depth In feet	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
	24	24	2196			FILL	Medium stiff, slightly moist, brown, clayey SILT (FILL) with roots and trace gravel Medium stiff to stiff to stiff, slightly moist, dark brown, low plastic silty CLAY (FILL) trace roots and gravel	1525 Collected sample S1103-0-2 for SVOC analysis Bottom of Boring at 2 ft bgs Backfilled using granular bentonite
5								

Completion Depth: 2.00 Ft. bgs
Project No.: 21561600.00000
Project Name: Krummrich Supplemental Soil & GW Investigation
Drilling Contractor: REDI
Drilling method: Geoprobe
Logged by: M. Corbett

URS

Water Depth: _____ ft., After _____ hrs.
Water Depth: _____ ft., After _____ hrs.
Water level at time of drilling
Water level after drilling
3" Clear Acetate Liner
Hollow Stem Auger
Rotosonic 3" Core Barrel
ATD - At time of drilling
Geoprobe Macro Sampler
Hand Auger Sampler
Unified Soil Classification based on field visual observations.

URS (ENVIRON) LOG WGK SUPPLEMENTAL 21561600 KRUMMRICH SUPPLEMENTAL.GPJ URSSTLEV.GDT 9/29/05

APPENDIX B

GROUNDWATER WELL

REDEVELOPMENT FIELD SHEETS

GROUNDWATER REDEVELOPMENT DATA SHEET

PROJECT NAME: SOLUTIA KRUMMRICH SUPPLEMENTAL GROUNDWATER SAMPLING PROJECT NUMBER:
DATE: 7/27/05
WEATHER: overcast, humid, 75°
FIELD PERSONNEL: URS: Mike Corbett REDI: Eric VanEck
MONITORING WELL ID: GM-8

INITIAL DATA

Well Diameter: 2 in.
Total Depth of Well: 35.75 ft
Depth to Water: 23.63 ft
Height of Water Column: 12.12 ft
1 0.163 gallons/ft for 2 inch well, 0.653 gallons/ft for 4-inch well

Gallons/Lin.Ft[1]: 0.163
Vol. Of Water Column: 1.98 gallons
Min. Purge Volume: 9.90 gallons (5 volumes)
Depth to Top of Screen: 19.00 ft

Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.1 ppm
LNAPL / DNAPL none ft

PURGE DATA

Purge Method: Air Development

Purge Volume (gals)	Time	Depth to Water (ft)	Color	Odor	pH	Temp (°C)	Cond. (µmhos/cm)	Turbidity
0	1300	23.63	light brown/brown	none	7.49	29.07	1085	cloudy w/sediment
1.98	1305	24.10	light brown		7.76	22.26	914.0	cloudy w/some sediment
3.96	1310	24.05	light brown		7.78	20.39	884.8	"
5.94	1312	24.02	light brown		7.89	20.58	879.5	slightly cloudy w/some sed.
7.92	1316	24.08	light brown		7.91	21.91	896.8	
9.90	1321	24.09	none		7.75	20.21	875.0	clear w/ little sed.
11.88	1324	24.10	none		7.77	19.52	859.9	clear
13.86	1328	24.00	none		7.86	19.85	861.8	clear

Start Time: 1300
Average Purge Rate (gallons/min): 0.48
Purge Stop Time: 1329
Well Volumes Purged: 7
Elapsed Time: 29 min.
Water Quality Meter ID: 00024
Total Volume Purged: ~14.00 gallons
Calibrated on: 7/27/05

SAMPLING DATA

Sampling Method:

Sample Date: Sample Time: Analysis:

COMMENTS:

depth to water (final): 23.63 ft btoc
depth to bottom (final): 36.29 ft (hard bottom) btoc → 0.54 ft sediment removed from bottom of well.

*surged bottom of well after purging began, and after 1st, 3rd, and 5th well volumes.

1 drum of purge water used

GROUNDWATER REDEVELOPMENT DATA SHEET

PROJECT NAME: SOLUTIA KRUMMRICH SUPPLEMENTAL GROUNDWATER SAMPLING PROJECT NUMBER:
DATE: 7/28/05
WEATHER: sunny, 80°
FIELD PERSONNEL: URS: Mike Corbett REDI: Brian Schilling
MONITORING WELL ID: GM-31A

INITIAL DATA

Well Diameter: 2 in.
Total Depth of Well: 40.94 ft
Depth to Water: 24.03 ft
Height of Water Column: 16.91 ft

Gallons/Lin.Ft[1]: 0.163
Vol. Of Water Column: 2.76 gallons
Min. Purge Volume: 13.80 gallons (5 volumes)
Depth to Top of Screen: 19.00 ft

Ambient PID/FID Reading: 0.2 ppm
Wellbore PID/FID Reading: 0.3 ppm
LNAPL / DNAPL none ft

1 0.163 gallons/ft for 2 inch well, 0.653 gallons/ft for 4-inch well

PURGE DATA

Purge Method: whale pump

Purge Volume (gals)	Time	Depth to Water (ft)	Color	Odor	pH	Temp (°C)	Cond. (µmhos/cm)	Turbidity
0	0930	24.08	very lt. brown	none	6.40	17.11	824.9	slightly cloudy w/ some sediment in suspension
2.76	0935	24.07	none	↓	6.54	16.92	851.6	clear w/ few suspended particles (fines)
5.52	0938	24.07	none		6.59	16.63	877.8	clear w/ few suspended particles (fines)
8.28	0944	24.07	none		6.55	17.51	912.9	"
11.04	0952	24.07	none		6.61	17.65	969.6	clear
13.80	0958	24.08	none		6.63	17.04	953.0	clear

Start Time: 0930
Average Purge Rate (gallons/min): 0.47
Purge Stop Time: 1000
Well Volumes Purged: 5
Elapsed Time: 30 min
Water Quality Meter ID: 00024
Total Volume Purged: ~14.0 gallons
Calibrated on: 7/28/05

SAMPLING DATA

Sampling Method:

Sample Date: Sample Time: Analysis:

COMMENTS:

Final Water Depth: 24.03 ft btoc
Final Depth to Bottom: 40.96 ft btoc (hard bottom) → 0.02 ft of sediment removed from bottom of well

Surged bottom of well after purging started, and after 1st, 2nd, 3rd well volumes

After 1st well volume, Ambient PID reading: 0.2, wellbore PID reading: 0.3
After 3rd " " : 0.2, " : 0.3

1 drum of purge water generated

GROUNDWATER REDEVELOPMENT DATA SHEET

PROJECT NAME: SOLUTIA KRUMMRICH SUPPLEMENTAL GROUNDWATER SAMPLING PROJECT NUMBER:
DATE: 7/28/05
WEATHER: partly cloudy, 80°
FIELD PERSONNEL: URS: Mike Corbett REDI: Brian Schilling
MONITORING WELL ID: OM-31B

INITIAL DATA

Well Diameter: 4 in.
Total Depth of Well: 86.20 ft
Depth to Water: 24.32 ft
Height of Water Column: 61.88 ft
Gallons/Lin.Ft[1]: 0.653
Vol. Of Water Column: 40.41 gallons
Min. Purge Volume: 202.05 gallons (5 volumes)
Depth to Top of Screen: 65.50 ft
Ambient PID/FID Reading: 0.2 ppm
Wellbore PID/FID Reading: 0.2 ppm
LNAPL / DNAPL none ft

1 0.163 gallons/ft for 2 inch well, 0.653 gallons/ft for 4-inch well

PURGE DATA

Purge Method: Air Development

Purge Volume (gals)	Time	Depth to Water (ft)	Color	Odor	pH	Temp (°C)	Cond. (µmhos/cm)	Turbidity
0	1055	24.72	grey	slight	5.77	25.90	2076	cloudy, w/some sediment and fine particles suspended
40.41	1110	24.65	grey	slight	7.06	17.16	2043	"
80.82	1125	24.66	none		7.04	17.06	2073	clear, w/few black fine part. in suspension
121.23	1135	24.65	none		7.02	18.06	2094	slightly cloudy, w/few black fine part. in suspension
161.64	1150	24.65	none		7.01	17.21	2054	clear, w/few black fines in suspension
202.05	1210	24.65	none		6.96	18.21	2118	clear, w/very few " "

Start Time: 1055
Average Purge Rate (gallons/min): 2.73
Purge Stop Time: 1210
Well Volumes Purged: 5
Elapsed Time: 75 min
Water Quality Meter ID: 00024
Total Volume Purged: ~205 gallons
Calibrated on: 7/28/05

SAMPLING DATA

Sampling Method:

Sample Date: Sample Time: Analysis:

COMMENTS:

surged bottom of well after initial, 1st, 3rd, 4th well volumes
final water level: 24.34 ft btoc
final bottom depth: 86.69 ft btoc → 0.49 ft of sediment removed from bottom of well

4 drums of purge water generated

GROUNDWATER REDEVELOPMENT DATA SHEET

PROJECT NAME: SOLUTIA KRUMMRICH SUPPLEMENTAL GROUNDWATER SAMPLING PROJECT NUMBER:
DATE: 7/28/05
WEATHER: sunny, 85°
FIELD PERSONNEL: URS: Mike Corbett REDI: Brian Schilling
MONITORING WELL ID: GM-31C

INITIAL DATA

Well Diameter: 4 in.
Total Depth of Well: 119.27 ft
Depth to Water: 24.73 ft
Height of Water Column: 94.54 ft
1 0.163 gallons/ft for 2 inch well, 0.653 gallons/ft for 4-inch well

Gallons/Lin.Ft[1]: 0.653
Vol. Of Water Column: 61.73 gallons
Min. Purge Volume: 308.65 gallons (5 volumes)
Depth to Top of Screen: 97.00 ft

Ambient PID/FID Reading: 0.2 ppm
Wellbore PID/FID Reading: 0.3 ppm
LNAPL / DNAPL none ft

PURGE DATA

Purge Method: Air Development

Purge Volume (gals)	Time	Depth to Water (ft)	Color	Odor	pH	Temp (°C)	Cond. (µmhos/cm)	Turbidity
0	1500*	24.90	dark grey	yes	6.95	19.62	1225	cloudy, w/ fine black particles in suspension
61.73	1535	24.89	none	yes	6.91	17.82	1274	slightly cloudy, w/ few fine black part. in susp.
123.46	1600	24.89	none	yes	6.98	17.55	1276	"
185.19	1625	24.89	lt. grey	yes	6.96	19.75	1268	"
246.92	1645	24.87	none	yes	7.02	20.90	1286	"
309.65	1705	24.87	none	slight	7.29	19.93	1329	"

Start Time: 1500
Average Purge Rate (gallons/min): 3.44
Purge Stop Time: 1700
Well Volumes Purged: 5
Elapsed Time: 90 min. (see *)
Water Quality Meter ID: 00024
Total Volume Purged: ~310 gallons
Calibrated on: 7/28/05

SAMPLING DATA

Sampling Method:

Sample Date: Sample Time: Analysis:

COMMENTS:

* purging stopped at 1510 to fix clogged hose. Purging resumed at 1530. Stopped again at 1550 to fix clog. Resumed at 1600.

Odor is solvent-like.

PID readings taken after each well volume consistent w/ initial readings.

Water Level after 5 volumes: 24.78 ft btoc
Bottom Depth after 5 volumes: 120.67 ft btoc (hard bottom) → 1.40 ft of sediment removed from bottom of well

6 55-gallon drums used.

GROUNDWATER REDEVELOPMENT DATA SHEET

PROJECT NAME: SOLUTIA KRUMMRICH SUPPLEMENTAL GROUNDWATER SAMPLING PROJECT NUMBER:
DATE: 7/29/05
WEATHER: sunny, 80°
FIELD PERSONNEL: URS: Mike Corbett REDI: Brian Schilling
MONITORING WELL ID: GM54A

INITIAL DATA

Well Diameter: 2 in.
Total Depth of Well: 40.83 (soft bottom) ft
Depth to Water: 10.88 ft
Height of Water Column: 29.95 ft
1 0.163 gallons/ft for 2 inch well, 0.653 gallons/ft for 4-inch well

Gallons/Lin.Ft[1]: 0.163
Vol. Of Water Column: 4.88 gallons
Min. Purge Volume: 24.40 gallons (5 volumes)
Depth to Top of Screen: 21.50 ft

Ambient PID/FID Reading: 0.2 ppm
Wellbore PID/FID Reading: 0.3 ppm
LNAPL / DNAPL none ft

PURGE DATA

Purge Method: whale pump

Purge Volume (gals)	Time	Depth to Water (ft)	Color	Odor	pH	Temp (°C)	Cond. (µmhos/cm)	Turbidity
0	0923	10.88	lt. grey/brown	slight	6.29	23.15	1302	cloudy w/some sediment
4.88	0933	–	"	none	6.70	18.02	1286	"
9.76	0943	–	none	none	6.78	19.14	1314	slight cloudy w/little sediment
14.64	0950	10.90	none	none	6.76	17.40	1267	slightly cloudy
19.52	1000	10.90	none	none	6.79	17.63	1274	slightly cloudy
24.40	1010	10.89	none	none	6.79	16.69	1255	slightly cloudy

Start Time: 0923
Average Purge Rate (gallons/min): 0.52
Purge Stop Time: 1010
Well Volumes Purged: 5
Elapsed Time: 47 min
Water Quality Meter ID: 00074
Total Volume Purged: 24.40 gallons
Calibrated on: 7/29/05

SAMPLING DATA

Sampling Method:

Sample Date: Sample Time: Analysis:

COMMENTS:

No water level taken after 1st and 2nd volumes; the interface probe was borrowed by Mike Miller, who was working w/ Eric Van Eck (REDI) repairing well GM-58A.

Final waterlevel (ft btoc): 10.88
Final bottom depth (ft btoc): 40.84 (solid bottom) → 0.01 ft of sediment removed from bottom of well

Bottom of well surged every 5-10 minutes.

1 drum used.

GROUNDWATER REDEVELOPMENT DATA SHEET

PROJECT NAME: SOLUTIA KRUMMRICH SUPPLEMENTAL GROUNDWATER SAMPLING PROJECT NUMBER:
DATE: 7/29/05
WEATHER: Sunny 85°
FIELD PERSONNEL: URS: Mike Corbett REDI: Brian Scilling
MONITORING WELL ID: GM-54B

INITIAL DATA

Well Diameter: 4 in.
Total Depth of Well: 88.69 (soft bottom) ft
Depth to Water: 11.06 ft
Height of Water Column: 77.63 ft
1 0.163 gallons/ft for 2 inch well, 0.653 gallons/ft for 4-inch well

Gallons/Lin.Ft[1]: 0.653
Vol. Of Water Column: 50.57 gallons
Min. Purge Volume: 252.60 gallons (5 volumes)
Depth to Top of Screen: ~~66.50~~ 69.30 ft
MC

Ambient PID/FID Reading: 0.3 ppm
Wellbore PID/FID Reading: 0.4 ppm
LNAPL / DNAPL: none ft

PURGE DATA

Purge Method: Air Development

Purge Volume (gals)	Time	Depth to Water (ft)	Color	Odor	pH	Temp (°C)	Cond. (µmhos/cm)	Turbidity
0	1245	11.48	none	yes	6.94	21.57	1092	clear, w/some black sediment
50.57	1305	11.31	none	yes	7.06	20.23	1059	slightly cloudy, w/some black sed.
101.04	1325	11.03	none	yes	7.04	19.48	1038	clear, w/very little fine black sed.
151.56	1405*	11.07	none	yes	7.11	19.48	1045	clear, " "
202.08	1422	11.25	none	no	6.98	18.22	1016	clear
252.60	1438	11.32	none	no	7.01	18.40	1000	clear

Start Time: 1245
Purge Stop Time: 1440
Elapsed Time: 95 min (see *)
Total Volume Purged: ~255 gallons
Average Purge Rate (gallons/min): 2.68
Well Volumes Purged: 5
Water Quality Meter ID: 00024
Calibrated on: 7/29/05

SAMPLING DATA

Sampling Method:

Sample Date: Sample Time: Analysis:

COMMENTS:

* Purging stopped at 1345 to fix a clog in the hose. Purging resumed at 1405.

Bottom of well surged every 5-10 minutes

Final Water Level (ft btoc): 11.07
Final Bottom depth (ft btoc): 90.46 (hard bottom) → 1.77 ft of sediment removed from bottom of well

5 drums used.

GROUNDWATER REDEVELOPMENT DATA SHEET

PROJECT NAME: SOLUTIA KRUMMRICH SUPPLEMENTAL GROUNDWATER SAMPLING PROJECT NUMBER:
DATE: 7/29/05
WEATHER: sunny, 85°
FIELD PERSONNEL: VRS: Mike Corbett REDT: Brian Schilling
MONITORING WELL ID: GM-5~~8~~A

INITIAL DATA

Well Diameter: 2 in.
Total Depth of Well: 40.7~~6~~ (soft) ft
Depth to Water: 19.90 ft
Height of Water Column: 20.78 ft
1 0.163 gallons/ft for 2 inch well, 0.653 gallons/ft for 4-inch well

Gallons/Lin.Ft[1]: 0.163
Vol. Of Water Column: 3.40 gallons
Min. Purge Volume: 17.0~~0~~ gallons (5 volumes)
Depth to Top of Screen: ~~19.40 18.37~~ MC 19.40 ft

Ambient PID/FID Reading: 0.1 ppm
Wellbore PID/FID Reading: 0.1 ppm
LNAPL / DNAPL none ft

PURGE DATA

Purge Method: whale pump

Purge Volume (gals)	Time	Depth to Water (ft)	Color	Odor	pH	Temp (°C)	Cond. (µmhos/cm)	Turbidity
0	1615	19.90	brown	none	6.58	20.34	1058	cloudy, w/ sediment
3.40	1620	19.95	lt. brown	none	6.60	17.51	1239	"
6.80	1630	19.95	lt. brown	slight	6.66	17.92	1355	cloudy, w/ some sediment
10.20	1640	19.95	none	none	6.76	17.02	1316	slightly cloudy, w/ some sediment
13.60	1650	19.96	none	none	6.76	16.94	1303	clear, w/ very little sed.
17.00	1655	19.96	none	none	6.71	16.94	1307	clear

Start Time: 1615
Average Purge Rate (gallons/min): 0.425
Purge Stop Time: 1655
Well Volumes Purged: 5
Elapsed Time: 40 min
Water Quality Meter ID: 00024
Total Volume Purged: 17.00 gallons
Calibrated on: 7/29/05

SAMPLING DATA

Sampling Method:

Sample Date: Sample Time: Analysis:

COMMENTS:

Sounded well bottom after every well volume, excluding the final well volume.

Final water level (ft btoc): 19.92
Final bottom Depth (ft btoc): ~~40.7~~ MC
40.77 (solid) → 0.01 ft of sediment removed from bottom of well

1 drum used

GROUNDWATER REDEVELOPMENT DATA SHEET

PROJECT NAME: SOLUTIA KRUMMRICH SUPPLEMENTAL GROUNDWATER SAMPLING PROJECT NUMBER:
DATE: 7/27/05
WEATHER: partly cloudy, 80°
FIELD PERSONNEL: URS: Mike Corbett REDI: Eric Van Eck
MONITORING WELL ID: GM-59A

INITIAL DATA

Well Diameter: 2 in.
Total Depth of Well: 41.53 (soft bottom) ft
Depth to Water: 18.97 ft
Height of Water Column: 22.56 ft
1 0.163 gallons/ft for 2 inch well, 0.653 gallons/ft for 4-inch well

Gallons/Lin.Ft[1]: 0.163
Vol. Of Water Column: 3.68 gallons
Min. Purge Volume: 18.40 gallons (5 volumes)
Depth to Top of Screen: 19.00 ft

Ambient PID/FID Reading: 0.1 ppm
Wellbore PID/FID Reading: 0.1 ppm
LNAPL / DNAPL none ft

PURGE DATA

Purge Method: Air Development

Purge Volume (gals)	Time	Depth to Water (ft)	Color	Odor	pH	Temp (°C)	Cond. (µmhos/cm)	Turbidity
0	1430	18.97	light brown/orange	none	7.91	41.71	1056	slightly cloudy w/some sediment
3.68	1435	18.98	none		7.71	25.56	912.9	clear, w/little sediment
7.36	1450	18.98	none		7.65	26.82	926.9	clear
11.04	1505	18.98	none		7.76	25.56	1012	clear
14.72	1520	18.98	none		7.62	23.58	1030	clear
18.40	1535	18.98	none		7.70	27.79	1114	clear
22.08	1555	18.98	none		7.97	24.42	1086	clear
25.76	1601	18.98	none		8.12	28.78	1055	clear

Start Time: 1430
Purge Stop Time: 1601
Elapsed Time: 91 minutes
Total Volume Purged: 25.76 gallons
Average Purge Rate (gallons/min): 0.28
Well Volumes Purged: 7
Water Quality Meter ID: 00024
Calibrated on: 7/27/05

SAMPLING DATA

Sampling Method:

Sample Date: Sample Time: Analysis:

COMMENTS:

After third purge volume, Ambient PID reading: 0.0 ppm
Wellbore PID reading: 17.3 ppm

After 4th purge volume, ambient PID reading: 0.0 ppm
Wellbore PID reading: 23.5 ppm

final depth to bottom: 41.54 ft btoc (hard bottom) → 0.01 ft sediment removed from bottom of well
" " water: 18.98 ft btoc

Surged bottom of well after pumping began, and after 1st, 2nd, 3rd, 5th well volumes.

1 drum of purge water used

GROUNDWATER SAMPLING

FIELD SHEETS

LOW FLOW GROUNDWATER SAMPLING DATA SHEET
SOLUTIA KRUMMRICH SUPPLEMENTAL GROUNDWATER SAMPLING

PROJECT NAME: SOLUTIA KRUMMRICH
PROJECT NUMBER: 21561573.00000
FIELD PERSONNEL: M. Miller C Mais
DATE: 8/2/05
WEATHER: Sunny 90°F's
MONITORING WELL ID: GM-8

INITIAL DATA

Well Diameter: 2 in
Total Well Depth (btoc): 36.30 ft
Depth to Water (btoc): 24.05 ft
Depth to LNAPL/DNAPL (btoc): ____ ft
Depth to Top of Screen (btoc): 19.7 ft
Screen Length: ~~[illegible]~~ 15 ft

Water Column Height (do not include LNAPL or DNAPL): 12.25 ft btoc
If Depth to Top of Screen is > Depth to Water AND Screen Lenth is ≥4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = ____ ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are ≥ 4ft,
Place Pump at: Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = 30 ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = ____ ft btoc

Volume of Flow Through Cell): 250 mL
Minimum Purge Volume =
(3 x Flow Through Cell Volume) 750 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.4 ppm

PURGE DATA

Pump Type: Stainless Steel Monsoon

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	Turbidity	pH	Temp (°C)	Cond. (µS/cm)	DO ~~(mg/l)~~ ug/l	ORP (mV)
0	12:04	24.11	Clear	None	79.7	6.74	33.10	1724	1427	138
~~250~~ 500	12:06	24.11	Clear	None	193.1	6.60	18.21	9089	8661	136
750	12:07	24.11	Clear	None	191.0	6.67	18.37	910.5	8570	135
1000	12:08	24.11	Clear	None	192.7	6.69	18.34	910.1	8485	134
1250	12:09	24.11	Clear	None	166.3	6.72	18.23	907.1	8294	133
1500	12:10	24.11	Clear	None	167.5	6.74	18.18	903.6	8265	133
1750	12:11	24.11	Clear	None	166.9	6.76	18.10	903.3	7987	132
2000	12:12	24.11	Clear	None	170.1	6.77	18.15	904.0	7829	132
						Stable	Stable	Stable	Stable	Stable

Start Time: 12:04
Stop Time: 12:12
Elapsed Time: 8:00 min
Average Purge Rate (mL/min): 200
Water Quality Meter ID: Troll 9000
Date Calibrated: 8/2/05

SAMPLING DATA

Sample Date: 8/2/05
Sample Time: 12:20
Analysis: SVOCs AND PCBs
Sample Method: Stainless Steel Monsoon
Sample Flow Rate: 250

COMMENTS:
~~[illegible]~~ Parameters stabilized over 3 consecutive readings

LOW FLOW GROUNDWATER SAMPLING DATA SHEET
SOLUTIA KRUMMRICH SUPPLEMENTAL GROUNDWATER SAMPLING

PROJECT NAME: SOLUTIA KRUMMRICH PROJECT NUMBER: 21561573.00000 FIELD PERSONNEL: M Miller & C Mais
DATE: 8/1/05 WEATHER: 90's°F Sunny
MONITORING WELL ID: GM-31A

INITIAL DATA

Well Diameter: 2 in
Total Well Depth (btoc): 40.96 ft
Depth to Water (btoc): 24.31 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 19 ft
Screen Length: 20 ft

Water Column Height (do not include LNAPL or DNAPL): 16.65 ft btoc
If Depth to Top of Screen is > Depth to Water AND Screen Lenth is ≥4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = ____ ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are ≥ 4ft,
Place Pump at: Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = 32 ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = ____ ft btoc

Volume of Flow Through Cell): 250 mL
Minimum Purge Volume =
(3 x Flow Through Cell Volume) 750 mL
Ambient PID/FID Reading: ____ ppm
Wellbore PID/FID Reading: ____ ppm

PURGE DATA

Pump Type: Stainless Steel Monsoon

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	Turbidity	pH	Temp ~~(°C)~~ °F	Cond. (µS/cm)	DO (mg/l)	ORP (mV)
0	14:05	24.31	Cloudy	None	45.6	6.01	73.84	903.9	3848	109
200	14:06	24.31	Cloudy	None	52.0	6.17	73.22	891.3	2011	110
400	14:07	24.31	Yellow	None	54.1	6.23	73.22	891.9	1597	111
600	14:08	24.31	Yellow	None	43.1	6.32	73.05	892.7	1421	111
800	14:10	24.31	Yellow	None	42.4	6.37	72.76	890.6	1489	112
1000	14:11	24.31	Yellow	None	35.8	6.42	72.71	889.0	1549	111
						stable	stable	stable	stable	stable

Start Time: 14:05
Stop Time: 14:11
Elapsed Time: 6 min
Average Purge Rate (mL/min): 200
Water Quality Meter ID: Troll 9000
Date Calibrated: 8/1/05

SAMPLING DATA

Sample Date: 8/1/05
Sample Method: Stainless Steel Monsoon
Sample Time: 14:15
Sample Flow Rate: 200
Analysis: SVOCs AND PCBs

COMMENTS: Stable over the last ~~three~~ 4 readings for all parameters.

LOW FLOW GROUNDWATER SAMPLING DATA SHEET
SOLUTIA KRUMMRICH SUPPLEMENTAL GROUNDWATER SAMPLING

PROJECT NAME: SOLUTIA KRUMMRICH PROJECT NUMBER: 21561573.00000 FIELD PERSONNEL: M Miller C. Mais
DATE: 8/1/05 WEATHER: Partly Cloudy 90's°F
MONITORING WELL ID: GM-31B

INITIAL DATA

soft bottom at 87.70*

Well Diameter: 4 / in
Total Well Depth (btoc): ~~91.37~~ ft
Depth to Water (btoc): 25.55 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 65.50 ft
Screen Length: 20 ft

Water Column Height (do not include LNAPL or DNAPL): 62.25 ft btoc
If Depth to Top of Screen is > Depth to Water AND Screen Lenth is ≥4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = @ 75 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are ≥ 4ft,
Place Pump at: Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = _____ ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = _____ ft btoc

Volume of Flow Through Cell): 250 mL
Minimum Purge Volume =
(3 x Flow Through Cell Volume) 750 mL
Ambient PID/FID Reading: 0.4 ppm
Wellbore PID/FID Reading: 0.7 ppm

PURGE DATA

Pump Type: Stainless Steel Monsoon

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	Turbidity	pH	Temp (°C)	Cond. (µS/cm)	ug/l DO ~~(mg/l)~~	ORP (mV)
						+/- 0.2	+/- 0.2	+/- 3%	10%	+/- 20
0	11:48	25.55	Clear	No odor	34.9	6.62	18.6	1860	2533	-89
200	11:52	25.55	Clear	No odor	27.1	6.70	20.91	2221	~~2229~~ 1639	-80
400	11:55	25.55	Clear	No odor	22.0	6.69	20.01	2171	1777	-77
600	11:56	25.55	Clear	No odor	24.2	6.67	19.56	2157	1785	-76
800	11:57	25.55	Clear	No odor	19.24	6.67	19.16	2135	1767	-75
1000	11:58	25.55	Clear	No odor	24.1	6.68	19.40	2183	1689	-74
1200	11:59	25.55	Clear	No odor	22.4	6.68	19.27	2188	1673	-74
1400	12:00	25.55	Clear	No odor	20.3	6.68	19.39	2202	1635	-74
1600	12:01	25.55	Clear	No odor	19.7	6.67	19.48	2200	1591	-74
						Stable	Stable	Stable	Stable	Stable

Start Time: 11:48
Stop Time: 12:01
Elapsed Time: 13 min
Average Purge Rate (mL/min): ~~200~~ 250 CM
Water Quality Meter ID: Troll 9000
Date Calibrated: 8/1/05

SAMPLING DATA

Sample Date: 8/1/05
Sample Time: 12:10
Analysis: SVOCs AND PCBs
Sample Method: Stainless Steel Monsoon
Sample Flow Rate: ~~200~~ 250 mL/min

COMMENTS:

Measured depths from top of exterior Casing. Interior casing was to far below in elevation to read the tape of the WL indicator. Stable over all ~~three~~ last reading with the parameters.

* Based on historical records and redevelopment from Bottom depth should be 86.70 BTOC

LOW FLOW GROUNDWATER SAMPLING DATA SHEET
SOLUTIA KRUMMRICH SUPPLEMENTAL GROUNDWATER SAMPLING

PROJECT NAME: SOLUTIA KRUMMRICH PROJECT NUMBER: 21561573.20000 FIELD PERSONNEL: M Miller C Mais
DATE: 8/2/05 WEATHER: 80's Sunny
MONITORING WELL ID: GM-31C

INITIAL DATA

Well Diameter: 4 in
Total Well Depth (btoc): 120.71 ft
Depth to Water (btoc): 25.13 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 97 ft
Screen Length: 20 ft

Water Column Height (do not include LNAPL or DNAPL): 95.58 ft btoc
If Depth to Top of Screen is > Depth to Water AND Screen Lenth is ≥4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 107 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are ≥ 4ft,
Place Pump at: Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = _____ ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = _____ ft btoc

Volume of Flow Through Cell): 250 mL
Minimum Purge Volume =
(0 x Flow Through Cell Volume) 750 mL
Ambient PID/FID Reading: 0.3 ppm
Wellbore PID/FID Reading: 0.4 ppm

+/- 0.45F
+/- 0.2°C

PURGE DATA

Pump Type: Stainless Steel Monsoon

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	Turbidity	pH	Temp ~~(°C)~~ °F	Cond. (µS/cm)	ug/l DO ~~(mg/l)~~	ORP (mV)
0	8:31	25.18	Clear	No odor	31.6	7.00	87.64	1106	9075	-117
250	8:32	25.18	Clear	No odor	28.0	7.01	63.97	1162	8815	-114
500	8:33	25.18	Clear	No odor	28.6	6.96	63.96	1185	8708	-113
750	8:34	25.18	Clear	No odor	29.4	6.92	65.51	1237	7825	-107
1000	8:36	25.18	Clear	No odor	32.9	6.91	67.06	1276	7522	-105
1250	8:37	25.18	Clear	No odor	37.9	6.92	65.84	1272	7597	-107
1500	8:39	25.18	Clear	No odor	38.0	6.92	66.42	1285	7262	-106
1750	8:41	25.18	Clear	No odor	39.4	6.93	67.54	1315	6882	-106
2000	8:42	25.18	Clear	No odor	39.0	6.94	65.17	1277	7357	-107
2250	8:43	25.18	Clear	No odor	45.1	6.94	64.50	1270	7183	-107
2500	8:44	25.18	Clear	No odor	44.4	6.95	64.28	1268	7021	-107
2750	8:45	25.18	Clear	No odor	45.7	6.94	64.72	1279	6836	-107
3000	8:46	25.18	Clear	No odor	45.2	6.94	64.86	1280	6781	-107
3250	8:47	25.18	Clear	No odor	43.1	6.95	64.80	1280	6655	-108
3500	8:48	25.18	Clear	No odor	43.3	6.95	64.75	1279	6564	-108
						stable	stable	stable	stable	stable

Start Time: 8:31
Stop Time: 8:48
Elapsed Time: 17 min
Average Purge Rate (mL/min): 250
Water Quality Meter ID: Troll 9000
Date Calibrated: 8/2/05

SAMPLING DATA

Sample Date: 8/2/05
Sample Time: ~~8:50~~ 9:00
Analysis: SVOCs AND PCBs
Sample Method: Stainless Steel Monsoon
Sample Flow Rate: 250

COMMENTS: Stable for all parameters over the last three readings

LOW FLOW GROUNDWATER SAMPLING DATA SHEET
SOLUTIA KRUMMRICH SUPPLEMENTAL GROUNDWATER SAMPLING

PROJECT NAME: SOLUTIA KRUMMRICH PROJECT NUMBER: 21561573.00000 FIELD PERSONNEL: M. Miller C. Mais
DATE: 8/3/05 WEATHER: Sunny 100.5°F
MONITORING WELL ID: GM 54A

INITIAL DATA

Well Diameter: 2 in
Total Well Depth (btoc): 40.81 ft
Depth to Water (btoc): 11.25 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 21.5 ft
Screen Length: ft

Water Column Height (do not include LNAPL or DNAPL): 29.57 ft btoc
If Depth to Top of Screen is > Depth to Water AND Screen Lenth is ≥4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = ~~30~~ 28 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are ≥ 4ft,
Place Pump at: Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = ft btoc

Volume of Flow Through Cell): 250 mL
Minimum Purge Volume =
(3 x Flow Through Cell Volume) 750 mL
Ambient PID/FID Reading: 0.2 ppm
Wellbore PID/FID Reading: 0.3 ppm

PURGE DATA

Pump Type: Stainless Steel Monsoon

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	Turbidity	pH	Temp (°C)	Cond. (µS/cm)	DO (mg/l) ugl	ORP (mV)
14:03 ↔	0	11.25	Clear	No odor	240.8	6.29	16.95	1054	3267	-39
14:04 ↔	250	11.25	Clear	No odor	252.0	6.40	17.05	1057	3006	-43
500	14:05	11.25	Clear	No odor	255.3	6.47	16.81	1053	2920	-45
750	14:06	11.25	Clear	No odor	254.8	6.53	16.76	1044	2888	-48
1000	14:07	11.25	Clear	No odor	252.2	6.56	16.43	1036	2882	-47
						Stable		Stable	Stable	Stable

Start Time: 14:03 Elapsed Time: 4 min Water Quality Meter ID: Troll 9000
Stop Time: 14:07 Average Purge Rate (mL/min): 250 Date Calibrated: 8/3/05

SAMPLING DATA

Sample Date: 8/3/03 Sample Time: 14:07 Analysis: SVOCs AND PCBs
Sample Method: Stainless Steel Monsoon Sample Flow Rate: 250

COMMENTS: This is the 2nd sample for this well. Sample labeled GM-54A-II

LOW FLOW GROUNDWATER SAMPLING DATA SHEET
SOLUTIA KRUMMRICH SUPPLEMENTAL GROUNDWATER SAMPLING

PROJECT NAME: SOLUTIA KRUMMRICH PROJECT NUMBER: 21561573.00000 FIELD PERSONNEL: M. Miller & C. Mais
DATE: 8/3/05 WEATHER: sunny 80's°F
MONITORING WELL ID: GM-54B

INITIAL DATA

Well Diameter: 4 in
Total Well Depth (btoc): 90.49 ft
Depth to Water (btoc): 11.43 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 69.3 ft
Screen Length: 20 ft

Water Column Height (do not include LNAPL or DNAPL): 79.06 ft btoc
If Depth to Top of Screen is > Depth to Water AND Screen Lenth is ≥4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 80 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are ≥ 4ft,
Place Pump at: Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = _____ ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = _____ ft btoc

Volume of Flow Through Cell): 250 mL
Minimum Purge Volume =
(3 x Flow Through Cell Volume) 750 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.2 ppm

PURGE DATA

Pump Type: Stainless Steel Monsoon

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	Turbidity	pH	Temp (°C)	Cond. (µS/cm)	DO ~~(mg/l)~~ µg/L	ORP (mV)
					—	± 0.2	~~± 0.2~~	3%	10% 2mg/L	± 20
0	7:46	11.43	Clear	No odor	~~2~~46.2	8.40	15.96	478.7	4285	26
250	7:47	11.43	Clear	No odor	40.8	8.21	15.97	536.7	4021	-115
500	7:48	11.43	Clear	No odor	49.5	7.58	16.43	702.1	3713	-135
750	7:50	11.43	Clear	No odor	51.5	7.36	16.85	792.1	3568	-129
1000	7:52	11.43	Clear	No odor	45.5	7.30	17.51	847.1	3475	-127
1250	7:55	11.43	Clear	No odor	55.6	7.29	15.58	835.1	3666	-131
1500	7:56	11.43	Clear	No odor	49.5	7.29	15.17	848.1	3448	-130
1750	7:57	11.43	Clear	No odor	52.2	7.28	15.46	861.0	3242	-130
2000	7:58	11.43	Clear	No odor	49.0	7.27	15.83	877.7	3169	-129
2250	7:59	11.43	Clear	No odor	48.2	7.27	16.06	887.9	3140	-129
2500	8:00	11.43	Clear	No odor	44.9	7.26	16.23	893.2	3118	-129
	CM					Stable	~~Stable~~	Stable	Stable	Stable

Start Time: 7:46
Stop Time: 8:00
Elapsed Time: 14 min
Average Purge Rate (mL/min): 250 mL
Water Quality Meter ID: Troll 9000
Date Calibrated: _____

SAMPLING DATA

Sample Date: 8/3/05
Sample Time: 8:15
Analysis: SVOCs AND PCBs
Sample Method: Stainless Steel Monsoon
Sample Flow Rate: 250 mL/min

COMMENTS:

LOW FLOW GROUNDWATER SAMPLING DATA SHEET
SOLUTIA KRUMMRICH SUPPLEMENTAL GROUNDWATER SAMPLING

PROJECT NAME: SOLUTIA KRUMMRICH PROJECT NUMBER: 21561573.00000 FIELD PERSONNEL: M. Miller C. Mais
DATE: 8/3/05 WEATHER: Sunny 90's °F
MONITORING WELL ID: GW-58A

INITIAL DATA

Well Diameter: 2 in
Total Well Depth (btoc): 40.78 ft
Depth to Water (btoc): 20.25 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 19.4 ft
Screen Length: 20 ft

Water Column Height (do not include LNAPL or DNAPL): _____ ft btoc
If Depth to Top of Screen is > Depth to Water AND Screen Lenth is ≥4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = _____ ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are ≥ 4ft,
Place Pump at: Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = _____ ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = _____ ft btoc

Volume of Flow Through Cell): _____ mL
Minimum Purge Volume =
(____ x Flow Through Cell Volume) _____ mL
Ambient PID/FID Reading: _____ ppm
Wellbore PID/FID Reading: _____ ppm

PURGE DATA

Pump Type: Stainless Steel Monsoon

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	Turbidity	pH	Temp (°C)	Cond. (µS/cm)	DO (mg/l)	ORP (mV)
0	12:28	20.25	Clear	No odor	47.3	6.53	18.15	938.6	3261	73
250	12:29	20.25	Clear	No odor	28.3	6.57	18.10	937.3	3258	71
500	12:30	20.25	Clear	No odor	29.5	6.60	18.22	937.3	3252	69
750	12:31	20.25	Clear	No odor	29.7	6.62	18.48	946.0	3239	68
1000	12:32	20.25	Clear	No odor	29.8	6.63	18.37	946.2	3314	68
						Stable	~~Stable~~	Stable	Stable	Stable

Start Time: 12:28
Stop Time: 12:32
Elapsed Time: 4 min
Average Purge Rate (mL/min): 250 ml/min
Water Quality Meter ID: Troll 9000
Date Calibrated: 8/3/05

SAMPLING DATA

Sample Date: 8/3/05
Sample Method: ~~Stainless Steel Monsoon~~ Geopump 2
Sample Time: 12:40
Sample Flow Rate: 25 mL/min
Analysis: SVOCs AND PCBs

COMMENTS:

LOW FLOW GROUNDWATER SAMPLING DATA SHEET
SOLUTIA KRUMMRICH SUPPLEMENTAL GROUNDWATER SAMPLING

PROJECT NAME: SOLUTIA KRUMMRICH
PROJECT NUMBER: 21561573.00000
FIELD PERSONNEL: M Miller & C. Mais
DATE: 08/01/05
WEATHER: 80's partly cloudy
MONITORING WELL ID: GM-59A

INITIAL DATA

Well Diameter: 2 in
Total Well Depth (btoc): 40.52 ft
Depth to Water (btoc): 19.38 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 20 ft
Screen Length: 20 ft

Water Column Height (do not include LNAPL or DNAPL): 21.14 ft btoc
If Depth to Top of Screen is > Depth to Water AND Screen Lenth is <4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 258 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are < 4ft,
Place Pump at: Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = _____ ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = _____ ft btoc

Volume of Flow Through Cell): 250 mL
Minimum Purge Volume =
(___ x Flow Through Cell Volume) 750 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.3 ppm

PURGE DATA

Pump Type: Stainless Steel Monsoon

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	Turbidity	pH	Temp (°C)	Cond. (µS/cm)	DO ~~mg/L (mg/l)~~ µg/L	ORP (mV)
0	0840	19.39	Clear	None	121.7	6.62	20.19	905.9	9591	-8
200	0845	19.39	Clear	None	59.5	6.67	21.38	906.6	8313	-7
400	0847	19.39	Clear	None	43.9	6.69	19.06	857.8	8805	7
600	0849	19.39	Clear	None	43.7	6.69	18.29	842.5	8716	17
800	0851	19.39	Clear	None	43.6	6.71	17.93	836.5	8311	21
1200	0855	19.39	Clear	None	42.3	6.72	18.08	839.0	7787	23
1400	0857	19.39	Clear	None	42.3	6.73	18.04	837.9	7467	24

Start Time: 0840
Stop Time: 0857
Elapsed Time: _____
Average Purge Rate (mL/min): _____
Water Quality Meter ID: Troll 9000
Date Calibrated: _____

SAMPLING DATA

Sample Date: 08/01/05
Sample Time: 0900
Analysis: SVOCs AND PCBs
Sample Method: Stainless Steel Monsoon
Sample Flow Rate: 250 mL/min

COMMENTS:

* Pump is obstructed at 25' BTOC

Solutia Krummrich
List of SDGs and Sample IDs

SDG	Sample ID
KRM48	S0115-0-2
KRM48	S0115-0-2-DUP
KRM48	S0116-0-2
KRM48	S0117-0-2
KRM48	S0118-0-2
KRM48	S0119-0-2
KRM48	S0120-0-2
KRM48	S0121-18-20
KRM48	S0121-18-20-DUP
KRM48	S0122-18-20
KRM48	S0123-18-20
KRM48	S0124-18-20
KRM48	S0214-0-2
KRM48	S0214-0-2-DUP
KRM48	S0215-0-2
KRM48	S0216-0-2
KRM48	S0217-0-2
KRM48	S1101-1-3
KRM48	S1102-1.5-3.5
KRM48	S1103-0-2
KRM49	S0902-4-6
KRM49	S0902-6-8
KRM49	S0903-2-4
KRM49	S0903-2-4-DUP
KRM49	S0907-10-12
KRM49	S0920-13-15
KRM49	S0925-2-3
KRM49	S0925-6-7
KRM49	S0925-9-10
KRM49	S0926-2-3
KRM49	S0926-6-7
KRM49	S0926-6-7-DUP
KRM49	S0926-9-10
KRM49	S0926-9-10-DUP
KRM49	S0929-5-7
KRM49	S0930-2-4
KRM49	S0931-3-5
KRM49	S1003-4-6
KRM49	S1004-3-5
KRM50	S0403-10-12
KRM50	S0403-1-3
KRM50	S0430-13-15
KRM50	S0430-13-15-DUP
KRM50	S0431-13-15
KRM50	S0432-13-15
KRM50	S0433-13-15
KRM50	S0916-13-15
KRM50	S0919-13-15
KRM50	S0927-2-3
KRM50	S0927-6-7
KRM50	S0927-9-10
KRM50	S0928-2-3

Solutia Krummrich
List of SDGs and Sample IDs

SDG	Sample ID
KRM50	S0928-6-7
KRM50	S0928-9-10
KRM51	GM-31A
KRM51	GM-31B
KRM51	GM-31B-DUP
KRM51	GM-31C
KRM51	GM-54A-II
KRM51	GM-54B
KRM51	GM-58A
KRM51	GM-59A
KRM51	GM-8

QUALITY ASSURANCE REPORT

(LEVEL III)

QUALITY ASSURANCE REPORT

Solutia Inc.
W.G. Krummrich Facility
St. Louis, Missouri

Supplemental Soil and Groundwater Sampling

Prepared for

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October 2005

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1. INTRODUCTION

This Quality Assurance Report and the Level IV Validations attached present the findings of a review of analytical data for soil and groundwater samples collected from July to August 2005 at the Solutia W.G. Krummrich plant as part of RCRA corrective action activities. The samples were collected by URS Corporation personnel. Analytical testing was provided by Severn Trent Laboratories located in Savannah, Georgia (STL-Savannah). Samples sent to Severn Trent were analyzed using the USEPA SW-846 methodologies referenced in the Supplemental Soil and Groundwater Sampling Plan (2005). Samples were tested for various combinations of parameters, including Volatile Organic Compounds (VOCs), Semi-Volatile Organic Compounds (SVOCs), Pesticides, PCBs, Herbicides, and Metals (Lead and Mercury).

One hundred percent of the data were subjected to a data quality review (Level III validation). In addition, eleven percent were also subjected to a full (Level IV) validation. These were performed in order to confirm that the analytical data provided by Severn Trent were acceptable in quality for characterizing the site.

A total of 72 samples (56 investigative samples, 8 field duplicates, 3 trip blanks, 2 equipment blanks, and 3 matrix spike and matrix spike duplicates) were analyzed by STL-Savannah. These samples were submitted in 4 Sample Delivery Groups (SDGs), KRM48 through KRM51. The samples were analyzed according to the following USEPA Methods:

- Method 8260B for VOCs
- Method 8270C for SVOCs
- Method 8081/8082 for Pesticides/PCBs
- Method 8151A for Herbicides
- Method 6010B for Lead
- Method 7471A for Mercury

The procedures for review of the data followed guidance from the following documents:

1. Supplemental Soil and Groundwater Sampling Plan, 2005. Prepared by URS Corporation.
2. U.S EPA Contract Laboratory Program National Functional Guidelines for Low Concentration Organic Data Review, June 2001.
3. U.S. EPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, October 2004.

The above "Guidelines" provided the criteria to review the data. Additional quantitative criteria are given in the analytical methods. Qualifiers assigned by the data reviewer have been transcribed onto the laboratory reporting forms (Form-1s). The qualifiers are accompanied by codes which indicate the reason for assignment of the qualifier(s). The various codes are explained in **Table 1** below.

TABLE 1

Lab Qualifier	Definition
NC	No criteria at this time
NA	Not applicable
J	Estimated Value (Organics only)
D	Diluted
U	Non-Detect
B	Analyte found in the blank (Organics only)
B	Value greater than IDL but less than CRDL (Metals only)
E	Exceeds calibration (Organics only)
E	Serial dilution result for samples with concentrations greater than 50 times the IDL are not within 10% of the original sample result (Metals only).
N	Matrix Spike or matrix spike duplicate is outside expected recovery limits. (Metals Only)

URS Qualifier	Definition
U	The analyte was analyzed for but was not detected.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
D	If the sample or extract is reanalyzed at a higher dilution factor, all concentrations are reported with a D.
R	The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

Based on the criteria outlined, it is recommended that the results reported for these analyses be accepted for their intended use. Acceptable levels of accuracy, precision, and representativeness (based on MS/MSD, LCS, and field duplicate results) were achieved for this data set, except where noted in this report. In addition, analytical completeness, defined to be the percentage of analytical results which are judged to be valid, including estimated (J) or estimated non-detect (UJ) values was 99 percent, which exceeds the completeness goal of 95 percent.

The data review included evaluation of the following criteria:

Organics

- Receipt condition and sample holding times
- Laboratory method blanks, equipment and trip blank samples
- Surrogate spike recoveries
- Laboratory control sample (LCS) recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) sample recoveries and Relative Percent Difference (RPD) values
- Field duplicate results
- Results reported from dilutions
- Internal Standard responses.

Inorganics

- Receipt condition and sample holding times
- Equipment blank and laboratory method blank samples
- LCS recoveries
- Spike sample recoveries and duplicates
- Field duplicate results
- Serial dilutions

2. RECEIPT CONDITION AND SAMPLE HOLDING TIMES

Sample holding time requirements for the analyses performed are presented in the methods and/or in the "Guidelines." Review of the sample collection and analysis dates involved comparing the chain-of-custody and the summary forms for accuracy, consistency, and holding time compliance.

Extractions and/or analyses were completed within the recommended holding time requirements with the exception of the samples mentioned in the table below.

SDG #	Sample	Analysis	Time Out of Hold	Qualification
KRM48 (soil samples)	S0120-0-2RE S0122-18-20RE	SVOCs	7days	"J" detections "UJ" for non-detects

3. EQUIPMENT BLANKS, TRIP BLANKS AND LABORATORY METHOD BLANK SAMPLES

Equipment blank samples are used to evaluate sampling equipment decontamination procedures. The Supplemental Soil and Groundwater Sampling Plan indicated equipment blank samples to be collected at a frequency of one per 10 investigative samples. A total of two equipment blank samples were collected which was below the target frequency. No analytes were detected in either of the two equipment blank samples, indicating that the equipment decontamination procedures were adequate.

Trip blanks samples are used to assess VOC cross contamination of samples during shipment to the laboratory. One trip blank was submitted with each shipment containing samples for VOC analyses for a total of 3 trip blank samples. No analytes were detected in any of the trip blank samples.

Laboratory method blank samples evaluate the existence and magnitude of contamination problems resulting from laboratory activities. All laboratory method blank samples were analyzed at the method prescribed frequencies. There was only one method blank detection. Di-n-butylphthalate was detected in method blank MB 680-17967/9-A with a concentration of 0.85 µg/l. No qualifiers were assigned because all samples related to this method blank were non-detect.

4. SURROGATE SPIKE RECOVERIES

Surrogate compounds are used to evaluate overall laboratory performance for sample preparation efficiency on a per sample basis. All samples analyzed for VOCs, SVOCs, Pesticides/PCBs and Herbicides were spiked with surrogate compounds prior to sample preparation. The "Guidelines" require that all VOC, Pesticides/PCBs and Herbicides surrogate spike recoveries meet acceptance criteria. The "Guidelines" also allow one SVOC surrogate recovery per fraction (base/neutral or acid fraction) to be outside acceptance criteria, provided that recoveries are greater than or equal to 10 percent.

Surrogate recoveries were within range with the exception of the samples mentioned below. When surrogates were not recovered due to dilutions, no qualifiers were assigned.

SDG #	Sample ID	Analysis	Surrogate	Recovery %	Range	Qualification
KRM48 (soil samples)	S0120-0-2	SVOCs	2-Fluorophenol 2-Fluorobiphenyl Nitrobenzene Phenol Terphenyl	30 30 25 28 31	36-101 38-104 33-94 38-102 40-129	All detected analytes "J" and non-detects "UJ"
KRM48 (soil samples)	S0122-18-20	SVOCs	Phenol	36	38-102	None, one surrogate out is allowed.
KRM49 (soil samples)	S1003-4-6 S1004-3-5 S0903-2-4 S0903-2-4-DUP S0929-5-7 S0902-4-6	PCBs	Decachlorobiphenyl	333 1750 529 464 618 570	30-150	All detected analytes "J"

SDG #	Sample ID	Analysis	Surrogate	Recovery %	Range	Qualification
KRM49 (soil samples)	S0931-3-5 S0930-2-4 S0902-4-6DL	PCBs	Decachlorobiphenyl Tetrachloro-m-xylene	0 D, 0 D 0 D, 0 D 0 D, 0 D	30-150 30-150 30-150	None, surrogates diluted out
KRM50 (soil samples)	S0431-13-15	VOCs	4-bromofluorobenzene Toluene	148 144	68-121 65-128	Detected analytes "J"
	S0431-13-15RA		4-bromofluorobenzene Toluene	123 135	68-121 65-128	Detected analytes "J"
	S0432-13-15		Dibromofluoromethane	135	66-127	Detected analytes "J"
	S0432-13-15RA		Dibromofluoromethane 4-bromofluorobenzene	150 22	66-127 68-121	Detected analytes "J" and non-detects "UJ"
	S0430-13-15-DUP		4-bromofluorobenzene Toluene	60 59	68-121 65-128	Non-detects "UJ"
	S0430-13-15-DUPRA		4-bromofluorobenzene Toluene	13 46	68-121 65-128	Non-detects "UJ"
KRM50 (soil samples)	S0403-1-3	Pesticides & PCBs	Decachlorobiphenyl	1630	30-150	Detected analytes "J"
KRM51 (ground water samples)	GM-59A GM-8 GM-54B	PCBs	Decachlorobiphenyl	19 25 27	30-150 30-150 30-150	Non-detects "UJ"
	GM-31B GM-31B-DUP GM-31A			9 8 7	30-150 30-150 30-150	Non-detects "R"
KRM51 (ground water samples)	GM-58A	PCBs	Tetrachloro-m-xylene	547	30-150	None, all analytes non-detect
KRM51 (ground water samples)	GM-31C	SVOCs	All surrogates	0 D	NA	None, surrogates diluted out

D – means diluted

PCB results for samples GM-31B, GM-31B-DUP and GM-31A were rejected due to decachlorobiphenyl surrogate recoveries being lower than 10 percent. The "Guidelines" state that if either surrogate recovery is reported as between 0 and 10 percent, the sample is not diluted and the analytes in the sample are non-detect, sample results should be qualified unusable (R). STL–Savannah was contacted regarding the low surrogate recoveries which prompted these rejections. A letter from STL-Savannah is attached at the end of this Report.

5. LABORATORY CONTROL SAMPLE RECOVERIES

Laboratory control samples (LCS) serve to monitor the accuracy of the analytical process. Laboratory control samples were prepared with each batch of samples. All LCS recoveries were within analytical accuracy limits with the exception of the LCSs mentioned below. Qualifications were made as appropriate.

Most LCS recoveries were within analytical accuracy limits. When LCS recoveries were greater than the acceptance range and the related analytes were non-detect, no qualifiers were assigned. Also if the LCS was related to QA/QC samples such as equipment blanks or trip blanks, no qualifiers were assigned.

SDG #	Sample ID	Analysis	LCS compound	Recovery %	Range	Qualification
KRM49 (soil samples)	680-17511/16-A	PCBs	Endrin	0	34-146	None, related sample is an equipment blank.
KRM50 (soil samples)	680-18399/2	VOCs	Chloromethane Vinyl chloride	16 24	42-140 34-154	Chloromethane and vinyl chloride detections qualified "J" & non-detects "R" in samples S0432-13-15RA, S0431-13-15RA, S0430-13-15, S0430-13-15-DUPRA & S0433-13-15.
KRM50 (soil samples)	680-17463/20-A	Pesticides/ PCBs	Aldrin	148	26-139	None, aldrin results in related samples were non-detect.

6. MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) SAMPLES

MS/MSD samples are analyzed to assess potential matrix effects upon the data. MS/MSD samples were required to be collected at a frequency of one per 20 investigative samples in accordance with the Supplemental Soil and Groundwater Sampling Plan. URS Corporation submitted 3 MS/MSD sample sets for 59 investigative samples meeting the Supplemental Soil and Groundwater Sampling Plan frequency requirement.

The MS/MSD recoveries and RPDs not within the evaluation criteria are mentioned below. No qualifications were made to the data if the MS/MSD percent recoveries were zero due to dilutions or if the percent RPD was the only factor out of criteria. USEPA National Functional Guidelines for Organic Data Review (June 2001) states that organic data should not be qualified based on MS/MSD criteria alone. However, using informed professional judgment the data reviewer may determine the need for qualification of the data.

USEPA National Functional Guidelines for Inorganic Data Review (October 2004) states that spike recovery limits do not apply when the sample concentration is ≥4 times the spike added.

SDG #	Parent Sample	Method	Analyte	MS/MSD %Rec.	Criteria %	RPD %	RPD Limit	Qualifier
KRM48 (soil samples)	S1101-1-3	8270	1,3-Dichlorobenzene	**32/25**	34-90	24	50	None, other QA/QC items within range
			1,2-Dichlorobenzene	**34/27**	35-93	23	50	
			2,4-Dichlorophenol	**41/38**	43-108	8	50	
			Hexachlorobutadiene	**41//32**	42-105	25	50	
			2-Chlorophenol	37/**34**	36-99	8	50	
			1,4-Dichlorobenzene	32/**25**	32-90	24	50	
			Hexachloroethane	31/**24**	31-88	25	50	
			2-Nitrophenol	39/**33**	38-104	15	50	
			2,4-Dimethylphenol	42/**39**	40-112	7	50	
			Bis(2-chloroethoxy)methane	42/**37**	38-106	13	50	
			1,2,4-Trichlorobenzene	39/**32**	36-98	19	50	
			2-Methylnaphthalene	41/**35**	39-104	15	50	
			2,4,6-Trichlorophenol	49/**42**	44-113	15	50	
			2,4,5-Trichlorophenol	49/**42**	46-116	15	50	
			2-Chloronaphthalene	44/**37**	41-110	18	50	
			Acenaphthylene	48/**40**	41-112	17	50	
			Dibenzofuran	47/**40**	44-108	16	50	
			4-Bromophenyl phenyl ether	46/**37**	38-106	22	50	
			Hexachlorobenzene	52/**40**	46-115	25	50	
			Phenanthrene	53/**43**	47-114	22	50	
			Anthracene	53/**43**	46-115	21	50	
			Benzo(a)anthracene	55/**44**	46-116	22	50	
			Chrysene	55/**45**	46-118	20	50	
			Di-n-octyl phthalate	53/**42**	43-129	23	50	
			Benzo(g,h,I)perylene	51/**39**	41-122	27	50	
			Carbazole	51/**41**	47-118	21	50	
KRM50 (soil samples)	S0403-10-12	8270	Hexachlorocyclopentadiene	**8/10**	20-109	19	50	None, other QA/QC items within range
			2,4,5-Trichlorophenol	**40**/46	46-116	13	50	
			2-Chloronaphthalene	**38**/45	41-110	16	50	
			Dimethyl phthalate	**39**/44	43-114	12	50	
			4,6-Dinitro-2-methylphenol	**7/5**	11-142	NC	50	
			4-Bromophenyl Phenyl Ether	**37**/42	38-106	12	50	
			Hexachlorobenzene	**37/43**	46-115	13	50	
			Phenanthrene	**45**/51	47-114	12	50	
			Benzo(a)anthracene	**44**/50	46-116	12	50	
			Indeno(1,2,3-cd)pyrene	**34**/39	36-133	14	50	
			Dibenz(a,h)anthracene	**36/40**	41-124	9	50	
			Benzo(g,h,I)perylene	**35/38**	41-122	7	50	
			Carbazole	**45**/50	47-118	10	50	
KRM50 (soil samples)	S0403-10-12	8081/ 8082	Endrin Ketone	**32/44**	47-156	31	50	None, other QA/QC items within range
			Heptachlor	115/55	19-150	**71**	50	
KRM50 (soil samples)	S0403-10-12	8151	Pentachlorophenol	**69/69**	71-109	1	50	None, other QA/QC items within range

NC – Not calculated

The bolded numbers are out of the acceptance range.

7. FIELD AND LABORATORY DUPLICATE RESULTS

Field duplicate results are used to evaluate representativeness. When results for both duplicate and sample values are greater than five times the practical quantitation limit (PQL), satisfactory representativeness is indicated by an RPD less than or equal to 100 percent for soil samples and less than or equal to 50 percent for aqueous samples. Where one or both of the results of a field duplicate pair are reported at less than five times the PQL, satisfactory representativeness is indicated if the field duplicate results agree within 3.5

times the quantitation limit. Field duplicate results that do not meet these criteria may indicate unsatisfactory representativeness of the results.

Laboratory duplicate samples are analyzed to assess precision by the laboratory at the time of analysis for the inorganics. A control limit of 20% for the RPD is used for original and duplicate sample values ≥ five times the reporting limits as stated in the Guidelines (2001).

Eight field duplicate samples were collected for 56 investigative samples. This satisfies the requirement in the Supplemental Soil and Groundwater Sampling Plan (1 per 10 investigative samples or 10 percent). The reported results for field and laboratory duplicate sample pairs were in agreement with the above acceptance criteria with the exception of the samples mentioned below:

SDG #	Sample ID	Compound and Concentration	Reason	Qualifier
KRM49 (soil samples)	S0926-6-7 S0926-6-7-DUP	Mercury (30 mg/kg) Mercury (4.6 mg/kg)	157 %	"J" for both samples
KRM49 (soil samples)	S0920-13-15 and laboratory duplicate	Mercury (0.13106 & 0.17738 mg/kg)	30 %	"J"

8. INTERNAL STANDARD RESPONSES

Internal standard (IS) performance criteria ensure that the GC/MS sensitivity and response are stable during each analytical run. IS areas must be within -50 percent to +100 percent. The internal standards area responses for the volatile and semi-volatile organic method were checked for the data review. All IS responses were within control limits with the exception of the sample mentioned below.

SDG #	Analysis	Sample ID	AREAS IS	Qualifier
KRM48 (soil samples)	SVOCs	S0122-18-20RE	IS1 1,4-Dichlorobenzene 214512 47802-191208 IS2 Naphthalene 839675 164988-659952 IS3 Acenaphthene 476558 89695-358778 IS4 Phenanthrene 712955 129363-517450 IS5 Chrysene 327623 72671-290684 IS6 Perylene 211745 70061-280244	None, all the analytes in sample S0122-18-20RE were non-detect.

9. ICP SERIAL DILUTIONS

The % differences (D) between the original sample results and the results obtained from the serial dilutions should agree within a 10% difference. However if the analyte concentration is less than a factor of 50 above the IDL, the serial dilution does not need to agree within 10 %. All the reported results were in agreement with the acceptance criteria.

STL MEMO ON METHOD 8081/8082

SURROGATE ACCEPTANCE POLICY

SEVERN TRENT STL

October 4, 2005

Amelia Turnell
URS Corporation
1001 Highlands Plaza Drive West
Suite 300
St. Louis, Missouri 63110

RE: STL Savannah Method 8081/8082 Surrogate Acceptance Policy

Dear Ms. Turnell:

Pursuant to our telephone conversation on September 21, 2005, the following summary and attachment are provided in response to your request for information and confirmation of laboratory policy regarding the surrogate recoveries for samples reported under STL Savannah Sample Delivery Group (SDG) KRM51, Job 6517.

Specifically, the laboratory was requested to verify the surrogate recoveries in the PCB analysis performed using Method 8082 for select samples where the recovery for one of the two reported surrogates was below the lower control limit and less than ten percent recovery. Also, the laboratory was asked to determine if there was any evidence of potential PCBs in laboratory samples ID 680-6517-2 through 680-6517-4.

The sample chromatograms for the noted samples were reviewed by the Semivolatile GC Department Manager, Mr. Wayne Robbins. Mr. Robbins determined that there were some peaks consistent with the presence of PCBs in samples lab ID 680-6517-2 and 680-6517-3, however, that these peaks were above the noise level of the extraction and analysis, but below the laboratory method detection limits (MDL). Additionally, these same peaks were present in the associated method blank at similar concentrations, and again below the laboratory MDL. For sample ID 680-6517-4, there were no peaks consistent with PCB chromatography.

It should be noted that in all three samples, the recovery for the alternate PCB surrogate compound, Tetrachloro-m-xylene (TCX), the surrogate recoveries weres well within acceptable levels and similar to the recoveries in the associated method blank and laboratory control sample (LCS).

Additionally, in response to your request, attached is a statement prepared for URS by the laboratory Quality Assurance Manager, Ms. Andrea Teal, explaining the surrogate acceptance policy for this method as documented in our laboratory standard operating procedure (SOP) for Organochlorine Pesticides and PCBs by GC (SOP #SG45).

If you have any further questions or need additional information, please feel free to contact me at (912) 354-7858.

Sincerely,

Lidya Gulizia

Lidya Gulizia
Project Manager
STL Savannah

Attachment: Surrogate Acceptance Policy, STL Savannah (9/28/05)

SEVERN TRENT STL

September 28, 2005

Surrogate Acceptance Policy
STL Savannah

STL Savannah's surrogate acceptance policy is detailed in the laboratory's SOP for Organochlorine Pesticides and PCBs by GC (SOP# SG45). Our procedure is taken from EPA Method 8081A which recommends two surrogates to be spiked into each sample: decachlorobiphenyl (DCB) and tetrachloro-m-xylene (TCMX). Due to the complex nature of GC chromatograms, surrogate recoveries are frequently complicated by matrix interferences; therefore, DCB is evaluated as our primary surrogate. If there is matrix interference with DCB, then TCMX is evaluated.

The previous version of EPA 8081 (Update II) is more explicit than EPA 8081A. In the absence of definitive policy in EPA 8081A, we have taken some guidance from EPA 8081 as we currently perform pesticide and PCB analyses together in a single injection. In Section 5.7.1 of EPA 8081, the method states to:

> "Use decachlorobiphenyl as the primary surrogate. However, if the recovery is low, or late-eluting compounds interfere with decachlorobiphenyl, then tetrachloro-m-xylene should be evaluated as a surrogate. Proceed with corrective action when both surrogates are out of limits for a sample."

We have adapted our dual method, dual column analysis procedures to follow this guidance. It is our policy not to initiate re-work unless both surrogate compounds are outside of the acceptance limits. Instead, recoveries from both surrogate compounds are provided in the final report, and the failing surrogate is qualified accordingly.

It should be noted, however, that the laboratory currently performs work for a wide variety of clients, many of whom have special QC requirements. If necessary, the laboratory can adopt stricter QC requirements for this project to require both TCMX and DCB surrogates to be evaluated for subsequent sampling events such that corrective action is taken if both surrogate compounds are not within QC limits, or the laboratory can continue their current policy with the exception that re-work is initiated for any surrogate results less than 10%. Project-specific requirements are incorporated into the Project QAPP or SOW and are communicated to the laboratory via the Project Plan and LIMS Worksheet Notes.

QUALITY ASSURACE REPORT

(LEVEL IV)

1. FULL VALIDATION OF VOC DATA- SDG KRM48

This section describes the full validation for two samples which were prepared by USEPA SW-846 Method 5030 and analyzed for volatile organic compounds (VOCs) by USEPA SW-846 Method 8260B. The samples were analyzed by STL Laboratories, Inc. of Savannah, Georgia and submitted as part of the sample delivery group (SDG) KRM48. The samples included as part of this validation are listed below:

Sample Identification
S0124-18-20
S0123-18-20

Evaluation of the analytical data followed procedures outlined in USEPA Contract Laboratory Program (CLP) National Functional Guidelines for Low Concentration Organic Data Review (USEPA 2001). The evaluation criteria used during the validation were a combination of those criteria presented in the respective methods and the laboratory criteria based on historical data.

Criteria evaluated included the following method performance criteria:

- Data Package Completeness
- Laboratory Case Narrative/ Cooler Receipt Form
- Holding Times and Sample Preservation
- **Instrument Performance**
- **Initial Calibration**
- **Calibration Verification**
- Field Duplicate Samples
- Blank Samples
- Surrogate Spike Recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) Samples
- Internal Standards and Retention Times
- Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)
- **Target Compound Identification and Quantification**
- Overall Data Assessment

Several items in the criteria mentioned above have already been evaluated as part of the Review Assessment performed on this SDG. Therefore, only the items that are bold are covered in this validation report. In addition, recalculations were performed to compare the summary forms versus the raw data recoveries for surrogates and the LCS.

1.1 Instrument Performance

GC/MS instrument performance checks were performed to ensure mass resolution, identification, and instrument sensitivity. Criteria for evaluation of instrument performance included possible transcription/calculation errors, adherence to instrument tuning frequency requirements, mass assignments, and ion abundance criteria. Instrument performance check samples were evaluated against criteria established in USEPA National Functional Guidelines for Low Concentration Organic Data Review (USEPA 2001).

Based on the raw data, the ion abundance criteria were within evaluation criteria for all masses, and no calculation or transcription errors were noted. No qualifications of the data were required.

1.2 Initial Calibration

Initial calibration (ICAL) criteria were established to assess whether the instrument was capable of producing acceptable qualitative and quantitative data for volatiles analysis. Samples included in this SDG were analyzed using instrument MSL5972. The ICALs for this instrument were performed on July 8, 2005. At least five standard concentrations were used to establish the ICAL curve as required by USEPA National Functional Guidelines for Low Concentration Organic Data Review (USEPA 2001).

For the ICAL curve, the response factors (RFs) were reviewed following USEPA National Functional Guidelines for Low Concentration Organic Data Review (USEPA 2001). The ICAL RFs were greater than 0.05 for all target compounds. Additionally, review of the ICAL summary forms indicated that the RF percent relative standard deviations (%RSDs) were ≤ 15 percent for target compounds and ≤ 30 percent for calibration check compounds (CCC). In some instances, linearity was determined using linear regression. All correlation coefficients were greater than 0.99 when linear regression was used to establish the ICAL.

Recalculations of the RFs and %RSDs for one compound per internal standard were performed, and no systematic errors in calculation or transcription were noted.

1.3 Calibration Verification

Review of the analysis run log indicated the initial calibration verification (ICV) was analyzed following the ICAL and calibration verifications (CVs) were performed at the required frequency of every 12 hours. Review of the continuing calibration summary form indicated all RFs met the evaluation criteria of greater than 0.05 for all analytes. In addition, %Ds met the evaluation criteria of less than 20% for CCCs and less than 25 percent for all analytes with the exceptions noted below:

Identifier	Verification	Analyte	%D
MSL5972, 07/08/05, LQ833	ICV	Dichlorodifluoromethane	26.2
MSL5972, 07/08/05, LQ833	ICV	Methylene chloride	31.7
MSL5972, 07/08/05, LQ833	ICV	Methyl acetate	39.3

Data were not qualified based on outlying ICV recoveries when the CV recoveries preceding the samples were acceptable.

1.4 Surrogate Recoveries

Approximately five percent of the surrogate recoveries were recalculated, and the summary forms versus the raw data were verified. No systematic error or transcription errors were noted.

1.5 LCS Recoveries

Approximately five percent of the LCS recoveries were recalculated and verified. No systematic calculation or transcription errors were noted.

1.6 Target Compound Identification and Quantification

For validation of the compound identification, chromatograms were reviewed to verify the major peaks were identified, the spectra of the identified compounds were verified against the library spectra, and the relative retention time was no greater than 0.06 different from the associated ICAL retention times. No anomalies were noted with the identification of the target compounds in the samples.

For the validation of compound quantification, the detections on this SDG were recalculated from the raw data, and no calculation errors were noted.

2. FULL VALIDATION OF SVOC DATA- SDG KRM48

This section describes the full validation for four samples which were prepared by USEPA SW-846 Method 3550B and analyzed for semi-volatile organic compounds (SVOCs) by USEPA SW-846 Method 8270C. The samples were analyzed by STL Laboratories, Inc. of Savannah, Georgia and submitted as part of the sample delivery group (SDG) KRM48. The samples included as part of this validation are listed below:

Sample Identification
S0118-0-2
S0116-0-2
S0117-0-2
S1101-1-3

Evaluation of the analytical data followed procedures outlined in USEPA Contract Laboratory Program (CLP) National Functional Guidelines for Low Concentration Organic Data Review (USEPA 2001). The evaluation criteria used during the validation were a combination of those criteria presented in the respective methods and the laboratory criteria based on historical data.

Criteria evaluated included the following method performance criteria:

- Data Package Completeness
- Laboratory Case Narrative/ Cooler Receipt Form
- Holding Times and Sample Preservation
- **Instrument Performance**
- **Initial Calibration**
- **Calibration Verification**
- Field Duplicate Samples
- Blank Samples
- Surrogate Spike Recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) Samples
- Internal Standards and Retention Times
- Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)

- **Target Compound Identification and Quantification**
- Overall Data Assessment

Several items in the criteria mentioned above have already been evaluated as part of the Review Assessment performed on this SDG. Therefore, only the items that are bold are covered in this validation report. In addition, recalculations were performed to compare the summary forms versus the raw data recoveries for surrogates, MS/MSD and the LCS.

2.1 Instrument Performance

GC/MS instrument performance checks were performed to ensure mass resolution, identification, and instrument sensitivity. Criteria for evaluation of instrument performance included possible transcription/calculation errors, adherence to instrument tuning frequency requirements, mass assignments, and ion abundance criteria. Instrument performance check samples were evaluated against criteria established in USEPA National Functional Guidelines for Low Concentration Organic Data Review (USEPA 2001).

Based on the raw data, the ion abundance criteria were within evaluation criteria for all masses, and no calculation or transcription errors were noted.

2.2 Initial Calibration

Initial calibration (ICAL) criteria were established to assess whether the instrument was capable of producing acceptable qualitative and quantitative data for semi-volatile analysis. An ICAL was analyzed at the beginning of the run sequence. The laboratory used six standard concentrations to establish the calibration curve, meeting the minimum required.

For the ICAL curve, the response factors (RFs) were reviewed and were greater than 0.05 for all target compounds. The RF percent relative standard deviations (%RSDs) were $\leq$ 30 percent for target compounds quantitated using internal standards. Some target analytes were quantitated using linear regression and all correlation coefficients (r^2) were greater than 0.99.

Recalculations of the RFs and %RSDs for one compound per internal standard was performed, and no systematic errors in calculation or transcription were noted.

2.3 Calibration Verification

Review of the laboratory instrument run logs indicated the initial calibration verification (ICV) was analyzed following the ICAL and calibration verifications (CVs) were performed at the required frequency of every 12 hours or batch of 20 samples. Review of CV summary forms indicated all target compounds quantitated using internal standards had RFs that met the evaluation criteria of greater than 0.05 for all target analytes and percent differences (%Ds) of $\leq$ 25%. Target compounds quantitated using linear regression had a percent drift $\leq$ 20 percent. Recalculation of the RF and %D for one compound per internal standard was completed, and no errors in calculation were noted.

2.4 Surrogate Recoveries

Approximately five percent of the surrogate recoveries were recalculated, and the summary forms versus the raw data were verified. No systematic error or transcription errors were noted.

2.5 Matrix Spike/Matrix Spike Duplicate (MS/MSD) Samples

Ten percent of the MS/MSD recoveries and RPD values were recalculated from the raw data and no calculation errors were noted.

2.6 LCS Recoveries

Approximately five percent of the LCS recoveries were recalculated and verified. No systematic calculation or transcription errors were noted.

2.7 Target Compound Identification and Quantification

For validation of the compound identification, chromatograms were reviewed to verify the major peaks were identified, the spectra of the identified compounds were verified against the library spectra, and the relative retention time was no greater than 0.06 different from the associated ICAL retention times. No anomalies were noted with the identification of the target compounds in the samples.

3. FULL VALIDATION OF PCB DATA - SDG KRM48

This section describes the full validation for four soil samples that were prepared by USEPA SW-846 Method 3550B and analyzed for polychlorinated biphenyls (PCBs) by USEPA SW-846 Method 8082. The samples were analyzed by Severn Trent Laboratories (STL), Inc., of Savannah, Georgia, and submitted as part of sample delivery group (SDG) KRM48. Samples included as part of this validation are listed below:

Sample Identification
S0215-0-2
S0216-0-2
S0217-0-2
S0214-0-2

The validation followed USEPA National Functional Guidelines for Low Concentration Organic Data Review (2001) where applicable to USEPA SW-846 Method 8082. The evaluation criteria used during the validation were a combination of those criteria presented in the analytical method and the laboratory criteria based on historical data.

Criteria evaluated included the following method performance criteria:

- Data package completeness
- Laboratory case narrative\cooler receipt form
- Sample preservation and holding times
- Initial calibration
- Calibration verification
- Blank samples
- Duplicate samples
- Surrogate spike recoveries
- Matrix spike/matrix spike duplicate (MS/MSD) samples
- Laboratory control samples (LCS)
- Target compound identification and quantification
- Overall assessment of data

3.1 Data Package Completeness

The data package was reviewed to make certain that it contained the data contractually required in the deliverable. This included checking the data package for the results of each analyte requested for each field sample submitted in the analytical batch, along with requested QC documentation for the respective methods. The data package was considered complete for SDG KRM48.

3.2 Laboratory Case Narrative\Cooler Receipt Form

The case narrative indicated the MS/MSD sample was from a different SDG. This issue is discussed below in the appropriate section. No additional problems were noted in laboratory the case narrative. No exceptions were noted on the cooler receipt form.

3.3 Sample Preservation and Holding Times

Review of the sample collection and analysis dates involved comparing the chains-of-custody, the summary forms, the raw data forms, and the chromatograms for accuracy, consistency, and holding time compliance. The samples were received and maintained at $4^{o}C \pm 2^{o}C$. All samples were extracted within 14 days of collection for soil and analyzed within 40 days of sample extraction. No qualifications of data were required based on sample preservation and holding time requirements.

3.4 Initial Calibration

Initial calibration (ICAL) criteria were established to assess whether the instrument was capable of producing acceptable qualitative and quantitative data for PCB analyses. External calibration procedures are common to Aroclor analysis using dual analytical columns; however, in this case STL Savannah established the ICAL using internal standard procedures common in PCB congener analysis. Although USEPA Method 8082 suggests external calibration for Aroclor analysis, internal calibration procedures are considered an acceptable alternative by USEPA methodology.

The ICAL for PCBs was performed on both analytical columns using a mixture of Aroclors 1016 and 1260 at six concentrations, and Aroclors 1221, 1232, 1242, 1248, 1254, and 1268 at a single concentration as outlined in Method 8082. The response factors (RF) were determined for of each of the major Aroclor 1016 and 1260 peaks, and the percent relative standard differences (%RSDs) were less than the method criteria of 20%. No qualifications to the PCB data were necessary.

The RFs and %RSDs for two representative peaks of Aroclors 1016 and 1260 were recalculated, for both columns, and no transcription or calculation errors were noted.

3.5 Calibration Verification

Continuing calibration verifications (CV) were performed at the required frequency of every 12 hours for PCB analysis. All peaks eluted within the specified retention time windows and the CFs average percent difference (%D) was within the evaluation criteria (15%) for Aroclors 1016 and 1260 for each CV. Some

individual peak %Ds from Aroclors 1221 and 1268 were outside evaluation criteria and are listed in the following table.

CV ID	Compound(peak#)	Column	%D	Criteria
RAG01007	Aroclor-1221(1)	CLPI	39	15
RAG01009	Aroclor-1268(1)	CLPI	16	15
RAG01009	Aroclor-1268(2)	CLPI	25	15
RAG01009	Aroclor-1268(3)	CLPI	19	15
RAG01009	Aroclor-1268(4)	CLPI	24	15
RAG01009	Aroclor-1268(5)	CLPI	23	15
RAG01009	Aroclor-1268(1)	CLPII	16	15
RAG01009	Aroclor-1268(2)	CLPII	20	15
RAG01009	Aroclor-1268(5)	CLPII	15	15

The average %D for all the Aroclor 1221 peaks was within evaluation criteria. No qualifications to the data were required for Aroclor 1221. Qualifications of data based on average %Ds are listed in the following table.

Field ID	Analyte	Qualification
S0215-0-2	Aroclor-1268	**UJ**
S0216-0-2	Aroclor-1268	**UJ**
S0217-0-2	Aroclor-1268	**UJ**
S0214-0-2	Aroclor-1268	**UJ**

The %Ds for two major peaks from Aroclors 1016 and 1260, from each applicable CV, were recalculated from the raw data, for both columns, and no transcription or calculation errors were noted.

3.6 Blank Samples

The purpose of the method blank samples is to evaluate the existence and magnitude of contamination problems emanating from laboratory activities. Method blank samples were analyzed with each analytical batch as required by Method 8082. All target compounds were reported as nondetect in the method blank. Review of chromatograms indicated that no peaks were present. No data qualifications were required based on blank samples.

3.7 Duplicate Samples

Field duplicates are collected to assess sample precision based on field collection techniques and laboratory duplicates are analyzed to assess the laboratory and analytical method precision. Sample S0214-0-2 was duplicated in the field and analyzed. All PCBs were nondetect in both samples. No qualifications to the data were required.

3.8 Surrogate Spike Recoveries

Surrogate compounds were used to evaluate the overall laboratory sample preparation efficiency on a per sample basis. All surrogate recoveries were within evaluation criteria. Ten percent of the recoveries were recalculated, and the summary forms versus the raw data were verified. No calculation or transcription errors were noted.

3.9 Matrix Spike/Matrix Spike Duplicate (MS/MSD) Samples

MS/MSD samples were analyzed to assess accuracy and precision for the analyses. The MS/MSD sample was from a different SDG. No qualification of data was required.

3.10 Laboratory Control Samples (LCS)

A laboratory control sample (LCS) was analyzed with the analytical batch as required by Method 8082. Review of the LCS summary forms indicated all LCS recoveries were within evaluation criteria. No qualifications to the data were required. Twenty percent of the LCS recoveries were recalculated, and no calculation or transcription errors were noted.

3.11 Target Compound Identification and Quantification

For the validation of the compound identification, chromatograms were reviewed to verify the major peaks were identified properly and the spectra of the identified compounds were verified against the retention time of the associated standard curve or CV. The retention times of identified compounds and surrogates were within the calculated retention time windows on both columns. Approximately 10 percent of the sample results were recalculated and no calculations or transcription errors were noted.

3.12 Overall Data Assessment

Based on the criteria outlined, it is recommended that the results reported for these analyses be accepted for their intended use. MS/MSD, LCS and surrogate recoveries demonstrated that acceptable levels of accuracy and precision were achieved, with the noted exceptions. In addition completeness defined to be the percentage of analytical results that are judged to be valid, including estimated values (**J**), was 100 percent for this SDG.

4. FULL VALIDATION OF MERCURY DATA – SDG KRM49

This section describes the full data validation for three soil samples, which were prepared and analyzed by USEPA SW-846 Method 7471A. Samples were analyzed by Severn Trent Laboratories (STL) of Savannah, Georgia, and submitted as part of sample delivery group (SDG) KRM49. Samples included as part of this validation are listed below:

Sample Identification
S0920-13-15
S0925-2-3
S0926-6-7

The data validation followed USEPA Contract Laboratory Program (CLP) National Functional Guidelines for Inorganic Data Review (USEPA 2004), where applicable to USEPA SW-846 Method 7471A. The evaluation criteria used during the validation were a combination of those criteria presented in the respective methods and the laboratory criteria based on historical data.

Criteria evaluated included the following method performance criteria:

Completeness of data package

Laboratory case narrative

Sample preservation and holding times

Blank contamination

Initial calibration

Calibration verification

Laboratory control sample (LCS)

Laboratory duplicate analysis

Matrix spike/matrix spike duplicate samples (MS/MSD)

Serial dilution

Field duplicate evaluation

Sample result verification

Overall data assessment

4.1 Data Package Completeness

The data package was reviewed to make certain that it contained the data contractually required in the deliverable. This included checking the data package for the results of each analyte requested for each field sample submitted in the analytical batch, along with requested QC documentation for the respective methods. The data package was complete for SDG KRM49.

4.2 Laboratory Case Narrative

The laboratory case narrative indicated that the matrix spike/matrix spike duplicate samples had native levels of mercury greater than 4X the spiked amount; therefore the MS/MSD samples could not be evaluated. This issue is addressed in the appropriate section below. No additional items were noted in the case narrative.

4.3 Sample Preservation and Holding Times

Review of the sample collection and analysis dates involved comparing the sample chain-of-custody, the sample preparation logs, the analysis run logs, and the raw data forms for holding time compliance. The laboratory received the samples properly preserved (pH<2), and the samples were analyzed within the evaluation criteria of 28 days. No qualification of the data was required based on holding time criteria or sample preservation.

4.4 Blank Contamination

The purpose of blank samples was to evaluate the existence and magnitude of contamination problems emanating from laboratory activities. Initial calibration, continuing calibration, and preparation blanks were all reported nondetect for all metals. Ten percent of the blank sample results were compared to the raw data and no transcription errors were noted.

4.5 Initial Calibration

Initial calibration (ICAL) criteria were established to assess whether the instrument was capable of producing acceptable qualitative and quantitative data for mercury. A curve consisting of a blank and five standards was used to establish the initial calibration curve for mercury per the requirements specified in Method 7471A. Review of the ICAL data indicated the correlation coefficient (r) value was greater than 0.995 for mercury. Review of the initial calibration verification (ICV) data indicated that mercury was within evaluation criteria (80-120%). No qualification of data was required based on ICAL criteria or ICV recoveries. The ICV recovery for mercury was recalculated and compared to the raw data and no calculation or transcription errors were noted.

4.6 Calibration Verification

Calibration verification (CV) criteria were established to assess whether the instrument was capable of reproducing acceptable qualitative and quantitative data established by the ICAL. The laboratory analyzed CV samples at a frequency of 10 percent as specified by the Method. CV samples associated

with the validated samples had recoveries within the evaluation criteria (80-120%). No qualifications to the data were required. One hundred percent of the CV sample recoveries were recalculated and compared to the raw data and no calculation or transcription errors were noted.

4.7 Laboratory Control Sample

Laboratory control samples (LCS) were analyzed to assess the accuracy of the analytical method and to demonstrate laboratory method performance. LCS recoveries were within evaluation criteria for all analytes (80-120%). No qualification of data was required based on LCS recoveries. One hundred percent of LCS recoveries were recalculated and compared to the raw data and no calculation or transcription errors were noted.

4.8 Laboratory Duplicate Analysis

A laboratory duplicate sample was analyzed to assess the precision of the laboratory. Sample S0920-13-15 was analyzed in duplicate by the laboratory for mercury. The laboratory duplicate RPD for sample S0920-13-15 (30%) was outside evaluation criteria (20%). Sample S0920-13-15 was qualified estimated (**J**) for mercury.

4.9 Matrix Spike/Spike Duplicate (MS/MSD)

A matrix spike / matrix spike duplicate (MS/MSD) sample pair was analyzed to assess accuracy, precision and the effects of matrix interference during analysis. The laboratory spiked and analyzed sample S0920-13-15. The native levels of mercury were greater than 4 times the spiking amount. The MS/MSD samples were not evaluated and no qualification of data was required.

4.10 Serial Dilutions

The serial dilution of sample S0920-13-15 was analyzed to determine whether or not significant physical or chemical interferences exist due to sample matrix. The percent difference (%D) for mercury of the serial dilution sample was within evaluation criteria (10%). No qualification of data was required. The serial dilution sample %D was recalculated and compared to the raw data and no transcription and calculation errors were noted.

4.11 Field Duplicate Evaluation

Overall precision for the sampling event was measured using field duplicate samples. Field duplicates were collected at a 5% frequency. The field duplicates for this SDG are listed in the table below.

Field ID	Field Duplicate ID
S0926-6-7	S0926-6-7-DUP
S0926-9-10	S0926-9-10-DUP

The S0926-6-7/ S0926-6-7-DUP RPD (157%) was outside evaluation criteria (50%). These samples were qualified estimated (**J**).

4.12 Sample Result Verification

The data summary form for sample S0925-2-3 was reviewed and compared to the raw data package and no transcription errors were noted.

4.13 Overall Data Assessment

Based on the criteria outlined, it is recommended that the results reported for these analyses be accepted for their intended use. Completeness is defined to be the percentage of analytical results that are judged to be valid, including estimated (J) data, which was 100 percent for this SDG.

SDG KRM 48

ORGANIC DATA ASSESSMENT

PROJECT NUMBER: 21561601.00000
LABORATORY: STL Savannah
LAB PROJECT NO. 680-6304 (KRM48)
NO. OF SAMPLES/
MATRIX: 16 samples / 15 solid, 1 aqueous

SITE: Solutia Krummrich
REVIEWER: URS CORPORATION
REVIEWER'S NAME: A. Turnell
COMPLETION DATE: 9/19/2005

DATA ASSESSMENT WORKSHEET

	VOCs Meth # 8260	SVOCs Meth # 8270
1. HOLDING TIMES	✓	(1)
2. BLANKS	✓	✓
3. SURROGATES	✓	(2-3)
4. SCS (LCS)	✓	✓
5. DCS (LSCD)	N/A	N/A
6. MATRIX SPIKE/DUP	N/A	(4)
7. DILUTION	✓	✓
8. DUPLICATES	✓	✓
9. INTERNAL STANDARDS	✓	(5)
10. OVERALL ASSESSMENT	O	O

O = Data had no problems/ or qualified due to minor problems.
M = Data qualified due to major problems.
Z = Data unacceptable.
X = Problems, but do not affect data.

ACTION ITEMS: (1) Samples S0120-0-2RE* and S0122-18-20RE were reextracted out of hold time (7 days past hold time). Therefore, detected analytes in these samples were qualified estimated "J" and non-detects were qualified "UJ".
(2) All surrogates in sample S0120-0-2 were recovered below the control limits, with the exception of surrogate 2,4,6-Tribromophenol. Therefore, the detected analyte in this sample was qualified estimated "J" and non-detects were qualified "UJ".

COMMENTS: (3) Surrogate Phenol-d5 was recovered below the control limits in sample S0122-18-20*. However, no action is necessary because phenol was the only surrogate recovered out of criteria.
(4) Several MS/MSD recoveries were below control limits in sample S1101-1-3. However, no action is necessary because the other QA/QC criteria were within limits.
(5) All internal standards in sample S0122-18-20RE, with the exception of Perylene had an IS area greater than 100%. However, no action is necessary since all the analytes in this sample were non-detect.

* S0120-0-2RE results were used instead of S0120-0-2 due to better QA/QC parameters. S0122-18-20 results were used instead of S0122-18-20RE due to better QA/QC parameters.

SDG# KRM48

PROJECT# 680-6304

VOLATILES BY GC/MS (8260B) FRACTION

KRM48

ORGANIC DATA ASSESSMENT

PROJECT NUMBER: 21561601.00000
LABORATORY: STL Savannah
LAB PROJECT NO. 680-6304 (KRM48)
NO. OF SAMPLES/
MATRIX: 16 samples / 15 solid, 1 aqueous

SITE: Solutia Krummrich
REVIEWER: URS CORPORATION
REVIEWER'S NAME: A. Turnell
COMPLETION DATE: 9/19/2005

DATA ASSESSMENT WORKSHEET

	VOCs Meth # 8260	SVOCs Meth # 8270
1. HOLDING TIMES	✓	(1)
2. BLANKS	✓	✓
3. SURROGATES	✓	(2-3)
4. SCS (LCS)	✓	✓
5. DCS (LSCD)	N/A	N/A
6. MATRIX SPIKE/DUP	N/A	(4)
7. DILUTION	✓	✓
8. DUPLICATES	✓	✓
9. INTERNAL STANDARDS	✓	(5)
10. OVERALL ASSESSMENT	O	O

O = Data had no problems/ or qualified due to minor problems.
M = Data qualified due to major problems.
Z = Data unacceptable.
X = Problems, but do not affect data.

ACTION ITEMS: (1) Samples S0120-0-2RE* and S0122-18-20RE were reextracted out of hold time (7 days past hold time). Therefore, detected analytes in these samples were qualified estimated "J" and non-detects were qualified "UJ".
(2) All surrogates in sample S0120-0-2 were recovered below the control limits; with the exception of surrogate 2,4,6-Tribromophenol. Therefore, the detected analyte in this sample was qualified estimated "J" and non-detects were qualified "UJ".

COMMENTS: (3) Surrogate Phenol-d5 was recovered below the control limits in sample S0122-18-20*. However, no action is necessary because phenol was the only surrogate recovered out of criteria.
(4) Several MS/MSD recoveries were below control limits in sample S1101-1-3. However, no action is necessary because the other QA/QC criteria were within limits.
(5) All internal standards in sample S0122-18-20RE, with the exception of Perylene had an IS area greater than 100%. However, no action is necessary since all the analytes in this sample were non-detect.

* S0120-0-2RE results were used instead of S0120-0-2 due to better QA/QC parameters. S0122-18-20 results were used instead of S0122-18-20RE due to better QA/QC parameters.

SDG# KRM48

PROJECT# 680-6304

VOLATILES BY GC/MS (8260B) FRACTION

Form 1
Volatile Organic Compounds by GC/MS

Client Sample ID: S0124-18-20

Lab Name: STL Savannah Job No.: 680-6304-1

SDG No.: KRM48

Matrix: (soil/water) Solid Lab Sample ID: 680-6304-9

Sample wt/vol: 6.0 (g/mL) g Lab File ID: 15330.d

Level: (low/med) Low Date Received: 07/26/05

% Moisture: not dec. 22 Date Analyzed: 08/01/05

GC Column: ____ ID: ____ (mm) Dilution Factor: 1

Soil Extract Volume: ____ (uL) Soil Aliquot Volume: ____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
67-64-1	Acetone	53	U
71-43-2	Benzene	6.8	
75-25-2	Bromoform	5.3	U
74-83-9	Bromomethane	5.3	U
75-15-0	Carbon disulfide	5.3	U
56-23-5	Carbon tetrachloride	5.3	U
108-90-7	Chlorobenzene	5.3	U
124-48-1	Dibromochloromethane	5.3	U
75-00-3	Chloroethane	5.3	U
67-66-3	Chloroform	5.3	U
74-87-3	Chloromethane	5.3	U
156-59-2	cis-1,2-Dichloroethene	5.3	U
10061-01-5	cis-1,3-Dichloropropene	5.3	U
75-27-4	Bromodichloromethane	5.3	U
107-06-2	1,2-Dichloroethane	5.3	U
75-34-3	1,1-Dichloroethane	5.3	U
75-35-4	1,1-Dichloroethene	5.3	U
78-87-5	1,2-Dichloropropane	5.3	U
100-41-4	Ethylbenzene	5.3	U
591-78-6	2-Hexanone	27	U
75-09-2	Methylene Chloride	5.3	U
78-93-3	2-Butanone (MEK)	27	U
108-10-1	4-Methyl-2-pentanone (MIBK)	27	U
100-42-5	Styrene	5.3	U
79-34-5	1,1,2,2-Tetrachloroethane	5.3	U
127-18-4	Tetrachloroethene	7.1	
108-88-3	Toluene	5.3	U
156-60-5	trans-1,2-Dichloroethene	5.3	U
10061-02-6	trans-1,3-Dichloropropene	5.3	U
79-00-5	1,1,2-Trichloroethane	5.3	U
71-55-6	1,1,1-Trichloroethane	5.3	U
79-01-6	Trichloroethene	5.3	U
75-01-4	Vinyl chloride	5.3	U
1330-20-7	Xylenes, Total	11	U

Form 1
Volatile Organic Compounds by GC/MS

Client Sample ID: S0121-18-20

Lab Name: STL Savannah | Job No.: 680-6304-1

SDG No.: KRM48

Matrix: (soil/water) Solid | Lab Sample ID: 680-6304-11

Sample wt/vol: 5.1 (g/mL) g | Lab File ID: 15336.d

Level: (low/med) Low | Date Received: 07/26/05

% Moisture: not dec. 5.0 | Date Analyzed: 08/01/05

GC Column: ID: (mm) | Dilution Factor: 1

Soil Extract Volume: (uL) | Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
67-64-1	Acetone	52	U
71-43-2	Benzene	5.2	U
75-25-2	Bromoform	5.2	U
74-83-9	Bromomethane	5.2	U
75-15-0	Carbon disulfide	5.2	U
56-23-5	Carbon tetrachloride	5.2	U
108-90-7	Chlorobenzene	5.2	U
124-48-1	Dibromochloromethane	5.2	U
75-00-3	Chloroethane	5.2	U
67-66-3	Chloroform	5.2	U
74-87-3	Chloromethane	5.2	U
156-59-2	cis-1,2-Dichloroethene	5.2	U
10061-01-5	cis-1,3-Dichloropropene	5.2	U
75-27-4	Bromodichloromethane	5.2	U
107-06-2	1,2-Dichloroethane	5.2	U
75-34-3	1,1-Dichloroethane	5.2	U
75-35-4	1,1-Dichloroethene	5.2	U
78-87-5	1,2-Dichloropropane	5.2	U
100-41-4	Ethylbenzene	5.2	U
591-78-6	2-Hexanone	26	U
75-09-2	Methylene Chloride	5.2	U
78-93-3	2-Butanone (MEK)	26	U
108-10-1	4-Methyl-2-pentanone (MIBK)	26	U
100-42-5	Styrene	5.2	U
79-34-5	1,1,2,2-Tetrachloroethane	5.2	U
127-18-4	Tetrachloroethene	5.2	U
108-88-3	Toluene	5.2	U
156-60-5	trans-1,2-Dichloroethene	5.2	U
10061-02-6	trans-1,3-Dichloropropene	5.2	U
79-00-5	1,1,2-Trichloroethane	5.2	U
71-55-6	1,1,1-Trichloroethane	5.2	U
79-01-6	Trichloroethene	5.2	U
75-01-4	Vinyl chloride	5.2	U
1330-20-7	Xylenes, Total	10	U

Form 1
Volatile Organic Compounds by GC/MS

Client Sample ID: S0121-18-20-DUP

Lab Name: STL Savannah | Job No.: 680-6304-1

SDG No.: KRM48

Matrix: (soil/water) Solid | Lab Sample ID: 680-6304-12

Sample wt/vol: 5.6 (g/mL) g | Lab File ID: 15337.d

Level: (low/med) Low | Date Received: 07/26/05

% Moisture: not dec. 8.2 | Date Analyzed: 08/01/05

GC Column: ID: (mm) | Dilution Factor: 1

Soil Extract Volume: (uL) | Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
67-64-1	Acetone	49	U
71-43-2	Benzene	4.9	U
75-25-2	Bromoform	4.9	U
74-83-9	Bromomethane	4.9	U
75-15-0	Carbon disulfide	4.9	U
56-23-5	Carbon tetrachloride	4.9	U
108-90-7	Chlorobenzene	4.9	U
124-48-1	Dibromochloromethane	4.9	U
75-00-3	Chloroethane	4.9	U
67-66-3	Chloroform	4.9	U
74-87-3	Chloromethane	4.9	U
156-59-2	cis-1,2-Dichloroethene	4.9	U
10061-01-5	cis-1,3-Dichloropropene	4.9	U
75-27-4	Bromodichloromethane	4.9	U
107-06-2	1,2-Dichloroethane	4.9	U
75-34-3	1,1-Dichloroethane	4.9	U
75-35-4	1,1-Dichloroethene	4.9	U
78-87-5	1,2-Dichloropropane	4.9	U
100-41-4	Ethylbenzene	4.9	U
591-78-6	2-Hexanone	24	U
75-09-2	Methylene Chloride	4.9	U
78-93-3	2-Butanone (MEK)	24	U
108-10-1	4-Methyl-2-pentanone (MIBK)	24	U
100-42-5	Styrene	4.9	U
79-34-5	1,1,2,2-Tetrachloroethane	4.9	U
127-18-4	Tetrachloroethene	4.9	U
108-88-3	Toluene	4.9	U
156-60-5	trans-1,2-Dichloroethene	4.9	U
10061-02-6	trans-1,3-Dichloropropene	4.9	U
79-00-5	1,1,2-Trichloroethane	4.9	U
71-55-6	1,1,1-Trichloroethane	4.9	U
79-01-6	Trichloroethene	4.9	U
75-01-4	Vinyl chloride	4.9	U
1330-20-7	Xylenes, Total	9.7	U

Form 1
Volatile Organic Compounds by GC/MS

Client Sample ID: S0123-18-20

Lab Name: STL Savannah | Job No.: 680-6304-1

SDG No.: KRM48

Matrix: (soil/water) Solid | Lab Sample ID: 680-6304-13

Sample wt/vol: 6.0 (g/mL) g | Lab File ID: 15328.d

Level: (low/med) Low | Date Received: 07/26/05

% Moisture: not dec. 22 | Date Analyzed: 08/01/05

GC Column: ID: (mm) | Dilution Factor: 1

Soil Extract Volume: (uL) | Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
67-64-1	Acetone	53	U
71-43-2	Benzene	5.3	U
75-25-2	Bromoform	5.3	U
74-83-9	Bromomethane	5.3	U
75-15-0	Carbon disulfide	5.3	U
56-23-5	Carbon tetrachloride	5.3	U
108-90-7	Chlorobenzene	5.3	U
124-48-1	Dibromochloromethane	5.3	U
75-00-3	Chloroethane	5.3	U
67-66-3	Chloroform	5.3	U
74-87-3	Chloromethane	5.3	U
156-59-2	cis-1,2-Dichloroethene	5.3	U
10061-01-5	cis-1,3-Dichloropropene	5.3	U
75-27-4	Bromodichloromethane	5.3	U
107-06-2	1,2-Dichloroethane	5.3	U
75-34-3	1,1-Dichloroethane	5.3	U
75-35-4	1,1-Dichloroethene	5.3	U
78-87-5	1,2-Dichloropropane	5.3	U
100-41-4	Ethylbenzene	5.3	U
591-78-6	2-Hexanone	27	U
75-09-2	Methylene Chloride	5.3	U
78-93-3	2-Butanone (MEK)	64	
108-10-1	4-Methyl-2-pentanone (MIBK)	27	U
100-42-5	Styrene	5.3	U
79-34-5	1,1,2,2-Tetrachloroethane	5.3	U
127-18-4	Tetrachloroethene	5.3	U
108-88-3	Toluene	5.3	U
156-60-5	trans-1,2-Dichloroethene	5.3	U
10061-02-6	trans-1,3-Dichloropropene	5.3	U
79-00-5	1,1,2-Trichloroethane	5.3	U
71-55-6	1,1,1-Trichloroethane	5.3	U
79-01-6	Trichloroethene	5.3	U
75-01-4	Vinyl chloride	5.3	U
1330-20-7	Xylenes, Total	11	U

Form 1
Volatile Organic Compounds by GC/MS

Client Sample ID: S0122-18-20

Lab Name: STL Savannah | Job No.: 680-6304-1

SDG No.: KRM48

Matrix: (soil/water) Solid | Lab Sample ID: 680-6304-15

Sample wt/vol: 6.1 (g/mL) g | Lab File ID: 15338.d

Level: (low/med) Low | Date Received: 07/26/05

% Moisture: not dec. 15 | Date Analyzed: 08/01/05

GC Column: ID: (mm) | Dilution Factor: 1

Soil Extract Volume: (uL) | Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
67-64-1	Acetone	48	U
71-43-2	Benzene	4.8	U
75-25-2	Bromoform	4.8	U
74-83-9	Bromomethane	4.8	U
75-15-0	Carbon disulfide	4.8	U
56-23-5	Carbon tetrachloride	4.8	U
108-90-7	Chlorobenzene	4.8	U
124-48-1	Dibromochloromethane	4.8	U
75-00-3	Chloroethane	4.8	U
67-66-3	Chloroform	4.8	U
74-87-3	Chloromethane	4.8	U
156-59-2	cis-1,2-Dichloroethene	4.8	U
10061-01-5	cis-1,3-Dichloropropene	4.8	U
75-27-4	Bromodichloromethane	4.8	U
107-06-2	1,2-Dichloroethane	4.8	U
75-34-3	1,1-Dichloroethane	4.8	U
75-35-4	1,1-Dichloroethene	4.8	U
78-87-5	1,2-Dichloropropane	4.8	U
100-41-4	Ethylbenzene	4.8	U
591-78-6	2-Hexanone	24	U
75-09-2	Methylene Chloride	4.8	U
78-93-3	2-Butanone (MEK)	24	U
108-10-1	4-Methyl-2-pentanone (MIBK)	24	U
100-42-5	Styrene	4.8	U
79-34-5	1,1,2,2-Tetrachloroethane	4.8	U
127-18-4	Tetrachloroethene	4.8	U
108-88-3	Toluene	4.8	U
156-60-5	trans-1,2-Dichloroethene	4.8	U
10061-02-6	trans-1,3-Dichloropropene	4.8	U
79-00-5	1,1,2-Trichloroethane	4.8	U
71-55-6	1,1,1-Trichloroethane	4.8	U
79-01-6	Trichloroethene	4.8	U
75-01-4	Vinyl chloride	4.8	U
1330-20-7	Xylenes, Total	9.6	U

Form 1
Volatile Organic Compounds by GC/MS

Client Sample ID: TB-1

Lab Name: STL Savannah | Job No.: 680-6304-1

SDG No.: KRM48

Matrix: (soil/water) Water | Lab Sample ID: 680-6304-20

Sample wt/vol: 5 (g/mL) mL | Lab File ID: o0327.d

Level: (low/med) | Date Received: 07/26/05

% Moisture: not dec. | Date Analyzed: 08/02/05

GC Column: ID: (mm) | Dilution Factor: 1

Soil Extract Volume: (uL) | Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
67-64-1	Acetone	25	U
71-43-2	Benzene	1.0	U
75-27-4	Bromodichloromethane	1.0	U
75-25-2	Bromoform	1.0	U
74-83-9	Bromomethane	1.0	U
78-93-3	2-Butanone (MEK)	10	U
75-15-0	Carbon disulfide	1.0	U
56-23-5	Carbon tetrachloride	1.0	U
108-90-7	Chlorobenzene	1.0	U
75-00-3	Chloroethane	1.0	U
67-66-3	Chloroform	1.0	U
74-87-3	Chloromethane	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
124-48-1	Dibromochloromethane	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
100-41-4	Ethylbenzene	1.0	U
591-78-6	2-Hexanone	10	U
75-09-2	Methylene Chloride	5.0	U
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U
100-42-5	Styrene	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
108-88-3	Toluene	1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
75-01-4	Vinyl chloride	1.0	U
1330-20-7	Xylenes, Total	2.0	U

SDG # KRM48

PROJECT # 680-6304

Semivolatile Compounds by GC/MS (8270C) Fraction

Form 1
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: S0118-0-2

Lab Name: STL Savannah | Job No.: 680-6304-1

SDG No.: KRM48

Matrix: (soil/water) Solid | Lab Sample ID: 680-6304-1

Sample wt/vol: 30.02 (g/mL) g | Lab File ID: n3569.d

Level: (low/med) Low | Date Received: 07/26/05

% Moisture: 8.6 Decanted: (Y/N) | Date Extracted: 07/28/05

Concentrated Extract Volume: 1.0 mL | Date Analyzed: 08/03/05

Injection Volume: (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) pH: | Extraction Method: 3550B

108-95-2	Phenol	360	U
111-44-4	Bis(2-chloroethyl)ether	360	U
95-57-8	2-Chlorophenol	360	U
541-73-1	1,3-Dichlorobenzene	360	U
106-46-7	1,4-Dichlorobenzene	360	U
95-50-1	1,2-Dichlorobenzene	360	U
95-48-7	2-Methylphenol	360	U
39638-32-9	2,2'-oxybis(2-chloropropane)	360	U
621-64-7	N-Nitrosodi-n-propylamine	360	U
67-72-1	Hexachloroethane	360	U
98-95-3	Nitrobenzene	360	U
78-59-1	Isophorone	360	U
88-75-5	2-Nitrophenol	360	U
105-67-9	2,4-Dimethylphenol	360	U
111-91-1	Bis(2-chloroethoxy)methane	360	U
120-83-2	2,4-Dichlorophenol	360	U
120-82-1	1,2,4-Trichlorobenzene	360	U
91-20-3	Naphthalene	360	U
106-47-8	4-Chloroaniline	720	U
87-68-3	Hexachlorobutadiene	360	U
59-50-7	4-Chloro-3-methylphenol	360	U
91-57-6	2-Methylnaphthalene	360	U
77-47-4	Hexachlorocyclopentadiene	360	U
88-06-2	2,4,6-Trichlorophenol	360	U
95-95-4	2,4,5-Trichlorophenol	360	U
91-58-7	2-Chloronaphthalene	360	U
88-74-4	2-Nitroaniline	1900	U
131-11-3	Dimethyl phthalate	360	U
208-96-8	Acenaphthylene	360	U
99-09-2	3-Nitroaniline	1900	U
83-32-9	Acenaphthene	360	U
51-28-5	2,4-Dinitrophenol	1900	U
100-02-7	4-Nitrophenol	1900	U
132-64-9	Dibenzofuran	360	U
121-14-2	2,4-Dinitrotoluene	360	U
606-20-2	2,6-Dinitrotoluene	360	U
65794-96-9	3 & 4 Methylphenol	360	U

Form 1
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: S0118-0-2

Lab Name: STL Savannah | Job No.: 680-6304-1

SDG No.: KRM48

Matrix: (soil/water) Solid | Lab Sample ID: 680-6304-1

Sample wt/vol: 30.02 (g/mL) g | Lab File ID: n3569.d

Level: (low/med) Low | Date Received: 07/26/05

% Moisture: 8.6 Decanted: (Y/N) | Date Extracted: 07/28/05

Concentrated Extract Volume: 1.0 mL | Date Analyzed: 08/03/05

Injection Volume: (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) pH: | Extraction Method: 3550B

84-66-2	Diethyl phthalate	360	U
7005-72-3	4-Chlorophenyl phenyl ether	360	U
86-73-7	Fluorene	360	U
100-01-6	4-Nitroaniline	1900	U
534-52-1	4,6-Dinitro-2-methylphenol	1900	U
86-30-6	N-Nitrosodiphenylamine	360	U
101-55-3	4-Bromophenyl phenyl ether	360	U
118-74-1	Hexachlorobenzene	360	U
87-86-5	Pentachlorophenol	1900	U
85-01-8	Phenanthrene	360	U
120-12-7	Anthracene	360	U
84-74-2	Di-n-butyl phthalate	360	U
206-44-0	Fluoranthene	420	
129-00-0	Pyrene	360	U
85-68-7	Butyl benzyl phthalate	360	U
91-94-1	3,3'-Dichlorobenzidine	720	U
56-55-3	Benzo[a]anthracene	360	U
117-81-7	Bis(2-ethylhexyl) phthalate	360	U
218-01-9	Chrysene	360	U
117-84-0	Di-n-octyl phthalate	360	U
205-99-2	Benzo[b]fluoranthene	360	U
207-08-9	Benzo[k]fluoranthene	360	U
50-32-8	Benzo[a]pyrene	360	U
193-39-5	Indeno[1,2,3-cd]pyrene	360	U
53-70-3	Dibenz(a,h)anthracene	360	U
191-24-2	Benzo[g,h,i]perylene	360	U
86-74-8	Carbazole	360	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE ID

6304-1

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: KRM48

Matrix: (soil/water) SOIL Client Desc: S0118-0-2

Sample wt/vol: 30 (g/mL) G Lab File ID: N3569

Level: (low/med) LOW Date Received: 07/26/05

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 07/28/05

Concentrated Extract Volume: 1(mL) Date Analyzed: 08/03/05

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 97-00-7	1-Chloro-2,4-Dinitrobenzene		U	
2. 86-00-0	2-Nitrobiphenyl		U	
3. 88-73-3	2-Nitrochlorobenzene		U	
4. 99-54-7	3,4-Dichloronitrobenzene		U	
5. 2113-58-8	3-Nitrobiphenyl		U	
6. 121-73-3	3-Nitrochlorobenzene		U	
7. 99-93-3	4-Nitrobiphenyl		U	
8. 100-00-5	4-Nitrochlorobenzene		U	
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Form 1
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: S0116-0-2

Lab Name: STL Savannah | Job No.: 680-6304-1

SDG No.: KRM48

Matrix: (soil/water) Solid | Lab Sample ID: 680-6304-2

Sample wt/vol: 30.05 (g/mL) g | Lab File ID: n3570.d

Level: (low/med) Low | Date Received: 07/26/05

% Moisture: 4.1 Decanted: (Y/N) | Date Extracted: 07/28/05

Concentrated Extract Volume: 1.0 mL | Date Analyzed: 08/03/05

Injection Volume: (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) pH: | Extraction Method: 3550B

108-95-2	Phenol	340	U
111-44-4	Bis(2-chloroethyl)ether	340	U
95-57-8	2-Chlorophenol	340	U
541-73-1	1,3-Dichlorobenzene	340	U
106-46-7	1,4-Dichlorobenzene	340	U
95-50-1	1,2-Dichlorobenzene	340	U
95-48-7	2-Methylphenol	340	U
39638-32-9	2,2'-oxybis(2-chloropropane)	340	U
621-64-7	N-Nitrosodi-n-propylamine	340	U
67-72-1	Hexachloroethane	340	U
98-95-3	Nitrobenzene	340	U
78-59-1	Isophorone	340	U
88-75-5	2-Nitrophenol	340	U
105-67-9	2,4-Dimethylphenol	340	U
111-91-1	Bis(2-chloroethoxy)methane	340	U
120-83-2	2,4-Dichlorophenol	340	U
120-82-1	1,2,4-Trichlorobenzene	340	U
91-20-3	Naphthalene	340	U
106-47-8	4-Chloroaniline	690	U
87-68-3	Hexachlorobutadiene	340	U
59-50-7	4-Chloro-3-methylphenol	340	U
91-57-6	2-Methylnaphthalene	340	U
77-47-4	Hexachlorocyclopentadiene	340	U
88-06-2	2,4,6-Trichlorophenol	340	U
95-95-4	2,4,5-Trichlorophenol	340	U
91-58-7	2-Chloronaphthalene	340	U
88-74-4	2-Nitroaniline	1800	U
131-11-3	Dimethyl phthalate	340	U
208-96-8	Acenaphthylene	340	U
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	340	U
51-28-5	2,4-Dinitrophenol	1800	U
100-02-7	4-Nitrophenol	1800	U
132-64-9	Dibenzofuran	340	U
121-14-2	2,4-Dinitrotoluene	340	U
606-20-2	2,6-Dinitrotoluene	340	U
65794-96-9	3 & 4 Methylphenol	340	U

Form 1
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: S0116-0-2

Lab Name: STL Savannah | Job No.: 680-6304-1

SDG No.: KRM48

Matrix: (soil/water) Solid | Lab Sample ID: 680-6304-2

Sample wt/vol: 30.05 (g/mL) g | Lab File ID: n3570.d

Level: (low/med) Low | Date Received: 07/26/05

% Moisture: 4.1 Decanted: (Y/N) | Date Extracted: 07/28/05

Concentrated Extract Volume: 1.0 mL | Date Analyzed: 08/03/05

Injection Volume: (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) pH: | Extraction Method: 3550B

84-66-2	Diethyl phthalate	340	U
7005-72-3	4-Chlorophenyl phenyl ether	340	U
86-73-7	Fluorene	340	U
100-01-6	4-Nitroaniline	1800	U
534-52-1	4,6-Dinitro-2-methylphenol	1800	U
86-30-6	N-Nitrosodiphenylamine	340	U
101-55-3	4-Bromophenyl phenyl ether	340	U
118-74-1	Hexachlorobenzene	340	U
87-86-5	Pentachlorophenol	1800	U
85-01-8	Phenanthrene	340	U
120-12-7	Anthracene	340	U
84-74-2	Di-n-butyl phthalate	340	U
206-44-0	Fluoranthene	340	U
129-00-0	Pyrene	340	U
85-68-7	Butyl benzyl phthalate	340	U
91-94-1	3,3'-Dichlorobenzidine	690	U
56-55-3	Benzo[a]anthracene	340	U
117-81-7	Bis(2-ethylhexyl) phthalate	340	U
218-01-9	Chrysene	340	U
117-84-0	Di-n-octyl phthalate	340	U
205-99-2	Benzo[b]fluoranthene	340	U
207-08-9	Benzo[k]fluoranthene	340	U
50-32-8	Benzo[a]pyrene	340	U
193-39-5	Indeno[1,2,3-cd]pyrene	340	U
53-70-3	Dibenz(a,h)anthracene	340	U
191-24-2	Benzo[g,h,i]perylene	340	U
86-74-8	Carbazole	340	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE ID

6304-2

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: KRM48

Matrix: (soil/water) SOIL Client Desc: S0116-0-2

Sample wt/vol: 30 (g/mL) G Lab File ID: N3570

Level: (low/med) LOW Date Received: 07/26/05

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 07/28/05

Concentrated Extract Volume: 1(mL) Date Analyzed: 08/03/05

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 97-00-7	1-Chloro-2,4-Dinitrobenzene		U	
2. 86-00-0	2-Nitrobiphenyl		U	
3. 88-73-3	2-Nitrochlorobenzene		U	
4. 99-54-7	3,4-Dichloronitrobenzene		U	
5. 2113-58-8	3-Nitrobiphenyl		U	
6. 121-73-3	3-Nitrochlorobenzene		U	
7. 99-93-3	4-Nitrobiphenyl		U	
8. 100-00-5	4-Nitrochlorobenzene		U	
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Form 1

Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: S0120-0-2RE

Lab Name: STL Savannah | Job No.: 680-6304-1

SDG No.: KRM48

Matrix: (soil/water) Solid | Lab Sample ID: 680-6304-3 RE

Sample wt/vol: 30.04 (g/mL) g | Lab File ID: j2775.d

Level: (low/med) Low | Date Received: 07/26/05

% Moisture: 6.5 Decanted: (Y/N) | Date Extracted: 08/15/05

Concentrated Extract Volume: 1.0 mL | Date Analyzed: 08/16/05

Injection Volume: (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) pH: | Extraction Method: 3550B

108-95-2	Phenol	350	U	UJ
111-44-4	Bis(2-chloroethyl)ether	350	U	UJ
95-57-8	2-Chlorophenol	350	U	UJ
541-73-1	1,3-Dichlorobenzene	350	U	UJ
106-46-7	1,4-Dichlorobenzene	350	U	UJ
95-50-1	1,2-Dichlorobenzene	350	U	UJ
95-48-7	2-Methylphenol	350	U	UJ
39638-32-9	2,2'-oxybis(2-chloropropane)	350	U	UJ
621-64-7	N-Nitrosodi-n-propylamine	350	U	UJ
67-72-1	Hexachloroethane	350	U	UJ
98-95-3	Nitrobenzene	350	U	UJ
78-59-1	Isophorone	350	U	UJ
88-75-5	2-Nitrophenol	350	U	UJ
105-67-9	2,4-Dimethylphenol	350	U	UJ
111-91-1	Bis(2-chloroethoxy)methane	350	U	UJ
120-83-2	2,4-Dichlorophenol	350	U	UJ
120-82-1	1,2,4-Trichlorobenzene	350	U	UJ
91-20-3	Naphthalene	350	U	UJ
106-47-8	4-Chloroaniline	700	U	UJ
87-68-3	Hexachlorobutadiene	350	U	UJ
59-50-7	4-Chloro-3-methylphenol	350	U	UJ
91-57-6	2-Methylnaphthalene	350	U	UJ
77-47-4	Hexachlorocyclopentadiene	350	U	UJ
88-06-2	2,4,6-Trichlorophenol	350	U	UJ
95-95-4	2,4,5-Trichlorophenol	350	U	UJ
91-58-7	2-Chloronaphthalene	350	U	UJ
88-74-4	2-Nitroaniline	1800	U	UJ
131-11-3	Dimethyl phthalate	350	U	UJ
208-96-8	Acenaphthylene	350	U	UJ
99-09-2	3-Nitroaniline	1800	U	UJ
83-32-9	Acenaphthene	350	U	UJ
51-28-5	2,4-Dinitrophenol	1800	U	UJ
100-02-7	4-Nitrophenol	1800	U	UJ
132-64-9	Dibenzofuran	350	U	UJ
121-14-2	2,4-Dinitrotoluene	350	U	UJ
606-20-2	2,6-Dinitrotoluene	350	U	UJ
65794-96-9	3 & 4 Methylphenol	350	U	UJ

Form 1

Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: S0120-0-2RE

Lab Name: STL Savannah | Job No.: 680-6304-1

SDG No.: KRM48

Matrix: (soil/water) Solid | Lab Sample ID: 680-6304-3 RE

Sample wt/vol: 30.04 (g/mL) g | Lab File ID: j2775.d

Level: (low/med) Low | Date Received: 07/26/05

% Moisture: 6.5 Decanted: (Y/N) | Date Extracted: 08/15/05

Concentrated Extract Volume: 1.0 mL | Date Analyzed: 08/16/05

Injection Volume: (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) pH: | Extraction Method: 3550B

84-66-2	Diethyl phthalate	350	U	J
7005-72-3	4-Chlorophenyl phenyl ether	350	U	J
86-73-7	Fluorene	350	U	J
100-01-6	4-Nitroaniline	1800	U	J
534-52-1	4,6-Dinitro-2-methylphenol	1800	U	J
86-30-6	N-Nitrosodiphenylamine	350	U	J
101-55-3	4-Bromophenyl phenyl ether	350	U	J
118-74-1	Hexachlorobenzene	350	U	J
87-86-5	Pentachlorophenol	1800	U	J
85-01-8	Phenanthrene	350	U	J
120-12-7	Anthracene	350	U	J
84-74-2	Di-n-butyl phthalate	350	U	J
206-44-0	Fluoranthene	360		J
129-00-0	Pyrene	670		J
85-68-7	Butyl benzyl phthalate	350	U	J
91-94-1	3,3'-Dichlorobenzidine	700	U	J
56-55-3	Benzo[a]anthracene	350	U	J
117-81-7	Bis(2-ethylhexyl) phthalate	350	U	J
218-01-9	Chrysene	350	U	J
117-84-0	Di-n-octyl phthalate	350	U	J
205-99-2	Benzo[b]fluoranthene	350	U	J
207-08-9	Benzo[k]fluoranthene	350	U	J
50-32-8	Benzo[a]pyrene	350	U	J
193-39-5	Indeno[1,2,3-cd]pyrene	350	U	J
53-70-3	Dibenz(a,h)anthracene	350	U	J
191-24-2	Benzo[g,h,i]perylene	350	U	J
86-74-8	Carbazole	350	U	J

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE ID

6304-3RE

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: KRM48

Matrix: (soil/water) SOIL Client Desc: S0120-0-2RE

Sample wt/vol: 30 (g/mL) G Lab File ID: J2775

Level: (low/med) LOW Date Received: 07/26/05

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 08/15/05

Concentrated Extract Volume: 1(mL) Date Analyzed: 08/16/05

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 97-00-7	1-Chloro-2,4-Dinitrobenzene		U	
2. 86-00-0	2-Nitrobiphenyl		U	
3. 88-73-3	2-Nitrochlorobenzene		U	
4. 99-54-7	3,4-Dichloronitrobenzene		U	
5. 2113-58-8	3-Nitrobiphenyl		U	
6. 121-73-3	3-Nitrochlorobenzene		U	
7. 99-93-3	4-Nitrobiphenyl		U	
8. 100-00-5	4-Nitrochlorobenzene		U	
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Form 1
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: S0117-0-2

Lab Name: STL Savannah | Job No.: 680-6304-1

SDG No.: KRM48

Matrix: (soil/water) Solid | Lab Sample ID: 680-6304-4

Sample wt/vol: 30.04 (g/mL) g | Lab File ID: n3572.d

Level: (low/med) Low | Date Received: 07/26/05

% Moisture: 13 Decanted: (Y/N) | Date Extracted: 07/28/05

Concentrated Extract Volume: 1.0 mL | Date Analyzed: 08/03/05

Injection Volume: (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) pH: | Extraction Method: 3550B

108-95-2	Phenol	380	U
111-44-4	Bis(2-chloroethyl)ether	380	U
95-57-8	2-Chlorophenol	380	U
541-73-1	1,3-Dichlorobenzene	380	U
106-46-7	1,4-Dichlorobenzene	380	U
95-50-1	1,2-Dichlorobenzene	380	U
95-48-7	2-Methylphenol	380	U
39638-32-9	2,2'-oxybis(2-chloropropane)	380	U
621-64-7	N-Nitrosodi-n-propylamine	380	U
67-72-1	Hexachloroethane	380	U
98-95-3	Nitrobenzene	380	U
78-59-1	Isophorone	380	U
88-75-5	2-Nitrophenol	380	U
105-67-9	2,4-Dimethylphenol	380	U
111-91-1	Bis(2-chloroethoxy)methane	380	U
120-83-2	2,4-Dichlorophenol	380	U
120-82-1	1,2,4-Trichlorobenzene	380	U
91-20-3	Naphthalene	380	U
106-47-8	4-Chloroaniline	760	U
87-68-3	Hexachlorobutadiene	380	U
59-50-7	4-Chloro-3-methylphenol	380	U
91-57-6	2-Methylnaphthalene	380	U
77-47-4	Hexachlorocyclopentadiene	380	U
88-06-2	2,4,6-Trichlorophenol	380	U
95-95-4	2,4,5-Trichlorophenol	380	U
91-58-7	2-Chloronaphthalene	380	U
88-74-4	2-Nitroaniline	1900	U
131-11-3	Dimethyl phthalate	380	U
208-96-8	Acenaphthylene	380	U
99-09-2	3-Nitroaniline	1900	U
83-32-9	Acenaphthene	380	U
51-28-5	2,4-Dinitrophenol	1900	U
100-02-7	4-Nitrophenol	1900	U
132-64-9	Dibenzofuran	380	U
121-14-2	2,4-Dinitrotoluene	380	U
606-20-2	2,6-Dinitrotoluene	380	U
65794-96-9	3 & 4 Methylphenol	380	U

Form 1
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: S0117-0-2

Lab Name: STL Savannah | Job No.: 680-6304-1

SDG No.: KRM48

Matrix: (soil/water) Solid | Lab Sample ID: 680-6304-4

Sample wt/vol: 30.04 (g/mL) g | Lab File ID: n3572.d

Level: (low/med) Low | Date Received: 07/26/05

% Moisture: 13 Decanted: (Y/N) | Date Extracted: 07/28/05

Concentrated Extract Volume: 1.0 mL | Date Analyzed: 08/03/05

Injection Volume: (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) pH: | Extraction Method: 3550B

84-66-2	Diethyl phthalate	380	U
7005-72-3	4-Chlorophenyl phenyl ether	380	U
86-73-7	Fluorene	380	U
100-01-6	4-Nitroaniline	1900	U
534-52-1	4,6-Dinitro-2-methylphenol	1900	U
86-30-6	N-Nitrosodiphenylamine	380	U
101-55-3	4-Bromophenyl phenyl ether	380	U
118-74-1	Hexachlorobenzene	380	U
87-86-5	Pentachlorophenol	1900	U
85-01-8	Phenanthrene	380	U
120-12-7	Anthracene	380	U
84-74-2	Di-n-butyl phthalate	380	U
206-44-0	Fluoranthene	380	U
129-00-0	Pyrene	380	U
85-68-7	Butyl benzyl phthalate	380	U
91-94-1	3,3'-Dichlorobenzidine	760	U
56-55-3	Benzo[a]anthracene	380	U
117-81-7	Bis(2-ethylhexyl) phthalate	380	U
218-01-9	Chrysene	380	U
117-84-0	Di-n-octyl phthalate	380	U
205-99-2	Benzo[b]fluoranthene	380	U
207-08-9	Benzo[k]fluoranthene	380	U
50-32-8	Benzo[a]pyrene	380	U
193-39-5	Indeno[1,2,3-cd]pyrene	380	U
53-70-3	Dibenz(a,h)anthracene	380	U
191-24-2	Benzo[g,h,i]perylene	380	U
86-74-8	Carbazole	380	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE ID

6304-4

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: KRM48

Matrix: (soil/water) SOIL Client Desc: S0117-0-2

Sample wt/vol: 30 (g/mL) G Lab File ID: N3572

Level: (low/med) LOW Date Received: 07/26/05

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 07/28/05

Concentrated Extract Volume: 1(mL) Date Analyzed: 08/03/05

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 97-00-7	1-Chloro-2,4-Dinitrobenzene		U	
2. 86-00-0	2-Nitrobiphenyl		U	
3. 88-73-3	2-Nitrochlorobenzene		U	
4. 99-54-7	3,4-Dichloronitrobenzene		U	
5. 2113-58-8	3-Nitrobiphenyl		U	
6. 121-73-3	3-Nitrochlorobenzene		U	
7. 99-93-3	4-Nitrobiphenyl		U	
8. 100-00-5	4-Nitrochlorobenzene		U	
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Form 1
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: S0115-0-2

Lab Name: STL Savannah Job No.: 680-6304-1

SDG No.: KRM48

Matrix: (soil/water) Solid Lab Sample ID: 680-6304-5

Sample wt/vol: 30.03 (g/mL) g Lab File ID: n3573.d

Level: (low/med) Low Date Received: 07/26/05

% Moisture: 5.2 Decanted: (Y/N) Date Extracted: 07/28/05

Concentrated Extract Volume: 1.0 mL Date Analyzed: 08/03/05

Injection Volume: (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) pH: Extraction Method: 3550B

108-95-2	Phenol	350	U
111-44-4	Bis(2-chloroethyl)ether	350	U
95-57-8	2-Chlorophenol	350	U
541-73-1	1,3-Dichlorobenzene	350	U
106-46-7	1,4-Dichlorobenzene	350	U
95-50-1	1,2-Dichlorobenzene	350	U
95-48-7	2-Methylphenol	350	U
39638-32-9	2,2'-oxybis(2-chloropropane)	350	U
621-64-7	N-Nitrosodi-n-propylamine	350	U
67-72-1	Hexachloroethane	350	U
98-95-3	Nitrobenzene	350	U
78-59-1	Isophorone	350	U
88-75-5	2-Nitrophenol	350	U
105-67-9	2,4-Dimethylphenol	350	U
111-91-1	Bis(2-chloroethoxy)methane	350	U
120-83-2	2,4-Dichlorophenol	350	U
120-82-1	1,2,4-Trichlorobenzene	350	U
91-20-3	Naphthalene	350	U
106-47-8	4-Chloroaniline	700	U
87-68-3	Hexachlorobutadiene	350	U
59-50-7	4-Chloro-3-methylphenol	350	U
91-57-6	2-Methylnaphthalene	350	U
77-47-4	Hexachlorocyclopentadiene	350	U
88-06-2	2,4,6-Trichlorophenol	350	U
95-95-4	2,4,5-Trichlorophenol	350	U
91-58-7	2-Chloronaphthalene	350	U
88-74-4	2-Nitroaniline	1800	U
131-11-3	Dimethyl phthalate	350	U
208-96-8	Acenaphthylene	350	U
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	350	U
51-28-5	2,4-Dinitrophenol	1800	U
100-02-7	4-Nitrophenol	1800	U
132-64-9	Dibenzofuran	350	U
121-14-2	2,4-Dinitrotoluene	350	U
606-20-2	2,6-Dinitrotoluene	350	U
65794-96-9	3 & 4 Methylphenol	350	U

Form 1
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: S0115-0-2

Lab Name: STL Savannah | Job No.: 680-6304-1

SDG No.: KRM48

Matrix: (soil/water) Solid | Lab Sample ID: 680-6304-5

Sample wt/vol: 30.03 (g/mL) g | Lab File ID: n3573.d

Level: (low/med) Low | Date Received: 07/26/05

% Moisture: 5.2 Decanted: (Y/N) | Date Extracted: 07/28/05

Concentrated Extract Volume: 1.0 mL | Date Analyzed: 08/03/05

Injection Volume: (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) pH: | Extraction Method: 3550B

84-66-2	Diethyl phthalate	350	U
7005-72-3	4-Chlorophenyl phenyl ether	350	U
86-73-7	Fluorene	350	U
100-01-6	4-Nitroaniline	1800	U
534-52-1	4,6-Dinitro-2-methylphenol	1800	U
86-30-6	N-Nitrosodiphenylamine	350	U
101-55-3	4-Bromophenyl phenyl ether	350	U
118-74-1	Hexachlorobenzene	350	U
87-86-5	Pentachlorophenol	1800	U
85-01-8	Phenanthrene	350	U
120-12-7	Anthracene	350	U
84-74-2	Di-n-butyl phthalate	350	U
206-44-0	Fluoranthene	350	U
129-00-0	Pyrene	350	U
85-68-7	Butyl benzyl phthalate	350	U
91-94-1	3,3'-Dichlorobenzidine	700	U
56-55-3	Benzo[a]anthracene	350	U
117-81-7	Bis(2-ethylhexyl) phthalate	350	U
218-01-9	Chrysene	350	U
117-84-0	Di-n-octyl phthalate	350	U
205-99-2	Benzo[b]fluoranthene	350	U
207-08-9	Benzo[k]fluoranthene	350	U
50-32-8	Benzo[a]pyrene	350	U
193-39-5	Indeno[1,2,3-cd]pyrene	350	U
53-70-3	Dibenz(a,h)anthracene	350	U
191-24-2	Benzo[g,h,i]perylene	350	U
86-74-8	Carbazole	350	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE ID

6304-5

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: KRM48

Matrix: (soil/water) SOIL Client Desc: S0115-0-2

Sample wt/vol: 30 (g/mL) G Lab File ID: N3573

Level: (low/med) LOW Date Received: 07/26/05

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 07/28/05

Concentrated Extract Volume: 1(mL) Date Analyzed: 08/03/05

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 97-00-7	1-Chloro-2.4-Dinitrobenzene		U	
2. 86-00-0	2-Nitrobiphenyl		U	
3. 88-73-3	2-Nitrochlorobenzene		U	
4. 99-54-7	3.4-Dichloronitrobenzene		U	
5. 2113-58-8	3-Nitrobiphenyl		U	
6. 121-73-3	3-Nitrochlorobenzene		U	
7. 99-93-3	4-Nitrobiphenyl		U	
8. 100-00-5	4-Nitrochlorobenzene		U	
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Form 1
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: S0115-0-2-DUP

Lab Name: STL Savannah Job No.: 680-6304-1

SDG No.: KRM48

Matrix: (soil/water) Solid Lab Sample ID: 680-6304-6

Sample wt/vol: 30.00 (g/mL) g Lab File ID: n3574.d

Level: (low/med) Low Date Received: 07/26/05

% Moisture: 4.9 Decanted: (Y/N) ___ Date Extracted: 07/28/05

Concentrated Extract Volume: 1.0 mL Date Analyzed: 08/03/05

Injection Volume: ___ (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) ___ pH: ___ Extraction Method: 3550B

108-95-2	Phenol	350	U
111-44-4	Bis(2-chloroethyl)ether	350	U
95-57-8	2-Chlorophenol	350	U
541-73-1	1,3-Dichlorobenzene	350	U
106-46-7	1,4-Dichlorobenzene	350	U
95-50-1	1,2-Dichlorobenzene	350	U
95-48-7	2-Methylphenol	350	U
39638-32-9	2,2'-oxybis(2-chloropropane)	350	U
621-64-7	N-Nitrosodi-n-propylamine	350	U
67-72-1	Hexachloroethane	350	U
98-95-3	Nitrobenzene	350	U
78-59-1	Isophorone	350	U
88-75-5	2-Nitrophenol	350	U
105-67-9	2,4-Dimethylphenol	350	U
111-91-1	Bis(2-chloroethoxy)methane	350	U
120-83-2	2,4-Dichlorophenol	350	U
120-82-1	1,2,4-Trichlorobenzene	350	U
91-20-3	Naphthalene	350	U
106-47-8	4-Chloroaniline	690	U
87-68-3	Hexachlorobutadiene	350	U
59-50-7	4-Chloro-3-methylphenol	350	U
91-57-6	2-Methylnaphthalene	350	U
77-47-4	Hexachlorocyclopentadiene	350	U
88-06-2	2,4,6-Trichlorophenol	350	U
95-95-4	2,4,5-Trichlorophenol	350	U
91-58-7	2-Chloronaphthalene	350	U
88-74-4	2-Nitroaniline	1800	U
131-11-3	Dimethyl phthalate	350	U
208-96-8	Acenaphthylene	350	U
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	350	U
51-28-5	2,4-Dinitrophenol	1800	U
100-02-7	4-Nitrophenol	1800	U
132-64-9	Dibenzofuran	350	U
121-14-2	2,4-Dinitrotoluene	350	U
606-20-2	2,6-Dinitrotoluene	350	U
65794-96-9	3 & 4 Methylphenol	350	U

Form 1
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: S0115-0-2-DUP

Lab Name: STL Savannah | Job No.: 680-6304-1

SDG No.: KRM48

Matrix: (soil/water) Solid | Lab Sample ID: 680-6304-6

Sample wt/vol: 30.00 (g/mL) g | Lab File ID: n3574.d

Level: (low/med) Low | Date Received: 07/26/05

% Moisture: 4.9 Decanted: (Y/N) | Date Extracted: 07/28/05

Concentrated Extract Volume: 1.0 mL | Date Analyzed: 08/03/05

Injection Volume: (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) pH: | Extraction Method: 3550B

84-66-2	Diethyl phthalate	350	U
7005-72-3	4-Chlorophenyl phenyl ether	350	U
86-73-7	Fluorene	350	U
100-01-6	4-Nitroaniline	1800	U
534-52-1	4,6-Dinitro-2-methylphenol	1800	U
86-30-6	N-Nitrosodiphenylamine	350	U
101-55-3	4-Bromophenyl phenyl ether	350	U
118-74-1	Hexachlorobenzene	350	U
87-86-5	Pentachlorophenol	1800	U
85-01-8	Phenanthrene	350	U
120-12-7	Anthracene	350	U
84-74-2	Di-n-butyl phthalate	350	U
206-44-0	Fluoranthene	350	U
129-00-0	Pyrene	350	U
85-68-7	Butyl benzyl phthalate	350	U
91-94-1	3,3'-Dichlorobenzidine	690	U
56-55-3	Benzo[a]anthracene	350	U
117-81-7	Bis(2-ethylhexyl) phthalate	350	U
218-01-9	Chrysene	350	U
117-84-0	Di-n-octyl phthalate	350	U
205-99-2	Benzo[b]fluoranthene	350	U
207-08-9	Benzo[k]fluoranthene	350	U
50-32-8	Benzo[a]pyrene	350	U
193-39-5	Indeno[1,2,3-cd]pyrene	350	U
53-70-3	Dibenz(a,h)anthracene	350	U
191-24-2	Benzo[g,h,i]perylene	350	U
86-74-8	Carbazole	350	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE ID

6304-6

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: KRM48

Matrix: (soil/water) SOIL Client Desc: S0115-0-2-DUP

Sample wt/vol: 30 (g/mL) G Lab File ID: N3574

Level: (low/med) LOW Date Received: 07/26/05

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 07/28/05

Concentrated Extract Volume: 1(mL) Date Analyzed: 08/03/05

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 97-00-7	1-Chloro-2,4-Dinitrobenzene		U	
2. 86-00-0	2-Nitrobiphenyl		U	
3. 88-73-3	2-Nitrochlorobenzene		U	
4. 99-54-7	3,4-Dichloronitrobenzene		U	
5. 2113-58-8	3-Nitrobiphenyl		U	
6. 121-73-3	3-Nitrochlorobenzene		U	
7. 99-93-3	4-Nitrobiphenyl		U	
8. 100-00-5	4-Nitrochlorobenzene		U	
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Form 1
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: S0119-0-2

Lab Name: STL Savannah Job No.: 680-6304-1

SDG No.: KRM48

Matrix: (soil/water) Solid Lab Sample ID: 680-6304-7

Sample wt/vol: 30.00 (g/mL) g Lab File ID: n3575.d

Level: (low/med) Low Date Received: 07/26/05

% Moisture: 4.5 Decanted: (Y/N) Date Extracted: 07/28/05

Concentrated Extract Volume: 1.0 mL Date Analyzed: 08/03/05

Injection Volume: (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) pH: Extraction Method: 3550B

108-95-2	Phenol	350	U
111-44-4	Bis(2-chloroethyl)ether	350	U
95-57-8	2-Chlorophenol	350	U
541-73-1	1,3-Dichlorobenzene	350	U
106-46-7	1,4-Dichlorobenzene	350	U
95-50-1	1,2-Dichlorobenzene	350	U
95-48-7	2-Methylphenol	350	U
39638-32-9	2,2'-oxybis(2-chloropropane)	350	U
621-64-7	N-Nitrosodi-n-propylamine	350	U
67-72-1	Hexachloroethane	350	U
98-95-3	Nitrobenzene	350	U
78-59-1	Isophorone	350	U
88-75-5	2-Nitrophenol	350	U
105-67-9	2,4-Dimethylphenol	350	U
111-91-1	Bis(2-chloroethoxy)methane	350	U
120-83-2	2,4-Dichlorophenol	350	U
120-82-1	1,2,4-Trichlorobenzene	350	U
91-20-3	Naphthalene	350	U
106-47-8	4-Chloroaniline	690	U
87-68-3	Hexachlorobutadiene	350	U
59-50-7	4-Chloro-3-methylphenol	350	U
91-57-6	2-Methylnaphthalene	350	U
77-47-4	Hexachlorocyclopentadiene	350	U
88-06-2	2,4,6-Trichlorophenol	350	U
95-95-4	2,4,5-Trichlorophenol	350	U
91-58-7	2-Chloronaphthalene	350	U
88-74-4	2-Nitroaniline	1800	U
131-11-3	Dimethyl phthalate	350	U
208-96-8	Acenaphthylene	350	U
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	350	U
51-28-5	2,4-Dinitrophenol	1800	U
100-02-7	4-Nitrophenol	1800	U
132-64-9	Dibenzofuran	350	U
121-14-2	2,4-Dinitrotoluene	350	U
606-20-2	2,6-Dinitrotoluene	350	U
65794-96-9	3 & 4 Methylphenol	350	U

Form 1
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: S0119-0-2

Lab Name: STL Savannah | Job No.: 680-6304-1

SDG No.: KRM48

Matrix: (soil/water) Solid | Lab Sample ID: 680-6304-7

Sample wt/vol: 30.00 (g/mL) g | Lab File ID: n3575.d

Level: (low/med) Low | Date Received: 07/26/05

% Moisture: 4.5 Decanted: (Y/N) | Date Extracted: 07/28/05

Concentrated Extract Volume: 1.0 mL | Date Analyzed: 08/03/05

Injection Volume: (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) pH: | Extraction Method: 3550B

84-66-2	Diethyl phthalate	350	U
7005-72-3	4-Chlorophenyl phenyl ether	350	U
86-73-7	Fluorene	350	U
100-01-6	4-Nitroaniline	1800	U
534-52-1	4,6-Dinitro-2-methylphenol	1800	U
86-30-6	N-Nitrosodiphenylamine	350	U
101-55-3	4-Bromophenyl phenyl ether	350	U
118-74-1	Hexachlorobenzene	350	U
87-86-5	Pentachlorophenol	1800	U
85-01-8	Phenanthrene	350	U
120-12-7	Anthracene	350	U
84-74-2	Di-n-butyl phthalate	350	U
206-44-0	Fluoranthene	350	U
129-00-0	Pyrene	350	U
85-68-7	Butyl benzyl phthalate	350	U
91-94-1	3,3'-Dichlorobenzidine	690	U
56-55-3	Benzo[a]anthracene	350	U
117-81-7	Bis(2-ethylhexyl) phthalate	350	U
218-01-9	Chrysene	350	U
117-84-0	Di-n-octyl phthalate	350	U
205-99-2	Benzo[b]fluoranthene	350	U
207-08-9	Benzo[k]fluoranthene	350	U
50-32-8	Benzo[a]pyrene	350	U
193-39-5	Indeno[1,2,3-cd]pyrene	350	U
53-70-3	Dibenz(a,h)anthracene	350	U
191-24-2	Benzo[g,h,i]perylene	350	U
86-74-8	Carbazole	350	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE ID

6304-7

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: KRM48

Matrix: (soil/water) SOIL Client Desc: S0119-0-2

Sample wt/vol: 30 (g/mL) G Lab File ID: N3575

Level: (low/med) LOW Date Received: 07/26/05

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 07/28/05

Concentrated Extract Volume: 1(mL) Date Analyzed: 08/03/05

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 97-00-7	1-Chloro-2.4-Dinitrobenzene		U	
2. 86-00-0	2-Nitrobiphenyl		U	
3. 88-73-3	2-Nitrochlorobenzene		U	
4. 99-54-7	3.4-Dichloronitrobenzene		U	
5. 2113-58-8	3-Nitrobiphenyl		U	
6. 121-73-3	3-Nitrochlorobenzene		U	
7. 99-93-3	4-Nitrobiphenyl		U	
8. 100-00-5	4-Nitrochlorobenzene		U	
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Form 1
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: S0124-18-20

Lab Name: STL Savannah | Job No.: 680-6304-1

SDG No.: KRM48

Matrix: (soil/water) Solid | Lab Sample ID: 680-6304-9

Sample wt/vol: 30.00 (g/mL) g | Lab File ID: n3576.d

Level: (low/med) Low | Date Received: 07/26/05

% Moisture: 22 Decanted: (Y/N) | Date Extracted: 07/28/05

Concentrated Extract Volume: 1.0 mL | Date Analyzed: 08/03/05

Injection Volume: (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) pH: | Extraction Method: 3550B

108-95-2	Phenol	420	U
111-44-4	Bis(2-chloroethyl)ether	420	U
95-57-8	2-Chlorophenol	420	U
541-73-1	1,3-Dichlorobenzene	420	U
106-46-7	1,4-Dichlorobenzene	420	U
95-50-1	1,2-Dichlorobenzene	420	U
95-48-7	2-Methylphenol	420	U
39638-32-9	2,2'-oxybis(2-chloropropane)	420	U
621-64-7	N-Nitrosodi-n-propylamine	420	U
67-72-1	Hexachloroethane	420	U
98-95-3	Nitrobenzene	420	U
78-59-1	Isophorone	420	U
88-75-5	2-Nitrophenol	420	U
105-67-9	2,4-Dimethylphenol	420	U
111-91-1	Bis(2-chloroethoxy)methane	420	U
120-83-2	2,4-Dichlorophenol	420	U
120-82-1	1,2,4-Trichlorobenzene	420	U
91-20-3	Naphthalene	420	U
106-47-8	4-Chloroaniline	840	U
87-68-3	Hexachlorobutadiene	420	U
59-50-7	4-Chloro-3-methylphenol	420	U
91-57-6	2-Methylnaphthalene	420	U
77-47-4	Hexachlorocyclopentadiene	420	U
88-06-2	2,4,6-Trichlorophenol	420	U
95-95-4	2,4,5-Trichlorophenol	420	U
91-58-7	2-Chloronaphthalene	420	U
88-74-4	2-Nitroaniline	2200	U
131-11-3	Dimethyl phthalate	420	U
208-96-8	Acenaphthylene	420	U
99-09-2	3-Nitroaniline	2200	U
83-32-9	Acenaphthene	420	U
51-28-5	2,4-Dinitrophenol	2200	U
100-02-7	4-Nitrophenol	2200	U
132-64-9	Dibenzofuran	420	U
121-14-2	2,4-Dinitrotoluene	420	U
606-20-2	2,6-Dinitrotoluene	420	U
65794-96-9	3 & 4 Methylphenol	420	U

Form 1
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: S0124-18-20

Lab Name: STL Savannah | Job No.: 680-6304-1

SDG No.: KRM48

Matrix: (soil/water) Solid | Lab Sample ID: 680-6304-9

Sample wt/vol: 30.00 (g/mL) g | Lab File ID: n3576.d

Level: (low/med) Low | Date Received: 07/26/05

% Moisture: 22 Decanted: (Y/N) | Date Extracted: 07/28/05

Concentrated Extract Volume: 1.0 mL | Date Analyzed: 08/03/05

Injection Volume: (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) pH: | Extraction Method: 3550B

84-66-2	Diethyl phthalate	420	U
7005-72-3	4-Chlorophenyl phenyl ether	420	U
86-73-7	Fluorene	420	U
100-01-6	4-Nitroaniline	2200	U
534-52-1	4,6-Dinitro-2-methylphenol	2200	U
86-30-6	N-Nitrosodiphenylamine	420	U
101-55-3	4-Bromophenyl phenyl ether	420	U
118-74-1	Hexachlorobenzene	420	U
87-86-5	Pentachlorophenol	2200	U
85-01-8	Phenanthrene	420	U
120-12-7	Anthracene	420	U
84-74-2	Di-n-butyl phthalate	420	U
206-44-0	Fluoranthene	420	U
129-00-0	Pyrene	420	U
85-68-7	Butyl benzyl phthalate	420	U
91-94-1	3,3'-Dichlorobenzidine	840	U
56-55-3	Benzo[a]anthracene	420	U
117-81-7	Bis(2-ethylhexyl) phthalate	420	U
218-01-9	Chrysene	420	U
117-84-0	Di-n-octyl phthalate	420	U
205-99-2	Benzo[b]fluoranthene	420	U
207-08-9	Benzo[k]fluoranthene	420	U
50-32-8	Benzo[a]pyrene	420	U
193-39-5	Indeno[1,2,3-cd]pyrene	420	U
53-70-3	Dibenz(a,h)anthracene	420	U
191-24-2	Benzo[g,h,i]perylene	420	U
86-74-8	Carbazole	420	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE ID

6304-9

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: KRM48

Matrix: (soil/water) SOIL Client Desc: S0124-18-20

Sample wt/vol: 30 (g/mL) G Lab File ID: N3576

Level: (low/med) LOW Date Received: 07/26/05

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 07/28/05

Concentrated Extract Volume: 1(mL) Date Analyzed: 08/03/05

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 97-00-7	1-Chloro-2.4-Dinitrobenzene		U	
2. 86-00-0	2-Nitrobiphenyl		U	
3. 88-73-3	2-Nitrochlorobenzene		U	
4. 99-54-7	3.4-Dichloronitrobenzene		U	
5. 2113-58-8	3-Nitrobiphenyl		U	
6. 121-73-3	3-Nitrochlorobenzene		U	
7. 99-93-3	4-Nitrobiphenyl		U	
8. 100-00-5	4-Nitrochlorobenzene		U	
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Form 1
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: S0121-18-20

Lab Name: STL Savannah Job No.: 680-6304-1

SDG No.: KRM48

Matrix: (soil/water) Solid Lab Sample ID: 680-6304-11

Sample wt/vol: 30.00 (g/mL) g Lab File ID: n3577.d

Level: (low/med) Low Date Received: 07/26/05

% Moisture: 5.0 Decanted: (Y/N) Date Extracted: 07/28/05

Concentrated Extract Volume: 1.0 mL Date Analyzed: 08/03/05

Injection Volume: (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) pH: Extraction Method: 3550B

108-95-2	Phenol	350	U
111-44-4	Bis(2-chloroethyl)ether	350	U
95-57-8	2-Chlorophenol	350	U
541-73-1	1,3-Dichlorobenzene	350	U
106-46-7	1,4-Dichlorobenzene	350	U
95-50-1	1,2-Dichlorobenzene	350	U
95-48-7	2-Methylphenol	350	U
39638-32-9	2,2'-oxybis(2-chloropropane)	350	U
621-64-7	N-Nitrosodi-n-propylamine	350	U
67-72-1	Hexachloroethane	350	U
98-95-3	Nitrobenzene	350	U
78-59-1	Isophorone	350	U
88-75-5	2-Nitrophenol	350	U
105-67-9	2,4-Dimethylphenol	350	U
111-91-1	Bis(2-chloroethoxy)methane	350	U
120-83-2	2,4-Dichlorophenol	350	U
120-82-1	1,2,4-Trichlorobenzene	350	U
91-20-3	Naphthalene	350	U
106-47-8	4-Chloroaniline	690	U
87-68-3	Hexachlorobutadiene	350	U
59-50-7	4-Chloro-3-methylphenol	350	U
91-57-6	2-Methylnaphthalene	350	U
77-47-4	Hexachlorocyclopentadiene	350	U
88-06-2	2,4,6-Trichlorophenol	350	U
95-95-4	2,4,5-Trichlorophenol	350	U
91-58-7	2-Chloronaphthalene	350	U
88-74-4	2-Nitroaniline	1800	U
131-11-3	Dimethyl phthalate	350	U
208-96-8	Acenaphthylene	350	U
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	350	U
51-28-5	2,4-Dinitrophenol	1800	U
100-02-7	4-Nitrophenol	1800	U
132-64-9	Dibenzofuran	350	U
121-14-2	2,4-Dinitrotoluene	350	U
606-20-2	2,6-Dinitrotoluene	350	U
65794-96-9	3 & 4 Methylphenol	350	U

Form 1
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: S0121-18-20

Lab Name: STL Savannah | Job No.: 680-6304-1

SDG No.: KRM48

Matrix: (soil/water) Solid | Lab Sample ID: 680-6304-11

Sample wt/vol: 30.00 (g/mL) g | Lab File ID: n3577.d

Level: (low/med) Low | Date Received: 07/26/05

% Moisture: 5.0 Decanted: (Y/N) | Date Extracted: 07/28/05

Concentrated Extract Volume: 1.0 mL | Date Analyzed: 08/03/05

Injection Volume: (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) pH: | Extraction Method: 3550B

84-66-2	Diethyl phthalate	350	U
7005-72-3	4-Chlorophenyl phenyl ether	350	U
86-73-7	Fluorene	350	U
100-01-6	4-Nitroaniline	1800	U
534-52-1	4,6-Dinitro-2-methylphenol	1800	U
86-30-6	N-Nitrosodiphenylamine	350	U
101-55-3	4-Bromophenyl phenyl ether	350	U
118-74-1	Hexachlorobenzene	350	U
87-86-5	Pentachlorophenol	1800	U
85-01-8	Phenanthrene	350	U
120-12-7	Anthracene	350	U
84-74-2	Di-n-butyl phthalate	350	U
206-44-0	Fluoranthene	350	U
129-00-0	Pyrene	350	U
85-68-7	Butyl benzyl phthalate	350	U
91-94-1	3,3'-Dichlorobenzidine	690	U
56-55-3	Benzo[a]anthracene	350	U
117-81-7	Bis(2-ethylhexyl) phthalate	350	U
218-01-9	Chrysene	350	U
117-84-0	Di-n-octyl phthalate	350	U
205-99-2	Benzo[b]fluoranthene	350	U
207-08-9	Benzo[k]fluoranthene	350	U
50-32-8	Benzo[a]pyrene	350	U
193-39-5	Indeno[1,2,3-cd]pyrene	350	U
53-70-3	Dibenz(a,h)anthracene	350	U
191-24-2	Benzo[g,h,i]perylene	350	U
86-74-8	Carbazole	350	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE ID
6304-11

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: KRM48

Matrix: (soil/water) SOIL Client Desc: S0121-18-20

Sample wt/vol: 30 (g/mL) G Lab File ID: N3577

Level: (low/med) LOW Date Received: 07/26/05

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 07/28/05

Concentrated Extract Volume: 1(mL) Date Analyzed: 08/03/05

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 97-00-7	1-Chloro-2,4-Dinitrobenzene		U	
2. 86-00-0	2-Nitrobiphenyl		U	
3. 88-73-3	2-Nitrochlorobenzene		U	
4. 99-54-7	3,4-Dichloronitrobenzene		U	
5. 2113-58-8	3-Nitrobiphenyl		U	
6. 121-73-3	3-Nitrochlorobenzene		U	
7. 99-93-3	4-Nitrobiphenyl		U	
8. 100-00-5	4-Nitrochlorobenzene		U	
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Form 1
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: S0121-18-20-DUP

Lab Name: STL Savannah | Job No.: 680-6304-1

SDG No.: KRM48

Matrix: (soil/water) Solid | Lab Sample ID: 680-6304-12

Sample wt/vol: 30.04 (g/mL) g | Lab File ID: n3578.d

Level: (low/med) Low | Date Received: 07/26/05

% Moisture: 8.2 Decanted: (Y/N) | Date Extracted: 07/28/05

Concentrated Extract Volume: 1.0 mL | Date Analyzed: 08/03/05

Injection Volume: (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) pH: | Extraction Method: 3550B

108-95-2	Phenol	360	U
111-44-4	Bis(2-chloroethyl)ether	360	U
95-57-8	2-Chlorophenol	360	U
541-73-1	1,3-Dichlorobenzene	360	U
106-46-7	1,4-Dichlorobenzene	360	U
95-50-1	1,2-Dichlorobenzene	360	U
95-48-7	2-Methylphenol	360	U
39638-32-9	2,2'-oxybis(2-chloropropane)	360	U
621-64-7	N-Nitrosodi-n-propylamine	360	U
67-72-1	Hexachloroethane	360	U
98-95-3	Nitrobenzene	360	U
78-59-1	Isophorone	360	U
88-75-5	2-Nitrophenol	360	U
105-67-9	2,4-Dimethylphenol	360	U
111-91-1	Bis(2-chloroethoxy)methane	360	U
120-83-2	2,4-Dichlorophenol	360	U
120-82-1	1,2,4-Trichlorobenzene	360	U
91-20-3	Naphthalene	360	U
106-47-8	4-Chloroaniline	720	U
87-68-3	Hexachlorobutadiene	360	U
59-50-7	4-Chloro-3-methylphenol	360	U
91-57-6	2-Methylnaphthalene	360	U
77-47-4	Hexachlorocyclopentadiene	360	U
88-06-2	2,4,6-Trichlorophenol	360	U
95-95-4	2,4,5-Trichlorophenol	360	U
91-58-7	2-Chloronaphthalene	360	U
88-74-4	2-Nitroaniline	1800	U
131-11-3	Dimethyl phthalate	360	U
208-96-8	Acenaphthylene	360	U
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	360	U
51-28-5	2,4-Dinitrophenol	1800	U
100-02-7	4-Nitrophenol	1800	U
132-64-9	Dibenzofuran	360	U
121-14-2	2,4-Dinitrotoluene	360	U
606-20-2	2,6-Dinitrotoluene	360	U
65794-96-9	3 & 4 Methylphenol	360	U

Form 1
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: S0121-18-20-DUP

Lab Name: STL Savannah | Job No.: 680-6304-1

SDG No.: KRM48

Matrix: (soil/water) Solid | Lab Sample ID: 680-6304-12

Sample wt/vol: 30.04 (g/mL) g | Lab File ID: n3578.d

Level: (low/med) Low | Date Received: 07/26/05

% Moisture: 8.2 Decanted: (Y/N) | Date Extracted: 07/28/05

Concentrated Extract Volume: 1.0 mL | Date Analyzed: 08/03/05

Injection Volume: (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) pH: | Extraction Method: 3550B

84-66-2	Diethyl phthalate	360	U
7005-72-3	4-Chlorophenyl phenyl ether	360	U
86-73-7	Fluorene	360	U
100-01-6	4-Nitroaniline	1800	U
534-52-1	4,6-Dinitro-2-methylphenol	1800	U
86-30-6	N-Nitrosodiphenylamine	360	U
101-55-3	4-Bromophenyl phenyl ether	360	U
118-74-1	Hexachlorobenzene	360	U
87-86-5	Pentachlorophenol	1800	U
85-01-8	Phenanthrene	360	U
120-12-7	Anthracene	360	U
84-74-2	Di-n-butyl phthalate	360	U
206-44-0	Fluoranthene	360	U
129-00-0	Pyrene	360	U
85-68-7	Butyl benzyl phthalate	360	U
91-94-1	3,3'-Dichlorobenzidine	720	U
56-55-3	Benzo[a]anthracene	360	U
117-81-7	Bis(2-ethylhexyl) phthalate	360	U
218-01-9	Chrysene	360	U
117-84-0	Di-n-octyl phthalate	360	U
205-99-2	Benzo[b]fluoranthene	360	U
207-08-9	Benzo[k]fluoranthene	360	U
50-32-8	Benzo[a]pyrene	360	U
193-39-5	Indeno[1,2,3-cd]pyrene	360	U
53-70-3	Dibenz(a,h)anthracene	360	U
191-24-2	Benzo[g,h,i]perylene	360	U
86-74-8	Carbazole	360	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE ID

6304-12

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: KRM48

Matrix: (soil/water) SOIL Client Desc: S0121-18-20-DUP

Sample wt/vol: 30 (g/mL) G Lab File ID: N3578

Level: (low/med) LOW Date Received: 07/26/05

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 07/28/05

Concentrated Extract Volume: 1(mL) Date Analyzed: 08/03/05

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 97-00-7	1-Chloro-2.4-Dinitrobenzene		U	
2. 86-00-0	2-Nitrobiphenyl		U	
3. 88-73-3	2-Nitrochlorobenzene		U	
4. 99-54-7	3.4-Dichloronitrobenzene		U	
5. 2113-58-8	3-Nitrobiphenyl		U	
6. 121-73-3	3-Nitrochlorobenzene		U	
7. 99-93-3	4-Nitrobiphenyl		U	
8. 100-00-5	4-Nitrochlorobenzene		U	
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Form 1
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: S0123-18-20

Lab Name: STL Savannah | Job No.: 680-6304-1

SDG No.: KRM48

Matrix: (soil/water) Solid | Lab Sample ID: 680-6304-13

Sample wt/vol: 30.03 (g/mL) g | Lab File ID: n3579.d

Level: (low/med) Low | Date Received: 07/26/05

% Moisture: 22 Decanted: (Y/N) | Date Extracted: 07/28/05

Concentrated Extract Volume: 1.0 mL | Date Analyzed: 08/03/05

Injection Volume: (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) pH: | Extraction Method: 3550B

108-95-2	Phenol	420	U
111-44-4	Bis(2-chloroethyl)ether	420	U
95-57-8	2-Chlorophenol	420	U
541-73-1	1,3-Dichlorobenzene	420	U
106-46-7	1,4-Dichlorobenzene	420	U
95-50-1	1,2-Dichlorobenzene	420	U
95-48-7	2-Methylphenol	420	U
39638-32-9	2,2'-oxybis(2-chloropropane)	420	U
621-64-7	N-Nitrosodi-n-propylamine	420	U
67-72-1	Hexachloroethane	420	U
98-95-3	Nitrobenzene	420	U
78-59-1	Isophorone	420	U
88-75-5	2-Nitrophenol	420	U
105-67-9	2,4-Dimethylphenol	420	U
111-91-1	Bis(2-chloroethoxy)methane	420	U
120-83-2	2,4-Dichlorophenol	420	U
120-82-1	1,2,4-Trichlorobenzene	420	U
91-20-3	Naphthalene	420	U
106-47-8	4-Chloroaniline	840	U
87-68-3	Hexachlorobutadiene	420	U
59-50-7	4-Chloro-3-methylphenol	420	U
91-57-6	2-Methylnaphthalene	420	U
77-47-4	Hexachlorocyclopentadiene	420	U
88-06-2	2,4,6-Trichlorophenol	420	U
95-95-4	2,4,5-Trichlorophenol	420	U
91-58-7	2-Chloronaphthalene	420	U
88-74-4	2-Nitroaniline	2200	U
131-11-3	Dimethyl phthalate	420	U
208-96-8	Acenaphthylene	420	U
99-09-2	3-Nitroaniline	2200	U
83-32-9	Acenaphthene	420	U
51-28-5	2,4-Dinitrophenol	2200	U
100-02-7	4-Nitrophenol	2200	U
132-64-9	Dibenzofuran	420	U
121-14-2	2,4-Dinitrotoluene	420	U
606-20-2	2,6-Dinitrotoluene	420	U
65794-96-9	3 & 4 Methylphenol	420	U

Form 1
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: S0123-18-20

Lab Name: STL Savannah | Job No.: 680-6304-1

SDG No.: KRM48

Matrix: (soil/water) Solid | Lab Sample ID: 680-6304-13

Sample wt/vol: 30.03 (g/mL) g | Lab File ID: n3579.d

Level: (low/med) Low | Date Received: 07/26/05

% Moisture: 22 Decanted: (Y/N) | Date Extracted: 07/28/05

Concentrated Extract Volume: 1.0 mL | Date Analyzed: 08/03/05

Injection Volume: (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) pH: | Extraction Method: 3550B

84-66-2	Diethyl phthalate	420	U
7005-72-3	4-Chlorophenyl phenyl ether	420	U
86-73-7	Fluorene	420	U
100-01-6	4-Nitroaniline	2200	U
534-52-1	4,6-Dinitro-2-methylphenol	2200	U
86-30-6	N-Nitrosodiphenylamine	420	U
101-55-3	4-Bromophenyl phenyl ether	420	U
118-74-1	Hexachlorobenzene	420	U
87-86-5	Pentachlorophenol	2200	U
85-01-8	Phenanthrene	420	U
120-12-7	Anthracene	420	U
84-74-2	Di-n-butyl phthalate	420	U
206-44-0	Fluoranthene	420	U
129-00-0	Pyrene	420	U
85-68-7	Butyl benzyl phthalate	420	U
91-94-1	3,3'-Dichlorobenzidine	840	U
56-55-3	Benzo[a]anthracene	420	U
117-81-7	Bis(2-ethylhexyl) phthalate	420	U
218-01-9	Chrysene	420	U
117-84-0	Di-n-octyl phthalate	420	U
205-99-2	Benzo[b]fluoranthene	420	U
207-08-9	Benzo[k]fluoranthene	420	U
50-32-8	Benzo[a]pyrene	420	U
193-39-5	Indeno[1,2,3-cd]pyrene	420	U
53-70-3	Dibenz(a,h)anthracene	420	U
191-24-2	Benzo[g,h,i]perylene	420	U
86-74-8	Carbazole	420	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE ID

6304-13

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: KRM48

Matrix: (soil/water) SOIL Client Desc: S0123-18-20

Sample wt/vol: 30 (g/mL) G Lab File ID: N3579

Level: (low/med) LOW Date Received: 07/26/05

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 07/28/05

Concentrated Extract Volume: 1(mL) Date Analyzed: 08/03/05

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 97-00-7	1-Chloro-2,4-Dinitrobenzene		U	
2. 86-00-0	2-Nitrobiphenyl		U	
3. 88-73-3	2-Nitrochlorobenzene		U	
4. 99-54-7	3,4-Dichloronitrobenzene		U	
5. 2113-58-8	3-Nitrobiphenyl		U	
6. 121-73-3	3-Nitrochlorobenzene		U	
7. 99-93-3	4-Nitrobiphenyl		U	
8. 100-00-5	4-Nitrochlorobenzene		U	
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Form 1
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: S0122-18-20

Lab Name: STL Savannah | Job No.: 680-6304-1

SDG No.: KRM48

Matrix: (soil/water) Solid | Lab Sample ID: 680-6304-15

Sample wt/vol: 30.03 (g/mL) g | Lab File ID: n3580.d

Level: (low/med) Low | Date Received: 07/26/05

% Moisture: 15 Decanted: (Y/N) | Date Extracted: 07/28/05

Concentrated Extract Volume: 1.0 mL | Date Analyzed: 08/03/05

Injection Volume: (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) pH: | Extraction Method: 3550B

108-95-2	Phenol	390	U
111-44-4	Bis(2-chloroethyl)ether	390	U
95-57-8	2-Chlorophenol	390	U
541-73-1	1,3-Dichlorobenzene	390	U
106-46-7	1,4-Dichlorobenzene	390	U
95-50-1	1,2-Dichlorobenzene	390	U
95-48-7	2-Methylphenol	390	U
39638-32-9	2,2'-oxybis(2-chloropropane)	390	U
621-64-7	N-Nitrosodi-n-propylamine	390	U
67-72-1	Hexachloroethane	390	U
98-95-3	Nitrobenzene	390	U
78-59-1	Isophorone	390	U
88-75-5	2-Nitrophenol	390	U
105-67-9	2,4-Dimethylphenol	390	U
111-91-1	Bis(2-chloroethoxy)methane	390	U
120-83-2	2,4-Dichlorophenol	390	U
120-82-1	1,2,4-Trichlorobenzene	390	U
91-20-3	Naphthalene	390	U
106-47-8	4-Chloroaniline	770	U
87-68-3	Hexachlorobutadiene	390	U
59-50-7	4-Chloro-3-methylphenol	390	U
91-57-6	2-Methylnaphthalene	390	U
77-47-4	Hexachlorocyclopentadiene	390	U
88-06-2	2,4,6-Trichlorophenol	390	U
95-95-4	2,4,5-Trichlorophenol	390	U
91-58-7	2-Chloronaphthalene	390	U
88-74-4	2-Nitroaniline	2000	U
131-11-3	Dimethyl phthalate	390	U
208-96-8	Acenaphthylene	390	U
99-09-2	3-Nitroaniline	2000	U
83-32-9	Acenaphthene	390	U
51-28-5	2,4-Dinitrophenol	2000	U
100-02-7	4-Nitrophenol	2000	U
132-64-9	Dibenzofuran	390	U
121-14-2	2,4-Dinitrotoluene	390	U
606-20-2	2,6-Dinitrotoluene	390	U
65794-96-9	3 & 4 Methylphenol	390	U

Form 1
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: S0122-18-20

Lab Name: STL Savannah | Job No.: 680-6304-1

SDG No.: KRM48

Matrix: (soil/water) Solid | Lab Sample ID: 680-6304-15

Sample wt/vol: 30.03 (g/mL) g | Lab File ID: n3580.d

Level: (low/med) Low | Date Received: 07/26/05

% Moisture: 15 Decanted: (Y/N) | Date Extracted: 07/28/05

Concentrated Extract Volume: 1.0 mL | Date Analyzed: 08/03/05

Injection Volume: (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) pH: | Extraction Method: 3550B

84-66-2	Diethyl phthalate	390	U
7005-72-3	4-Chlorophenyl phenyl ether	390	U
86-73-7	Fluorene	390	U
100-01-6	4-Nitroaniline	2000	U
534-52-1	4,6-Dinitro-2-methylphenol	2000	U
86-30-6	N-Nitrosodiphenylamine	390	U
101-55-3	4-Bromophenyl phenyl ether	390	U
118-74-1	Hexachlorobenzene	390	U
87-86-5	Pentachlorophenol	2000	U
85-01-8	Phenanthrene	390	U
120-12-7	Anthracene	390	U
84-74-2	Di-n-butyl phthalate	390	U
206-44-0	Fluoranthene	390	U
129-00-0	Pyrene	390	U
85-68-7	Butyl benzyl phthalate	390	U
91-94-1	3,3'-Dichlorobenzidine	770	U
56-55-3	Benzo[a]anthracene	390	U
117-81-7	Bis(2-ethylhexyl) phthalate	390	U
218-01-9	Chrysene	390	U
117-84-0	Di-n-octyl phthalate	390	U
205-99-2	Benzo[b]fluoranthene	390	U
207-08-9	Benzo[k]fluoranthene	390	U
50-32-8	Benzo[a]pyrene	390	U
193-39-5	Indeno[1,2,3-cd]pyrene	390	U
53-70-3	Dibenz(a,h)anthracene	390	U
191-24-2	Benzo[g,h,i]perylene	390	U
86-74-8	Carbazole	390	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE ID

6304-15

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: KRM48

Matrix: (soil/water) SOIL Client Desc: S0122-18-20

Sample wt/vol: 30 (g/mL) G Lab File ID: N3580

Level: (low/med) LOW Date Received: 07/26/05

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 07/28/05

Concentrated Extract Volume: 1(mL) Date Analyzed: 08/03/05

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 97-00-7	1-Chloro-2.4-Dinitrobenzene		U	
2. 86-00-0	2-Nitrobiphenyl		U	
3. 88-73-3	2-Nitrochlorobenzene		U	
4. 99-54-7	3.4-Dichloronitrobenzene		U	
5. 2113-58-8	3-Nitrobiphenyl		U	
6. 121-73-3	3-Nitrochlorobenzene		U	
7. 99-93-3	4-Nitrobiphenyl		U	
8. 100-00-5	4-Nitrochlorobenzene		U	
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Form 1
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: S1101-1-3

Lab Name: STL Savannah | Job No.: 680-6304-1

SDG No.: KRM48

Matrix: (soil/water) Solid | Lab Sample ID: 680-6304-17

Sample wt/vol: 30.04 (g/mL) g | Lab File ID: n3581.d

Level: (low/med) Low | Date Received: 07/26/05

% Moisture: 15 Decanted: (Y/N) | Date Extracted: 07/28/05

Concentrated Extract Volume: 1.0 mL | Date Analyzed: 08/03/05

Injection Volume: (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) pH: | Extraction Method: 3550B

108-95-2	Phenol	390	U
111-44-4	Bis(2-chloroethyl)ether	390	U
95-57-8	2-Chlorophenol	390	U
541-73-1	1,3-Dichlorobenzene	390	U
106-46-7	1,4-Dichlorobenzene	390	U
95-50-1	1,2-Dichlorobenzene	390	U
95-48-7	2-Methylphenol	390	U
39638-32-9	2,2'-oxybis(2-chloropropane)	390	U
621-64-7	N-Nitrosodi-n-propylamine	390	U
67-72-1	Hexachloroethane	390	U
98-95-3	Nitrobenzene	390	U
78-59-1	Isophorone	390	U
88-75-5	2-Nitrophenol	390	U
105-67-9	2,4-Dimethylphenol	390	U
111-91-1	Bis(2-chloroethoxy)methane	390	U
120-83-2	2,4-Dichlorophenol	390	U
120-82-1	1,2,4-Trichlorobenzene	390	U
91-20-3	Naphthalene	390	U
106-47-8	4-Chloroaniline	770	U
87-68-3	Hexachlorobutadiene	390	U
59-50-7	4-Chloro-3-methylphenol	390	U
91-57-6	2-Methylnaphthalene	390	U
77-47-4	Hexachlorocyclopentadiene	390	U
88-06-2	2,4,6-Trichlorophenol	390	U
95-95-4	2,4,5-Trichlorophenol	390	U
91-58-7	2-Chloronaphthalene	390	U
88-74-4	2-Nitroaniline	2000	U
131-11-3	Dimethyl phthalate	390	U
208-96-8	Acenaphthylene	390	U
99-09-2	3-Nitroaniline	2000	U
83-32-9	Acenaphthene	390	U
51-28-5	2,4-Dinitrophenol	2000	U
100-02-7	4-Nitrophenol	2000	U
132-64-9	Dibenzofuran	390	U
121-14-2	2,4-Dinitrotoluene	390	U
606-20-2	2,6-Dinitrotoluene	390	U
65794-96-9	3 & 4 Methylphenol	390	U

Form 1
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: S1101-1-3

Lab Name: STL Savannah | Job No.: 680-6304-1

SDG No.: KRM48

Matrix: (soil/water) Solid | Lab Sample ID: 680-6304-17

Sample wt/vol: 30.04 (g/mL) g | Lab File ID: n3581.d

Level: (low/med) Low | Date Received: 07/26/05

% Moisture: 15 Decanted: (Y/N) | Date Extracted: 07/28/05

Concentrated Extract Volume: 1.0 mL | Date Analyzed: 08/03/05

Injection Volume: (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) pH: | Extraction Method: 3550B

84-66-2	Diethyl phthalate	390	U
7005-72-3	4-Chlorophenyl phenyl ether	390	U
86-73-7	Fluorene	390	U
100-01-6	4-Nitroaniline	2000	U
534-52-1	4,6-Dinitro-2-methylphenol	2000	U
86-30-6	N-Nitrosodiphenylamine	390	U
101-55-3	4-Bromophenyl phenyl ether	390	U
118-74-1	Hexachlorobenzene	390	U
87-86-5	Pentachlorophenol	2000	U
85-01-8	Phenanthrene	390	U
120-12-7	Anthracene	390	U
84-74-2	Di-n-butyl phthalate	390	U
206-44-0	Fluoranthene	390	U
129-00-0	Pyrene	390	U
85-68-7	Butyl benzyl phthalate	390	U
91-94-1	3,3'-Dichlorobenzidine	770	U
56-55-3	Benzo[a]anthracene	390	U
117-81-7	Bis(2-ethylhexyl) phthalate	390	U
218-01-9	Chrysene	390	U
117-84-0	Di-n-octyl phthalate	390	U
205-99-2	Benzo[b]fluoranthene	390	U
207-08-9	Benzo[k]fluoranthene	390	U
50-32-8	Benzo[a]pyrene	390	U
193-39-5	Indeno[1,2,3-cd]pyrene	390	U
53-70-3	Dibenz(a,h)anthracene	390	U
191-24-2	Benzo[g,h,i]perylene	390	U
86-74-8	Carbazole	390	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE ID

6304-17

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: KRM48

Matrix: (soil/water) SOIL Client Desc: S1101-1-3

Sample wt/vol: 30 (g/mL) G Lab File ID: N3581

Level: (low/med) LOW Date Received: 07/26/05

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 07/28/05

Concentrated Extract Volume: 1(mL) Date Analyzed: 08/03/05

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	97-00-7	1-Chloro-2.4-Dinitrobenzene		U	
2.	86-00-0	2-Nitrobiphenyl		U	
3.	88-73-3	2-Nitrochlorobenzene		U	
4.	99-54-7	3.4-Dichloronitrobenzene		U	
5.	2113-58-8	3-Nitrobiphenyl		U	
6.	121-73-3	3-Nitrochlorobenzene		U	
7.	99-93-3	4-Nitrobiphenyl		U	
8.	100-00-5	4-Nitrochlorobenzene		U	
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Form 1
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: S1102-1.5-3.5

Lab Name: STL Savannah | Job No.: 680-6304-1

SDG No.: KRM48

Matrix: (soil/water) Solid | Lab Sample ID: 680-6304-18

Sample wt/vol: 30.04 (g/mL) g | Lab File ID: n3582.d

Level: (low/med) Low | Date Received: 07/26/05

% Moisture: 16 Decanted: (Y/N) | Date Extracted: 07/28/05

Concentrated Extract Volume: 1.0 mL | Date Analyzed: 08/03/05

Injection Volume: (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) pH: | Extraction Method: 3550B

108-95-2	Phenol	390	U
111-44-4	Bis(2-chloroethyl)ether	390	U
95-57-8	2-Chlorophenol	390	U
541-73-1	1,3-Dichlorobenzene	390	U
106-46-7	1,4-Dichlorobenzene	390	U
95-50-1	1,2-Dichlorobenzene	390	U
95-48-7	2-Methylphenol	390	U
39638-32-9	2,2'-oxybis(2-chloropropane)	390	U
621-64-7	N-Nitrosodi-n-propylamine	390	U
67-72-1	Hexachloroethane	390	U
98-95-3	Nitrobenzene	390	U
78-59-1	Isophorone	390	U
88-75-5	2-Nitrophenol	390	U
105-67-9	2,4-Dimethylphenol	390	U
111-91-1	Bis(2-chloroethoxy)methane	390	U
120-83-2	2,4-Dichlorophenol	390	U
120-82-1	1,2,4-Trichlorobenzene	390	U
91-20-3	Naphthalene	390	U
106-47-8	4-Chloroaniline	790	U
87-68-3	Hexachlorobutadiene	390	U
59-50-7	4-Chloro-3-methylphenol	390	U
91-57-6	2-Methylnaphthalene	390	U
77-47-4	Hexachlorocyclopentadiene	390	U
88-06-2	2,4,6-Trichlorophenol	390	U
95-95-4	2,4,5-Trichlorophenol	390	U
91-58-7	2-Chloronaphthalene	390	U
88-74-4	2-Nitroaniline	2000	U
131-11-3	Dimethyl phthalate	390	U
208-96-8	Acenaphthylene	390	U
99-09-2	3-Nitroaniline	2000	U
83-32-9	Acenaphthene	390	U
51-28-5	2,4-Dinitrophenol	2000	U
100-02-7	4-Nitrophenol	2000	U
132-64-9	Dibenzofuran	390	U
121-14-2	2,4-Dinitrotoluene	390	U
606-20-2	2,6-Dinitrotoluene	390	U
65794-96-9	3 & 4 Methylphenol	390	U

Form 1
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: S1102-1.5-3.5

Lab Name: STL Savannah Job No.: 680-6304-1

SDG No.: KRM48

Matrix: (soil/water) Solid Lab Sample ID: 680-6304-18

Sample wt/vol: 30.04 (g/mL) g Lab File ID: n3582.d

Level: (low/med) Low Date Received: 07/26/05

% Moisture: 16 Decanted: (Y/N) Date Extracted: 07/28/05

Concentrated Extract Volume: 1.0 mL Date Analyzed: 08/03/05

Injection Volume: (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) pH: Extraction Method: 3550B

84-66-2	Diethyl phthalate	390	U
7005-72-3	4-Chlorophenyl phenyl ether	390	U
86-73-7	Fluorene	390	U
100-01-6	4-Nitroaniline	2000	U
534-52-1	4,6-Dinitro-2-methylphenol	2000	U
86-30-6	N-Nitrosodiphenylamine	390	U
101-55-3	4-Bromophenyl phenyl ether	390	U
118-74-1	Hexachlorobenzene	390	U
87-86-5	Pentachlorophenol	2000	U
85-01-8	Phenanthrene	390	U
120-12-7	Anthracene	390	U
84-74-2	Di-n-butyl phthalate	390	U
206-44-0	Fluoranthene	390	U
129-00-0	Pyrene	390	U
85-68-7	Butyl benzyl phthalate	390	U
91-94-1	3,3'-Dichlorobenzidine	790	U
56-55-3	Benzo[a]anthracene	390	U
117-81-7	Bis(2-ethylhexyl) phthalate	390	U
218-01-9	Chrysene	390	U
117-84-0	Di-n-octyl phthalate	390	U
205-99-2	Benzo[b]fluoranthene	390	U
207-08-9	Benzo[k]fluoranthene	390	U
50-32-8	Benzo[a]pyrene	390	U
193-39-5	Indeno[1,2,3-cd]pyrene	390	U
53-70-3	Dibenz(a,h)anthracene	390	U
191-24-2	Benzo[g,h,i]perylene	390	U
86-74-8	Carbazole	390	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE ID

6304-18

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: KRM48

Matrix: (soil/water) SOIL Client Desc: S1102-1.5-3.5

Sample wt/vol: 30 (g/mL) G Lab File ID: N3582

Level: (low/med) LOW Date Received: 07/26/05

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 07/28/05

Concentrated Extract Volume: 1(mL) Date Analyzed: 08/03/05

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 97-00-7	1-Chloro-2.4-Dinitrobenzene		U	
2. 86-00-0	2-Nitrobiphenyl		U	
3. 88-73-3	2-Nitrochlorobenzene		U	
4. 99-54-7	3.4-Dichloronitrobenzene		U	
5. 2113-58-8	3-Nitrobiphenyl		U	
6. 121-73-3	3-Nitrochlorobenzene		U	
7. 99-93-3	4-Nitrobiphenyl		U	
8. 100-00-5	4-Nitrochlorobenzene		U	
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Form 1
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: S1103-0-2

Lab Name: STL Savannah | Job No.: 680-6304-1

SDG No.: KRM48

Matrix: (soil/water) Solid | Lab Sample ID: 680-6304-19

Sample wt/vol: 30.01 (g/mL) g | Lab File ID: n3583.d

Level: (low/med) Low | Date Received: 07/26/05

% Moisture: 21 Decanted: (Y/N) | Date Extracted: 07/28/05

Concentrated Extract Volume: 1.0 mL | Date Analyzed: 08/03/05

Injection Volume: (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) pH: | Extraction Method: 3550B

108-95-2	Phenol	420	U
111-44-4	Bis(2-chloroethyl)ether	420	U
95-57-8	2-Chlorophenol	420	U
541-73-1	1,3-Dichlorobenzene	420	U
106-46-7	1,4-Dichlorobenzene	420	U
95-50-1	1,2-Dichlorobenzene	420	U
95-48-7	2-Methylphenol	420	U
39638-32-9	2,2'-oxybis(2-chloropropane)	420	U
621-64-7	N-Nitrosodi-n-propylamine	420	U
67-72-1	Hexachloroethane	420	U
98-95-3	Nitrobenzene	420	U
78-59-1	Isophorone	420	U
88-75-5	2-Nitrophenol	420	U
105-67-9	2,4-Dimethylphenol	420	U
111-91-1	Bis(2-chloroethoxy)methane	420	U
120-83-2	2,4-Dichlorophenol	420	U
120-82-1	1,2,4-Trichlorobenzene	420	U
91-20-3	Naphthalene	420	U
106-47-8	4-Chloroaniline	840	U
87-68-3	Hexachlorobutadiene	420	U
59-50-7	4-Chloro-3-methylphenol	420	U
91-57-6	2-Methylnaphthalene	420	U
77-47-4	Hexachlorocyclopentadiene	420	U
88-06-2	2,4,6-Trichlorophenol	420	U
95-95-4	2,4,5-Trichlorophenol	420	U
91-58-7	2-Chloronaphthalene	420	U
88-74-4	2-Nitroaniline	2200	U
131-11-3	Dimethyl phthalate	420	U
208-96-8	Acenaphthylene	420	U
99-09-2	3-Nitroaniline	2200	U
83-32-9	Acenaphthene	420	U
51-28-5	2,4-Dinitrophenol	2200	U
100-02-7	4-Nitrophenol	2200	U
132-64-9	Dibenzofuran	420	U
121-14-2	2,4-Dinitrotoluene	420	U
606-20-2	2,6-Dinitrotoluene	420	U
65794-96-9	3 & 4 Methylphenol	420	U

Form 1
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: S1103-0-2

Lab Name: STL Savannah | Job No.: 680-6304-1

SDG No.: KRM48

Matrix: (soil/water) Solid | Lab Sample ID: 680-6304-19

Sample wt/vol: 30.01 (g/mL) g | Lab File ID: n3583.d

Level: (low/med) Low | Date Received: 07/26/05

% Moisture: 21 Decanted: (Y/N) | Date Extracted: 07/28/05

Concentrated Extract Volume: 1.0 mL | Date Analyzed: 08/03/05

Injection Volume: (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) pH: | Extraction Method: 3550B

84-66-2	Diethyl phthalate	420	U
7005-72-3	4-Chlorophenyl phenyl ether	420	U
86-73-7	Fluorene	420	U
100-01-6	4-Nitroaniline	2200	U
534-52-1	4,6-Dinitro-2-methylphenol	2200	U
86-30-6	N-Nitrosodiphenylamine	420	U
101-55-3	4-Bromophenyl phenyl ether	420	U
118-74-1	Hexachlorobenzene	420	U
87-86-5	Pentachlorophenol	2200	U
85-01-8	Phenanthrene	420	U
120-12-7	Anthracene	420	U
84-74-2	Di-n-butyl phthalate	420	U
206-44-0	Fluoranthene	420	U
129-00-0	Pyrene	420	U
85-68-7	Butyl benzyl phthalate	420	U
91-94-1	3,3'-Dichlorobenzidine	840	U
56-55-3	Benzo[a]anthracene	420	U
117-81-7	Bis(2-ethylhexyl) phthalate	420	U
218-01-9	Chrysene	420	U
117-84-0	Di-n-octyl phthalate	420	U
205-99-2	Benzo[b]fluoranthene	420	U
207-08-9	Benzo[k]fluoranthene	420	U
50-32-8	Benzo[a]pyrene	420	U
193-39-5	Indeno[1,2,3-cd]pyrene	420	U
53-70-3	Dibenz(a,h)anthracene	420	U
191-24-2	Benzo[g,h,i]perylene	420	U
86-74-8	Carbazole	420	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE ID

6304-19

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: KRM48

Matrix: (soil/water) SOIL Client Desc: S1103-0-2

Sample wt/vol: 30 (g/mL) G Lab File ID: N3583

Level: (low/med) LOW Date Received: 07/26/05

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 07/28/05

Concentrated Extract Volume: 1(mL) Date Analyzed: 08/03/05

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 97-00-7	1-Chloro-2.4-Dinitrobenzene		U	
2. 86-00-0	2-Nitrobiphenyl		U	
3. 88-73-3	2-Nitrochlorobenzene		U	
4. 99-54-7	3.4-Dichloronitrobenzene		U	
5. 2113-58-8	3-Nitrobiphenyl		U	
6. 121-73-3	3-Nitrochlorobenzene		U	
7. 99-93-3	4-Nitrobiphenyl		U	
8. 100-00-5	4-Nitrochlorobenzene		U	
9.				
10.				
11.				
12.				
13.				
14.				
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30.				

SDG# KRM48

PROJECT# 680-6304

POLYCHLORINATED BIPHENYLS (8082) FRACTION

Form 1

Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: S0215-0-2

Lab Name: STL Savannah | Job No.: 680-6304-1

SDG No.: KRM48

Matrix: (soil/water) Solid | Lab Sample ID: 680-6304-8

Sample wt/vol: 30.02 (g/mL) g | Lab File ID: rag01018.d

% Moisture: 5.4 Decanted: (Y/N) | Date Received: 07/26/05

Extraction Method: 3550B | Date Extracted: 07/29/05

Concentrated Extract Volume: 10.0 mL | Date Analyzed: 08/01/05

Injection Volume: (uL) | Dilution Factor: 2

GPC Cleanup: (Y/N) pH: | Sulfur Cleanup: (Y/N)

12674-11-2	PCB-1016	70	U
11104-28-2	PCB-1221	140	U
11141-16-5	PCB-1232	70	U
53469-21-9	PCB-1242	70	U
12672-29-6	PCB-1248	70	U
11097-69-1	PCB-1254	70	U
11096-82-5	PCB-1260	130	P
11100-14-4	PCB-1268	70	U

Form 1
Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: S0216-0-2

Lab Name: STL Savannah | Job No.: 680-6304-1

SDG No.: KRM48

Matrix: (soil/water) Solid | Lab Sample ID: 680-6304-10

Sample wt/vol: 30.01 (g/mL) g | Lab File ID: rag01014.d

% Moisture: 14 Decanted: (Y/N) | Date Received: 07/26/05

Extraction Method: 3550B | Date Extracted: 07/29/05

Concentrated Extract Volume: 10.0 mL | Date Analyzed: 08/01/05

Injection Volume: (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) pH: | Sulfur Cleanup: (Y/N)

12674-11-2	PCB-1016	38	U
11104-28-2	PCB-1221	78	U
11141-16-5	PCB-1232	38	U
53469-21-9	PCB-1242	38	U
12672-29-6	PCB-1248	320	P
11097-69-1	PCB-1254	38	U
11096-82-5	PCB-1260	38	U
11100-14-4	PCB-1268	38	U

Form 1

Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: S0217-0-2

Lab Name: STL Savannah | Job No.: 680-6304-1

SDG No.: KRM48

Matrix: (soil/water) Solid | Lab Sample ID: 680-6304-14

Sample wt/vol: 30.00 (g/mL) g | Lab File ID: rag01015.d

% Moisture: 12 Decanted: (Y/N) | Date Received: 07/26/05

Extraction Method: 3550B | Date Extracted: 07/29/05

Concentrated Extract Volume: 10.0 mL | Date Analyzed: 08/01/05

Injection Volume: (uL) | Dilution Factor: 2

GPC Cleanup: (Y/N) pH: | Sulfur Cleanup: (Y/N)

12674-11-2	PCB-1016	75	U
11104-28-2	PCB-1221	150	U
11141-16-5	PCB-1232	75	U
53469-21-9	PCB-1242	75	U
12672-29-6	PCB-1248	75	U
11097-69-1	PCB-1254	75	U
11096-82-5	PCB-1260	320	P
11100-14-4	PCB-1268	75	U

Form 1
Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: S0214-0-2

Lab Name: STL Savannah | Job No.: 680-6304-1

SDG No.: KRM48

Matrix: (soil/water) Solid | Lab Sample ID: 680-6304-16

Sample wt/vol: 30.01 (g/mL) g | Lab File ID: rag01016.d

% Moisture: 13 Decanted: (Y/N) | Date Received: 07/26/05

Extraction Method: 3550B | Date Extracted: 07/29/05

Concentrated Extract Volume: 10.0 mL | Date Analyzed: 08/01/05

Injection Volume: (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) pH: | Sulfur Cleanup: (Y/N)

12674-11-2	PCB-1016	38	U
11104-28-2	PCB-1221	77	U
11141-16-5	PCB-1232	38	U
53469-21-9	PCB-1242	38	U
12672-29-6	PCB-1248	38	U
11097-69-1	PCB-1254	38	U
11096-82-5	PCB-1260	38	U
11100-14-4	PCB-1268	38	U

Form 1

Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: S0214-0-2-DUP

Lab Name: STL Savannah | Job No.: 680-6304-1

SDG No.: KRM48

Matrix: (soil/water) Solid | Lab Sample ID: 680-6304-21

Sample wt/vol: 30.02 (g/mL) g | Lab File ID: rag01017.d

% Moisture: 14 Decanted: (Y/N) | Date Received: 07/26/05

Extraction Method: 3550B | Date Extracted: 07/29/05

Concentrated Extract Volume: 10.0 mL | Date Analyzed: 08/01/05

Injection Volume: (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) pH: | Sulfur Cleanup: (Y/N)

12674-11-2	PCB-1016	38	U
11104-28-2	PCB-1221	78	U
11141-16-5	PCB-1232	38	U
53469-21-9	PCB-1242	38	U
12672-29-6	PCB-1248	38	U
11097-69-1	PCB-1254	38	U
11096-82-5	PCB-1260	38	U
11100-14-4	PCB-1268	38	U

KRM48

INORGANIC DATA ASSESSMENT

PROJECT NUMBER: 21561601.00000
LABORATORY: STL Savannah
LAB PROJECT NO. 680-6304 (KRM48)
NO. OF SAMPLES/
MATRIX: 2 samples/2 solid

SITE: Solutia Krummrich

REVIEWER: URS CORPORATION
REVIEWER'S NAME: A. Turnell
COMPLETION DATE: 9/18/2005

DATA ASSESSMENT WORKSHEET

	Lead Meth # 6010
1. HOLDING TIMES	✓
2. BLANKS	✓
3. DUPLICATES	✓
4. SCS (LCS)	✓
5. DCS (LSCD)	N/A
6. MATRIX SPIKE/DUP	✓
7. DILUTION	(1)
8. OVERALL ASSESSMENT	O

O = Data had no problems/ or qualified due to minor problems.
M = Data qualified due to major problems.
Z = Data unacceptable.
X = Problems, but do not affect data.

ACTION ITEMS:

COMMENTS: (1) The serial dilution analysis did not agree within a 10% difference of the original determination. However, no action is necessary because the serial dilution was not performed in one of our samples.

SDG# KRM48

PROJECT# 680-6304

METALS FRACTION

1A - IN
INORGANICS ANALYSES DATA SHEET

Client ID: S0120-0-2

Lab Name: STL Savannah Job No.: KRM48

Matrix (soil/water): Solid Lab Sample ID: 680-6304-3

Level (low/med): Date Received: 07/26/2005

% Solids: 6.5

Concentration Units (ug/L or mg/Kg dry weight): mg/Kg

CAS No.	Analyte	Concentration	C	Q	M
7439-92-1	Lead	98			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

FORM 1A - IN

1A - IN
INORGANICS ANALYSES DATA SHEET

Client ID: S0119-0-2

Lab Name: STL Savannah Job No.: KRM48

Matrix (soil/water): Solid Lab Sample ID: 680-6304-7

Level (low/med): Date Received: 07/26/2005

% Solids: 4.5

Concentration Units (ug/L or mg/Kg dry weight): mg/Kg

CAS No.	Analyte	Concentration	C	Q	M
7439-92-1	Lead	70			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

FORM 1A - IN

SDG KRM 49

ORGANIC DATA ASSESSMENT

PROJECT NUMBER: 21561601.00000
LABORATORY: STL Savannah
LAB PROJECT NO. 680-6360 (KRM49)
NO. OF SAMPLES/
MATRIX: 16 samples / 15 solid, 1 aqueous

SITE: Solutia Krummrich
REVIEWER: URS CORPORATION
REVIEWER'S NAME: M. Reynolds
COMPLETION DATE: 9/8/2005

DATA ASSESSMENT WORKSHEET

	VOCs Meth # 8260B	SVOCs Meth # 8270C	Herbicides Meth # 8151A	PCBs/ Pesticides Meth # 8081/8082
1. HOLDING TIMES	✓	✓	✓	✓
2. BLANKS	✓	✓	✓	✓
3. SURROGATES	✓	✓	✓	(1-2)
4. SCS (LCS)	✓	✓	✓	(3)
5. DCS (LSCD)	N/A	N/A	✓	N/A
6. MATRIX SPIKE/DUP	N/A	N/A	N/A	✓
7. DILUTION	✓	✓	✓	(4)
8. DUPLICATES	N/A	N/A	N/A	✓
9. INTERNAL STANDARDS	✓	✓	N/A	(5)
10. OTHER	N/A	N/A	N/A	(6)
11. OVERALL ASSESSMENT	O	O	O	O

O = Data had no problems/ or qualified due to minor problems.
M = Data qualified due to major problems.
Z = Data unacceptable.
X = Problems, but do not affect data.

ACTION ITEMS: (1) Surrogate recoveries for Decachlorobiphenyl for samples S1003-4-6, S1004-3-5, S0903-2-4, S0903-2-4-DUP, S0929-5-7, and S0902-4-6 were above control limits. Therefore, detected analytes in all these samples were qualified estimated "J".

COMMENTS: (2) Surrogate recoveries for Decachlorobiphenyl and Tetrachloro-m-xylene for samples S0931-3-5, S0930-2-4, and S0902-4-6DL were not recovered due to surrogates being diluted out. No qualifiers were assigned.
(3) SCS recovery for Endrin in sample LCS 680-17511/16-A was 0%. Since the related sample is a QA/QC sample (equipment blank), no qualifiers were assigned.
(4) Samples S0929-5-7 (2), S0902-4-6DL (10), S0931-3-5 (20), and S0930-2-4 (20) were diluted by 2 to 20 times due to target analyte abundance. No qualifiers were assigned.
(5) The internal standard, Bromonitrobenzene, was recovered outside of the control limits on channel two. Therefore, all data for this sample was reported from channel one.
(6) In the CCV for clock 1R0801 the %D exceeded the maximum criteria for PCB-1268. Related samples include S1003-4-6, S0903-2-4, S0903-2-4-DUP, S0929-5-7, and S0930-2-4. In the CCV for clock

1R0801 the %D exceeded the maximum criteria for PCB-1221. The related sample is S0902-4-6. No qualifiers were assigned since calibrations are not part of a data quality review.

* Original results for S0902-4-6 were used with the exception of PCB-1221, PCB-1242, and PCB-1254. S0902-4-6DL results were used for these three analytes.

SDG# KRM49

PROJECT# 680-6360

VOLATILES BY GC/MS (8260B) FRACTION

Form 1
Volatile Organic Compounds by GC/MS

Client Sample ID: S0902-4-6-EB

Lab Name: STL Savannah Job No.: 680-6360-1

SDG No.: KRM49

Matrix: (soil/water) Water Lab Sample ID: 680-6360-20

Sample wt/vol: 5 (g/mL) mL Lab File ID: p8180.d

Level: (low/med) Date Received: 07/28/05

% Moisture: not dec. Date Analyzed: 08/02/05

GC Column: ID: (mm) Dilution Factor: 1

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
67-64-1	Acetone	25	U
71-43-2	Benzene	1.0	U
75-27-4	Bromodichloromethane	1.0	U
75-25-2	Bromoform	1.0	U
74-83-9	Bromomethane	1.0	U
78-93-3	2-Butanone (MEK)	10	U
75-15-0	Carbon disulfide	1.0	U
56-23-5	Carbon tetrachloride	1.0	U
108-90-7	Chlorobenzene	1.0	U
75-00-3	Chloroethane	1.0	U
67-66-3	Chloroform	1.0	U
74-87-3	Chloromethane	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
124-48-1	Dibromochloromethane	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
100-41-4	Ethylbenzene	1.0	U
591-78-6	2-Hexanone	10	U
75-09-2	Methylene Chloride	5.0	U
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U
100-42-5	Styrene	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
108-88-3	Toluene	1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
75-01-4	Vinyl chloride	1.0	U
1330-20-7	Xylenes, Total	2.0	U

Form 1
Volatile Organic Compounds by GC/MS

Client Sample ID: TB-3

Lab Name: STL Savannah Job No.: 680-6360-1

SDG No.: KRM49

Matrix: (soil/water) Water Lab Sample ID: 680-6360-21

Sample wt/vol: 5 (g/mL) mL Lab File ID: p8178.d

Level: (low/med) _____ Date Received: 07/28/05

% Moisture: not dec. _____ Date Analyzed: 08/02/05

GC Column: _____ ID: _____ (mm) Dilution Factor: 1

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
67-64-1	Acetone	25	U
71-43-2	Benzene	1.0	U
75-27-4	Bromodichloromethane	1.0	U
75-25-2	Bromoform	1.0	U
74-83-9	Bromomethane	1.0	U
78-93-3	2-Butanone (MEK)	10	U
75-15-0	Carbon disulfide	1.0	U
56-23-5	Carbon tetrachloride	1.0	U
108-90-7	Chlorobenzene	1.0	U
75-00-3	Chloroethane	1.0	U
67-66-3	Chloroform	1.0	U
74-87-3	Chloromethane	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
124-48-1	Dibromochloromethane	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
100-41-4	Ethylbenzene	1.0	U
591-78-6	2-Hexanone	10	U
75-09-2	Methylene Chloride	5.0	U
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U
100-42-5	Styrene	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
108-88-3	Toluene	1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
75-01-4	Vinyl chloride	1.0	U
1330-20-7	Xylenes, Total	2.0	U

SDG # KRM49

PROJECT # 680-6360

Semivolatile Compounds by GC/MS (8270C) Fraction

Form 1
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: S0902-4-6-EB

Lab Name: STL Savannah Job No.: 680-6360-1

SDG No.: KRM49

Matrix: (soil/water) Water Lab Sample ID: 680-6360-20

Sample wt/vol: 1030 (g/mL) mL Lab File ID: e5552.d

Level: (low/med) Low Date Received: 07/28/05

% Moisture: ____ Decanted: (Y/N) ____ Date Extracted: 08/01/05

Concentrated Extract Volume: 1 mL Date Analyzed: 08/03/05

Injection Volume: ____ (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) ____ pH: ____ Extraction Method: 3520C

108-95-2	Phenol	9.7	U
111-44-4	Bis(2-chloroethyl)ether	9.7	U
95-57-8	2-Chlorophenol	9.7	U
541-73-1	1,3-Dichlorobenzene	9.7	U
106-46-7	1,4-Dichlorobenzene	9.7	U
95-50-1	1,2-Dichlorobenzene	9.7	U
95-48-7	2-Methylphenol	9.7	U
39638-32-9	2,2'-oxybis(2-chloropropane)	9.7	U
621-64-7	N-Nitrosodi-n-propylamine	9.7	U
67-72-1	Hexachloroethane	9.7	U
98-95-3	Nitrobenzene	9.7	U
78-59-1	Isophorone	9.7	U
88-75-5	2-Nitrophenol	9.7	U
105-67-9	2,4-Dimethylphenol	9.7	U
111-91-1	Bis(2-chloroethoxy)methane	9.7	U
120-83-2	2,4-Dichlorophenol	9.7	U
120-82-1	1,2,4-Trichlorobenzene	9.7	U
91-20-3	Naphthalene	9.7	U
106-47-8	4-Chloroaniline	19	U
87-68-3	Hexachlorobutadiene	9.7	U
59-50-7	4-Chloro-3-methylphenol	9.7	U
91-57-6	2-Methylnaphthalene	9.7	U
77-47-4	Hexachlorocyclopentadiene	9.7	U
88-06-2	2,4,6-Trichlorophenol	9.7	U
95-95-4	2,4,5-Trichlorophenol	9.7	U
91-58-7	2-Chloronaphthalene	9.7	U
88-74-4	2-Nitroaniline	49	U
131-11-3	Dimethyl phthalate	9.7	U
208-96-8	Acenaphthylene	9.7	U
99-09-2	3-Nitroaniline	49	U
83-32-9	Acenaphthene	9.7	U
51-28-5	2,4-Dinitrophenol	49	U
100-02-7	4-Nitrophenol	49	U
132-64-9	Dibenzofuran	9.7	U
121-14-2	2,4-Dinitrotoluene	9.7	U
606-20-2	2,6-Dinitrotoluene	9.7	U
65794-96-9	3 & 4 Methylphenol	9.7	U

Form 1
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: S0902-4-6-EB

Lab Name: STL Savannah | Job No.: 680-6360-1

SDG No.: KRM49

Matrix: (soil/water) Water | Lab Sample ID: 680-6360-20

Sample wt/vol: 1030 (g/mL) mL | Lab File ID: e5552.d

Level: (low/med) Low | Date Received: 07/28/05

% Moisture: ____ Decanted: (Y/N) ____ | Date Extracted: 08/01/05

Concentrated Extract Volume: 1 mL | Date Analyzed: 08/03/05

Injection Volume: ____ (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) ____ pH: ____ | Extraction Method: 3520C

84-66-2	Diethyl phthalate	9.7	U
7005-72-3	4-Chlorophenyl phenyl ether	9.7	U
86-73-7	Fluorene	9.7	U
100-01-6	4-Nitroaniline	49	U
534-52-1	4,6-Dinitro-2-methylphenol	49	U
86-30-6	N-Nitrosodiphenylamine	9.7	U
101-55-3	4-Bromophenyl phenyl ether	9.7	U
118-74-1	Hexachlorobenzene	9.7	U
87-86-5	Pentachlorophenol	49	U
85-01-8	Phenanthrene	9.7	U
120-12-7	Anthracene	9.7	U
84-74-2	Di-n-butyl phthalate	9.7	U
206-44-0	Fluoranthene	9.7	U
129-00-0	Pyrene	9.7	U
85-68-7	Butyl benzyl phthalate	9.7	U
91-94-1	3,3'-Dichlorobenzidine	19	U
56-55-3	Benzo[a]anthracene	9.7	U
117-81-7	Bis(2-ethylhexyl) phthalate	9.7	U
218-01-9	Chrysene	9.7	U
117-84-0	Di-n-octyl phthalate	9.7	U
205-99-2	Benzo[b]fluoranthene	9.7	U
207-08-9	Benzo[k]fluoranthene	9.7	U
50-32-8	Benzo[a]pyrene	9.7	U
193-39-5	Indeno[1,2,3-cd]pyrene	9.7	U
53-70-3	Dibenz(a,h)anthracene	9.7	U
191-24-2	Benzo[g,h,i]perylene	9.7	U
86-74-8	Carbazole	9.7	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE ID

6360-E-20-A

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: KRM49

Matrix: (soil/water) WATER Client Desc: S0902-4-6-EB

Sample wt/vol: 1030 (g/mL) ML Lab File ID: E5552

Level: (low/med) LOW Date Received: 07/28/05

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 08/01/05

Concentrated Extract Volume: 1(mL) Date Analyzed: 08/03/05

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/l

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 97-00-7	1-Chloro-2,4-Dinitrobenzene		U	
2. 86-00-0	2-Nitrobiphenyl		U	
3. 88-73-3	2-Nitrochlorobenzene		U	
4. 99-54-7	3,4-Dichloronitrobenzene		U	
5. 2113-58-8	3-Nitrobiphenyl		U	
6. 121-73-3	3-Nitrochlorobenzene		U	
7. 99-93-3	4-Nitrobiphenyl		U	
8. 100-00-5	4-Nitrochlorobenzene		U	
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

SDG# KRM49

PROJECT# 680-6360

PESTICIDES/PCBs (8081/8082) FRACTION

Form 1
Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: S1003-4-6

Lab Name: STL Savannah Job No.: 680-6360-1

SDG No.: KRM49

Matrix: (soil/water) Solid Lab Sample ID: 680-6360-10

Sample wt/vol: 30.04 (g/mL) g Lab File ID: rag08026.d

% Moisture: 18 Decanted: (Y/N) Date Received: 07/28/05

Extraction Method: 3550B Date Extracted: 08/05/05

Concentrated Extract Volume: 10 mL Date Analyzed: 08/08/05

Injection Volume: (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) pH: Sulfur Cleanup: (Y/N)

12674-11-2	PCB-1016	40	U
11104-28-2	PCB-1221	82	U
11141-16-5	PCB-1232	40	U
53469-21-9	PCB-1242	40	U
12672-29-6	PCB-1248	40	U
11097-69-1	PCB-1254	72	
11096-82-5	PCB-1260	67	
11100-14-4	PCB-1268	64	

J
J
J

Form 1
Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: S1004-3-5

Lab Name: STL Savannah Job No.: 680-6360-1

SDG No.: KRM49

Matrix: (soil/water) Solid Lab Sample ID: 680-6360-11

Sample wt/vol: 30.03 (g/mL) g Lab File ID: rag01022.d

% Moisture: 28 Decanted: (Y/N) Date Received: 07/28/05

Extraction Method: 3550B Date Extracted: 07/29/05

Concentrated Extract Volume: 10.0 mL Date Analyzed: 08/01/05

Injection Volume: (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) pH: Sulfur Cleanup: (Y/N)

12674-11-2	PCB-1016	45	U
11104-28-2	PCB-1221	92	U
11141-16-5	PCB-1232	45	U
53469-21-9	PCB-1242	45	U
12672-29-6	PCB-1248	45	U
11097-69-1	PCB-1254	45	U
11096-82-5	PCB-1260	67	
11100-14-4	PCB-1268	190	P

JCJ

Form 1
Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: S0931-3-5

Lab Name: STL Savannah | Job No.: 680-6360-1

SDG No.: KRM49

Matrix: (soil/water) Solid | Lab Sample ID: 680-6360-12

Sample wt/vol: 30.02 (g/mL) g | Lab File ID: rag01024.d

% Moisture: 11 Decanted: (Y/N) | Date Received: 07/28/05

Extraction Method: 3550B | Date Extracted: 07/29/05

Concentrated Extract Volume: 10.0 mL | Date Analyzed: 08/01/05

Injection Volume: (uL) | Dilution Factor: 20

GPC Cleanup: (Y/N) pH: | Sulfur Cleanup: (Y/N)

12674-11-2	PCB-1016	740	U
11104-28-2	PCB-1221	1500	U
11141-16-5	PCB-1232	740	U
53469-21-9	PCB-1242	740	U
12672-29-6	PCB-1248	4800	P
11097-69-1	PCB-1254	740	U
11096-82-5	PCB-1260	1300	
11100-14-4	PCB-1268	740	U

Form 1
Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: S0907-10-12

Lab Name: STL Savannah | Job No.: 680-6360-1

SDG No.: KRM49

Matrix: (soil/water) Solid | Lab Sample ID: 680-6360-13

Sample wt/vol: 30.02 (g/mL) g | Lab File ID: rag01038.d

% Moisture: 30 Decanted: (Y/N) | Date Received: 07/28/05

Extraction Method: 3550B | Date Extracted: 07/29/05

Concentrated Extract Volume: 10.0 mL | Date Analyzed: 08/02/05

Injection Volume: (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) pH: | Sulfur Cleanup: (Y/N)

12674-11-2	PCB-1016	47	U
11104-28-2	PCB-1221	95	U
11141-16-5	PCB-1232	47	U
53469-21-9	PCB-1242	47	U
12672-29-6	PCB-1248	47	U
11097-69-1	PCB-1254	47	U
11096-82-5	PCB-1260	47	U
11100-14-4	PCB-1268	47	U

Form 1

Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: S0903-2-4

Lab Name: STL Savannah | Job No.: 680-6360-1

SDG No.: KRM49

Matrix: (soil/water) Solid | Lab Sample ID: 680-6360-14

Sample wt/vol: 30.01 (g/mL) g | Lab File ID: rag01039.d

% Moisture: 12 Decanted: (Y/N) | Date Received: 07/28/05

Extraction Method: 3550B | Date Extracted: 07/29/05

Concentrated Extract Volume: 10.0 mL | Date Analyzed: 08/02/05

Injection Volume: (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) pH: | Sulfur Cleanup: (Y/N)

12674-11-2	PCB-1016	37	U
11104-28-2	PCB-1221	76	U
11141-16-5	PCB-1232	37	U
53469-21-9	PCB-1242	37	U
12672-29-6	PCB-1248	37	U
11097-69-1	PCB-1254	230	
11096-82-5	PCB-1260	200	
11100-14-4	PCB-1268	100	

FORM I 8081A_8082

Form 1
Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: S0903-2-4-DUP

Lab Name: STL Savannah | Job No.: 680-6360-1

SDG No.: KRM49

Matrix: (soil/water) Solid | Lab Sample ID: 680-6360-15

Sample wt/vol: 30.00 (g/mL) g | Lab File ID: rag01040.d

% Moisture: 7.8 Decanted: (Y/N) | Date Received: 07/28/05

Extraction Method: 3550B | Date Extracted: 07/29/05

Concentrated Extract Volume: 10.0 mL | Date Analyzed: 08/02/05

Injection Volume: (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) pH: | Sulfur Cleanup: (Y/N)

12674-11-2	PCB-1016	36	U
11104-28-2	PCB-1221	73	U
11141-16-5	PCB-1232	36	U
53469-21-9	PCB-1242	36	U
12672-29-6	PCB-1248	36	U
11097-69-1	PCB-1254	120	
11096-82-5	PCB-1260	190	
11100-14-4	PCB-1268	85	

444

Form 1

Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: S0929-5-7

Lab Name: STL Savannah | Job No.: 680-6360-1

SDG No.: KRM49

Matrix: (soil/water) Solid | Lab Sample ID: 680-6360-16

Sample wt/vol: 30.02 (g/mL) g | Lab File ID: rag01041.d

% Moisture: 25 Decanted: (Y/N) | Date Received: 07/28/05

Extraction Method: 3550B | Date Extracted: 07/29/05

Concentrated Extract Volume: 10.0 mL | Date Analyzed: 08/02/05

Injection Volume: (uL) | Dilution Factor: 2

GPC Cleanup: (Y/N) pH: | Sulfur Cleanup: (Y/N)

12674-11-2	PCB-1016	87	U
11104-28-2	PCB-1221	180	U
11141-16-5	PCB-1232	87	U
53469-21-9	PCB-1242	87	U
12672-29-6	PCB-1248	200	J
11097-69-1	PCB-1254	880	J
11096-82-5	PCB-1260	320	J
11100-14-4	PCB-1268	170	J

Form 1
Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: S0930-2-4

Lab Name: STL Savannah | Job No.: 680-6360-1

SDG No.: KRM49

Matrix: (soil/water) Solid | Lab Sample ID: 680-6360-17

Sample wt/vol: 30.02 (g/mL) g | Lab File ID: rag01042.d

% Moisture: 17 Decanted: (Y/N) | Date Received: 07/28/05

Extraction Method: 3550B | Date Extracted: 07/29/05

Concentrated Extract Volume: 10.0 mL | Date Analyzed: 08/02/05

Injection Volume: (uL) | Dilution Factor: 20

GPC Cleanup: (Y/N) pH: | Sulfur Cleanup: (Y/N)

12674-11-2	PCB-1016	790	U
11104-28-2	PCB-1221	1600	U
11141-16-5	PCB-1232	790	U
53469-21-9	PCB-1242	790	U
12672-29-6	PCB-1248	790	U
11097-69-1	PCB-1254	790	U
11096-82-5	PCB-1260	2300	
11100-14-4	PCB-1268	7100	

Form 1

Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: S0902-4-6

Lab Name: STL Savannah | Job No.: 680-6360-1

SDG No.: KRM49

Matrix: (soil/water) Solid | Lab Sample ID: 680-6360-18

Sample wt/vol: 30.03 (g/mL) g | Lab File ID: rag01045.d

% Moisture: 30 Decanted: (Y/N) | Date Received: 07/28/05

Extraction Method: 3550B | Date Extracted: 07/29/05

Concentrated Extract Volume: 10.0 mL | Date Analyzed: 08/02/05

Injection Volume: (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) pH: | Sulfur Cleanup: (Y/N)

12674-11-2	PCB-1016	47	U
11104-28-2	PCB-1221	5100 D ~~2800~~	~~E~~
11141-16-5	PCB-1232	47	U
53469-21-9	PCB-1242	7600 D ~~2700~~	~~P E~~
12672-29-6	PCB-1248	47	U
11097-69-1	PCB-1254	1600 D ~~370~~	~~P E~~
11096-82-5	PCB-1260	330	J
11100-14-4	PCB-1268	47	U

Form 1
Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: S0902-6-8

Lab Name: STL Savannah | Job No.: 680-6360-1

SDG No.: KRM49

Matrix: (soil/water) Solid | Lab Sample ID: 680-6360-19

Sample wt/vol: 30.04 (g/mL) g | Lab File ID: rag01046.d

% Moisture: 27 Decanted: (Y/N) | Date Received: 07/28/05

Extraction Method: 3550B | Date Extracted: 07/29/05

Concentrated Extract Volume: 10.0 mL | Date Analyzed: 08/02/05

Injection Volume: (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) pH: | Sulfur Cleanup: (Y/N)

12674-11-2	PCB-1016	45	U
11104-28-2	PCB-1221	92	U
11141-16-5	PCB-1232	45	U
53469-21-9	PCB-1242	350	
12672-29-6	PCB-1248	45	U
11097-69-1	PCB-1254	45	U
11096-82-5	PCB-1260	45	U
11100-14-4	PCB-1268	45	U

Form 1

Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: S0902-4-6-EB

Lab Name: STL Savannah Job No.: 680-6360-1

SDG No.: KRM49

Matrix: (soil/water) Water Lab Sample ID: 680-6360-20

Sample wt/vol: 1040 (g/mL) mL Lab File ID: mag01021.d

% Moisture: ____ Decanted: (Y/N) ____ Date Received: 07/28/05

Extraction Method: 3520C Date Extracted: 07/29/05

Concentrated Extract Volume: 10 mL Date Analyzed: 08/01/05

Injection Volume: ____ (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) ____ pH: ____ Sulfur Cleanup: (Y/N) ____

72-54-8	4,4'-DDD	0.096	U
72-55-9	4,4'-DDE	0.096	U
50-29-3	4,4'-DDT	0.096	U
309-00-2	Aldrin	0.048	U
319-84-6	alpha-BHC	0.048	U
319-85-7	beta-BHC	0.048	U
57-74-9	Chlordane (technical)	0.48	U
319-86-8	delta-BHC	0.048	U
60-57-1	Dieldrin	0.096	U
959-98-8	Endosulfan I	0.048	U
33213-65-9	Endosulfan II	0.096	U
1031-07-8	Endosulfan sulfate	0.096	U
72-20-8	Endrin	0.096	U
7421-93-4	Endrin aldehyde	0.096	U
53494-70-5	Endrin ketone	0.096	U
58-89-9	gamma-BHC (Lindane)	0.048	U
76-44-8	Heptachlor	0.048	U
1024-57-3	Heptachlor epoxide	0.048	U
72-43-5	Methoxychlor	0.48	U
12674-11-2	PCB-1016	0.96	U
11104-28-2	PCB-1221	1.9	U
11141-16-5	PCB-1232	0.96	U
53469-21-9	PCB-1242	0.96	U
12672-29-6	PCB-1248	0.96	U
11097-69-1	PCB-1254	0.96	U
11096-82-5	PCB-1260	0.96	U
8001-35-2	Toxaphene	4.8	U
11100-14-4	PCB-1268	0.96	U

SDG# KRM49

PROJECT# 680-6360

CHLORINATED HERBICIDES (8151A) FRACTION

Form 1

Chlorinated Herbicides by GC Using Methylation or Pentafluorobenzylation Derivat

Client Sample ID: S0902-4-6-EB

Lab Name: STL Savannah | Job No.: 680-6360-1

SDG No.: KRM49

Matrix: (soil/water) Water | Lab Sample ID: 680-6360-20

Sample wt/vol: 1030 (g/mL) mL | Lab File ID: sag05078.d

% Moisture: _____ Decanted: (Y/N) ___ | Date Received: 07/28/05

Extraction Method: 8151A | Date Extracted: 08/03/05

Concentrated Extract Volume: 10 mL | Date Analyzed: 08/06/05

Injection Volume: _____ (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) ___ pH: _____ | Sulfur Cleanup: (Y/N) _____

93-76-5	2,4,5-T	0.49	U
94-75-7	2,4-D	0.49	U
94-82-6	2,4-DB	0.49	U
75-99-0	Dalapon	9.7	U
1918-00-9	Dicamba	0.49	U
120-36-5	Dichlorprop	0.49	U
88-85-7	Dinoseb	5.8	U
94-74-6	MCPA	120	U
93-65-2	MCPP	120	U
87-86-5	Pentachlorophenol	0.24	U
93-72-1	Silvex (2,4,5-TP)	0.49	U

KRM49

INORGANIC DATA ASSESSMENT

PROJECT NUMBER: 21561601.00000
LABORATORY: STL Savannah
LAB PROJECT NO. 680-6360 (KRM49)
NO. OF SAMPLES/
MATRIX: 10 samples/9 solid, 1 aqueous

SITE: Solutia Krummrich

REVIEWER: URS CORPORATION
REVIEWER'S NAME: M. Reynolds
COMPLETION DATE: 9/12/2005

DATA ASSESSMENT WORKSHEET

	Mercury Meth # 7471A	Lead Meth # 6010B
1. HOLDING TIMES	✓	✓
2. BLANKS	✓	✓
3. DUPLICATES	(1)	N/A
4. SCS (LCS)	✓	✓
5. DCS (LSCD)	N/A	N/A
6. MATRIX SPIKE/DUP	(2)	N/A
7. DILUTION	(3)	✓
8. OVERALL ASSESSMENT	O	O

O = Data had no problems/ or qualified due to minor problems.
M = Data qualified due to major problems.
Z = Data unacceptable.
X = Problems, but do not affect data.

ACTION ITEMS: (1) The laboratory duplicate RPD for sample S0920-13-15 was outside evaluation criteria of 20%. Therefore sample S0920-13-15 was qualified estimated "J".
Mercury in sample S0926-6-7 and field duplicate S0926-6-7-DUP had a RPD greater than 50%. Therefore, Mercury in these two samples was qualified estimated "J".

COMMENTS: (2) Spike sample recoveries for S0920-13-15S and S0920-13-15SD had sample results greater than four times the spike added. Therefore, no action is necessary.
(3) Samples S0920-13-15 (50), S0920-13-15S (200), S0920-13-15SD (200), S0925-2-3 (50), S0926-6-7 (50), S0926-6-7-DUP (10), S0926-9-10 (10), and S0926-9-10-DUP (10) were diluted by 10 to 2000 times due to Mercury abundance. However, no action is necessary.

SDG# KRM49

PROJECT# 680-6360

METALS FRACTION

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

S0920-13-15

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: SAS032

Matrix (soil/water): SOIL Lab Sample ID: 680-6360-1

Level (low/med): LOW Date Received: 7/28/2005

% Solids: 80

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7439-97-6	Mercury	58		*	CV	J

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

STL SAVANNAH

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

S0925-2-3

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: KRM49

Matrix (soil/water): SOIL Lab Sample ID: 680-6360-2

Level (low/med): LOW Date Received: 7/28/2005

% Solids: 94

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	39		*	CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

S0925-6-7

ontract:

ab Code: STLSAV Case No.: SAS No.: SDG NO.: SAS032

atrix (soil/water): SOIL Lab Sample ID: 680-6360-3

evel (low/med): LOW Date Received: 7/28/2005

Solids: 81

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.55		*S	CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

S0925-9-10

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: KRM49

Matrix (soil/water): SOIL Lab Sample ID: 680-6360-4

Level (low/med): LOW Date Received: 7/28/2005

% Solids: 73

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.092		*	CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

S0926-2-3

ontract:

ab Code: STLSAV Case No.: SAS No.: SDG NO.: SAS032

atrix (soil/water): SOIL Lab Sample ID: 680-6360-5

evel (low/med): LOW Date Received: 7/28/2005

Solids: 95

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.57		S*	CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Co nts:

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

S0926-6-7

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: KRM49

Matrix (soil/water): SOIL Lab Sample ID: 680-6360-6

Level (low/med): LOW Date Received: 7/28/2005

% Solids: 90

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	30		*	CV

J

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

17

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

S0926-6-7-DUP

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: KRM49

Matrix (soil/water): SOIL Lab Sample ID: 680-6360-7

Level (low/med): LOW Date Received: 7/28/2005

% Solids: 79

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	4.6		*	CV

J

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

S0926-9-10

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: KRM49

Matrix (soil/water): SOIL Lab Sample ID: 680-6360-8

Level (low/med): LOW Date Received: 7/28/2005

% Solids: 82

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	5.8		*	CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

S0926-9-10-DUP

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: KRM49

Matrix (soil/water): SOIL Lab Sample ID: 680-6360-9

Level (low/med): LOW Date Received: 7/28/2005

% Solids: 80

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	3.6		*	CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

1A - IN
INORGANICS ANALYSES DATA SHEET

Client ID: S0902-4-6-EB

Lab Name: STL Savannah Job No.: KRM49

Matrix (soil/water): Water Lab Sample ID: 680-6360-20

Level (low/med): Date Received: 07/28/2005

% Solids:

Concentration Units (ug/L or mg/Kg dry weight): ug/L

CAS No.	Analyte	Concentration	C	Q	M
7439-92-1	Lead	5.0	U		P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

S0902-4-6-EB

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: KRM49

Matrix (soil/water): WATER Lab Sample ID: 680-6360-20

Level (low/med): LOW Date Received: 7/28/2005

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.20	U	*	CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

SDG KRM 50

ORGANIC DATA ASSESSMENT

PROJECT NUMBER: 21561601.00000
LABORATORY: STL Savannah
LAB PROJECT NO. 680-6371-1 (KRM50)
NO. OF SAMPLES/
MATRIX: 16 samples / 15 solid, 1 aqueous

SITE: Solutia Krummrich
REVIEWER: URS CORPORATION
REVIEWER'S NAME: M. Reynolds
COMPLETION DATE: 9/8/2005

DATA ASSESSMENT WORKSHEET

	VOCs Meth # 8260B	SVOCs Meth # 8270C	PCBs/ Pesticides Meth # 9093/8081A	Herbicides Meth # 8151
1. HOLDING TIMES	✓	✓	✓	✓
2. BLANKS	✓	✓	✓	✓
3. SURROGATES	(1)	✓	(6)	✓
4. SCS (LCS)	(2)	✓	(7)	✓
5. DCS (LSCD)	N/A	N/A	N/A	✓
6. MATRIX SPIKE/DUP	N/A	(5)	(8)	(10)
7. DILUTION	(3)	✓	✓	✓
8. DUPLICATES	✓	N/A	N/A	N/A
9. INTERNAL STANDARDS	✓	✓	N/A	N/A
10. OTHER	(4)	N/A	(9)	N/A
11. OVERALL ASSESSMENT	O	O	O	O

O = Data had no problems/ or qualified due to minor problems.
M = Data qualified due to major problems.
Z = Data unacceptable.
X = Problems, but do not affect data.

ACTION ITEMS: (1) Surrogate recoveries for 4-Bromofluorobenzene for S0432-13-15RA, S0430-13-15-DUP, and S0430-13-15-DUPRA were below the control limits. Surrogate recoveries for Toluene-d8 for S0430-13-15-DUP and S0430-13-15-DUPRA were below control limits. Therefore, detected analytes for these samples were qualified estimated "J" and non-detect analytes were qualified "UJ".
Surrogate recoveries for 4-Bromofluorobenzene for S0431-13-15* and S0431-13-15RA were above the control limits. Therefore, detected analytes in these two samples were qualified estimated "J".
Surrogate recoveries for Dibromofluoromethane for S0432-13-15*, S0432-13-15RA, S0431-13-15, and S0431-13-15RA were above the control limits. Therefore, detected analytes in these samples were qualified estimated "J".
Surrogate recoveries for Toluene-d8 for S0431-13-15 and S0431-13-15RA were above the control limits. Therefore, detected analytes for these two samples were qualified estimated "J".

ACTION ITEMS CONT.: (2) LCS recoveries for Chloromethane and Vinyl Chloride in sample LCS 680-18399/2 were below the control limits. Therefore, Chloromethane and Vinyl Chloride detections were qualified estimated "J" and non-detects were rejected "R" in related samples S0432-13-15RA, S0431-13-15RA, S0430-13-15, S0430-13-15-DUPRA, and S0433-13-15.
(6) Surrogate recovery for DCB Decachlorobiphenyl for S0403-1-3 was above the control limits. Therefore, detected analytes in this sample were qualified estimated "J".

COMMENTS: (3) Samples S0432-13-15, S0432-13-15RA, S0431-13-15, S0431-13-15RA, S0430-13-15, S0430-13-15-DUP*, S0430-13-15-DUPRA, S0433-13-15, S0403-1-3, and S0403-10-12 were diluted 40 times due to target analyte abundance. However, no action is necessary.
(4) In the continuing calibration of clock 2L0803ML, Chloroethane %D was high; however, the CCAL RRF was higher than the AVG RRF and the analyte was non-detect. Since the calibrations are not part of a data review, no qualifiers were assigned.
(5) MS/MSD recoveries for Hexachlorocyclopentadiene, 2,4,5-Trichlorophenol, 2-Chloronaphthalene, Dimethyl phthalate, 4,6-Dinitro-2-methylphenol, 4-Bromophenyl Phenyl Ether, Hexachlorobenzene, Phenanthrene, Benzo(a)anthracene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene, Benzo(g,h,i)-perylene, and Carbazole were below control limits. However, no action is necessary because all other quality control parameters were in control limits.
(7) LCS recovery for Aldrin in sample LCS 680-17463/20-A was above control limits. However, no action is necessary since all Aldrin results in related samples were non-detect.
(8) MS/MSD recovery for Endrin Ketone was below the control limits. However, no action is necessary because Endrin Ketone was within control limits in the other QA/QC parameters. Also, the RPD for Heptachlor was high. However, no action is necessary because the Heptachlor MS/MSD recoveries were within the control limits.
(9) In the CCV for clock 1I0802 the %D for 4,4-DDT exceeded the maximum criteria. However, no qualifiers were assigned because calibrations are not part of a data quality review.
(10) MS/MSD recovery for Pentachlorophenol was below the control limits. However, no action is necessary because Pentachlorophenol was within control limits in the other QA/QC parameters.

* S0432-13-15 results were used instead of S0432-13-15RA due to better QA/QC parameters. S0431-13-15 results were used instead of S0431-13-15RA due to better QA/QC parameters. S0430-13-15-DUP results were used instead of S0430-13-15-DUPRA due to better QA/QC parameters.

SDG# KRM50

PROJECT# 680-6371

VOLATILES BY GC/MS (8260B) FRACTION

Form 1
Volatile Organic Compounds by GC/MS

Client Sample ID: S0432-13-15

Lab Name: STL Savannah Job No.: 680-6371-1

SDG No.: KRM50

Matrix: (soil/water) Solid Lab Sample ID: 680-6371-1

Sample wt/vol: 5.3 (g/mL) g Lab File ID: 15359.d

Level: (low/med) Medium Date Received: 07/28/05

% Moisture: not dec. Date Analyzed: 08/04/05

GC Column: ID: (mm) Dilution Factor: 1

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
124-48-1	Dibromochloromethane	190	U
74-83-9	Bromomethane	190	U
74-87-3	Chloromethane	190	U
75-27-4	Bromodichloromethane	190	U
75-01-4	Vinyl chloride	190	U
75-09-2	Methylene Chloride	190	U
78-93-3	2-Butanone (MEK)	940	U
108-10-1	4-Methyl-2-pentanone (MIBK)	940	U
75-00-3	Chloroethane	190	U
67-64-1	Acetone	1900	U
75-15-0	Carbon disulfide	190	U
75-35-4	1,1-Dichloroethene	190	U
75-34-3	1,1-Dichloroethane	190	U
156-59-2	cis-1,2-Dichloroethene	190	U
156-60-5	trans-1,2-Dichloroethene	190	U
67-66-3	Chloroform	190	U
107-06-2	1,2-Dichloroethane	190	U
71-55-6	1,1,1-Trichloroethane	190	U
56-23-5	Carbon tetrachloride	190	U
79-34-5	1,1,2,2-Tetrachloroethane	190	U
78-87-5	1,2-Dichloropropane	190	U
10061-02-6	trans-1,3-Dichloropropene	190	U
79-01-6	Trichloroethene	190	U
79-00-5	1,1,2-Trichloroethane	190	U
71-43-2	Benzene	190	U
10061-01-5	cis-1,3-Dichloropropene	190	U
75-25-2	Bromoform	190	U
591-78-6	2-Hexanone	940	U
127-18-4	Tetrachloroethene	190	U
108-88-3	Toluene	190	U
108-90-7	Chlorobenzene	190	U
100-41-4	Ethylbenzene	190	U
100-42-5	Styrene	190	U
1330-20-7	Xylenes, Total	380	U

Form 1
Volatile Organic Compounds by GC/MS

Client Sample ID: S0431-13-15

Lab Name: STL Savannah Job No.: 680-6371-1

SDG No.: KRM50

Matrix: (soil/water) Solid Lab Sample ID: 680-6371-2

Sample wt/vol: 6.1 (g/mL) g Lab File ID: 15360.d

Level: (low/med) Medium Date Received: 07/28/05

% Moisture: not dec. Date Analyzed: 08/04/05

GC Column: ID: (mm) Dilution Factor: 1

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
124-48-1	Dibromochloromethane	160	U
74-83-9	Bromomethane	160	U
74-87-3	Chloromethane	160	U
75-27-4	Bromodichloromethane	160	U
75-01-4	Vinyl chloride	160	U
75-09-2	Methylene Chloride	160	U
78-93-3	2-Butanone (MEK)	820	U
108-10-1	4-Methyl-2-pentanone (MIBK)	820	U
75-00-3	Chloroethane	160	U
67-64-1	Acetone	1600	U
75-15-0	Carbon disulfide	160	U
75-35-4	1,1-Dichloroethene	160	U
75-34-3	1,1-Dichloroethane	160	U
156-59-2	cis-1,2-Dichloroethene	160	U
156-60-5	trans-1,2-Dichloroethene	160	U
67-66-3	Chloroform	160	U
107-06-2	1,2-Dichloroethane	160	U
71-55-6	1,1,1-Trichloroethane	160	U
56-23-5	Carbon tetrachloride	160	U
79-34-5	1,1,2,2-Tetrachloroethane	160	U
78-87-5	1,2-Dichloropropane	160	U
10061-02-6	trans-1,3-Dichloropropene	160	U
79-01-6	Trichloroethene	160	U
79-00-5	1,1,2-Trichloroethane	160	U
71-43-2	Benzene	160	U
10061-01-5	cis-1,3-Dichloropropene	160	U
75-25-2	Bromoform	160	U
591-78-6	2-Hexanone	2000	J
127-18-4	Tetrachloroethene	160	U
108-88-3	Toluene	190	J
108-90-7	Chlorobenzene	160	U
100-41-4	Ethylbenzene	160	U
100-42-5	Styrene	160	U
1330-20-7	Xylenes, Total	330	U

Form 1
Volatile Organic Compounds by GC/MS

Client Sample ID: S0430-13-15

Lab Name: STL Savannah Job No.: 680-6371-1

SDG No.: KRM50

Matrix: (soil/water) Solid Lab Sample ID: 680-6371-3

Sample wt/vol: 6.0 (g/mL) g Lab File ID: m0068.d

Level: (low/med) Medium Date Received: 07/28/05

% Moisture: not dec. Date Analyzed: 08/04/05

GC Column: ID: (mm) Dilution Factor: 1

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q	
124-48-1	Dibromochloromethane	170	U	
74-83-9	Bromomethane	170	U	
74-87-3	Chloromethane	170	U *	R
75-27-4	Bromodichloromethane	170	U	
75-01-4	Vinyl chloride	170	U *	R
75-09-2	Methylene Chloride	170	U	
78-93-3	2-Butanone (MEK)	830	U	
108-10-1	4-Methyl-2-pentanone (MIBK)	830	U	
75-00-3	Chloroethane	170	U	
67-64-1	Acetone	1700	U	
75-15-0	Carbon disulfide	170	U	
75-35-4	1,1-Dichloroethene	170	U	
75-34-3	1,1-Dichloroethane	170	U	
156-59-2	cis-1,2-Dichloroethene	170	U	
156-60-5	trans-1,2-Dichloroethene	170	U	
67-66-3	Chloroform	170	U	
107-06-2	1,2-Dichloroethane	170	U	
71-55-6	1,1,1-Trichloroethane	170	U	
56-23-5	Carbon tetrachloride	170	U	
79-34-5	1,1,2,2-Tetrachloroethane	170	U	
78-87-5	1,2-Dichloropropane	170	U	
10061-02-6	trans-1,3-Dichloropropene	170	U	
79-01-6	Trichloroethene	170	U	
79-00-5	1,1,2-Trichloroethane	170	U	
71-43-2	Benzene	170	U	
10061-01-5	cis-1,3-Dichloropropene	170	U	
75-25-2	Bromoform	170	U	
591-78-6	2-Hexanone	830	U	
127-18-4	Tetrachloroethene	170	U	
108-88-3	Toluene	170	U	
108-90-7	Chlorobenzene	220		
100-41-4	Ethylbenzene	170	U	
100-42-5	Styrene	170	U	
1330-20-7	Xylenes, Total	330	U	

Form 1
Volatile Organic Compounds by GC/MS

Client Sample ID: S0430-13-15-DUP

Lab Name: STL Savannah Job No.: 680-6371-1

SDG No.: KRM50

Matrix: (soil/water) Solid Lab Sample ID: 680-6371-4

Sample wt/vol: 7.4 (g/mL) g Lab File ID: 15362.d

Level: (low/med) Medium Date Received: 07/28/05

% Moisture: not dec. Date Analyzed: 08/04/05

GC Column: ID: (mm) Dilution Factor: 1

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q	
124-48-1	Dibromochloromethane	140	U	UJ
74-83-9	Bromomethane	140	U	UJ
74-87-3	Chloromethane	140	U	UJ
75-27-4	Bromodichloromethane	140	U	UJ
75-01-4	Vinyl chloride	140	U	UJ
75-09-2	Methylene Chloride	140	U	UJ
78-93-3	2-Butanone (MEK)	1500		J
108-10-1	4-Methyl-2-pentanone (MIBK)	680	U	[illegible]
75-00-3	Chloroethane	140	U	[illegible]
67-64-1	Acetone	1400	U	UJ
75-15-0	Carbon disulfide	140	U	UJ
75-35-4	1,1-Dichloroethene	140	U	UJ
75-34-3	1,1-Dichloroethane	140	U	UJ
156-59-2	cis-1,2-Dichloroethene	140	U	UJ
156-60-5	trans-1,2-Dichloroethene	140	U	UJ
67-66-3	Chloroform	140	U	UJ
107-06-2	1,2-Dichloroethane	140	U	UJ
71-55-6	1,1,1-Trichloroethane	140	U	UJ
56-23-5	Carbon tetrachloride	140	U	UJ
79-34-5	1,1,2,2-Tetrachloroethane	140	U	UJ
78-87-5	1,2-Dichloropropane	140	U	UJ
10061-02-6	trans-1,3-Dichloropropene	140	U	UJ
79-01-6	Trichloroethene	140	U	UJ
79-00-5	1,1,2-Trichloroethane	140	U	UJ
71-43-2	Benzene	140	U	UJ
10061-01-5	cis-1,3-Dichloropropene	140	U	UJ
75-25-2	Bromoform	140	U	UJ
591-78-6	2-Hexanone	1500		J
127-18-4	Tetrachloroethene	140	U	UJ
108-88-3	Toluene	140	U	UJ
108-90-7	Chlorobenzene	140	U	UJ
100-41-4	Ethylbenzene	140	U	UJ
100-42-5	Styrene	140	U	UJ
1330-20-7	Xylenes, Total	270	U	[illegible]

Form 1
Volatile Organic Compounds by GC/MS

Client Sample ID: S0433-13-15

Lab Name: STL Savannah Job No.: 680-6371-1

SDG No.: KRM50

Matrix: (soil/water) Solid Lab Sample ID: 680-6371-5

Sample wt/vol: 6.1 (g/mL) g Lab File ID: m0070.d

Level: (low/med) Medium Date Received: 07/28/05

% Moisture: not dec. Date Analyzed: 08/04/05

GC Column: ID: (mm) Dilution Factor: 1

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q	
124-48-1	Dibromochloromethane	160	U	
74-83-9	Bromomethane	160	U	
74-87-3	Chloromethane	160	U *	R
75-27-4	Bromodichloromethane	160	U	
75-01-4	Vinyl chloride	160	U *	R
75-09-2	Methylene Chloride	160	U	
78-93-3	2-Butanone (MEK)	950		
108-10-1	4-Methyl-2-pentanone (MIBK)	820	U	
75-00-3	Chloroethane	160	U	
67-64-1	Acetone	1600	U	
75-15-0	Carbon disulfide	160	U	
75-35-4	1,1-Dichloroethene	160	U	
75-34-3	1,1-Dichloroethane	160	U	
156-59-2	cis-1,2-Dichloroethene	160	U	
156-60-5	trans-1,2-Dichloroethene	160	U	
67-66-3	Chloroform	160	U	
107-06-2	1,2-Dichloroethane	160	U	
71-55-6	1,1,1-Trichloroethane	160	U	
56-23-5	Carbon tetrachloride	160	U	
79-34-5	1,1,2,2-Tetrachloroethane	160	U	
78-87-5	1,2-Dichloropropane	160	U	
10061-02-6	trans-1,3-Dichloropropene	160	U	
79-01-6	Trichloroethene	160	U	
79-00-5	1,1,2-Trichloroethane	160	U	
71-43-2	Benzene	160	U	
10061-01-5	cis-1,3-Dichloropropene	160	U	
75-25-2	Bromoform	160	U	
591-78-6	2-Hexanone	820	U	
127-18-4	Tetrachloroethene	160	U	
108-88-3	Toluene	160	U	
108-90-7	Chlorobenzene	160	U	
100-41-4	Ethylbenzene	160	U	
100-42-5	Styrene	160	U	
1330-20-7	Xylenes, Total	330	U	

Form 1
Volatile Organic Compounds by GC/MS

Client Sample ID: S0403-1-3

Lab Name: STL Savannah Job No.: 680-6371-1

SDG No.: KRM50

Matrix: (soil/water) Solid Lab Sample ID: 680-6371-6

Sample wt/vol: 4.0 (g/mL) g Lab File ID: 15364.d

Level: (low/med) Medium Date Received: 07/28/05

% Moisture: not dec. 20 Date Analyzed: 08/04/05

GC Column: ID: (mm) Dilution Factor: 1

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
124-48-1	Dibromochloromethane	250	U
74-83-9	Bromomethane	250	U
74-87-3	Chloromethane	250	U
75-27-4	Bromodichloromethane	250	U
75-01-4	Vinyl chloride	250	U
75-09-2	Methylene Chloride	250	U
78-93-3	2-Butanone (MEK)	1300	U
108-10-1	4-Methyl-2-pentanone (MIBK)	1300	U
75-00-3	Chloroethane	250	U
67-64-1	Acetone	2500	U
75-15-0	Carbon disulfide	250	U
75-35-4	1,1-Dichloroethene	250	U
75-34-3	1,1-Dichloroethane	250	U
156-59-2	cis-1,2-Dichloroethene	250	U
156-60-5	trans-1,2-Dichloroethene	250	U
67-66-3	Chloroform	250	U
107-06-2	1,2-Dichloroethane	250	U
71-55-6	1,1,1-Trichloroethane	250	U
56-23-5	Carbon tetrachloride	250	U
79-34-5	1,1,2,2-Tetrachloroethane	250	U
78-87-5	1,2-Dichloropropane	250	U
10061-02-6	trans-1,3-Dichloropropene	250	U
79-01-6	Trichloroethene	250	U
79-00-5	1,1,2-Trichloroethane	250	U
71-43-2	Benzene	570	
10061-01-5	cis-1,3-Dichloropropene	250	U
75-25-2	Bromoform	250	U
591-78-6	2-Hexanone	1300	U
127-18-4	Tetrachloroethene	250	U
108-88-3	Toluene	260	
108-90-7	Chlorobenzene	250	U
100-41-4	Ethylbenzene	250	U
100-42-5	Styrene	250	U
1330-20-7	Xylenes, Total	1800	

Form 1
Volatile Organic Compounds by GC/MS

Client Sample ID: S0403-10-12

Lab Name: STL Savannah | Job No.: 680-6371-1

SDG No.: KRM50

Matrix: (soil/water) Solid | Lab Sample ID: 680-6371-7

Sample wt/vol: 8.3 (g/mL) g | Lab File ID: 15365.d

Level: (low/med) Medium | Date Received: 07/28/05

% Moisture: not dec. 20 | Date Analyzed: 08/04/05

GC Column: ID: (mm) | Dilution Factor: 1

Soil Extract Volume: (uL) | Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
124-48-1	Dibromochloromethane	120	U
74-83-9	Bromomethane	120	U
74-87-3	Chloromethane	120	U
75-27-4	Bromodichloromethane	120	U
75-01-4	Vinyl chloride	120	U
75-09-2	Methylene Chloride	120	U
78-93-3	2-Butanone (MEK)	600	U
108-10-1	4-Methyl-2-pentanone (MIBK)	960	
75-00-3	Chloroethane	120	U
67-64-1	Acetone	1200	U
75-15-0	Carbon disulfide	120	U
75-35-4	1,1-Dichloroethene	120	U
75-34-3	1,1-Dichloroethane	120	U
156-59-2	cis-1,2-Dichloroethene	120	U
156-60-5	trans-1,2-Dichloroethene	120	U
67-66-3	Chloroform	120	U
107-06-2	1,2-Dichloroethane	120	U
71-55-6	1,1,1-Trichloroethane	120	U
56-23-5	Carbon tetrachloride	120	U
79-34-5	1,1,2,2-Tetrachloroethane	120	U
78-87-5	1,2-Dichloropropane	120	U
10061-02-6	trans-1,3-Dichloropropene	120	U
79-01-6	Trichloroethene	120	U
79-00-5	1,1,2-Trichloroethane	120	U
71-43-2	Benzene	120	U
10061-01-5	cis-1,3-Dichloropropene	120	U
75-25-2	Bromoform	120	U
591-78-6	2-Hexanone	2100	
127-18-4	Tetrachloroethene	120	U
108-88-3	Toluene	120	U
108-90-7	Chlorobenzene	120	U
100-41-4	Ethylbenzene	120	U
100-42-5	Styrene	120	U
1330-20-7	Xylenes, Total	240	U

Form 1
Volatile Organic Compounds by GC/MS

Client Sample ID: 525D TB-2

Lab Name: STL Savannah Job No.: 680-6371-1

SDG No.: KRM50

Matrix: (soil/water) Water Lab Sample ID: 680-6371-16

Sample wt/vol: 5 (g/mL) mL Lab File ID: p8198.d

Level: (low/med) Date Received: 07/28/05

% Moisture: not dec. Date Analyzed: 08/03/05

GC Column: ID: (mm) Dilution Factor: 1

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
67-64-1	Acetone	25	U
71-43-2	Benzene	1.0	U
75-27-4	Bromodichloromethane	1.0	U
75-25-2	Bromoform	1.0	U
74-83-9	Bromomethane	1.0	U
78-93-3	2-Butanone (MEK)	10	U
75-15-0	Carbon disulfide	1.0	U
56-23-5	Carbon tetrachloride	1.0	U
108-90-7	Chlorobenzene	1.0	U
75-00-3	Chloroethane	1.0	U
67-66-3	Chloroform	1.0	U
74-87-3	Chloromethane	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
124-48-1	Dibromochloromethane	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
100-41-4	Ethylbenzene	1.0	U
591-78-6	2-Hexanone	10	U
75-09-2	Methylene Chloride	5.0	U
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U
100-42-5	Styrene	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
108-88-3	Toluene	1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
75-01-4	Vinyl chloride	1.0	U
1330-20-7	Xylenes, Total	2.0	U

SDG # KRM50

PROJECT # 680-6371

Semivolatile Compounds by GC/MS (8270C) Fraction

Form 1
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: S0403-1-3

Lab Name: STL Savannah | Job No.: 680-6371.1

SDG No.: KRM50

Matrix: (soil/water) Solid | Lab Sample ID: 680-6371-6

Sample wt/vol: 30.04 (g/mL) g | Lab File ID: n3656.d

Level: (low/med) Low | Date Received: 07/28/05

% Moisture: 20 Decanted: (Y/N) | Date Extracted: 08/01/05

Concentrated Extract Volume: 1.0 mL | Date Analyzed: 08/08/05

Injection Volume: (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) pH: | Extraction Method: 3550B

108-95-2	Phenol	410	U
111-44-4	Bis(2-chloroethyl)ether	410	U
95-57-8	2-Chlorophenol	410	U
541-73-1	1,3-Dichlorobenzene	410	U
106-46-7	1,4-Dichlorobenzene	410	U
95-50-1	1,2-Dichlorobenzene	410	U
95-48-7	2-Methylphenol	410	U
39638-32-9	2,2'-oxybis(2-chloropropane)	410	U
621-64-7	N-Nitrosodi-n-propylamine	410	U
67-72-1	Hexachloroethane	410	U
98-95-3	Nitrobenzene	410	U
78-59-1	Isophorone	410	U
88-75-5	2-Nitrophenol	410	U
105-67-9	2,4-Dimethylphenol	410	U
111-91-1	Bis(2-chloroethoxy)methane	410	U
120-83-2	2,4-Dichlorophenol	410	U
120-82-1	1,2,4-Trichlorobenzene	410	U
91-20-3	Naphthalene	410	U
106-47-8	4-Chloroaniline	820	U
87-68-3	Hexachlorobutadiene	410	U
59-50-7	4-Chloro-3-methylphenol	410	U
91-57-6	2-Methylnaphthalene	410	U
77-47-4	Hexachlorocyclopentadiene	410	U
88-06-2	2,4,6-Trichlorophenol	410	U
95-95-4	2,4,5-Trichlorophenol	410	U
91-58-7	2-Chloronaphthalene	410	U
88-74-4	2-Nitroaniline	2100	U
131-11-3	Dimethyl phthalate	410	U
208-96-8	Acenaphthylene	410	U
99-09-2	3-Nitroaniline	2100	U
83-32-9	Acenaphthene	410	U
51-28-5	2,4-Dinitrophenol	2100	U
100-02-7	4-Nitrophenol	2100	U
132-64-9	Dibenzofuran	410	U
121-14-2	2,4-Dinitrotoluene	410	U
606-20-2	2,6-Dinitrotoluene	410	U
65794-96-9	3 & 4 Methylphenol	410	U

Form 1
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: S0403-1-3

Lab Name: STL Savannah | Job No.: 680-6371.1

SDG No.: KRM50

Matrix: (soil/water) Solid | Lab Sample ID: 680-6371-6

Sample wt/vol: 30.04 (g/mL) g | Lab File ID: n3656.d

Level: (low/med) Low | Date Received: 07/28/05

% Moisture: 20 Decanted: (Y/N) | Date Extracted: 08/01/05

Concentrated Extract Volume: 1.0 mL | Date Analyzed: 08/08/05

Injection Volume: (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) pH: | Extraction Method: 3550B

84-66-2	Diethyl phthalate	410	U
7005-72-3	4-Chlorophenyl phenyl ether	410	U
86-73-7	Fluorene	410	U
100-01-6	4-Nitroaniline	2100	U
534-52-1	4,6-Dinitro-2-methylphenol	2100	U
86-30-6	N-Nitrosodiphenylamine	410	U
101-55-3	4-Bromophenyl phenyl ether	410	U
118-74-1	Hexachlorobenzene	410	U
87-86-5	Pentachlorophenol	2100	U
85-01-8	Phenanthrene	410	U
120-12-7	Anthracene	410	U
84-74-2	Di-n-butyl phthalate	410	U
206-44-0	Fluoranthene	410	U
129-00-0	Pyrene	410	U
85-68-7	Butyl benzyl phthalate	410	U
91-94-1	3,3'-Dichlorobenzidine	820	U
56-55-3	Benzo[a]anthracene	410	U
117-81-7	Bis(2-ethylhexyl) phthalate	410	U
218-01-9	Chrysene	410	U
117-84-0	Di-n-octyl phthalate	410	U
205-99-2	Benzo[b]fluoranthene	410	U
207-08-9	Benzo[k]fluoranthene	410	U
50-32-8	Benzo[a]pyrene	410	U
193-39-5	Indeno[1,2,3-cd]pyrene	410	U
53-70-3	Dibenz(a,h)anthracene	410	U
191-24-2	Benzo[g,h,i]perylene	410	U
86-74-8	Carbazole	410	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE ID
6371-6

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: KRM50

Matrix: (soil/water) SOIL Client Desc: S0403-1-3

Sample wt/vol: 30 (g/mL) G Lab File ID: N3656

Level: (low/med) LOW Date Received: 07/28/05

% Moisture: 20 decanted: (Y/N) N Date Extracted: 08/01/05

Concentrated Extract Volume: 1(mL) Date Analyzed: 08/08/05

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 97-00-7	1-Chloro-2,4-Dinitrobenzene		U	
2. 86-00-0	2-Nitrobiphenyl		U	
3. 88-73-3	2-Nitrochlorobenzene		U	
4. 99-54-7	3,4-Dichloronitrobenzene		U	
5. 2113-58-8	3-Nitrobiphenyl		U	
6. 121-73-3	3-Nitrochlorobenzene		U	
7. 99-93-3	4-Nitrobiphenyl		U	
8. 100-00-5	4-Nitrochlorobenzene		U	
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Form 1
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: S0403-10-12

Lab Name: STL Savannah | Job No.: 680-6371.1

SDG No.: KRM50

Matrix: (soil/water) Solid | Lab Sample ID: 680-6371-7

Sample wt/vol: 30.03 (g/mL) g | Lab File ID: n3657.d

Level: (low/med) Low | Date Received: 07/28/05

% Moisture: 20 Decanted: (Y/N) | Date Extracted: 08/01/05

Concentrated Extract Volume: 1.0 mL | Date Analyzed: 08/08/05

Injection Volume: (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) pH: | Extraction Method: 3550B

108-95-2	Phenol	410	U
111-44-4	Bis(2-chloroethyl)ether	410	U
95-57-8	2-Chlorophenol	410	U
541-73-1	1,3-Dichlorobenzene	410	U
106-46-7	1,4-Dichlorobenzene	410	U
95-50-1	1,2-Dichlorobenzene	410	U
95-48-7	2-Methylphenol	410	U
39638-32-9	2,2'-oxybis(2-chloropropane)	410	U
621-64-7	N-Nitrosodi-n-propylamine	410	U
67-72-1	Hexachloroethane	410	U
98-95-3	Nitrobenzene	410	U
78-59-1	Isophorone	410	U
88-75-5	2-Nitrophenol	410	U
105-67-9	2,4-Dimethylphenol	410	U
111-91-1	Bis(2-chloroethoxy)methane	410	U
120-83-2	2,4-Dichlorophenol	410	U
120-82-1	1,2,4-Trichlorobenzene	410	U
91-20-3	Naphthalene	410	U
106-47-8	4-Chloroaniline	820	U
87-68-3	Hexachlorobutadiene	410	U
59-50-7	4-Chloro-3-methylphenol	410	U
91-57-6	2-Methylnaphthalene	410	U
77-47-4	Hexachlorocyclopentadiene	410	U
88-06-2	2,4,6-Trichlorophenol	410	U
95-95-4	2,4,5-Trichlorophenol	410	U
91-58-7	2-Chloronaphthalene	410	U
88-74-4	2-Nitroaniline	2100	U
131-11-3	Dimethyl phthalate	410	U
208-96-8	Acenaphthylene	410	U
99-09-2	3-Nitroaniline	2100	U
83-32-9	Acenaphthene	410	U
51-28-5	2,4-Dinitrophenol	2100	U
100-02-7	4-Nitrophenol	2100	U
132-64-9	Dibenzofuran	410	U
121-14-2	2,4-Dinitrotoluene	410	U
606-20-2	2,6-Dinitrotoluene	410	U
65794-96-9	3 & 4 Methylphenol	410	U

Form 1
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: S0403-10-12

Lab Name: STL Savannah | Job No.: 680-6371.1

SDG No.: KRM50

Matrix: (soil/water) Solid | Lab Sample ID: 680-6371-7

Sample wt/vol: 30.03 (g/mL) g | Lab File ID: n3657.d

Level: (low/med) Low | Date Received: 07/28/05

% Moisture: 20 Decanted: (Y/N) | Date Extracted: 08/01/05

Concentrated Extract Volume: 1.0 mL | Date Analyzed: 08/08/05

Injection Volume: (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) pH: | Extraction Method: 3550B

84-66-2	Diethyl phthalate	410	U
7005-72-3	4-Chlorophenyl phenyl ether	410	U
86-73-7	Fluorene	410	U
100-01-6	4-Nitroaniline	2100	U
534-52-1	4,6-Dinitro-2-methylphenol	2100	U
86-30-6	N-Nitrosodiphenylamine	410	U
101-55-3	4-Bromophenyl phenyl ether	410	U
118-74-1	Hexachlorobenzene	410	U
87-86-5	Pentachlorophenol	2100	U
85-01-8	Phenanthrene	410	U
120-12-7	Anthracene	410	U
84-74-2	Di-n-butyl phthalate	410	U
206-44-0	Fluoranthene	410	U
129-00-0	Pyrene	410	U
85-68-7	Butyl benzyl phthalate	410	U
91-94-1	3,3'-Dichlorobenzidine	820	U
56-55-3	Benzo[a]anthracene	410	U
117-81-7	Bis(2-ethylhexyl) phthalate	410	U
218-01-9	Chrysene	410	U
117-84-0	Di-n-octyl phthalate	410	U
205-99-2	Benzo[b]fluoranthene	410	U
207-08-9	Benzo[k]fluoranthene	410	U
50-32-8	Benzo[a]pyrene	410	U
193-39-5	Indeno[1,2,3-cd]pyrene	410	U
53-70-3	Dibenz(a,h)anthracene	410	U
191-24-2	Benzo[g,h,i]perylene	410	U
86-74-8	Carbazole	410	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE ID

6371-7

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: KRM50

Matrix: (soil/water) SOIL Client Desc: S0403-10-12

Sample wt/vol: 30 (g/mL) G Lab File ID: N3657

Level: (low/med) LOW Date Received: 07/28/05

% Moisture: 20 decanted: (Y/N) N Date Extracted: 08/01/05

Concentrated Extract Volume: 1(mL) Date Analyzed: 08/08/05

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 97-00-7	1-Chloro-2,4-Dinitrobenzene		U	
2. 86-00-0	2-Nitrobiphenyl		U	
3. 88-73-3	2-Nitrochlorobenzene		U	
4. 99-54-7	3,4-Dichloronitrobenzene		U	
5. 2113-58-8	3-Nitrobiphenyl		U	
6. 121-73-3	3-Nitrochlorobenzene		U	
7. 99-93-3	4-Nitrobiphenyl		U	
8. 100-00-5	4-Nitrochlorobenzene		U	
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SDG# KRM50

PROJECT# 680-6371

POLYCHLORINATED BIPHENYLS (8082) FRACTION

Form 1

Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: S0403-1-3

Lab Name: STL Savannah | Job No.: 680-6371-1

SDG No.: KRM50

Matrix: (soil/water) Solid | Lab Sample ID: 680-6371-6

Sample wt/vol: 30.06 (g/mL) g | Lab File ID: iag02014.d

% Moisture: 20 Decanted: (Y/N) | Date Received: 07/28/05

Extraction Method: 3550B | Date Extracted: 07/29/05

Concentrated Extract Volume: 10.0 mL | Date Analyzed: 08/02/05

Injection Volume: (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) pH: | Sulfur Cleanup: (Y/N)

11100-14-4	PCB-1268	41	U
12674-11-2	PCB-1016	41	U
72-54-8	4,4'-DDD	4.1	U
72-55-9	4,4'-DDE	4.1	U
50-29-3	4,4'-DDT	5.4	J
309-00-2	Aldrin	2.1	U *
319-84-6	alpha-BHC	2.1	U
319-85-7	beta-BHC	2.1	U
57-74-9	Chlordane (technical)	21	U
319-86-8	delta-BHC	2.1	U
60-57-1	Dieldrin	4.1	U
959-98-8	Endosulfan I	2.1	U
33213-65-9	Endosulfan II	4.1	U
1031-07-8	Endosulfan sulfate	4.1	U
72-20-8	Endrin	4.1	U
7421-93-4	Endrin aldehyde	4.1	U
53494-70-5	Endrin ketone	4.1	U
58-89-9	gamma-BHC (Lindane)	2.1	U
76-44-8	Heptachlor	2.1	U
1024-57-3	Heptachlor epoxide	2.1	U
72-43-5	Methoxychlor	21	U
11104-28-2	PCB-1221	83	U
11141-16-5	PCB-1232	41	U
53469-21-9	PCB-1242	41	U
12672-29-6	PCB-1248	41	U
11097-69-1	PCB-1254	41	U
11096-82-5	PCB-1260	41	U
8001-35-2	Toxaphene	210	U

Form 1

Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: S0403-10-12

Lab Name: STL Savannah | Job No.: 680-6371-1

SDG No.: KRM50

Matrix: (soil/water) Solid | Lab Sample ID: 680-6371-7

Sample wt/vol: 30.02 (g/mL) g | Lab File ID: iag02015.d

% Moisture: 20 Decanted: (Y/N) | Date Received: 07/28/05

Extraction Method: 3550B | Date Extracted: 07/29/05

Concentrated Extract Volume: 10.0 mL | Date Analyzed: 08/02/05

Injection Volume: (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) pH: | Sulfur Cleanup: (Y/N)

11100-14-4	PCB-1268	41	U
12674-11-2	PCB-1016	41	U
72-54-8	4,4'-DDD	4.1	U
72-55-9	4,4'-DDE	4.1	U
50-29-3	4,4'-DDT	4.1	U
309-00-2	Aldrin	2.1	U *
319-84-6	alpha-BHC	2.1	U
319-85-7	beta-BHC	2.1	U
57-74-9	Chlordane (technical)	21	U
319-86-8	delta-BHC	2.1	U
60-57-1	Dieldrin	4.1	U
959-98-8	Endosulfan I	2.1	U
33213-65-9	Endosulfan II	4.1	U
1031-07-8	Endosulfan sulfate	4.1	U
72-20-8	Endrin	4.1	U
7421-93-4	Endrin aldehyde	4.1	U
53494-70-5	Endrin ketone	4.1	U
58-89-9	gamma-BHC (Lindane)	2.1	U
76-44-8	Heptachlor	2.1	U
1024-57-3	Heptachlor epoxide	2.1	U
72-43-5	Methoxychlor	21	U
11104-28-2	PCB-1221	83	U
11141-16-5	PCB-1232	41	U
53469-21-9	PCB-1242	41	U
12672-29-6	PCB-1248	41	U
11097-69-1	PCB-1254	41	U
11096-82-5	PCB-1260	41	U
8001-35-2	Toxaphene	210	U

SDG# KRM50

PROJECT# 680-6371

CHLORINATED HERBICIDES (8151A) FRACTION

Form 1
Chlorinated Herbicides by GC Using Methylation or Pentafluorobenzylation Derivat

Client Sample ID: S0403-1-3

Lab Name: STL Savannah | Job No.: 680-6371-1

SDG No.: KRM50

Matrix: (soil/water) Solid | Lab Sample ID: 680-6371-6

Sample wt/vol: 30.04 (g/mL) g | Lab File ID: sag09031.d

% Moisture: | Decanted: (Y/N) | Date Received: 07/28/05

Extraction Method: 8151A | Date Extracted: 08/01/05

Concentrated Extract Volume: 10 mL | Date Analyzed: 08/10/05

Injection Volume: (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) pH: | Sulfur Cleanup: (Y/N)

93-76-5	2,4,5-T	8.3	U
94-75-7	2,4-D	8.3	U
94-82-6	2,4-DB	8.3	U
75-99-0	Dalapon	330	U
1918-00-9	Dicamba	8.3	U
120-36-5	Dichlorprop	100	U
88-85-7	Dinoseb	100	U
94-74-6	MCPA	2000	U
93-65-2	MCPP	2000	U
87-86-5	Pentachlorophenol	8.3	U
93-72-1	Silvex (2,4,5-TP)	8.3	U

Form 1

Chlorinated Herbicides by GC Using Methylation or Pentafluorobenzylation Derivat

Client Sample ID: S0403-10-12

Lab Name: STL Savannah | Job No.: 680-6371-1

SDG No.: KRM50

Matrix: (soil/water) Solid | Lab Sample ID: 680-6371-7

Sample wt/vol: 30.05 (g/mL) g | Lab File ID: sag09033.d

% Moisture: _____ Decanted: (Y/N) ___ | Date Received: 07/28/05

Extraction Method: 8151A | Date Extracted: 08/01/05

Concentrated Extract Volume: 10 mL | Date Analyzed: 08/10/05

Injection Volume: _____ (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) _____ pH: _____ | Sulfur Cleanup: (Y/N) _____

93-76-5	2,4,5-T	8.3	U
94-75-7	2,4-D	8.3	U
94-82-6	2,4-DB	8.3	U
75-99-0	Dalapon	330	U
1918-00-9	Dicamba	8.3	U
120-36-5	Dichlorprop	100	U
88-85-7	Dinoseb	100	U
94-74-6	MCPA	2000	U
93-65-2	MCPP	2000	U
87-86-5	Pentachlorophenol	8.3	U
93-72-1	Silvex (2,4,5-TP)	8.3	U

KRM50

INORGANIC DATA ASSESSMENT

PROJECT NUMBER: 21561601.00000
LABORATORY: STL Savannah
LAB PROJECT NO. 680-6371-1 (KRM50)
NO. OF SAMPLES/
MATRIX: 8 samples/8 solid

SITE: Solutia Krummrich

REVIEWER: URS CORPORATION
REVIEWER'S NAME: M. Reynolds
COMPLETION DATE: 9/14/2005

DATA ASSESSMENT WORKSHEET

	Mercury Meth # 7471A
1. HOLDING TIMES	✓
2. BLANKS	✓
3. DUPLICATES	(1)
4. SCS (LCS)	✓
5. DCS (LSCD)	N/A
6. MATRIX SPIKE/DUP	(2)
7. DILUTION	(3)
8. OVERALL ASSESSMENT	O

O = Data had no problems/ or qualified due to minor problems.
M = Data qualified due to major problems.
Z = Data unacceptable.
X = Problems, but do not affect data.

ACTION ITEMS:

COMMENTS: (1) The duplicate result was >20%. However, no action is necessary because the duplicate was performed in a sample from another SDG.
(2) MS/MSD recoveries were outside of the control limits. However, no action is necessary because the parent sample is from another SDG and the sample concentrations were greater than four times the spikes added.
(3) Samples S0927-6-7 (100), S0927-9-10 (20), and S0928-2-3 (2) were diluted 2 to 100 times due to mercury abundance. However, no action is necessary.

SDG# KRM50

PROJECT# 680-6371

METALS FRACTION

STL SAVANNAH

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

S0927-2-3

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: KRM50

Matrix (soil/water): SOIL Lab Sample ID: 680-6371-8

Level (low/med): LOW Date Received: 7/28/2005

% Solids: 83

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.034			CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

S0927-6-7

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: KRM50

Matrix (soil/water): SOIL Lab Sample ID: 680-6371-9

Level (low/med): LOW Date Received: 7/28/2005

% Solids: 77

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	81		*	CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.
S0927-9-10

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: KRM50

Matrix (soil/water): SOIL Lab Sample ID: 680-6371-10

Level (low/med): LOW Date Received: 7/28/2005

% Solids: 71

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	17		*	CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

S0919-13-15

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: KRM50

Matrix (soil/water): SOIL Lab Sample ID: 680-6371-11

Level (low/med): LOW Date Received: 7/28/2005

% Solids: 67

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	1.6		S	CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

S0928-2-3

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: KRM50

Matrix (soil/water): SOIL Lab Sample ID: 680-6371-12

Level (low/med): LOW Date Received: 7/28/2005

% Solids: 76

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.27			CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

S0928-6-7

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: KRM50

Matrix (soil/water): SOIL Lab Sample ID: 680-6371-13

Level (low/med): LOW Date Received: 7/28/2005

% Solids: 75

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.71		S	CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

S0928-9-10

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: KRM50

Matrix (soil/water): SOIL Lab Sample ID: 680-6371-14

Level (low/med): LOW Date Received: 7/28/2005

% Solids: 75

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.21			CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

S0916-13-15

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: KRM50

Matrix (soil/water): SOIL Lab Sample ID: 680-6371-15

Level (low/med): LOW Date Received: 7/28/2005

% Solids: 75

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.19			CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

SDG KRM 51

KRM51

ORGANIC DATA ASSESSMENT

PROJECT NUMBER: 21561601.00000
LABORATORY: STL Savannah
LAB PROJECT NO. 680-6517 (KRM51)
NO. OF SAMPLES/
MATRIX: 10 aqueous samples

SITE: Solutia Krummrich

REVIEWER: URS CORPORATION
REVIEWER'S NAME: M. Reynolds
COMPLETION DATE: 9/20/2005

DATA ASSESSMENT WORKSHEET

	SVOCs Meth # 8270C	PCBs Meth # 8082
1. HOLDING TIMES	✓	✓
2. BLANKS	(1)	✓
3. SURROGATES	(2)	(4-5)
4. SCS (LCS)	✓	✓
5. DCS (LSCD)	N/A	N/A
6. MATRIX SPIKE/DUP	✓	✓
7. DILUTION	(3)	✓
8. DUPLICATES	✓	✓
9. INTERNAL STANDARDS	✓	(6)
10. OVERALL ASSESSMENT	O	O

O = Data had no problems/ or qualified due to minor problems.
M = Data qualified due to major problems.
Z = Data unacceptable.
X = Problems, but do not affect data.

ACTION ITEMS: (4) Surrogate recoveries for DCB Decachlorobiphenyl for GM-59A, GM-8, and GM-54B were below the control limits and were between 10-30%. Therefore, non-detect analytes in these samples were qualified estimated non-detect "UJ" (these samples did not have detections).
Surrogate recoveries for DCB Decachlorobiphenyl for GM-31B, GM-31B-DUP, and GM-31A were below the control limits and were less than 10%. Therefore, non-detect analytes were rejected "R" (these samples did not have detections).

COMMENTS: (1) Di-n-butylphthalate was detected in method blank MB 680-17967/9-A. However, no action is necessary because all related samples are non-detect.
(2) Surrogates in sample GM-31C were not recovered because they were diluted out. However, no action is necessary.
(3) Sample GM-31C was diluted by 10 times due to target analyte abundance. However, no action is necessary.
(5) The surrogate recovery for Tetrachloro-m-xylene for GM-58A was above the control limits. However, no action is necessary because all analytes for this sample were non-detect.
(6) The internal standard Bromonitrobenzene (BNB) was recovered outside the control limits in sample GM-58A on column 2. However, no action is necessary because results were reported for column 1.

SDG # KRM51

PROJECT # 680-6517

Semivolatile Compounds by GC/MS (8270C) Fraction

Form 1
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: GM-59A

Lab Name: STL Savannah Job No.: 680-6517-1

SDG No.: KRM51

Matrix: (soil/water) Water Lab Sample ID: 680-6517-1

Sample wt/vol: 1040 (g/mL) mL Lab File ID: t0433.d

Level: (low/med) Low Date Received: 08/02/05

% Moisture: ____ Decanted: (Y/N) ____ Date Extracted: 08/03/05

Concentrated Extract Volume: 1 mL Date Analyzed: 08/05/05

Injection Volume: ____ (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) ____ pH: ____ Extraction Method: 3520C

108-95-2	Phenol	9.6	U
111-44-4	Bis(2-chloroethyl)ether	9.6	U
95-57-8	2-Chlorophenol	9.6	U
541-73-1	1,3-Dichlorobenzene	9.6	U
106-46-7	1,4-Dichlorobenzene	9.6	U
95-50-1	1,2-Dichlorobenzene	9.6	U
95-48-7	2-Methylphenol	9.6	U
39638-32-9	2,2'-oxybis(2-chloropropane)	9.6	U
621-64-7	N-Nitrosodi-n-propylamine	9.6	U
67-72-1	Hexachloroethane	9.6	U
98-95-3	Nitrobenzene	9.6	U
78-59-1	Isophorone	9.6	U
88-75-5	2-Nitrophenol	9.6	U
105-67-9	2,4-Dimethylphenol	9.6	U
111-91-1	Bis(2-chloroethoxy)methane	9.6	U
120-83-2	2,4-Dichlorophenol	9.6	U
120-82-1	1,2,4-Trichlorobenzene	9.6	U
91-20-3	Naphthalene	9.6	U
106-47-8	4-Chloroaniline	19	U
87-68-3	Hexachlorobutadiene	9.6	U
59-50-7	4-Chloro-3-methylphenol	9.6	U
91-57-6	2-Methylnaphthalene	9.6	U
77-47-4	Hexachlorocyclopentadiene	9.6	U
88-06-2	2,4,6-Trichlorophenol	9.6	U
95-95-4	2,4,5-Trichlorophenol	9.6	U
91-58-7	2-Chloronaphthalene	9.6	U
88-74-4	2-Nitroaniline	48	U
131-11-3	Dimethyl phthalate	9.6	U
208-96-8	Acenaphthylene	9.6	U
99-09-2	3-Nitroaniline	48	U
83-32-9	Acenaphthene	9.6	U
51-28-5	2,4-Dinitrophenol	48	U
100-02-7	4-Nitrophenol	48	U
132-64-9	Dibenzofuran	9.6	U
121-14-2	2,4-Dinitrotoluene	9.6	U
606-20-2	2,6-Dinitrotoluene	9.6	U
65794-96-9	3 & 4 Methylphenol	9.6	U

Form 1
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: GM-59A

Lab Name: STL Savannah | Job No.: 680-6517-1

SDG No.: KRM51

Matrix: (soil/water) Water | Lab Sample ID: 680-6517-1

Sample wt/vol: 1040 (g/mL) mL | Lab File ID: t0433.d

Level: (low/med) Low | Date Received: 08/02/05

% Moisture: ____ Decanted: (Y/N) ____ | Date Extracted: 08/03/05

Concentrated Extract Volume: 1 mL | Date Analyzed: 08/05/05

Injection Volume: ____ (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) ____ pH: ____ | Extraction Method: 3520C

84-66-2	Diethyl phthalate	9.6	U
7005-72-3	4-Chlorophenyl phenyl ether	9.6	U
86-73-7	Fluorene	9.6	U
100-01-6	4-Nitroaniline	48	U
534-52-1	4,6-Dinitro-2-methylphenol	48	U
86-30-6	N-Nitrosodiphenylamine	9.6	U
101-55-3	4-Bromophenyl phenyl ether	9.6	U
118-74-1	Hexachlorobenzene	9.6	U
87-86-5	Pentachlorophenol	48	U
85-01-8	Phenanthrene	9.6	U
120-12-7	Anthracene	9.6	U
84-74-2	Di-n-butyl phthalate	9.6	U
206-44-0	Fluoranthene	9.6	U
129-00-0	Pyrene	9.6	U
85-68-7	Butyl benzyl phthalate	9.6	U
91-94-1	3,3'-Dichlorobenzidine	19	U
56-55-3	Benzo[a]anthracene	9.6	U
117-81-7	Bis(2-ethylhexyl) phthalate	9.6	U
218-01-9	Chrysene	9.6	U
117-84-0	Di-n-octyl phthalate	9.6	U
205-99-2	Benzo[b]fluoranthene	9.6	U
207-08-9	Benzo[k]fluoranthene	9.6	U
50-32-8	Benzo[a]pyrene	9.6	U
193-39-5	Indeno[1,2,3-cd]pyrene	9.6	U
53-70-3	Dibenz(a,h)anthracene	9.6	U
191-24-2	Benzo[g,h,i]perylene	9.6	U
86-74-8	Carbazole	9.6	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE ID

6517-1

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: KRM51

Matrix: (soil/water) WATER Client Desc: GM-59A

Sample wt/vol: 1040 (g/mL) ML Lab File ID: T0433

Level: (low/med) LOW Date Received: 08/02/05

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 08/03/05

Concentrated Extract Volume: 1(mL) Date Analyzed: 08/05/05

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/l

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 97-00-7	1-Chloro-2.4-Dinitrobenzene		U	
2. 86-00-0	2-Nitrobiphenyl		U	
3. 88-73-3	2-Nitrochlorobenzene		U	
4. 99-54-7	3.4-Dichloronitrobenzene		U	
5. 2113-58-8	3-Nitrobiphenyl		U	
6. 121-73-3	3-Nitrochlorobenzene		U	
7. 99-93-3	4-Nitrobiphenyl		U	
8. 100-00-5	4-Nitrochlorobenzene		U	
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Form 1
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: GM-31B

Lab Name: STL Savannah | Job No.: 680-6517-1

SDG No.: KRM51

Matrix: (soil/water) Water | Lab Sample ID: 680-6517-2

Sample wt/vol: 1050 (g/mL) mL | Lab File ID: t0434.d

Level: (low/med) Low | Date Received: 08/02/05

% Moisture: ____ Decanted: (Y/N) ____ | Date Extracted: 08/03/05

Concentrated Extract Volume: 1 mL | Date Analyzed: 08/05/05

Injection Volume: ____ (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) ____ pH: ____ | Extraction Method: 3520C

108-95-2	Phenol	9.5	U
111-44-4	Bis(2-chloroethyl)ether	9.5	U
95-57-8	2-Chlorophenol	9.5	U
541-73-1	1,3-Dichlorobenzene	9.5	U
106-46-7	1,4-Dichlorobenzene	9.5	U
95-50-1	1,2-Dichlorobenzene	9.5	U
95-48-7	2-Methylphenol	9.5	U
39638-32-9	2,2'-oxybis(2-chloropropane)	9.5	U
621-64-7	N-Nitrosodi-n-propylamine	9.5	U
67-72-1	Hexachloroethane	9.5	U
98-95-3	Nitrobenzene	9.5	U
78-59-1	Isophorone	9.5	U
88-75-5	2-Nitrophenol	9.5	U
105-67-9	2,4-Dimethylphenol	9.5	U
111-91-1	Bis(2-chloroethoxy)methane	9.5	U
120-83-2	2,4-Dichlorophenol	9.5	U
120-82-1	1,2,4-Trichlorobenzene	9.5	U
91-20-3	Naphthalene	9.5	U
106-47-8	4-Chloroaniline	19	U
87-68-3	Hexachlorobutadiene	9.5	U
59-50-7	4-Chloro-3-methylphenol	9.5	U
91-57-6	2-Methylnaphthalene	9.5	U
77-47-4	Hexachlorocyclopentadiene	9.5	U
88-06-2	2,4,6-Trichlorophenol	9.5	U
95-95-4	2,4,5-Trichlorophenol	9.5	U
91-58-7	2-Chloronaphthalene	9.5	U
88-74-4	2-Nitroaniline	48	U
131-11-3	Dimethyl phthalate	9.5	U
208-96-8	Acenaphthylene	9.5	U
99-09-2	3-Nitroaniline	48	U
83-32-9	Acenaphthene	9.5	U
51-28-5	2,4-Dinitrophenol	48	U
100-02-7	4-Nitrophenol	48	U
132-64-9	Dibenzofuran	9.5	U
121-14-2	2,4-Dinitrotoluene	9.5	U
606-20-2	2,6-Dinitrotoluene	9.5	U
65794-96-9	3 & 4 Methylphenol	9.5	U

Form 1
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: GM-31B

Lab Name: STL Savannah | Job No.: 680-6517-1

SDG No.: KRM51

Matrix: (soil/water) Water | Lab Sample ID: 680-6517-2

Sample wt/vol: 1050 (g/mL) mL | Lab File ID: t0434.d

Level: (low/med) Low | Date Received: 08/02/05

% Moisture: ____ Decanted: (Y/N) ____ | Date Extracted: 08/03/05

Concentrated Extract Volume: 1 mL | Date Analyzed: 08/05/05

Injection Volume: ____ (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) ____ pH: ____ | Extraction Method: 3520C

84-66-2	Diethyl phthalate	9.5	U
7005-72-3	4-Chlorophenyl phenyl ether	9.5	U
86-73-7	Fluorene	9.5	U
100-01-6	4-Nitroaniline	48	U
534-52-1	4,6-Dinitro-2-methylphenol	48	U
86-30-6	N-Nitrosodiphenylamine	9.5	U
101-55-3	4-Bromophenyl phenyl ether	9.5	U
118-74-1	Hexachlorobenzene	9.5	U
87-86-5	Pentachlorophenol	48	U
85-01-8	Phenanthrene	9.5	U
120-12-7	Anthracene	9.5	U
84-74-2	Di-n-butyl phthalate	9.5	U
206-44-0	Fluoranthene	9.5	U
129-00-0	Pyrene	9.5	U
85-68-7	Butyl benzyl phthalate	9.5	U
91-94-1	3,3'-Dichlorobenzidine	19	U
56-55-3	Benzo[a]anthracene	9.5	U
117-81-7	Bis(2-ethylhexyl) phthalate	14	
218-01-9	Chrysene	9.5	U
117-84-0	Di-n-octyl phthalate	9.5	U
205-99-2	Benzo[b]fluoranthene	9.5	U
207-08-9	Benzo[k]fluoranthene	9.5	U
50-32-8	Benzo[a]pyrene	9.5	U
193-39-5	Indeno[1,2,3-cd]pyrene	9.5	U
53-70-3	Dibenz(a,h)anthracene	9.5	U
191-24-2	Benzo[g,h,i]perylene	9.5	U
86-74-8	Carbazole	9.5	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE ID

6517-2

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: KRM51

Matrix: (soil/water) WATER Client Desc: ~~6517-2~~ GM-31B

Sample wt/vol: 1050 (g/mL) ML Lab File ID: T0434

Level: (low/med) LOW Date Received: 08/02/05

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 08/03/05

Concentrated Extract Volume: 1(mL) Date Analyzed: 08/05/05

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/l

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 97-00-7	1-Chloro-2.4-Dinitrobenzene		U	
2. 86-00-0	2-Nitrobiphenyl		U	
3. 88-73-3	2-Nitrochlorobenzene		U	
4. 99-54-7	3.4-Dichloronitrobenzene		U	
5. 2113-58-8	3-Nitrobiphenyl		U	
6. 121-73-3	3-Nitrochlorobenzene		U	
7. 99-93-3	4-Nitrobiphenyl		U	
8. 100-00-5	4-Nitrochlorobenzene		U	
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Form 1
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: GM-31B-DUP

Lab Name: STL Savannah | Job No.: 680-6517-1

SDG No.: KRM51

Matrix: (soil/water) Water | Lab Sample ID: 680-6517-3

Sample wt/vol: 1060 (g/mL) mL | Lab File ID: t0432.d

Level: (low/med) Low | Date Received: 08/02/05

% Moisture: ____ Decanted: (Y/N) ____ | Date Extracted: 08/03/05

Concentrated Extract Volume: 1 mL | Date Analyzed: 08/05/05

Injection Volume: ____ (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) ____ pH: ____ | Extraction Method: 3520C

108-95-2	Phenol	9.4	U
111-44-4	Bis(2-chloroethyl)ether	9.4	U
95-57-8	2-Chlorophenol	9.4	U
541-73-1	1,3-Dichlorobenzene	9.4	U
106-46-7	1,4-Dichlorobenzene	9.4	U
95-50-1	1,2-Dichlorobenzene	9.4	U
95-48-7	2-Methylphenol	9.4	U
39638-32-9	2,2'-oxybis(2-chloropropane)	9.4	U
621-64-7	N-Nitrosodi-n-propylamine	9.4	U
67-72-1	Hexachloroethane	9.4	U
98-95-3	Nitrobenzene	9.4	U
78-59-1	Isophorone	9.4	U
88-75-5	2-Nitrophenol	9.4	U
105-67-9	2,4-Dimethylphenol	9.4	U
111-91-1	Bis(2-chloroethoxy)methane	9.4	U
120-83-2	2,4-Dichlorophenol	9.4	U
120-82-1	1,2,4-Trichlorobenzene	9.4	U
91-20-3	Naphthalene	9.4	U
106-47-8	4-Chloroaniline	19	U
87-68-3	Hexachlorobutadiene	9.4	U
59-50-7	4-Chloro-3-methylphenol	9.4	U
91-57-6	2-Methylnaphthalene	9.4	U
77-47-4	Hexachlorocyclopentadiene	9.4	U
88-06-2	2,4,6-Trichlorophenol	9.4	U
95-95-4	2,4,5-Trichlorophenol	9.4	U
91-58-7	2-Chloronaphthalene	9.4	U
88-74-4	2-Nitroaniline	47	U
131-11-3	Dimethyl phthalate	9.4	U
208-96-8	Acenaphthylene	9.4	U
99-09-2	3-Nitroaniline	47	U
83-32-9	Acenaphthene	9.4	U
51-28-5	2,4-Dinitrophenol	47	U
100-02-7	4-Nitrophenol	47	U
132-64-9	Dibenzofuran	9.4	U
121-14-2	2,4-Dinitrotoluene	9.4	U
606-20-2	2,6-Dinitrotoluene	9.4	U
65794-96-9	3 & 4 Methylphenol	9.4	U

Form 1
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: GM-31B-DUP

Lab Name: STL Savannah | Job No.: 680-6517-1

SDG No.: KRM51

Matrix: (soil/water) Water | Lab Sample ID: 680-6517-3

Sample wt/vol: 1060 (g/mL) mL | Lab File ID: t0432.d

Level: (low/med) Low | Date Received: 08/02/05

% Moisture: ____ Decanted: (Y/N) ____ | Date Extracted: 08/03/05

Concentrated Extract Volume: 1 mL | Date Analyzed: 08/05/05

Injection Volume: ____ (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) ____ pH: ____ | Extraction Method: 3520C

84-66-2	Diethyl phthalate	9.4	U
7005-72-3	4-Chlorophenyl phenyl ether	9.4	U
86-73-7	Fluorene	9.4	U
100-01-6	4-Nitroaniline	47	U
534-52-1	4,6-Dinitro-2-methylphenol	47	U
86-30-6	N-Nitrosodiphenylamine	9.4	U
101-55-3	4-Bromophenyl phenyl ether	9.4	U
118-74-1	Hexachlorobenzene	9.4	U
87-86-5	Pentachlorophenol	47	U
85-01-8	Phenanthrene	9.4	U
120-12-7	Anthracene	9.4	U
84-74-2	Di-n-butyl phthalate	9.4	U
206-44-0	Fluoranthene	9.4	U
129-00-0	Pyrene	9.4	U
85-68-7	Butyl benzyl phthalate	9.4	U
91-94-1	3,3'-Dichlorobenzidine	19	U
56-55-3	Benzo(a)anthracene	9.4	U
117-81-7	Bis(2-ethylhexyl) phthalate	11	
218-01-9	Chrysene	9.4	U
117-84-0	Di-n-octyl phthalate	9.4	U
205-99-2	Benzo(b)fluoranthene	9.4	U
207-08-9	Benzo(k)fluoranthene	9.4	U
50-32-8	Benzo(a)pyrene	9.4	U
193-39-5	Indeno(1,2,3-cd)pyrene	9.4	U
53-70-3	Dibenz(a,h)anthracene	9.4	U
191-24-2	Benzo(g,h,i)perylene	9.4	U
86-74-8	Carbazole	9.4	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE ID
6517-3

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: KRM51

Matrix: (soil/water) WATER Client Desc: ~~6517-3~~ GH-31B-DUP

Sample wt/vol: 1060 (g/mL) ML Lab File ID: T0432

Level: (low/med) LOW Date Received: 08/02/05

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 08/03/05

Concentrated Extract Volume: 1(mL) Date Analyzed: 08/05/05

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/l

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 97-00-7	1-Chloro-2,4-Dinitrobenzene		U	
2. 86-00-0	2-Nitrobiphenyl		U	
3. 88-73-3	2-Nitrochlorobenzene		U	
4. 99-54-7	3,4-Dichloronitrobenzene		U	
5. 2113-58-8	3-Nitrobiphenyl		U	
6. 121-73-3	3-Nitrochlorobenzene		U	
7. 99-93-3	4-Nitrobiphenyl		U	
8. 100-00-5	4-Nitrochlorobenzene		U	
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Form 1
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: GM-31A

Lab Name: STL Savannah Job No.: 680-6517-1

SDG No.: KRM51

Matrix: (soil/water) Water Lab Sample ID: 680-6517-4

Sample wt/vol: 1050 (g/mL) mL Lab File ID: t0431.d

Level: (low/med) Low Date Received: 08/02/05

% Moisture: _____ Decanted: (Y/N) ____ Date Extracted: 08/03/05

Concentrated Extract Volume: 1 mL Date Analyzed: 08/05/05

Injection Volume: _____ (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) _____ pH: _____ Extraction Method: 3520C

108-95-2	Phenol	9.5	U
111-44-4	Bis(2-chloroethyl)ether	9.5	U
95-57-8	2-Chlorophenol	9.5	U
541-73-1	1,3-Dichlorobenzene	9.5	U
106-46-7	1,4-Dichlorobenzene	9.5	U
95-50-1	1,2-Dichlorobenzene	9.5	U
95-48-7	2-Methylphenol	9.5	U
39638-32-9	2,2'-oxybis(2-chloropropane)	9.5	U
621-64-7	N-Nitrosodi-n-propylamine	9.5	U
67-72-1	Hexachloroethane	9.5	U
98-95-3	Nitrobenzene	9.6	
78-59-1	Isophorone	9.5	U
88-75-5	2-Nitrophenol	9.5	U
105-67-9	2,4-Dimethylphenol	9.5	U
111-91-1	Bis(2-chloroethoxy)methane	9.5	U
120-83-2	2,4-Dichlorophenol	16	
120-82-1	1,2,4-Trichlorobenzene	9.5	U
91-20-3	Naphthalene	9.5	U
106-47-8	4-Chloroaniline	19	U
87-68-3	Hexachlorobutadiene	9.5	U
59-50-7	4-Chloro-3-methylphenol	9.5	U
91-57-6	2-Methylnaphthalene	9.5	U
77-47-4	Hexachlorocyclopentadiene	9.5	U
88-06-2	2,4,6-Trichlorophenol	180	
95-95-4	2,4,5-Trichlorophenol	9.5	U
91-58-7	2-Chloronaphthalene	9.5	U
88-74-4	2-Nitroaniline	48	U
131-11-3	Dimethyl phthalate	9.5	U
208-96-8	Acenaphthylene	9.5	U
99-09-2	3-Nitroaniline	48	U
83-32-9	Acenaphthene	9.5	U
51-28-5	2,4-Dinitrophenol	48	U
100-02-7	4-Nitrophenol	48	U
132-64-9	Dibenzofuran	9.5	U
121-14-2	2,4-Dinitrotoluene	9.5	U
606-20-2	2,6-Dinitrotoluene	9.5	U
65794-96-9	3 & 4 Methylphenol	9.5	U

Form 1
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: GM-31A

Lab Name: STL Savannah | Job No.: 680-6517-1

SDG No.: KRM51

Matrix: (soil/water) Water | Lab Sample ID: 680-6517-4

Sample wt/vol: 1050 (g/mL) mL | Lab File ID: t0431.d

Level: (low/med) Low | Date Received: 08/02/05

% Moisture: ____ Decanted: (Y/N) ____ | Date Extracted: 08/03/05

Concentrated Extract Volume: 1 mL | Date Analyzed: 08/05/05

Injection Volume: ____ (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) ____ pH: ____ | Extraction Method: 3520C

84-66-2	Diethyl phthalate	9.5	U
7005-72-3	4-Chlorophenyl phenyl ether	9.5	U
86-73-7	Fluorene	9.5	U
100-01-6	4-Nitroaniline	48	U
534-52-1	4,6-Dinitro-2-methylphenol	48	U
86-30-6	N-Nitrosodiphenylamine	9.5	U
101-55-3	4-Bromophenyl phenyl ether	9.5	U
118-74-1	Hexachlorobenzene	9.5	U
87-86-5	Pentachlorophenol	90	
85-01-8	Phenanthrene	9.5	U
120-12-7	Anthracene	9.5	U
84-74-2	Di-n-butyl phthalate	9.5	U
206-44-0	Fluoranthene	9.5	U
129-00-0	Pyrene	9.5	U
85-68-7	Butyl benzyl phthalate	9.5	U
91-94-1	3,3'-Dichlorobenzidine	19	U
56-55-3	Benzo[a]anthracene	9.5	U
117-81-7	Bis(2-ethylhexyl) phthalate	9.5	U
218-01-9	Chrysene	9.5	U
117-84-0	Di-n-octyl phthalate	9.5	U
205-99-2	Benzo[b]fluoranthene	9.5	U
207-08-9	Benzo[k]fluoranthene	9.5	U
50-32-8	Benzo[a]pyrene	9.5	U
193-39-5	Indeno[1,2,3-cd]pyrene	9.5	U
53-70-3	Dibenz(a,h)anthracene	9.5	U
191-24-2	Benzo[g,h,i]perylene	9.5	U
86-74-8	Carbazole	9.5	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE ID

6517-4

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: KRM51

Matrix: (soil/water) WATER Client Desc: ~~6517-4~~ GM-31A

Sample wt/vol: 1050 (g/mL) ML Lab File ID: T0431

Level: (low/med) LOW Date Received: 08/02/05

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 08/03/05

Concentrated Extract Volume: 1(mL) Date Analyzed: 08/05/05

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/l

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 97-00-7	1-Chloro-2.4-Dinitrobenzene		U	
2. 86-00-0	2-Nitrobiphenyl	9.00	51	NJ
3. 88-73-3	2-Nitrochlorobenzene	6.60	74	NJ
4. 99-54-7	3.4-Dichloronitrobenzene		U	
5. 2113-58-8	3-Nitrobiphenyl		U	
6. 121-73-3	3-Nitrochlorobenzene	6.49	7.9	NJ
7. 99-93-3	4-Nitrobiphenyl		U	
8. 100-00-5	4-Nitrochlorobenzene	6.55	11	NJ
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Form 1

Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: GM-31C

Lab Name: STL Savannah | Job No.: 680-6517-1

SDG No.: KRM51

Matrix: (soil/water) Water | Lab Sample ID: 680-6517-5

Sample wt/vol: 1050 (g/mL) mL | Lab File ID: g1319.d

Level: (low/med) Low | Date Received: 08/03/05

% Moisture: _____ Decanted: (Y/N) ___ | Date Extracted: 08/05/05

Concentrated Extract Volume: 1 mL | Date Analyzed: 08/10/05

Injection Volume: _____ (uL) | Dilution Factor: 10

GPC Cleanup: (Y/N) _____ pH: _____ | Extraction Method: 3520C

108-95-2	Phenol	95	U
111-44-4	Bis(2-chloroethyl)ether	95	U
95-57-8	2-Chlorophenol	95	U
541-73-1	1,3-Dichlorobenzene	95	U
106-46-7	1,4-Dichlorobenzene	95	U
95-50-1	1,2-Dichlorobenzene	95	U
95-48-7	2-Methylphenol	95	U
39638-32-9	2,2'-oxybis(2-chloropropane)	95	U
621-64-7	N-Nitrosodi-n-propylamine	95	U
67-72-1	Hexachloroethane	95	U
98-95-3	Nitrobenzene	95	U
78-59-1	Isophorone	95	U
88-75-5	2-Nitrophenol	95	U
105-67-9	2,4-Dimethylphenol	95	U
111-91-1	Bis(2-chloroethoxy)methane	95	U
120-83-2	2,4-Dichlorophenol	95	U
120-82-1	1,2,4-Trichlorobenzene	95	U
91-20-3	Naphthalene	95	U
106-47-8	4-Chloroaniline	1400	
87-68-3	Hexachlorobutadiene	95	U
59-50-7	4-Chloro-3-methylphenol	95	U
91-57-6	2-Methylnaphthalene	95	U
77-47-4	Hexachlorocyclopentadiene	95	U
88-06-2	2,4,6-Trichlorophenol	95	U
95-95-4	2,4,5-Trichlorophenol	95	U
91-58-7	2-Chloronaphthalene	95	U
88-74-4	2-Nitroaniline	480	U
131-11-3	Dimethyl phthalate	95	U
208-96-8	Acenaphthylene	95	U
99-09-2	3-Nitroaniline	480	U
83-32-9	Acenaphthene	95	U
51-28-5	2,4-Dinitrophenol	480	U
100-02-7	4-Nitrophenol	480	U
132-64-9	Dibenzofuran	95	U
121-14-2	2,4-Dinitrotoluene	95	U
606-20-2	2,6-Dinitrotoluene	95	U
65794-96-9	3 & 4 Methylphenol	95	U

Form 1
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: GM-31C

Lab Name: STL Savannah | Job No.: 680-6517-1

SDG No.: KRM51

Matrix: (soil/water) Water | Lab Sample ID: 680-6517-5

Sample wt/vol: 1050 (g/mL) mL | Lab File ID: g1319.d

Level: (low/med) Low | Date Received: 08/03/05

% Moisture: ____ Decanted: (Y/N) ____ | Date Extracted: 08/05/05

Concentrated Extract Volume: 1 mL | Date Analyzed: 08/10/05

Injection Volume: ____ (uL) | Dilution Factor: 10

GPC Cleanup: (Y/N) ____ pH: ____ | Extraction Method: 3520C

84-66-2	Diethyl phthalate	95	U
7005-72-3	4-Chlorophenyl phenyl ether	95	U
86-73-7	Fluorene	95	U
100-01-6	4-Nitroaniline	480	U
534-52-1	4,6-Dinitro-2-methylphenol	480	U
86-30-6	N-Nitrosodiphenylamine	95	U
101-55-3	4-Bromophenyl phenyl ether	95	U
118-74-1	Hexachlorobenzene	95	U
87-86-5	Pentachlorophenol	480	U
85-01-8	Phenanthrene	95	U
120-12-7	Anthracene	95	U
84-74-2	Di-n-butyl phthalate	95	U
206-44-0	Fluoranthene	95	U
129-00-0	Pyrene	95	U
85-68-7	Butyl benzyl phthalate	95	U
91-94-1	3,3'-Dichlorobenzidine	190	U
56-55-3	Benzo[a]anthracene	95	U
117-81-7	Bis(2-ethylhexyl) phthalate	95	U
218-01-9	Chrysene	95	U
117-84-0	Di-n-octyl phthalate	95	U
205-99-2	Benzo[b]fluoranthene	95	U
207-08-9	Benzo[k]fluoranthene	95	U
50-32-8	Benzo[a]pyrene	95	U
193-39-5	Indeno[1,2,3-cd]pyrene	95	U
53-70-3	Dibenz(a,h)anthracene	95	U
191-24-2	Benzo[g,h,i]perylene	95	U
86-74-8	Carbazole	95	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE ID

6517-5

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: KRM51

Matrix: (soil/water) WATER Client Desc: GM-31C

Sample wt/vol: 1050 (g/mL) ML Lab File ID: G1319

Level: (low/med) LOW Date Received:

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 02/25/05

Concentrated Extract Volume: 1(mL) Date Analyzed: 08/10/05

Injection Volume: 1.0(uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH: ___

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/l

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 97-00-7	1-Chloro-2.4-Dinitrobenzene		U	
2. 86-00-0	2-Nitrobiphenyl		U	
3. 88-73-3	2-Nitrochlorobenzene		U	
4. 99-54-7	3.4-Dichloronitrobenzene		U	
5. 2113-58-8	3-Nitrobiphenyl		U	
6. 121-73-3	3-Nitrochlorobenzene		U	
7. 99-93-3	4-Nitrobiphenyl		U	
8. 100-00-5	4-Nitrochlorobenzene		U	
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Form 1
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: GM-8

Lab Name: STL Savannah Job No.: 680-6517-1

SDG No.: KRM51

Matrix: (soil/water) Water Lab Sample ID: 680-6517-6

Sample wt/vol: 1010 (g/mL) mL Lab File ID: n3675.d

Level: (low/med) Low Date Received: 08/03/05

% Moisture: ____ Decanted: (Y/N) ____ Date Extracted: 08/05/05

Concentrated Extract Volume: 1 mL Date Analyzed: 08/09/05

Injection Volume: ____ (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) ____ pH: ____ Extraction Method: 3520C

108-95-2	Phenol	9.9	U
111-44-4	Bis(2-chloroethyl)ether	9.9	U
95-57-8	2-Chlorophenol	9.9	U
541-73-1	1,3-Dichlorobenzene	9.9	U
106-46-7	1,4-Dichlorobenzene	9.9	U
95-50-1	1,2-Dichlorobenzene	9.9	U
95-48-7	2-Methylphenol	9.9	U
39638-32-9	2,2'-oxybis(2-chloropropane)	9.9	U
621-64-7	N-Nitrosodi-n-propylamine	9.9	U
67-72-1	Hexachloroethane	9.9	U
98-95-3	Nitrobenzene	9.9	U
78-59-1	Isophorone	9.9	U
88-75-5	2-Nitrophenol	9.9	U
105-67-9	2,4-Dimethylphenol	9.9	U
111-91-1	Bis(2-chloroethoxy)methane	9.9	U
120-83-2	2,4-Dichlorophenol	9.9	U
120-82-1	1,2,4-Trichlorobenzene	9.9	U
91-20-3	Naphthalene	9.9	U
106-47-8	4-Chloroaniline	20	U
87-68-3	Hexachlorobutadiene	9.9	U
59-50-7	4-Chloro-3-methylphenol	9.9	U
91-57-6	2-Methylnaphthalene	9.9	U
77-47-4	Hexachlorocyclopentadiene	9.9	U
88-06-2	2,4,6-Trichlorophenol	9.9	U
95-95-4	2,4,5-Trichlorophenol	9.9	U
91-58-7	2-Chloronaphthalene	9.9	U
88-74-4	2-Nitroaniline	50	U
131-11-3	Dimethyl phthalate	9.9	U
208-96-8	Acenaphthylene	9.9	U
99-09-2	3-Nitroaniline	50	U
83-32-9	Acenaphthene	9.9	U
51-28-5	2,4-Dinitrophenol	50	U
100-02-7	4-Nitrophenol	50	U
132-64-9	Dibenzofuran	9.9	U
121-14-2	2,4-Dinitrotoluene	9.9	U
606-20-2	2,6-Dinitrotoluene	9.9	U
65794-96-9	3 & 4 Methylphenol	9.9	U

Form 1
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: GM-8

Lab Name: STL Savannah Job No.: 680-6517-1

SDG No.: KRM51

Matrix: (soil/water) Water Lab Sample ID: 680-6517-6

Sample wt/vol: 1010 (g/mL) mL Lab File ID: n3675.d

Level: (low/med) Low Date Received: 08/03/05

% Moisture: ____ Decanted: (Y/N) ____ Date Extracted: 08/05/05

Concentrated Extract Volume: 1 mL Date Analyzed: 08/09/05

Injection Volume: ____ (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) ____ pH: ____ Extraction Method: 3520C

84-66-2	Diethyl phthalate	9.9	U
7005-72-3	4-Chlorophenyl phenyl ether	9.9	U
86-73-7	Fluorene	9.9	U
100-01-6	4-Nitroaniline	50	U
534-52-1	4,6-Dinitro-2-methylphenol	50	U
86-30-6	N-Nitrosodiphenylamine	9.9	U
101-55-3	4-Bromophenyl phenyl ether	9.9	U
118-74-1	Hexachlorobenzene	9.9	U
87-86-5	Pentachlorophenol	50	U
85-01-8	Phenanthrene	9.9	U
120-12-7	Anthracene	9.9	U
84-74-2	Di-n-butyl phthalate	9.9	U
206-44-0	Fluoranthene	9.9	U
129-00-0	Pyrene	9.9	U
85-68-7	Butyl benzyl phthalate	9.9	U
91-94-1	3,3'-Dichlorobenzidine	20	U
56-55-3	Benzo[a]anthracene	9.9	U
117-81-7	Bis(2-ethylhexyl) phthalate	9.9	U
218-01-9	Chrysene	9.9	U
117-84-0	Di-n-octyl phthalate	9.9	U
205-99-2	Benzo[b]fluoranthene	9.9	U
207-08-9	Benzo[k]fluoranthene	9.9	U
50-32-8	Benzo[a]pyrene	9.9	U
193-39-5	Indeno[1,2,3-cd]pyrene	9.9	U
53-70-3	Dibenz(a,h)anthracene	9.9	U
191-24-2	Benzo[g,h,i]perylene	9.9	U
86-74-8	Carbazole	9.9	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE ID

6517-6

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: KRM51

Matrix: (soil/water) WATER Client Desc: GM-8

Sample wt/vol: 1010 (g/mL) ML Lab File ID: N3675

Level: (low/med) LOW Date Received: 08/03/05

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 08/05/05

Concentrated Extract Volume: 1 (mL) Date Analyzed: 08/09/05

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/l

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 97-00-7	1-Chloro-2,4-Dinitrobenzene		U	
2. 86-00-0	2-Nitrobiphenyl		U	
3. 88-73-3	2-Nitrochlorobenzene		U	
4. 99-54-7	3,4-Dichloronitrobenzene		U	
5. 2113-58-8	3-Nitrobiphenyl		U	
6. 121-73-3	3-Nitrochlorobenzene		U	
7. 99-93-3	4-Nitrobiphenyl		U	
8. 100-00-5	4-Nitrochlorobenzene		U	
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Form 1
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: GM-8-FB

Lab Name: STL Savannah | Job No.: 680-6517-1

SDG No.: KRM51

Matrix: (soil/water) Water | Lab Sample ID: 680-6517-7

Sample wt/vol: 1050 (g/mL) mL | Lab File ID: n3676.d

Level: (low/med) Low | Date Received: 08/03/05

% Moisture: Decanted: (Y/N) | Date Extracted: 08/05/05

Concentrated Extract Volume: 1 mL | Date Analyzed: 08/09/05

Injection Volume: (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) pH: | Extraction Method: 3520C

108-95-2	Phenol	9.5	U
111-44-4	Bis(2-chloroethyl)ether	9.5	U
95-57-8	2-Chlorophenol	9.5	U
541-73-1	1,3-Dichlorobenzene	9.5	U
106-46-7	1,4-Dichlorobenzene	9.5	U
95-50-1	1,2-Dichlorobenzene	9.5	U
95-48-7	2-Methylphenol	9.5	U
39638-32-9	2,2'-oxybis(2-chloropropane)	9.5	U
621-64-7	N-Nitrosodi-n-propylamine	9.5	U
67-72-1	Hexachloroethane	9.5	U
98-95-3	Nitrobenzene	9.5	U
78-59-1	Isophorone	9.5	U
88-75-5	2-Nitrophenol	9.5	U
105-67-9	2,4-Dimethylphenol	9.5	U
111-91-1	Bis(2-chloroethoxy)methane	9.5	U
120-83-2	2,4-Dichlorophenol	9.5	U
120-82-1	1,2,4-Trichlorobenzene	9.5	U
91-20-3	Naphthalene	9.5	U
106-47-8	4-Chloroaniline	19	U
87-68-3	Hexachlorobutadiene	9.5	U
59-50-7	4-Chloro-3-methylphenol	9.5	U
91-57-6	2-Methylnaphthalene	9.5	U
77-47-4	Hexachlorocyclopentadiene	9.5	U
88-06-2	2,4,6-Trichlorophenol	9.5	U
95-95-4	2,4,5-Trichlorophenol	9.5	U
91-58-7	2-Chloronaphthalene	9.5	U
88-74-4	2-Nitroaniline	48	U
131-11-3	Dimethyl phthalate	9.5	U
208-96-8	Acenaphthylene	9.5	U
99-09-2	3-Nitroaniline	48	U
83-32-9	Acenaphthene	9.5	U
51-28-5	2,4-Dinitrophenol	48	U
100-02-7	4-Nitrophenol	48	U
132-64-9	Dibenzofuran	9.5	U
121-14-2	2,4-Dinitrotoluene	9.5	U
606-20-2	2,6-Dinitrotoluene	9.5	U
65794-96-9	3 & 4 Methylphenol	9.5	U

Form 1
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: GM-8-FB

Lab Name: STL Savannah Job No.: 680-6517-1

SDG No.: KRM51

Matrix: (soil/water) Water Lab Sample ID: 680-6517-7

Sample wt/vol: 1050 (g/mL) mL Lab File ID: n3676.d

Level: (low/med) Low Date Received: 08/03/05

% Moisture: ____ Decanted: (Y/N) ____ Date Extracted: 08/05/05

Concentrated Extract Volume: 1 mL Date Analyzed: 08/09/05

Injection Volume: ____ (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) ____ pH: ____ Extraction Method: 3520C

84-66-2	Diethyl phthalate	9.5	U
7005-72-3	4-Chlorophenyl phenyl ether	9.5	U
86-73-7	Fluorene	9.5	U
100-01-6	4-Nitroaniline	48	U
534-52-1	4,6-Dinitro-2-methylphenol	48	U
86-30-6	N-Nitrosodiphenylamine	9.5	U
101-55-3	4-Bromophenyl phenyl ether	9.5	U
118-74-1	Hexachlorobenzene	9.5	U
87-86-5	Pentachlorophenol	48	U
85-01-8	Phenanthrene	9.5	U
120-12-7	Anthracene	9.5	U
84-74-2	Di-n-butyl phthalate	9.5	U
206-44-0	Fluoranthene	9.5	U
129-00-0	Pyrene	9.5	U
85-68-7	Butyl benzyl phthalate	9.5	U
91-94-1	3,3'-Dichlorobenzidine	19	U
56-55-3	Benzo[a]anthracene	9.5	U
117-81-7	Bis(2-ethylhexyl) phthalate	9.5	U
218-01-9	Chrysene	9.5	U
117-84-0	Di-n-octyl phthalate	9.5	U
205-99-2	Benzo[b]fluoranthene	9.5	U
207-08-9	Benzo[k]fluoranthene	9.5	U
50-32-8	Benzo[a]pyrene	9.5	U
193-39-5	Indeno[1,2,3-cd]pyrene	9.5	U
53-70-3	Dibenz(a,h)anthracene	9.5	U
191-24-2	Benzo[g,h,i]perylene	9.5	U
86-74-8	Carbazole	9.5	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE ID
6517-7

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: KRM51

Matrix: (soil/water) WATER Client Desc: GM-8-FB

Sample wt/vol: 1050 (g/mL) ML Lab File ID: N3676

Level: (low/med) LOW Date Received: 08/03/05

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 08/05/05

Concentrated Extract Volume: 1(mL) Date Analyzed: 08/09/05

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/l

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 97-00-7	1-Chloro-2.4-Dinitrobenzene		U	
2. 86-00-0	2-Nitrobiphenyl		U	
3. 88-73-3	2-Nitrochlorobenzene		U	
4. 99-54-7	3.4-Dichloronitrobenzene		U	
5. 2113-58-8	3-Nitrobiphenyl		U	
6. 121-73-3	3-Nitrochlorobenzene		U	
7. 99-93-3	4-Nitrobiphenyl		U	
8. 100-00-5	4-Nitrochlorobenzene		U	
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Form 1
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: GM-54B

Lab Name: STL Savannah | Job No.: 680-6517-1

SDG No.: KRM51

Matrix: (soil/water) Water | Lab Sample ID: 680-6517-8

Sample wt/vol: 1050 (g/mL) mL | Lab File ID: n3677.d

Level: (low/med) Low | Date Received: 08/04/05

% Moisture: ____ Decanted: (Y/N) ____ | Date Extracted: 08/05/05

Concentrated Extract Volume: 1 mL | Date Analyzed: 08/09/05

Injection Volume: ____ (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) ____ pH: ____ | Extraction Method: 3520C

108-95-2	Phenol	9.5	U
111-44-4	Bis(2-chloroethyl)ether	9.5	U
95-57-8	2-Chlorophenol	9.5	U
541-73-1	1,3-Dichlorobenzene	9.5	U
106-46-7	1,4-Dichlorobenzene	9.5	U
95-50-1	1,2-Dichlorobenzene	9.5	U
95-48-7	2-Methylphenol	9.5	U
39638-32-9	2,2'-oxybis(2-chloropropane)	9.5	U
621-64-7	N-Nitrosodi-n-propylamine	9.5	U
67-72-1	Hexachloroethane	9.5	U
98-95-3	Nitrobenzene	9.5	U
78-59-1	Isophorone	9.5	U
88-75-5	2-Nitrophenol	9.5	U
105-67-9	2,4-Dimethylphenol	9.5	U
111-91-1	Bis(2-chloroethoxy)methane	9.5	U
120-83-2	2,4-Dichlorophenol	9.5	U
120-82-1	1,2,4-Trichlorobenzene	9.5	U
91-20-3	Naphthalene	9.5	U
106-47-8	4-Chloroaniline	19	U
87-68-3	Hexachlorobutadiene	9.5	U
59-50-7	4-Chloro-3-methylphenol	9.5	U
91-57-6	2-Methylnaphthalene	9.5	U
77-47-4	Hexachlorocyclopentadiene	9.5	U
88-06-2	2,4,6-Trichlorophenol	9.5	U
95-95-4	2,4,5-Trichlorophenol	9.5	U
91-58-7	2-Chloronaphthalene	9.5	U
88-74-4	2-Nitroaniline	48	U
131-11-3	Dimethyl phthalate	9.5	U
208-96-8	Acenaphthylene	9.5	U
99-09-2	3-Nitroaniline	48	U
83-32-9	Acenaphthene	9.5	U
51-28-5	2,4-Dinitrophenol	48	U
100-02-7	4-Nitrophenol	48	U
132-64-9	Dibenzofuran	9.5	U
121-14-2	2,4-Dinitrotoluene	9.5	U
606-20-2	2,6-Dinitrotoluene	9.5	U
65794-96-9	3, & 4 Methylphenol	9.5	U

Form 1
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: GM-54B

Lab Name: STL Savannah Job No.: 680-6517-1

SDG No.: KRM51

Matrix: (soil/water) Water Lab Sample ID: 680-6517-8

Sample wt/vol: 1050 (g/mL) mL Lab File ID: n3677.d

Level: (low/med) Low Date Received: 08/04/05

% Moisture: ____ Decanted: (Y/N) ____ Date Extracted: 08/05/05

Concentrated Extract Volume: 1 mL Date Analyzed: 08/09/05

Injection Volume: ____ (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) ____ pH: ____ Extraction Method: 3520C

84-66-2	Diethyl phthalate	9.5	U
7005-72-3	4-Chlorophenyl phenyl ether	9.5	U
86-73-7	Fluorene	9.5	U
100-01-6	4-Nitroaniline	48	U
534-52-1	4,6-Dinitro-2-methylphenol	48	U
86-30-6	N-Nitrosodiphenylamine	9.5	U
101-55-3	4-Bromophenyl phenyl ether	9.5	U
118-74-1	Hexachlorobenzene	9.5	U
87-86-5	Pentachlorophenol	48	U
85-01-8	Phenanthrene	9.5	U
120-12-7	Anthracene	9.5	U
84-74-2	Di-n-butyl phthalate	9.5	U
206-44-0	Fluoranthene	9.5	U
129-00-0	Pyrene	9.5	U
85-68-7	Butyl benzyl phthalate	9.5	U
91-94-1	3,3'-Dichlorobenzidine	19	U
56-55-3	Benzo[a]anthracene	9.5	U
117-81-7	Bis(2-ethylhexyl) phthalate	26	
218-01-9	Chrysene	9.5	U
117-84-0	Di-n-octyl phthalate	9.5	U
205-99-2	Benzo[b]fluoranthene	9.5	U
207-08-9	Benzo[k]fluoranthene	9.5	U
50-32-8	Benzo[a]pyrene	9.5	U
193-39-5	Indeno[1,2,3-cd]pyrene	9.5	U
53-70-3	Dibenz(a,h)anthracene	9.5	U
191-24-2	Benzo[g,h,i]perylene	9.5	U
86-74-8	Carbazole	9.5	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE ID
6517-8

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: KRM51

Matrix: (soil/water) WATER Client Desc: GM-54B

Sample wt/vol: 1050 (g/mL) ML Lab File ID: N3677

Level: (low/med) LOW Date Received: 08/04/05

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 08/05/05

Concentrated Extract Volume: 1(mL) Date Analyzed: 08/09/05

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/l

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 97-00-7	1-Chloro-2,4-Dinitrobenzene		U	
2. 86-00-0	2-Nitrobiphenyl		U	
3. 88-73-3	2-Nitrochlorobenzene		U	
4. 99-54-7	3,4-Dichloronitrobenzene		U	
5. 2113-58-8	3-Nitrobiphenyl		U	
6. 121-73-3	3-Nitrochlorobenzene		U	
7. 99-93-3	4-Nitrobiphenyl		U	
8. 100-00-5	4-Nitrochlorobenzene		U	
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Form 1
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: GM-58A

Lab Name: STL Savannah | Job No.: 680-6517-1

SDG No.: KRM51

Matrix: (soil/water) Water | Lab Sample ID: 680-6517-10

Sample wt/vol: 1030 (g/mL) mL | Lab File ID: n3673.d

Level: (low/med) Low | Date Received: 08/04/05

% Moisture: _____ Decanted: (Y/N) ___ | Date Extracted: 08/05/05

Concentrated Extract Volume: 1 mL | Date Analyzed: 08/09/05

Injection Volume: _____ (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) _____ pH: _____ | Extraction Method: 3520C

108-95-2	Phenol	9.7	U
111-44-4	Bis(2-chloroethyl)ether	9.7	U
95-57-8	2-Chlorophenol	9.7	U
541-73-1	1,3-Dichlorobenzene	9.7	U
106-46-7	1,4-Dichlorobenzene	9.7	U
95-50-1	1,2-Dichlorobenzene	9.7	U
95-48-7	2-Methylphenol	9.7	U
39638-32-9	2,2'-oxybis(2-chloropropane)	9.7	U
621-64-7	N-Nitrosodi-n-propylamine	9.7	U
67-72-1	Hexachloroethane	9.7	U
98-95-3	Nitrobenzene	9.7	U
78-59-1	Isophorone	9.7	U
88-75-5	2-Nitrophenol	9.7	U
105-67-9	2,4-Dimethylphenol	9.7	U
111-91-1	Bis(2-chloroethoxy)methane	9.7	U
120-83-2	2,4-Dichlorophenol	9.7	U
120-82-1	1,2,4-Trichlorobenzene	9.7	U
91-20-3	Naphthalene	9.7	U
106-47-8	4-Chloroaniline	19	U
87-68-3	Hexachlorobutadiene	9.7	U
59-50-7	4-Chloro-3-methylphenol	9.7	U
91-57-6	2-Methylnaphthalene	9.7	U
77-47-4	Hexachlorocyclopentadiene	9.7	U
88-06-2	2,4,6-Trichlorophenol	110	
95-95-4	2,4,5-Trichlorophenol	9.7	U
91-58-7	2-Chloronaphthalene	9.7	U
88-74-4	2-Nitroaniline	49	U
131-11-3	Dimethyl phthalate	9.7	U
208-96-8	Acenaphthylene	9.7	U
99-09-2	3-Nitroaniline	49	U
83-32-9	Acenaphthene	9.7	U
51-28-5	2,4-Dinitrophenol	49	U
100-02-7	4-Nitrophenol	49	U
132-64-9	Dibenzofuran	9.7	U
121-14-2	2,4-Dinitrotoluene	9.7	U
606-20-2	2,6-Dinitrotoluene	9.7	U
65794-96-9	3 & 4 Methylphenol	9.7	U

Form 1
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: GM-58A

Lab Name: STL Savannah | Job No.: 680-6517-1

SDG No.: KRM51

Matrix: (soil/water) Water | Lab Sample ID: 680-6517-10

Sample wt/vol: 1030 (g/mL) mL | Lab File ID: n3673.d

Level: (low/med) Low | Date Received: 08/04/05

% Moisture: ____ Decanted: (Y/N) ____ | Date Extracted: 08/05/05

Concentrated Extract Volume: 1 mL | Date Analyzed: 08/09/05

Injection Volume: ____ (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) ____ pH: ____ | Extraction Method: 3520C

84-66-2	Diethyl phthalate	9.7	U
7005-72-3	4-Chlorophenyl phenyl ether	9.7	U
86-73-7	Fluorene	9.7	U
100-01-6	4-Nitroaniline	49	U
534-52-1	4,6-Dinitro-2-methylphenol	49	U
86-30-6	N-Nitrosodiphenylamine	9.7	U
101-55-3	4-Bromophenyl phenyl ether	9.7	U
118-74-1	Hexachlorobenzene	9.7	U
87-86-5	Pentachlorophenol	49	U
85-01-8	Phenanthrene	9.7	U
120-12-7	Anthracene	9.7	U
84-74-2	Di-n-butyl phthalate	9.7	U
206-44-0	Fluoranthene	9.7	U
129-00-0	Pyrene	9.7	U
85-68-7	Butyl benzyl phthalate	9.7	U
91-94-1	3,3'-Dichlorobenzidine	19	U
56-55-3	Benzo[a]anthracene	9.7	U
117-81-7	Bis(2-ethylhexyl) phthalate	9.7	U
218-01-9	Chrysene	9.7	U
117-84-0	Di-n-octyl phthalate	9.7	U
205-99-2	Benzo[b]fluoranthene	9.7	U
207-08-9	Benzo[k]fluoranthene	9.7	U
50-32-8	Benzo[a]pyrene	9.7	U
193-39-5	Indeno[1,2,3-cd]pyrene	9.7	U
53-70-3	Dibenz(a,h)anthracene	9.7	U
191-24-2	Benzo[g,h,i]perylene	9.7	U
86-74-8	Carbazole	9.7	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE ID

6517-10

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: KRM51

Matrix: (soil/water) WATER Client Desc: GM-58A

Sample wt/vol: 1030 (g/mL) ML Lab File ID: N3673

Level: (low/med) LOW Date Received: 08/04/05

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 08/05/05

Concentrated Extract Volume: 1(mL) Date Analyzed: 08/09/05

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/l

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 97-00-7	1-Chloro-2.4-Dinitrobenzene		U	
2. 86-00-0	2-Nitrobiphenyl		U	
3. 88-73-3	2-Nitrochlorobenzene	6.42	9.5	NJ
4. 99-54-7	3.4-Dichloronitrobenzene		U	
5. 2113-58-8	3-Nitrobiphenyl		U	
6. 121-73-3	3-Nitrochlorobenzene		U	
7. 99-93-3	4-Nitrobiphenyl		U	
8. 100-00-5	4-Nitrochlorobenzene	6.37	5.0	NJ
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Form 1
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: GM-54A-II

Lab Name: STL Savannah | Job No.: 680-6517-1

SDG No.: KRM51

Matrix: (soil/water) Water | Lab Sample ID: 680-6517-11

Sample wt/vol: 1050 (g/mL) mL | Lab File ID: n3681.d

Level: (low/med) Low | Date Received: 08/04/05

% Moisture: ____ Decanted: (Y/N) ____ | Date Extracted: 08/05/05

Concentrated Extract Volume: 1 mL | Date Analyzed: 08/09/05

Injection Volume: ____ (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) ____ pH: ____ | Extraction Method: 3520C

108-95-2	Phenol	9.5	U
111-44-4	Bis(2-chloroethyl)ether	9.5	U
95-57-8	2-Chlorophenol	9.5	U
541-73-1	1,3-Dichlorobenzene	9.5	U
106-46-7	1,4-Dichlorobenzene	9.5	U
95-50-1	1,2-Dichlorobenzene	9.5	U
95-48-7	2-Methylphenol	9.5	U
39638-32-9	2,2'-oxybis(2-chloropropane)	9.5	U
621-64-7	N-Nitrosodi-n-propylamine	9.5	U
67-72-1	Hexachloroethane	9.5	U
98-95-3	Nitrobenzene	9.5	U
78-59-1	Isophorone	9.5	U
88-75-5	2-Nitrophenol	9.5	U
105-67-9	2,4-Dimethylphenol	9.5	U
111-91-1	Bis(2-chloroethoxy)methane	9.5	U
120-83-2	2,4-Dichlorophenol	9.5	U
120-82-1	1,2,4-Trichlorobenzene	9.5	U
91-20-3	Naphthalene	9.5	U
106-47-8	4-Chloroaniline	19	U
87-68-3	Hexachlorobutadiene	9.5	U
59-50-7	4-Chloro-3-methylphenol	9.5	U
91-57-6	2-Methylnaphthalene	9.5	U
77-47-4	Hexachlorocyclopentadiene	9.5	U
88-06-2	2,4,6-Trichlorophenol	9.5	U
95-95-4	2,4,5-Trichlorophenol	9.5	U
91-58-7	2-Chloronaphthalene	9.5	U
88-74-4	2-Nitroaniline	48	U
131-11-3	Dimethyl phthalate	9.5	U
208-96-8	Acenaphthylene	9.5	U
99-09-2	3-Nitroaniline	48	U
83-32-9	Acenaphthene	9.5	U
51-28-5	2,4-Dinitrophenol	48	U
100-02-7	4-Nitrophenol	48	U
132-64-9	Dibenzofuran	9.5	U
121-14-2	2,4-Dinitrotoluene	9.5	U
606-20-2	2,6-Dinitrotoluene	9.5	U
65794-96-9	3 & 4 Methylphenol	9.5	U

Form 1
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: GM-54A-II

Lab Name: STL Savannah Job No.: 680-6517-1

SDG No.: KRM51

Matrix: (soil/water) Water Lab Sample ID: 680-6517-11

Sample wt/vol: 1050 (g/mL) mL Lab File ID: n3681.d

Level: (low/med) Low Date Received: 08/04/05

% Moisture: _____ Decanted: (Y/N) ___ Date Extracted: 08/05/05

Concentrated Extract Volume: 1 mL Date Analyzed: 08/09/05

Injection Volume: _____ (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) _____ pH: _____ Extraction Method: 3520C

84-66-2	Diethyl phthalate	9.5	U
7005-72-3	4-Chlorophenyl phenyl ether	9.5	U
86-73-7	Fluorene	9.5	U
100-01-6	4-Nitroaniline	48	U
534-52-1	4,6-Dinitro-2-methylphenol	48	U
86-30-6	N-Nitrosodiphenylamine	9.5	U
101-55-3	4-Bromophenyl phenyl ether	9.5	U
118-74-1	Hexachlorobenzene	9.5	U
87-86-5	Pentachlorophenol	48	U
85-01-8	Phenanthrene	9.5	U
120-12-7	Anthracene	9.5	U
84-74-2	Di-n-butyl phthalate	9.5	U
206-44-0	Fluoranthene	9.5	U
129-00-0	Pyrene	9.5	U
85-68-7	Butyl benzyl phthalate	9.5	U
91-94-1	3,3'-Dichlorobenzidine	19	U
56-55-3	Benzo[a]anthracene	9.5	U
117-81-7	Bis(2-ethylhexyl) phthalate	9.5	U
218-01-9	Chrysene	9.5	U
117-84-0	Di-n-octyl phthalate	9.5	U
205-99-2	Benzo[b]fluoranthene	9.5	U
207-08-9	Benzo[k]fluoranthene	9.5	U
50-32-8	Benzo[a]pyrene	9.5	U
193-39-5	Indeno[1,2,3-cd]pyrene	9.5	U
53-70-3	Dibenz(a,h)anthracene	9.5	U
191-24-2	Benzo[g,h,i]perylene	9.5	U
86-74-8	Carbazole	9.5	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE ID

6517-11

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: KRM51

Matrix: (soil/water) WATER Client Desc: GM-54A-11

Sample wt/vol: 1050 (g/mL) ML Lab File ID: N3681

Level: (low/med) LOW Date Received: 08/04/05

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 08/05/05

Concentrated Extract Volume: 1(mL) Date Analyzed: 08/09/05

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/l

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 97-00-7	1-Chloro-2,4-Dinitrobenzene		U	
2. 86-00-0	2-Nitrobiphenyl		U	
3. 88-73-3	2-Nitrochlorobenzene		U	
4. 99-54-7	3,4-Dichloronitrobenzene		U	
5. 2113-58-8	3-Nitrobiphenyl		U	
6. 121-73-3	3-Nitrochlorobenzene		U	
7. 99-93-3	4-Nitrobiphenyl		U	
8. 100-00-5	4-Nitrochlorobenzene		U	
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

SDG# KRM51

PROJECT# 680-6517

POLYCHLORINATED BIPHENYLS (8082) FRACTION

Form 1

Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: GM-59A

Lab Name: STL Savannah | Job No.: 680-6517-1

SDG No.: KRM51

Matrix: (soil/water) Water | Lab Sample ID: 680-6517-1

Sample wt/vol: 1030 (g/mL) mL | Lab File ID: jag05022.d

% Moisture: ____ Decanted: (Y/N) ____ | Date Received: 08/02/05

Extraction Method: 3520C | Date Extracted: 08/03/05

Concentrated Extract Volume: 10 mL | Date Analyzed: 08/05/05

Injection Volume: ____ (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) ____ pH: ____ | Sulfur Cleanup: (Y/N) ____

12674-11-2	PCB-1016	0.97	U	UJ
11104-28-2	PCB-1221	1.9	U	UJ
11141-16-5	PCB-1232	0.97	U	UJ
53469-21-9	PCB-1242	0.97	U	UJ
12672-29-6	PCB-1248	0.97	U	UJ
11097-69-1	PCB-1254	0.97	U	UJ
11096-82-5	PCB-1260	0.97	U	UJ

Form 1

Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: GM-31B

Lab Name: STL Savannah | Job No.: 680-6517-1

SDG No.: KRM51

Matrix: (soil/water) Water | Lab Sample ID: 680-6517-2

Sample wt/vol: 1060 (g/mL) mL | Lab File ID: jag05023.d

% Moisture: ____ Decanted: (Y/N) ____ | Date Received: 08/02/05

Extraction Method: 3520C | Date Extracted: 08/03/05

Concentrated Extract Volume: 10 mL | Date Analyzed: 08/05/05

Injection Volume: ____ (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) ____ pH: ____ | Sulfur Cleanup: (Y/N) ____

12674-11-2	PCB-1016	0.94	U	R
11104-28-2	PCB-1221	1.9	U	R
11141-16-5	PCB-1232	0.94	U	R
53469-21-9	PCB-1242	0.94	U	R
12672-29-6	PCB-1248	0.94	U	R
11097-69-1	PCB-1254	0.94	U	R
11096-82-5	PCB-1260	0.94	U	R

Form 1
Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: GM-31B-DUP

Lab Name: STL Savannah Job No.: 680-6517-1

SDG No.: KRM51

Matrix: (soil/water) Water Lab Sample ID: 680-6517-3

Sample wt/vol: 1060 (g/mL) mL Lab File ID: jag05024.d

% Moisture: ____ Decanted: (Y/N) ____ Date Received: 08/02/05

Extraction Method: 3520C Date Extracted: 08/03/05

Concentrated Extract Volume: 10 mL Date Analyzed: 08/05/05

Injection Volume: ____ (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) ____ pH: ____ Sulfur Cleanup: (Y/N) ____

12674-11-2	PCB-1016	0.94	U	R
11104-28-2	PCB-1221	1.9	U	R
11141-16-5	PCB-1232	0.94	U	R
53469-21-9	PCB-1242	0.94	U	R
12672-29-6	PCB-1248	0.94	U	R
11097-69-1	PCB-1254	0.94	U	R
11096-82-5	PCB-1260	0.94	U	R

Form 1

Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: GM-31A

Lab Name: STL Savannah | Job No.: 680-6517-1

SDG No.: KRM51

Matrix: (soil/water) Water | Lab Sample ID: 680-6517-4

Sample wt/vol: 1050 (g/mL) mL | Lab File ID: jag05026.d

% Moisture: ____ Decanted: (Y/N) ____ | Date Received: 08/02/05

Extraction Method: 3520C | Date Extracted: 08/03/05

Concentrated Extract Volume: 10 mL | Date Analyzed: 08/05/05

Injection Volume: ____ (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) ____ pH: ____ | Sulfur Cleanup: (Y/N) ____

12674-11-2	PCB-1016	0.95	U	R
11104-28-2	PCB-1221	1.9	U	R
11141-16-5	PCB-1232	0.95	U	R
53469-21-9	PCB-1242	0.95	U	R
12672-29-6	PCB-1248	0.95	U	R
11097-69-1	PCB-1254	0.95	U	R
11096-82-5	PCB-1260	0.95	U	R

Form 1

Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: GM-31C

Lab Name: STL Savannah | Job No.: 680-6517-1

SDG No.: KRM51

Matrix: (soil/water) Water | Lab Sample ID: 680-6517-5

Sample wt/vol: 1060 (g/mL) mL | Lab File ID: mag09026.d

% Moisture: Decanted: (Y/N) | Date Received: 08/03/05

Extraction Method: 3520C | Date Extracted: 08/08/05

Concentrated Extract Volume: 10 mL | Date Analyzed: 08/09/05

Injection Volume: (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) pH: | Sulfur Cleanup: (Y/N)

12674-11-2	PCB-1016	0.94	U
11104-28-2	PCB-1221	1.9	U
11141-16-5	PCB-1232	0.94	U
53469-21-9	PCB-1242	0.94	U
12672-29-6	PCB-1248	0.94	U
11097-69-1	PCB-1254	0.94	U
11096-82-5	PCB-1260	0.94	U

Form 1
Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: GM-8

Lab Name: STL Savannah Job No.: 680-6517-1

SDG No.: KRM51

Matrix: (soil/water) Water Lab Sample ID: 680-6517-6

Sample wt/vol: 1060 (g/mL) mL Lab File ID: mag09027.d

% Moisture: ____ Decanted: (Y/N) ____ Date Received: 08/03/05

Extraction Method: 3520C Date Extracted: 08/08/05

Concentrated Extract Volume: 10 mL Date Analyzed: 08/09/05

Injection Volume: ____ (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) ____ pH: ____ Sulfur Cleanup: (Y/N) ____

12674-11-2	PCB-1016	0.94	U	UJ
11104-28-2	PCB-1221	1.9	U	UJ
11141-16-5	PCB-1232	0.94	U	UJ
53469-21-9	PCB-1242	0.94	U	UJ
12672-29-6	PCB-1248	0.94	U	UJ
11097-69-1	PCB-1254	0.94	U	UJ
11096-82-5	PCB-1260	0.94	U	UJ

Form 1

Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: GM-8-FB

Lab Name: STL Savannah | Job No.: 680-6517-1

SDG No.: KRM51

Matrix: (soil/water) Water | Lab Sample ID: 680-6517-7

Sample wt/vol: 1050 (g/mL) mL | Lab File ID: mag09028.d

% Moisture: ____ Decanted: (Y/N) ____ | Date Received: 08/03/05

Extraction Method: 3520C | Date Extracted: 08/08/05

Concentrated Extract Volume: 10 mL | Date Analyzed: 08/09/05

Injection Volume: ____ (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) ____ pH: ____ | Sulfur Cleanup: (Y/N) ____

12674-11-2	PCB-1016	0.95	U
11104-28-2	PCB-1221	1.9	U
11141-16-5	PCB-1232	0.95	U
53469-21-9	PCB-1242	0.95	U
12672-29-6	PCB-1248	0.95	U
11097-69-1	PCB-1254	0.95	U
11096-82-5	PCB-1260	0.95	U

Form 1
Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: GM-54B

Lab Name: STL Savannah | Job No.: 680-6517-1

SDG No.: KRM51

Matrix: (soil/water) Water | Lab Sample ID: 680-6517-8

Sample wt/vol: 1040 (g/mL) mL | Lab File ID: mag09029.d

% Moisture: _____ Decanted: (Y/N) ____ | Date Received: 08/04/05

Extraction Method: 3520C | Date Extracted: 08/08/05

Concentrated Extract Volume: 10 mL | Date Analyzed: 08/09/05

Injection Volume: _____ (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) ____ pH: _____ | Sulfur Cleanup: (Y/N) _____

12674-11-2	PCB-1016	0.96	U	UJ
11104-28-2	PCB-1221	1.9	U	UJ
11141-16-5	PCB-1232	0.96	U	UJ
53469-21-9	PCB-1242	0.96	U	UJ
12672-29-6	PCB-1248	0.96	U	UJ
11097-69-1	PCB-1254	0.96	U	UJ
11096-82-5	PCB-1260	0.96	U	UJ

Form 1

Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: GM-58A

Lab Name: STL Savannah | Job No.: 680-6517-1

SDG No.: KRM51

Matrix: (soil/water) Water | Lab Sample ID: 680-6517-10

Sample wt/vol: 1050 (g/mL) mL | Lab File ID: mag09031.d

% Moisture: Decanted: (Y/N) | Date Received: 08/04/05

Extraction Method: 3520C | Date Extracted: 08/08/05

Concentrated Extract Volume: 10 mL | Date Analyzed: 08/09/05

Injection Volume: (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) pH: | Sulfur Cleanup: (Y/N)

12674-11-2	PCB-1016	0.95	U
11104-28-2	PCB-1221	1.9	U
11141-16-5	PCB-1232	0.95	U
53469-21-9	PCB-1242	0.95	U
12672-29-6	PCB-1248	0.95	U
11097-69-1	PCB-1254	0.95	U
11096-82-5	PCB-1260	0.95	U

Form 1

Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: GM-54A-II

Lab Name: STL Savannah | Job No.: 680-6517-1

SDG No.: KRM51

Matrix: (soil/water) Water | Lab Sample ID: 680-6517-11

Sample wt/vol: 1060 (g/mL) mL | Lab File ID: mag09032.d

% Moisture: ____ Decanted: (Y/N) ___ | Date Received: 08/04/05

Extraction Method: 3520C | Date Extracted: 08/08/05

Concentrated Extract Volume: 10 mL | Date Analyzed: 08/10/05

Injection Volume: ____ (uL) | Dilution Factor: 1

GPC Cleanup: (Y/N) ____ pH: ____ | Sulfur Cleanup: (Y/N) ____

12674-11-2	PCB-1016	0.94	U
11104-28-2	PCB-1221	1.9	U
11141-16-5	PCB-1232	0.94	U
53469-21-9	PCB-1242	0.94	U
12672-29-6	PCB-1248	0.94	U
11097-69-1	PCB-1254	0.94	U
11096-82-5	PCB-1260	0.94	U

CHAIN OF CUSTODY

CHAIN OF CUSTODY RECORD

URS CORPORATION

1001 HIGHLAND PLAZA DRIVE WEST, SUITE 300
ST. LOUIS, MISSOURI 63110
314-429-0100

SHEET 1 of 1

PROJECT NO: 21561573.00000

PROJECT NAME: Solutia Krummrich Supplemental Soil and Groundwater Sampling

SAMPLER'S: (Signature) Christine Mais

DATE	TIME	SAMPLE I.D. NUMBER	NO. OF CONTAINERS	SVOC 8270	PCB 8280				REMARKS
8/1/05	9:00	GM-59A	4	✓	✓				groundwater
8/1/05	9:00	GM-59A-MS	4	✓	✓				
8/1/05	9:00	GM-59A-MD	4	✓	✓				
8/1/05	12:10	GM-31B	4	✓	✓				
8/1/05	12:10	GM-31B-DUP	4	✓	✓				
8/1/05	11:15	GM-31A	4	✓	✓				
									4.0 5.2/4.2

RELINQUISHED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME
Christine Mais	8/1/05 16:00	[illegible]	8-1-05 1600
RELINQUISHED BY: (Signature) [illegible]	DATE / TIME 8/1/05 1750	RECEIVED AT LAB BY: (Signature) [illegible]	DATE / TIME
METHOD OF SHIPMENT:		AIRBILL NO: 680-6517	

CHAIN OF CUSTODY RECORD

SHEET 1 of 1

URS CORPORATION

1001 HIGHLAND PLAZA DRIVE WEST, SUITE 300
ST. LOUIS, MISSOURI 63110
314-429-0100

PROJECT NO: 21561573 00000

PROJECT NAME: Solutia Krummrich Supplemental Soil and GW Sampling

SAMPLER'S: (Signature) Christine Mais

DATE	TIME	SAMPLE I.D. NUMBER	NO. OF CONTAINERS	SVOC	PCB				REMARKS
8/2/05	9:00	GM-31C	4	✓	✓				Groundwater
8/2/05	12:20	GM-8	4	✓	✓				
8/2/05	14:15	GM-8-FB *	4	✓	✓				ID on container
									Read GM58A FB

CONTAINER DESCRIPTION / ANALYSES REQUESTED

RELINQUISHED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME
Christine Mais	8/2/05 16:00	[illegible]	8/2/05 - 16:30
RELINQUISHED BY: (Signature)	DATE / TIME	RECEIVED AT LAB BY: (Signature)	DATE / TIME
		[illegible]	080305 0930
METHOD OF SHIPMENT:		AIRBILL NO: 680-6517	

CHAIN OF CUSTODY RECORD

URS CORPORATION

1001 HIGHLAND PLAZA DRIVE WEST, SUITE 300
ST. LOUIS, MISSOURI 63110
314-429-0100

SHEET___of___

PROJECT NO: 21561573 00000

PROJECT NAME: Solutia Krummrich Supplemental Soil and GW Sampling

SAMPLER'S: (Signature) Christine Mais

DATE	TIME	SAMPLE I.D. NUMBER	NO. OF CONTAINERS	SVOC 8270	PCB 8082				REMARKS
8/3/05	8:15	GM-54B	4	✓	✓				groundwater
8/3/05	9:15	GM-54A *	4	✓	✓				
8/3/05	12:40	GM-58A	4	✓	✓				
8/3/05	14:07	GM-54A-II	4	✓	✓				~~hold this sample until further instruction.~~ MK 9/14/05
		* Per C. Mais, do not analyze sample							
		id GM-54A, hold. Analyze							
		sample GM-54A-II. MKeney 9/14/05							
									680-6517

RELINQUISHED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME
Christine Mais	8/3/05 15:00	[signature]	8/3/05 1500
RELINQUISHED BY: (Signature)	DATE / TIME	RECEIVED AT LAB BY: (Signature)	DATE / TIME
[signature]	8/3/05 1730	[signature]	080405 0905

METHOD OF SHIPMENT:

AIRBILL NO:

CHAIN OF CUSTODY RECORD

SHEET 1 of 3

URS CORPORATION

1001 HIGHLAND PLAZA DRIVE WEST, SUITE 300
ST. LOUIS, MISSOURI 63110
314-429-0100

PROJECT NO: 21561573.00000

PROJECT NAME: Solutia Krummrich Supplemental Soil & groundwater sampling

SAMPLER'S: (Signature) Christine Mair

CONTAINER DESCRIPTION / ANALYSES REQUESTED

DATE	TIME	SAMPLE I.D. NUMBER	NO. OF CONTAINERS	Mercury 7470	PCBs 8280				REMARKS
7/27	8:45	S0920-13-15	1	✓					analyze for * MS/MSD per client L Wolfe
7/27	9:50	S0925-2-3	1	✓					
7/27	9:55	S0925-6-7	1	✓					
7/27	10:00	S0925-9-10	1	✓					
7/27	10:10	S0926-2-3	1	✓					
7/27	10:15	S0926-6-7	1	✓					
7/27	10:15	S0926-6-7-DUP	1	✓					4.8/4.6
7/27	10:20	S0926-9-10	1	✓					
7/27	10:20	S0926-9-10-DUP	1	✓					680-6360
7/27	10:50	S1003-4-6	1		✓				

RELINQUISHED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME
Christine Mair	7/27/05 16:00	[illegible]	7-27-05 1600
[illegible]	7-27-05 1800	RECEIVED AT LAB BY: (Signature) [illegible]	DATE / TIME 7/28/05 09:30

METHOD OF SHIPMENT:

AIRBILL NO:

CHAIN OF CUSTODY RECORD

URS CORPORATION

1001 HIGHLAND PLAZA DRIVE WEST, SUITE 300
ST. LOUIS, MISSOURI 63110
314-429-0100

SHEET 2 of

PROJECT NO: 21561573.00000

PROJECT NAME: Solutia Krummrich Supplemental Soil and Gw Sampling

SAMPLER'S: (Signature) Christine Mais

CONTAINER DESCRIPTION / ANALYSES REQUESTED

DATE	TIME	SAMPLE I.D. NUMBER	NO. OF CONTAINERS	Soil PCBs 8280					REMARKS
7/27	10:50	S1003-4-6-MS	1	✓					
7/27	10:50	S1003-4-6-MD	1	✓					
7/27	12:45	S1004-3-5	1	✓					
7/27	13:00	S0931-3-5	1	✓					
7/27	13:25	S0907-10-12	1	✓					4.8/4.6
7/27	14:00	S0903-2-4	1	✓					
7/27	14:00	S0903-2-4-DUP	1	✓					
7/27	14:15	S0929-5-7	1	✓					
7/27	13:45	S0930-2-4	1	✓					680-6360
7/27	~~14:55~~ 15:25	S0902-4-6	1	✓					

RELINQUISHED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME
Christine Mais	7/27/05 1600	[illegible]	7-27-05 1600
[illegible]	7-27-05 1800	RECEIVED AT LAB BY: (Signature) [illegible]	DATE / TIME 7/28/05

METHOD OF SHIPMENT:

AIRBILL NO:

CHAIN OF CUSTODY RECORD

URS CORPORATION

1001 HIGHLAND PLAZA DRIVE WEST, SUITE 300
ST. LOUIS, MISSOURI 63110
314-429-0100

SHEET 3 of 3

PROJECT NO: 21561573.00000

PROJECT NAME: Solutia Krummrich Supplemental Soil & GW Sampling

SAMPLER(S): (Signature) Christine Mais

DATE	TIME	SAMPLE I.D. NUMBER	NO. OF CONTAINERS	Soil PCBs 8260	Water VOCs 8260	SVOCs 8270	Pest/PCBs	Herbicides	6010/7470 Lead/Mercury	REMARKS
7/27	15:30 ~~14:55~~	S0902-6-8	1	✓						
7/27	14:50	S0902-4-6-EB	13		(4) ✓	(2) ✓	(2) ✓	(2) ✓	(1) ✓	
7/27	15:00	TB-3	4		✓					

4.8/4.6
680-6360

RELINQUISHED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME
Christine Mais	7/29/05 1600	[illegible]	7-27-05 1600
RELINQUISHED BY: (Signature) [illegible]	DATE / TIME 7-27-05 1800	RECEIVED AT LAB BY: (Signature) [illegible]	DATE / TIME

METHOD OF SHIPMENT:

AIRBILL NO:

CHAIN OF CUSTODY RECORD

SHEET 1 of

URS CORPORATION

1001 HIGHLAND PLAZA DRIVE WEST, SUITE 300
ST. LOUIS, MISSOURI 63110
314-429-0100

PROJECT NO: 21561573.00000

PROJECT NAME: Solutia Krummrich Supplemental Soil & Groundwater Sampling

SAMPLER'S: (Signature) Christine Mas

DATE	TIME	SAMPLE I.D. NUMBER	NO. OF CONTAINERS	PCBs 8082	SVOCs 8270	Lead 6010	VOCs 8260		REMARKS
7/25	9:20	S0118-0-2	1		✓				
7/25	9:25	S0116-0-2	1		✓				
7/25	9:32	S0120-0-2	2		✓	✓			
7/25	9:40	S0117-0-2	1		✓				
7/25	9:48	S0115-0-2	1		✓				
7/25	9:48	S0115-0-2-DUP	1		✓				
7/25	10:02	S0119-0-2	2		✓	✓			
7/25	10:25	S0215-0-2	1	✓					
7/25	10:35	S0124-18-20	~~2~~ 4 (CN)		✓		✓		
7/25	11:00	S0216-0-2	1	✓					

RELINQUISHED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME
Christine Mas	7/25/05 16:30	[illegible]	7-25-05 1630
RELINQUISHED BY: (Signature)	DATE / TIME	RECEIVED AT LAB BY: (Signature)	DATE / TIME
		[illegible]	072605 0932
METHOD OF SHIPMENT:		AIRBILL NO: 680-6304	

CHAIN OF CUSTODY RECORD

SHEET 2 of 3

URS CORPORATION

1001 HIGHLAND PLAZA DRIVE WEST, SUITE 300
ST. LOUIS, MISSOURI 63110
314-429-0100

PROJECT NO: 21561573.00000

PROJECT NAME: Solutia Krummrich Supplemental Soil & Groundwater Sampling

SAMPLER'S: (Signature) Christine Mais

DATE	TIME	SAMPLE I.D. NUMBER	NO. OF CONTAINERS	PCBs 8082	VOCs 8260	SVOCs 8270			REMARKS
7/25	11:15	S0121-18-20	4		✓	✓			
7/25	11:15	S0121-18-20-Dup	4		✓	✓			
7/25	13:15	S0124 3 LW-18-20 *	4		✓	✓			Per Christine Mais via email - ID
7/25	13:25	S0217-0-2	1	✓					should be
7/25	13:40	S0122-18-20	4		✓	✓			S0123-18-20 7/25/05 LWolfe
7/25	14:15	S0214-0-2	1	✓					
7/25	15:55	S1101-~~0-2~~ 1-3	1			✓			
7/25	15:45	S1102-~~0-2~~ 1.5-3.5	1			✓			
7/25	15:45	S1103-0-2	1			✓			
7/25	15:45	S1101-~~MS~~ 1-3-MS	1			✓			

RELINQUISHED BY: (Signature) Christine Mais	DATE / TIME 7/25/05 16:30	RECEIVED BY: (Signature)	DATE / TIME 7-25-05 1630
RELINQUISHED BY: (Signature)	DATE / TIME	RECEIVED AT LAB BY: (Signature)	DATE / TIME 072605 0932
METHOD OF SHIPMENT:		AIRBILL NO: 680-6304	

CHAIN OF CUSTODY RECORD

SHEET 3 of 3

URS CORPORATION

1001 HIGHLAND PLAZA DRIVE WEST, SUITE 300
ST. LOUIS, MISSOURI 63110
314-429-0100

PROJECT NO: 21561573.00000

PROJECT NAME: Solutia Krummrich Supplemental Groundwater & Soil Sampling

SAMPLER'S (Signature): Christine Mais

DATE	TIME	SAMPLE I.D. NUMBER	NO. OF CONTAINERS	SVOC	VOC				REMARKS
7/25	15:55	S1101-1-3 MD	1	✓					
7/25	16:30	TB-1	1		✓				
		Received 50214-0-2 Dup	1	PCBs					
		per Christine Mais analyze for via email			PCBs		7/28/2005		8:38 AM L. Wolfe

RELINQUISHED BY: (Signature) Christine Mais	DATE / TIME 7/25/05 16:30	RECEIVED BY: (Signature)	DATE / TIME 7-25-05 1630
RELINQUISHED BY: (Signature)	DATE / TIME	RECEIVED AT LAB BY: (Signature)	DATE / TIME 07/26/05 0932
METHOD OF SHIPMENT:		AIRBILL NO: 6550-6304	

CHAIN OF CUSTODY RECORD

SHEET 1 of 2

URS CORPORATION

1001 HIGHLAND PLAZA DRIVE WEST, SUITE 300
ST. LOUIS, MISSOURI 63110
314-429-0100

PROJECT NO: 21561513.00000

PROJECT NAME: Solutia Krummrich Supplemental Soil & Groundwater Sampling

SAMPLER'S: (Signature) Christin Mais

DATE	TIME	SAMPLE I.D. NUMBER	NO. OF CONTAINERS	PCBs 8082	SVOCs 8270	VOCs 8260	Metals 7470	Herbicides 8151	Pesticides 8081	REMARKS
07/26/05	0900	S0432-13-15	4			X				
	0935	S0431-13-15	4			X				
	1005	S0430-13-15	4			X				
	1015	S0430-13-15-DUP	4			X				38
	1055	S0433-13-15	4			X				
	1130	S0403-1-3	5	X	X	X		X	X	
	1140	S0403-10-12	5	X	X	X		X	X	
	13:45	S0927-2-3	1				X			
	13:50	S0927-6-7	1				X			
	13:55	S0927-9-10	1				X			680-6371

RELINQUISHED BY: (Signature) Christin Mais	DATE / TIME 7/26/05 16:00	RECEIVED BY: (Signature)	DATE / TIME 7-26-05 1600
RELINQUISHED BY: (Signature)	DATE / TIME	RECEIVED AT LAB BY: (Signature) S. Hughes	DATE / TIME 7/27/05 09:30
METHOD OF SHIPMENT:		AIRBILL NO:	

CHAIN OF CUSTODY RECORD

SHEET 2 of 2

URS CORPORATION

1001 HIGHLAND PLAZA DRIVE WEST, SUITE 300
ST. LOUIS, MISSOURI 63110
314-429-0100

PROJECT NO: 21561573.00000

PROJECT NAME: Solutia Krummrich Supplemental Soil & Groundwater Sampling

SAMPLER'S: (Signature) Christine Mais

DATE	TIME	SAMPLE I.D. NUMBER	NO. OF CONTAINERS	Mercury 7470					REMARKS
7/26	14:25	S0919-13-15	1	X					
	14:55	S0928-2-3	1	X					
	15:00	S0928-6-7	1	X					
	15:05	S0928-9-10	1	X					
	15:35	S0916-13-15	1	X					
	16:00	525D TB-2 x	1	X					680-6371
		Trip Blk for VOA							
		Analysis for VOA							
		Not Hg.							
									680-6371

RELINQUISHED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME
Christine Mais	7/26/05 1600	[illegible]	7-26-05 1600
RELINQUISHED BY: (Signature)	DATE / TIME	RECEIVED AT LAB BY: (Signature)	DATE / TIME
		[illegible]	7/28/05 09:30
METHOD OF SHIPMENT:		AIRBILL NO:	

APPENDIX D
TABLE 1
PHOTOLOG INDEX

Photo ID	Location	Boring	Depth	Date
8	Lot F	S0122	18-20	07/25/05
9	Lot F	S0214	0-2	07/25/05
10	FCSA	S1103	0-2	07/25/05
11	FCSA	S1102	1.5-3.5	07/25/05
12	FCSA	S1101	1-3	07/25/05
13	NCPPA	S0432	13-15	07/26/05
14	NCPPA	S0431	13-15	07/26/05
15	NCPPA	S0430	13-15	07/26/05
16	NCPPA	S0433	13-15	07/26/05
17	NCPPA	S0403	1-3	07/26/05
18	NCPPA	S0403	10-12	07/26/05
19	FCAPA - Mercury Area	S0927	2-3	07/26/05
20	FCAPA - Mercury Area	S0927	6-7	07/26/05
21	FCAPA - Mercury Area	S0927	9-10	07/26/05
22	FCAPA - Mercury Area	S0919	13-15	07/26/05
23	FCAPA - Mercury Area	S0928	2-3	07/26/05
24	FCAPA - Mercury Area	S0928	6-7	07/26/05
25	FCAPA - Mercury Area	S0928	9-10	07/26/05
26	FCAPA - Mercury Area	S0916	13-15	07/26/05
27	FCAPA - Mercury Area	S0920	13-15	07/27/05
28	FCAPA - Mercury Area	S0925	2-3	07/27/05
29	FCAPA - Mercury Area	S0925	6-7	07/27/05
30	FCAPA - Mercury Area	S0925	9-10	07/27/05
31	FCAPA - Mercury Area	S0926	2-3	07/27/05
32	FCAPA - Mercury Area	S0926	6-7	07/27/05
33	FCAPA - PCB Area	S1003	4-6	07/27/05
34	FCAPA - PCB Area	S1004	3-5	07/27/05
35	FCAPA - PCB Area	S0931	3-5	07/27/05
36	FCAPA - PCB Area	S0907	10-12	07/27/05
37	FCAPA - PCB Area	S0930	2-4	07/27/05
38	FCAPA - PCB Area	S0903	2-4	07/27/05
39	FCAPA - PCB Area	S0929	5-7	07/27/05
40	FCAPA - PCB Area	S0902	4-6	07/27/05
41	FCAPA - PCB Area	S0902	6-8	07/27/05

SOLUTIA - 216

"Yare, Bruce S"
<bsyare@solutia.com>
10/13/2005 12:33 PM

To

Subject RE: Plume Stability Monitoring Plan

History: This message has been replied to.

Ken - We will incorporate these changes into the work plan and re-issue the revised pages rather than the entire document. If I read your email correctly, recommended screen midpoint elevations are:

PSMW-2	337 ft amsl
PSMW-7	297 ft amsl
PSMW-12	306 ft amsl

We did vertical groundwater profiling in the vicinity of PSMW-2 to get information on PCB distribution. We expect those results soon and will use them to select the screen depth if PCBs are detected. If not, we will use your suggested depth of 337 ft amsl.

Steve is out of touch today and tomorrow so I am responding for him.

Bruce

From: Bardo.Kenneth@epamail.epa.gov [mailto:Bardo.Kenneth@epamail.epa.gov]
Sent: Wednesday, October 12, 2005 9:43 AM
To: Smith, Steven D; Yare, Bruce S
Subject: Plume Stability Monitoring Plan

I looked at the revised 9/16 Plume Stability Monitoring Plan. The plan addresses EPA comments provided in July and August. However in Section 2.4, I suggest the following:

Screen elevations will be determined at each location based on the determined ground surface elevation and data from nearby wells/borings. Preliminary screen elevations are provided in a table on page 2-8. Based on data from TRA2-GPC/D, it appears at this time that a midpoint screen elevation of 339' AMSL (Solutia proposes TBD) is appropriate at PSMW-2. Based on data from TRA4-GPB, a midpoint elevation of 297' is appropriate at PSMW-7 (Solutia proposes 288'). Based on data from AA-GWM-S1/S2, a midpoint elevation of 306' is appropriate at PSMW-12 (Solutia proposes 316'). The preliminary screen elevations differ because different wells/borings (GM-3 at PSMW-7, and GM-60A/B at PSMW-12) are considered by Solutia in the calculations. However, no analytical data is provided along with wells GM-3 and GM-60A/B to suggest that they are screened in the most contaminated vertical zone within the SHU, MHU, and DHU. In this case, nearby TRA-GP or AA-GWM borings which evaluated 4 to 5 distinct contaminant zones would be more appropriate to use.

Please consider thsi comment when installing and screening wells at locations PSMW-2, PSMW-7, and PSMW-12.

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SOLUTIA - 217

SOLUTIA. *Solutions for a better life.*

October 17th, 2005

Mr. Kenneth Bardo
U.S. EPA Region V
Corrective Action Section
Enforcement Compliance Branch
77 West Jackson Boulevard DE-J9
Chicago, IL 60604-3507

Re: Solutia Inc. – W. G. Krummrich Plant, RCRA
Plume Stability Monitoring Plan

Dear Ken:

Enclosed please find revised pages 2-5 through 2-8 of the September 16, 2005 Plume Stability Monitoring Plan. These pages were revised in accordance with your October 12, 2005 email on screen elevations in PSMW-2, 7 and 12. Please remove the corresponding pages from the September 16, 2005 Plume Stability Monitoring Plan and replace them with the enclosed pages.

On-site plume stability monitoring well installation is scheduled to start today.

Sincerely,

Steven D. Smith
Project Manager

cc: Distribution List on Following Page

Distribution

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Glen Kurowski	Monsanto, 800 N. Lindbergh Blvd, St. Louis, MO 63141	1 Copy
Linda Tape	Husch, Eppenberger, 190 Carondelet Plaza, Suite 600, St. Louis, MO 63105-3441	1 Copy

Chlorophenols are present in the SHU at the downgradient limit of the plant production area (Figure 2-5) and extend 700 feet downgradient of Lot F in the MHU and 1900 feet downgradient in the DHU. The areal extent of chlorophenols in the SHU, MHU and DHU is approximately 115 acres, 92 acres and 517 acres, respectively. Dichlorobenzenes in the SHU are located in two areas of the plant: 1) at the southern end of the Former Chlorobenzene Process Area and 2) the Former Chlorobenzene Storage Area (Figure 2-6). They do not extend past Lot F in the MHU and extend 1900 feet downgradient of Lot F in the DHU. The areal extent of dichlorobenzenes in the SHU, MHU and DHU is approximately 23 acres, 115 acres and 437 acres, respectively,

Phenol is present in the SHU at the downgradient limit of the plant process area, does not extend past the downgradient limit of Lot F in the MHU and extends 800 feet downgradient of Lot F in the DHU (Figure 2-7). Phenol is also present in the MHU and DHU at the upgradient end of the plant process area and the DHU north of the Former Chlorobenzene Process Area. The areal extent of phenol in the SHU, MHU and DHU is approximately 69 acres, 92 acres and 115 acres, respectively.

The areal distribution of BTEX in the SHU, MHU and DHU is similar to benzene (Figure 2-8). The areal extent of BTEX in the SHU, MHU and DHU is approximately 126 acres, 218 acres and 471 acres, respectively,

Based on this information, site-related constituents are migrating preferentially through the DHU, resulting in the farthest downgradient extent of migration and the largest area of impacted groundwater of any of the three hydrogeologic units found at the W.G. Krummrich facility.

2.3 Monitoring Well Screen Depth

Chlorobenzene (MCB) and Dichlorobenzenes (DCB) have the largest areal extent of any of the site-related constituents present in groundwater (Figures 2-3 and 2-6). Because their distribution includes the area occupied by other constituents and they are the constituents that migrated furthest from the facility and are closest to the Mississippi River, MCB and DCB were used to select plume stability monitoring well screen depths.

Selected screen depths for the W.G. Krummrich Plume Stability Monitoring Plan are given in Tables 2.1 to 2.15. These screen depths, which are based on the highest detected groundwater concentrations in the nearest vertical profile to the plume stability monitoring well location (Figure 2.9), are summarized below:

Summary of Selected Plume Stability Monitoring Well Screen Depths (Feet below Ground Surface)

Well	Screen Depth	Well	Screen Depth	Well	Screen Depth	Well	Screen Depth
MW-1	43	MW-6	110	MW-11	104	MW-16	120
MW-2	72	MW-7	119	MW-12	100	MW-17	127
MW-3	72	MW-8	73	MW-13	114		
MW-4	97.5	MW-9	104	MW-14	112		
MW-5	22.5	MW-10	104	MW-15	112		

Note: Depth below ground surface to midpoint of 5 ft. long screen

Plume stability monitoring wells PSMW-1, 2, 3, 4 and 5 are located in source areas and, as a consequence, selected screen depths are in the lower portion of the SHU and the MHU. GM-17 A, B and C is the closest groundwater vertical profile to PSMW-5. The highest detected Total VOC and Total SVOC concentrations at GM-17 A, B and C occur in GM-17 A, which is screened 18 to 38 ft. below ground surface. Based on this information, the screen in PSMW-5 should be installed between 18 and 38 ft. below ground surface. Historical groundwater data (2001) from GM-32, 33 and 34, which are located in the same area as GM-17 A, B and C and PSMW-5, indicate that Total VOC concentrations in wells GM-32, 33 and 34 range from 326,000 to 1,600,000 ug/l. GM-32 is screened from 9 to 24 ft. below ground surface while GM-33 and 34 are screened from 5 to 25 ft. below ground surface. Because the historical groundwater data from GM-32, 33 and 34 indicate that the highest Total VOC concentrations occur from 5 to 25 ft. below ground surface in the area of PSMW-5, this monitoring well will be screened from 5 to 25 ft. below ground surface instead of 18 to 38 ft. below ground surface. To ensure that groundwater quality samples can be collected from PSMW-5 during dry weather conditions, the well screen will be installed from 20 to 25 ft. below ground surface. Depth to groundwater is typically no more than 15 ft. below ground surface but can reach 20 ft. below ground surface in dry weather conditions.

The MHU will also be screened at PSMW-8 because VOC and SVOC concentrations are highest in this hydrogeologic unit, probably as a result of past spills and leaks from the Former Chlorobenzene Storage Area.

Screens will be installed in the DHU at PSMW-6, 7, 9, 10, 11, 12, 13, 14, 15, 16 and 17. These monitoring wells are located downgradient of the Plant Process Area where the highest groundwater concentrations are found in the deeper portions of the alluvial aquifer.

Screen depths generally get deeper with increasing distance from the W.G. Krummrich facility downgradient boundary. Screen depths at PSMW-6, 7, 8 and 9, located at the downgradient boundary of the plant, average 101.5 feet and range from 73 to 119 ft bgs. Monitoring wells PSMW-10, 11, 12 and 13, which are located approximately half way between the plant boundary and the Mississippi River, have an average screen depth of 104.5 ft bgs and range from 100 to 114 ft bgs. At the Mississippi River, PSMW-14, 15, 16 and 17 have an average depth of 117.75 ft bgs and range from 112 to 127 ft bgs.

This screen depth pattern reflects high concentrations in shallow groundwater in the source areas and high concentrations in deep groundwater in the discharge area as groundwater migrates from the plant and discharges to the Mississippi River.

At location PSMW-2, in the Former PCB Manufacturing Area, MCB and DCB vertical distribution (Tables 2.2 and 2.3) indicates that the well screen midpoint should be 72 to 73 ft. below ground surface. However, there is insufficient data for PCBs in groundwater to identify the proper screen interval. Solutia plans to address this data gap by conducting groundwater profiling in this area. A separate work plan will be developed and submitted to USEPA for this work.

If property access is denied for these proposed locations, monitoring wells will be installed on the closest available property where if the location would still meet the objectives of the groundwater monitoring program.

2.4 Monitoring Well Installation

URS Corporation (URS) will perform the field activities in accordance with this plan, Standard Operation Procedures (SOPs), and an approved Health and Safety Plan (HASP). URS will coordinate with Solutia personnel to obtain the appropriate permits and clearance to perform the subsurface activities.

The monitoring wells will be installed using rotasonic drilling techniques. The borings will be advanced using an approximately 4-inch diameter by 10-foot long core barrel and a 6-inch diameter override casing. Soil cores will be continuously collected from the core barrel through the length of the boring. The monitoring wells will be installed through the six-inch override casing. Plume stability monitoring wells PSMW-14M, 15M and 16M will be installed in the borehole as wells PSMW-14D, 15D and 16D. Drill cuttings will be containerized and staged per Solutia procedures.

The subsurface stratigraphy will be logged during drilling operations by a qualified field scientist in accordance with the Unified Soil Classification System (USCS) protocols. The field scientist will note soil attributes such as color, particle size, consistency, moisture content, structure, plasticity, odor (if obvious) and organic content (if visible). Soil samples from each boring will be visually evaluated for evidence of impact and screened in the field using a Photoionization Detector (PID). Information pertaining to the subsurface soil and drilling conditions will be recorded in the field on a standard field boring log form in accordance with the SOP-8 (Appendix C). Representative scaled, color digital photographs will be taken of each soil core to provide a record of materials present at this site.

Ground surface elevation will be confirmed at each vertical groundwater profile location and determined for each plume stability monitoring well location prior to well installation. Ground surface elevation at each monitoring well location will then be compared to ground surface elevation at the vertical

groundwater profile locations used to select plume stability monitoring well screen depths. These data will then be used to determine the depth below ground surface of the midpoint of each 5 ft.-long plume stability monitoring well screen. Vertical groundwater profile elevations are listed below:

Vertical Groundwater Profile Ground Surface Elevations, Ft. AMSL

Monitoring Well	Vertical Profile	Elevation	Monitoring Well	Vertical Profile	Elevation
PSMW - 1	TRA1-GPB	413	PSMW - 10	AA-P-1	408
PSMW - 2	TRA2-GPC and D	411	PSMW - 11	AA-P-1	408
PSMW - 3	TRA2-GPD	411	PSMW - 12	AA-GWM-S1	422
PSMW - 4	GM-4A, B and C	404.5		AA-GWM-S2	410.5
PSMW - 5	GM-17A, B and C	410	PSMW - 13	AA-S-1B	411
PSMW - 6	UAA-1	406	PSMW - 14	AA-P-3	410.5
PSMW - 7	TRA4-GPB	416	PSMW - 15	AA-P-3	410.5
PSMW - 8	TRA4-GPC	413	PSMW - 16	AA-GWM-S1	422
PSMW - 9	UAA-3	405	PSMW - 17	AA-Q-1	420

Notes: Elevations in feet above mean sea level

Well screen depths (midpoint of 5 ft. long screens) and screened intervals are provided in the table below.

Monitoring Well No.	Monitoring Area	Estimated Depth Below Ground Surface	Monitoring Well Screen Midpoint Elevation
PSMW - 1	Northern Plume Boundary	43	370
PSMW - 2	Source Area - PCB Mfg. Area	72	339
PSMW - 3	Source Area - CPA	72	339
PSMW - 4	Source Area -North Tank Farm	97.5	307
PSMW - 5	Source Area - CSA	22.5	387.5
PSMW - 6	Northern Plume Boundary	110	296
PSMW - 7	CPA Migration Pathway	119	297
PSMW - 8	CSA Migration Pathway	73	340
PSMW - 9	Southern Plume Boundary	104	301
PSMW - 10	Northern Plume Boundary	104	304
PSMW - 11	CPA Migration Pathway	104	304
PSMW - 12	CSA Migration Pathway	100	306
PSMW - 13	Southern Plume Boundary	114	297
PSMW - 14 M	Northern Plume Boundary	45.5	365
PSMW - 14 D	Northern Plume Boundary	112	298.5
PSMW - 15 M	CPA Migration Pathway	45.5	365
PSMW - 15 D	CPA Migration Pathway	112	298.5
PSMW - 16 M	CSA Migration Pathway	60	365
PSMW - 16 D	CSA Migration Pathway	120	302
PSMW - 17	Southern Plume Boundary	127	293

Note: PSMW-12 screen midpoint elevation based on average of grade elevation and selected screen depth at AA-GWM-S1 (422 ft amsl and 120 ft bgs, respectively) and grade elevation and selected screen depth at AA-GWM-S2 (410.5 ft amsl and 100 ft bgs, respectively).

At the completion of the boring, the monitoring well will be constructed in accordance with state of Illinois guidelines by a permitted Illinois well driller. Monitoring wells will be constructed of two-inch diameter

SOLUTIA - 221

"Smith, Steven D"
<sdsmit@solutia.com>
10/26/2005 12:45 PM

To Kenneth Bardo/R5/USEPA/US@EPA
cc George Hamper/R5/USEPA/US@EPA, briller_dan@bah.com
bcc

Subject RE: FW: WGK - PCB Thermal Treatability Test

History: This message has been replied to.

Ken

For the record and in response to the email below, let me state that the agency agreed with the plan to use push sampling to attempt to locate an area of higher PCB values at the W.G.K. Plant, and then to take the large soil sample from that same area for the actual bench scale study. During our August 10th, 2005 meeting we informed you that by push sampling, we located an area which had 22,000 ppm of PCBs. However, when we went back to the same location and took a large sample of soil in order to run the bench scale tests, the PCB value for this large sample came back at 2,447 ppm.

The fact that these two numbers did not match is totally beyond Solutia's control. Obviously soil samples are very heterogeneous. A third soil sample at the same location would likely result in yet a third result.

Solutia has worked diligently this year, spending hundreds of thousands of dollars in an effort to expedite the two bench scale studies, in additional to various soil and groundwater monitoring programs. The attached quarterly report highlights some of the activities and efforts we have made over the last year.

As per our phone conversation, we are proceeding with the bench scale tests using the sample previously collected.

Other activities include carrying out the work in the revised "Plume Stability Monitoring Plan" and the "PCB Mobility and Migration Investigation Plan". In order to make continued progress we are currently installing the on-site, groundwater monitoring wells for the Plume Stability Monitoring Plan (while we continue to seek access for the installation of the off-site wells).

We will continue to push progress on all of these substantial efforts.

Steve

-----Original Message-----
From: Bardo.Kenneth@epamail.epa.gov [mailto:Bardo.Kenneth@epamail.epa.gov]
Sent: Tuesday, September 13, 2005 1:19 PM
To: Smith, Steven D
Cc: Hamper.George@epamail.epa.gov; briller_dan@bah.com
Subject: Re: FW: WGK - PCB Thermal Treatability Test

Steve Smith - I am discouraged to hear at this late date that appropriate samples have not yet been obtained for conducting the treatability tests. It has been a month since we were informed at an August 10th meeting that soil samples from the MCB/DCB source areas were not comparable to the historical

high concentrations. At that time, Solutia represented that the PCB soil sample concentrations were OK and were actually higher than historical high concentrations (i.e., 22,000 ppm). On or about August 12, we responded that spiking the soil samples with MCB/DCB was appropriate and should be performed. At that time, it was our understanding that the spiking would occur and that the treatability tests would move forward.

Your e-mail of September 9th now states that the PCB soil samples are also well below the historical high concentration. Any additional sampling to obtain results comparable to historical concentrations will further delay the start of the In Situ Thermal Desorption (ISTD) treatability test. We have been discussing the implementation of the treatability tests at the PCB and MCB/DCB source areas since early-2005 (approx. 9 months). I am disappointed by the progress that has been made since then to advance the treatability tests. The expected time frame for completing the tests and submittal of reports is September 23, 2005, for the ISTD treatability test (PCBs) and December 23, 2005, for the Enhanced Aerobic Bioremediation treatability test (MCB/ DCB).
Based on your e-mail, it is not readily apparent whether MCB/DCB spiking has occurred (even though we concurred with the procedure one month ago) and it is obvious that the ISTD treatability test will not be completed on time.

As you know, our November 18, 2004, letter highlighted major deficiencies in the Solutia CMS . Rather than EPA proceeding with the available information and initiating a proposal for final corrective measures, we agreed to proceed with interim measures in the form of treatability studies and potential source controls to rapidly address and stabilize ongoing releases at the Solutia facility. However the excessive time it has taken to begin the treatability tests to evaluate the feasibility of engineered source controls is inconsistent with our approach for interim measures/stabilization. We are concerned that Solutia's effort has not been commensurate with EPA's expectation and priority for proceeding with IMs and stabilizing source areas.

Action to Complete Treatability Tests: Data submitted by Solutia, shows that the maximum concentration of PCBs found at 16 sample locations at the Former PCB Manufacturing Area range from 10.6 to 22,100 mg/kg. The median is 1,750 ppm and the mean is 3,196 mg/kg. At 2,447 mg/kg, the PCB concentrations of the original sample obtained for the treatability test is fairly representative of the typical PCB concentrations found in the area. However, as provided for in the workplan, the ISTD test was proposed to be performed on the maximum concentrations detected in the area. Therefore, Solutia should immediately re-mobilize in the field and obtain additional soil samples from former sample locations S0825 and S0835. Individual homgenization and separation into bench-test aliquots should be performed on soil from each sample location. The treatability tests should then be perfomed on the homogenized sample with the highest concentration of PCBs. If neither sample location provides a higher concentration than 2,447 mg/kg, the original soil sample should be used in the treatability tests.

If you have any questions, please let me know. - Ken Bardo

"Smith, Steven D" <sdsmit@solutia.com>

09/09/2005

To Kenneth Bardo/R5/USEPA/US@EPA

cc

02:40 PM

Subject
FW: WGK - PCB Thermal Treatability Test

Ken - May we proceed with the ISTD test, or would you rather we go back to the field and try to find a sample with higher PCB concentrations?

Steve

From: Yare, Bruce S
Sent: Thursday, September 08, 2005 5:57 PM
To: Smith, Steven D
Cc: Williams, Richard S
Subject: WGK - PCB Thermal Treatability Test

Steve

We received results from the field baseline analyses of the ISTD Treatability Study samples yesterday. Results are summarized below:

Sample SO825 (Unsaturated SHU)

PCB
Actual 2,447 mg/kg
Target 22,100 mg/kg

Sample SCTB67 & DNAPL-K-4@9' (Unsaturated SHU)

MCB
Actual 870 mg/kg
Target 23,000 mg/kg
DCB
Actual 117 mg/kg
Target 13,850 mg/kg

Sample DNAPL-K-4@16.5' (Saturated SHU)

MCB
Actual 210 mg/kg
Target 1,600 mg/kg
DCB
Actual 1,270 mg/kg
Target 2,950 mg/kg

None of the samples achieved target (historical high) concentrations even though they were collected at the same depths and locations as the historical high concentrations.

MCB and DCB thermal treatability test samples can be spiked so that they equal or exceed historical high concentrations.

The PCB thermal treatability test samples can not be spiked to achieve historical high concentrations because PCBs are no longer available in quantities large enough to spike the volume of soil needed for the treatability tests.

We have two choices on how to proceed:

Perform the PCB thermal treatability test on the 2,447 mg/kg sample

Collect additional samples until we match or exceed the historical high concentration.

I am reluctant to proceed with the treatability tests because the 2,447 mg/kg sample concentration is a factor of 9 lower than the historical high. The Work Plan says that the tests will be performed on samples with the historical high concentration.

Returning to the field to try an find a sample with a concentration equal to or greater than the historical high concentration will extend the duration of the ISTD Treatability Study. Finding the appropriate sample location will be a trial and error process of unknown duration.
Once we find a sampling location that matches the historical high concentration, we need to re-mobilize Prosonics in order to get the large volume of sample needed for the treatability tests.

We are proceeding with the MCB/DCB thermal treatability tests. I believe we need some guidance from the Agency on how to proceed with the PCB thermal treatability tests.

Bruce

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3rd Q 2005 Report.doc

SOLUTIA - 223

Kenneth
Bardo/R5/USEPA/US
11/01/2005 02:01 PM

To sdsmit@solutia.com
cc bsyare@solutia.com
bcc briller_dan@bah.com

Subject CMS Addendum III

Steve - I reviewed CMS Addendum III submitted on October 7th. The supplemental investigations conducted are sufficient at this time and the data will be used in our evaluation to propose a final remedy. Below is information also requested on the Route 3 Drum Site but not provided in the CMS Addendum. It is also necessary to evaluate a final remedy. Please provide a written response to the information requested as soon as possible; your response may be via e-mail. - Ken

1) Confirmation that the bottom elevation of the Route 3 Drum Site Trench is 390' AMSL.

2) The results for any residual concentrations of all compounds of nitrochlorobenzene, dichloronitrobenzene, dinitrochlorobenzene, nitrobiphenyl, and any other contaminants exceeding applicable standards when capping was completed in this area.

3) Section 7 of CMS Addendum II documents that 3500 drums of B-221 Ortho, 250 drums of Eutectic, and 585 drums of dinitrochlorobenzene were disposed at the drum site. Provide information on the hazardous constituents likely to be present in "B-221 Ortho" and "Eutectic".

4) Any noticeable impacts on contaminant trends in groundwater for the constituents remaining in this area above applicable standards after capping.

5) General procedures for and frequency of inspections and maintenance to ensure that cap integrity is not compromised.

6) Verification that this capped area is encircled by the chain link fence mentioned in Section 5.2.1.2 of the CMS Report, and that the chain link fence encompasses the originally estimated soil impact area (meaning that the Phase II geophysical investigation and trenching was conducted outside the known Route 3 Drum Site impact area).

7) An indication as to how such inspection and maintenance efforts are funded. These activities and costs should considered in the final corrective measures array analysis.

SOLUTIA - 226

Kenneth
Bardo/R5/USEPA/US
01/09/2006 04:07 PM

To sdsmit@solutia.com
cc bsyare@solutia.com
bcc

Subject PCB Plan

Steve - As we discussed on the phone today, the PCB Mobility and Migration Investigation Work Plan should be implemented immediately. We provided comments on the 9/16/05 plan via e-mail on 10/3/05, and followed up with another e-mail to Bruce Yare on 10/19/05. The final revised plan was submitted on 10/21/05.

As discussed in our comments, the use of Method 1312 (SPLP) is not necessary to be performed in the investigations. We also requested that unfiltered groundwater samples be obtained during push sampling. Our follow-up comment asked if both filtered and unfiltered samples had been obtained from the SHU, MHU, and DHU during the push sampling program for the TRA-GP and AA-GWM-series. We simply ask that groundwater sampling for PCBs be performed in a manner consistent with the previous procedures used for push sampling during the RFI.

Phase I of the site investigation is proposed to be completed no later than 120 days from initiation (approx. May 2006). Please notify us when work is initiated. Subsequent phases (II and III) address our comments for determining the horizontal and vertical exent of PCB contamination and the installation/monitoring of permanent monitoring wells. However we do not concur with the proposed Phase II and III schedules. We believe that the Phase II soil sampling used to define the 25 mg/kg total PCB isocon line should be performed concurrently with Phase I since the work is similar. It does make sense to perform Phase III work (now to be designated as Phase II) after completion of Phase I.

EPA will provide comments on the Phase I site investigations report when it is received. Please ensure that the report provides and discusses the results for defining the 25 mg/kg total PCB isocon line. Delineation of the isocon line is necessary to perform the next phase (permanent groundwater monitoring) and determine the proper location for proposed monitoring wells PMAMW-1, PMAMW-2, and PMAMW-3. In the alternative, the report should discuss the data gaps and propose additional soil borings for delineating the isocon line (to be performed during Phase II).

Please note that our comments requested a monitoring well near S0805 in the middle of the contaminated area. The Soultia plan calls for locating this well (PMAMW-4) at S0835, approximately 50-feet to the south. The exact location should be re-proposed in the Phase I report based on the Phase I data. The idea is to locate PMAMW-4 in the middle of the contaminated area, wherever that is determined to be. - Ken

SOLUTIA - 227

"Smith, Steven D"
<sdsmit@solutia.com>
01/09/2006 05:53 PM

To

Subject FW: SA2 - Surface Water and Sediment Data (Validated)

Ken - Here are the river surface water and sediment samples we discussed today. Any questions, please call.

Steve

-----Original Message-----
From: Steven_Shroff@URSCorp.com [mailto:Steven_Shroff@URSCorp.com]
Sent: Tuesday, December 20, 2005 1:46 PM
To: Smith, Steven D; ems1002@msn.com
Cc: Robert_Veenstra@URSCorp.com
Subject: Fw: SA2 - Surface Water and Sediment Data (Validated)

Steve and Gary,

Here are the analytical results for the surface water and sediment samples.

Please let us know if you have any questions or need additional information.

Thanks,

Steven J. Shroff
Project Manager
URS Corporation
1001 Highlands Plaza Dr. West, Suite 300 St. Louis, MO 63110

314-743-4172 Direct
314-429-0100 Main
314-429-0462 Fax
steven_shroff@urscorp.com

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----- Forwarded by Steven Shroff/StLouis/URSCorp on 12/20/2005 01:44 PM -----

Meg Reynolds/StLouis/URSCorp

12/13/2005 01:51 PM

To: Steven Shroff/StLouis/URSCorp@URSCORP

cc:

Subject: SA2 - Surface Water and Sediment Data (Validated)

Steve,

Amelia completed her review of the SA2 surface water and sediment data yesterday evening and sent the checklists to Jeff Aust in Omaha. He completed his peer review this morning. I have regenerated the tables I provided you yesterday with the URS Qualifiers and URS Qualifier Code included.

(See attached file: SA2-SurfaceWaterResults.xls)(See attached file: SA2-SedimentResults.xls)

Note that Amelia has not yet reviewed the SDG with the single tank sample yet. She expected to perform her review tonight or tomorrow and then forward the checklists on to Jeff Aust. Therefore, I will not have that updated table until tomorrow or Thursday.

Regards,

Meg Reynolds
URS Corporation
1001 Highland Plaza Drive West, Suite 300 St. Louis, MO 63110
314-743-4202
FAX 314-429-0462

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SA2-SurfaceWaterResults.xls SA2-SedimentResults.xls

Sauget Area 2
Surface Water Sample Results

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers	URS Qualifier Code
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	VOCs	1,1,1-Trichloroethane	1	ug/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	VOCs	1,1,2,2-Tetrachloroethane	1	ug/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	VOCs	1,1,2-Trichloroethane	1	ug/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	VOCs	1,1-Dichloroethane	1	ug/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	VOCs	1,1-Dichloroethylene	1	ug/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	VOCs	1,2-Dichloroethane	1	ug/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	VOCs	1,2-Dichloroethene (total)	2	ug/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	VOCs	1,2-Dichloropropane	1	ug/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	VOCs	2-Butanone (MEK)	10	ug/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	VOCs	4-Methyl-2-pentanone (MIBK)	10	ug/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	VOCs	Acetone	25	ug/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	VOCs	Benzene	1	ug/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	VOCs	Bromodichloromethane	1	ug/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	VOCs	Bromoform	1	ug/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	VOCs	Bromomethane	1	ug/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	VOCs	Carbon Disulfide	1	ug/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	VOCs	Carbon Tetrachloride	1	ug/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	VOCs	Chlorobenzene	0.87	ug/L	J	J	F
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	VOCs	Chlorodibromomethane	1	ug/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	VOCs	Chloroethane	1	ug/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	VOCs	Chloroform	1	ug/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	VOCs	Chloromethane	1	ug/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	VOCs	cis-1,3-Dichloropropene	1	ug/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	VOCs	Dichloromethane	5	ug/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	VOCs	Ethylbenzene	1	ug/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	VOCs	Methyl N-Butyl Ketone	10	ug/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	VOCs	Styrene (Monomer)	1	ug/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	VOCs	Tetrachloroethene	1	ug/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	VOCs	Toluene	1	ug/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	VOCs	trans-1,3-Dichloropropene	1	ug/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	VOCs	Trichloroethene	1	ug/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	VOCs	Vinyl chloride	1	ug/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	VOCs	Xylenes, Total	2	ug/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	1,2,4-Trichlorobenzene	9.4	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	1,2-Dichlorobenzene	9.4	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	1,3-Dichlorobenzene	9.4	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	1,4-Dichlorobenzene	9.4	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	2,2'-Oxybis(1-Chloropropane) (bis-2-chloroisopropyl ether)	9.4	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	2,4,5-Trichlorophenol	9.4	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	2,4,6-Trichlorophenol	9.4	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	2,4-Dichlorophenol	9.4	ug/L	U	UJ	H

Sauget Area 2
Surface Water Sample Results

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers	URS Qualifier Code
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	2,4-Dimethylphenol	9.4	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	2,4-Dinitrophenol	47	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	2,4-Dinitrotoluene	9.4	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	2,6-Dinitrotoluene	9.4	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	2-Chloronaphthalene	9.4	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	2-Chlorophenol	9.4	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	2-Methylnaphthalene	9.4	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	2-Methylphenol (o-Cresol)	9.4	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	2-Nitroaniline	47	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	2-Nitrophenol	9.4	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	3 & 4 Methylphenol	9.4	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	3,3'-Dichlorobenzidine	19	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	3-Nitroaniline	47	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	4,6-Dinitro-2-methylphenol	47	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	4-Bromophenyl Phenyl Ether	9.4	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	4-Chloro-3-methylphenol	9.4	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	4-Chlorophenyl Phenyl Ether	9.4	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	4-Nitrophenol	47	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	Acenaphthene	9.4	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	Acenaphthylene	9.4	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	Anthracene	9.4	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	Benzo(a)anthracene	9.4	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	Benzo(a)pyrene	9.4	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	Benzo(b)fluoranthene	9.4	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	Benzo(g,h,i)perylene	9.4	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	Benzo(k)fluoranthene	9.4	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	Benzyl Butyl Phthalate	9.4	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	bis(2-Chloroethoxy)methane	9.4	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	bis(2-Chloroethyl)ether	9.4	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	bis(2-Ethylhexyl)phthalate	9.4	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	Carbazole	9.4	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	Chrysene	9.4	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	Dibenzo(a,h)anthracene	9.4	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	Dibenzofuran	9.4	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	Diethyl Phthalate	9.4	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	Dimethyl Phthalate	9.4	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	Di-n-butylphthalate	9.4	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	Di-n-octylphthalate	9.4	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	Dinoseb	9.4	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	Fluoranthene	9.4	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	Fluorene	9.4	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	Hexachlorobenzene	9.4	ug/L	U	UJ	H

Sauget Area 2
Surface Water Sample Results

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers	URS Qualifier Code
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	Hexachlorobutadiene	9.4	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	Hexachlorocyclopentadiene	9.4	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	Hexachloroethane	9.4	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	Indeno(1,2,3-cd)pyrene	9.4	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	Isophorone	9.4	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	Naphthalene	9.4	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	Nitrobenzene	9.4	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	N-Nitroso-di-n-propylamine	9.4	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	N-Nitrosodiphenylamine	9.4	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	P-Chloroaniline	19	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	Phenanthrene	9.4	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	Phenol	9.4	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	P-Nitroaniline	47	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	SVOCs	Pyrene	9.4	ug/L	U	UJ	H
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Pesticides	4,4'-DDD	0.094	ug/L	U	UJ	S
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Pesticides	4,4'-DDE	0.094	ug/L	U	UJ	S
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Pesticides	4,4'-DDT	0.094	ug/L	U	UJ	S
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Pesticides	Aldrin	0.047	ug/L	U	UJ	S
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Pesticides	alpha-BHC	0.047	ug/L	U	UJ	S
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Pesticides	alpha-Chlordane	0.047	ug/L	U	UJ	S
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Pesticides	beta-BHC	0.047	ug/L	U	UJ	S
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Pesticides	delta-BHC	0.047	ug/L	U	UJ	S
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Pesticides	Dieldrin	0.094	ug/L	U	UJ	S
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Pesticides	Endosulfan I	0.047	ug/L	U	UJ	S
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Pesticides	Endosulfan II	0.094	ug/L	U	UJ	S
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Pesticides	Endosulfan Sulfate	0.094	ug/L	U	UJ	S
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Pesticides	Endrin	0.094	ug/L	U	UJ	S
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Pesticides	Endrin Aldehyde	0.094	ug/L	U	UJ	S
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Pesticides	Endrin Ketone	0.094	ug/L	U	UJ	S
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Pesticides	gamma-BHC (Lindane)	0.047	ug/L	U	UJ	S
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Pesticides	gamma-Chlordane	0.047	ug/L	U	UJ	S
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Pesticides	Heptachlor	0.047	ug/L	U	UJ	S
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Pesticides	Heptachlor Epoxide	0.047	ug/L	U	UJ	S
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Pesticides	Methoxychlor	0.47	ug/L	U	UJ	S
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Pesticides	Toxaphene	4.7	ug/L	U	UJ	S
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Herbicides	2,4,5-T	0.48	ug/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Herbicides	2,4,5-TP (Silvex)	0.48	ug/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Herbicides	2,4-D	0.25	ug/L	JP		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Herbicides	2,4-DB	0.48	ug/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Herbicides	Dalapon	9.6	ug/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Herbicides	Dicamba	0.48	ug/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Herbicides	Dichlorprop	0.48	ug/L	U		

Sauget Area 2
Surface Water Sample Results

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers	URS Qualifier Code
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Herbicides	MCPA (2-Methyl-4-Chlorophenoxyacetic Acid)	120	ug/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Herbicides	MCPP	120	ug/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Herbicides	Pentachlorophenol	0.24	ug/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Metals	Aluminum	3.1	mg/L			
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Metals	Aluminum (Dissolved)	0.2	mg/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Metals	Antimony	0.02	mg/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Metals	Antimony (Dissolved)	0.02	mg/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Metals	Arsenic	0.0066	mg/L	J		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Metals	Arsenic (Dissolved)	0.01	mg/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Metals	Barium	0.11	mg/L			
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Metals	Barium (Dissolved)	0.076	mg/L			
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Metals	Beryllium	0.00014	mg/L	J		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Metals	Beryllium (Dissolved)	0.004	mg/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Metals	Cadmium	0.005	mg/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Metals	Cadmium (Dissolved)	0.005	mg/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Metals	Calcium	46	mg/L			
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Metals	Calcium (Dissolved)	45	mg/L			
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Metals	Chromium	0.0038	mg/L	J		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Metals	Chromium (Dissolved)	0.01	mg/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Metals	Cobalt	0.0014	mg/L	J		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Metals	Cobalt (Dissolved)	0.01	mg/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Metals	Copper	0.0039	mg/L	J		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Metals	Copper (Dissolved)	0.02	mg/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Metals	Iron	3	mg/L			
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Metals	Iron (Dissolved)	0.05	mg/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Metals	Lead	0.0047	mg/L	J		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Metals	Lead (Dissolved)	0.005	mg/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Metals	Magnesium	21	mg/L			
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Metals	Magnesium (Dissolved)	21	mg/L			
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Metals	Manganese	0.24	mg/L			
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Metals	Manganese (Dissolved)	0.01	mg/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Metals	Mercury	0.0002	mg/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Metals	Mercury (Dissolved)	0.0002	mg/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Metals	Nickel	0.0064	mg/L	J		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Metals	Nickel (Dissolved)	0.0024	mg/L	J		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Metals	Potassium	5.5	mg/L			
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Metals	Potassium (Dissolved)	4.8	mg/L			
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Metals	Selenium	0.01	mg/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Metals	Selenium (Dissolved)	0.0075	mg/L	J B	U	P
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Metals	Silver	0.01	mg/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Metals	Silver (Dissolved)	0.01	mg/L	U		

Sauget Area 2
Surface Water Sample Results

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers	URS Qualifier Code
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Metals	Sodium	35	mg/L			
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Metals	Sodium (Dissolved)	34	mg/L			
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Metals	Thallium	0.025	mg/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Metals	Thallium (Dissolved)	0.025	mg/L	U		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Metals	Vanadium	0.0097	mg/L	J		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Metals	Vanadium (Dissolved)	0.0033	mg/L	J		
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Metals	Zinc	0.052	mg/L			
Surface Water	RIVER	PDA2	SW-SA2-GMCS-PDA2	9/22/05	Metals	Zinc (Dissolved)	0.0061	mg/L	J		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	VOCs	1,1,1-Trichloroethane	1	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	VOCs	1,1,2,2-Tetrachloroethane	1	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	VOCs	1,1,2-Trichloroethane	1	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	VOCs	1,1-Dichloroethane	1	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	VOCs	1,1-Dichloroethylene	1	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	VOCs	1,2-Dichloroethane	1	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	VOCs	1,2-Dichloroethene (total)	2	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	VOCs	1,2-Dichloropropane	1	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	VOCs	2-Butanone (MEK)	10	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	VOCs	4-Methyl-2-pentanone (MIBK)	10	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	VOCs	Acetone	25	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	VOCs	Benzene	1	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	VOCs	Bromodichloromethane	1	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	VOCs	Bromoform	1	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	VOCs	Bromomethane	1	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	VOCs	Carbon Disulfide	1	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	VOCs	Carbon Tetrachloride	1	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	VOCs	Chlorobenzene	4.3	ug/L		J	F
Surface Water	RIVER	PDA2	DUP SW	9/22/05	VOCs	Chlorodibromomethane	1	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	VOCs	Chloroethane	1	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	VOCs	Chloroform	1	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	VOCs	Chloromethane	1	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	VOCs	cis-1,3-Dichloropropene	1	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	VOCs	Dichloromethane	5	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	VOCs	Ethylbenzene	1	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	VOCs	Methyl N-Butyl Ketone	10	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	VOCs	Styrene (Monomer)	1	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	VOCs	Tetrachloroethene	1	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	VOCs	Toluene	1	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	VOCs	trans-1,3-Dichloropropene	1	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	VOCs	Trichloroethene	1	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	VOCs	Vinyl chloride	1	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	VOCs	Xylenes, Total	2	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	1,2,4-Trichlorobenzene	9.4	ug/L	U		

Sauget Area 2
Surface Water Sample Results

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers	URS Qualifier Code
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	1,2-Dichlorobenzene	9.4	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	1,3-Dichlorobenzene	9.4	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	1,4-Dichlorobenzene	9.4	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	2,2'-Oxybis(1-Chloropropane) (bis-2-chloroisopropyl ether)	9.4	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	2,4,5-Trichlorophenol	9.4	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	2,4,6-Trichlorophenol	9.4	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	2,4-Dichlorophenol	9.4	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	2,4-Dimethylphenol	9.4	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	2,4-Dinitrophenol	47	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	2,4-Dinitrotoluene	9.4	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	2,6-Dinitrotoluene	9.4	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	2-Chloronaphthalene	9.4	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	2-Chlorophenol	9.4	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	2-Methylnaphthalene	9.4	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	2-Methylphenol (o-Cresol)	9.4	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	2-Nitroaniline	47	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	2-Nitrophenol	9.4	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	3 & 4 Methylphenol	9.4	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	3,3'-Dichlorobenzidine	19	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	3-Nitroaniline	47	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	4,6-Dinitro-2-methylphenol	47	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	4-Bromophenyl Phenyl Ether	9.4	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	4-Chloro-3-methylphenol	9.4	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	4-Chlorophenyl Phenyl Ether	9.4	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	4-Nitrophenol	47	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	Acenaphthene	9.4	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	Acenaphthylene	9.4	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	Anthracene	9.4	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	Benzo(a)anthracene	9.4	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	Benzo(a)pyrene	9.4	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	Benzo(b)fluoranthene	9.4	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	Benzo(g,h,i)perylene	9.4	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	Benzo(k)fluoranthene	9.4	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	Benzyl Butyl Phthalate	9.4	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	bis(2-Chloroethoxy)methane	9.4	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	bis(2-Chloroethyl)ether	9.4	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	bis(2-Ethylhexyl)phthalate	9.4	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	Carbazole	9.4	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	Chrysene	9.4	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	Dibenzo(a,h)anthracene	9.4	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	Dibenzofuran	9.4	ug/L	U		

Sauget Area 2
Surface Water Sample Results

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers	URS Qualifier Code
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	Diethyl Phthalate	9.4	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	Dimethyl Phthalate	9.4	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	Di-n-butylphthalate	9.4	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	Di-n-octylphthalate	9.4	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	Dinoseb	9.4	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	Fluoranthene	9.4	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	Fluorene	9.4	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	Hexachlorobenzene	9.4	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	Hexachlorobutadiene	9.4	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	Hexachlorocyclopentadiene	9.4	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	Hexachloroethane	9.4	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	Indeno(1,2,3-cd)pyrene	9.4	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	Isophorone	9.4	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	Naphthalene	9.4	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	Nitrobenzene	9.4	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	N-Nitroso-di-n-propylamine	9.4	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	N-Nitrosodiphenylamine	9.4	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	P-Chloroaniline	19	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	Phenanthrene	9.4	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	Phenol	9.4	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	P-Nitroaniline	47	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	SVOCs	Pyrene	9.4	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Pesticides	4,4'-DDD	0.094	ug/L	U	UJ	S
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Pesticides	4,4'-DDE	0.094	ug/L	U	UJ	S
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Pesticides	4,4'-DDT	0.094	ug/L	U	UJ	S
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Pesticides	Aldrin	0.047	ug/L	U	UJ	S
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Pesticides	alpha-BHC	0.047	ug/L	U	UJ	S
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Pesticides	alpha-Chlordane	0.047	ug/L	U	UJ	S
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Pesticides	beta-BHC	0.047	ug/L	U	UJ	S
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Pesticides	delta-BHC	0.047	ug/L	U	UJ	S
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Pesticides	Dieldrin	0.094	ug/L	U	UJ	S
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Pesticides	Endosulfan I	0.047	ug/L	U	UJ	S
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Pesticides	Endosulfan II	0.094	ug/L	U	UJ	S
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Pesticides	Endosulfan Sulfate	0.094	ug/L	U	UJ	S
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Pesticides	Endrin	0.094	ug/L	U	UJ	S
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Pesticides	Endrin Aldehyde	0.094	ug/L	U	UJ	S
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Pesticides	Endrin Ketone	0.094	ug/L	U	UJ	S
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Pesticides	gamma-BHC (Lindane)	0.047	ug/L	U	UJ	S
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Pesticides	gamma-Chlordane	0.047	ug/L	U	UJ	S
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Pesticides	Heptachlor	0.047	ug/L	U	UJ	S
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Pesticides	Heptachlor Epoxide	0.047	ug/L	U	UJ	S
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Pesticides	Methoxychlor	0.47	ug/L	U	UJ	S

Sauget Area 2
Surface Water Sample Results

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers	URS Qualifier Code
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Pesticides	Toxaphene	4.7	ug/L	U	UJ	S
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Herbicides	2,4,5-T	0.49	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Herbicides	2,4,5-TP (Silvex)	0.49	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Herbicides	2,4-D	0.49	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Herbicides	2,4-DB	0.49	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Herbicides	Dalapon	9.7	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Herbicides	Dicamba	0.49	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Herbicides	Dichlorprop	0.49	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Herbicides	MCPA (2-Methyl-4-Chlorophenoxyacetic Acid)	120	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Herbicides	MCPP	120	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Herbicides	Pentachlorophenol	0.24	ug/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Metals	Aluminum	2.4	mg/L			
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Metals	Aluminum (Dissolved)	0.2	mg/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Metals	Antimony	0.02	mg/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Metals	Antimony (Dissolved)	0.02	mg/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Metals	Arsenic	0.01	mg/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Metals	Arsenic (Dissolved)	0.01	mg/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Metals	Barium	0.11	mg/L			
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Metals	Barium (Dissolved)	0.074	mg/L			
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Metals	Beryllium	0.00012	mg/L	J		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Metals	Beryllium (Dissolved)	0.004	mg/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Metals	Cadmium	0.005	mg/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Metals	Cadmium (Dissolved)	0.005	mg/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Metals	Calcium	46	mg/L			
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Metals	Calcium (Dissolved)	43	mg/L			
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Metals	Chromium	0.0028	mg/L	J		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Metals	Chromium (Dissolved)	0.01	mg/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Metals	Cobalt	0.0013	mg/L	J		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Metals	Cobalt (Dissolved)	0.01	mg/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Metals	Copper	0.0033	mg/L	J		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Metals	Copper (Dissolved)	0.02	mg/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Metals	Iron	2.3	mg/L			
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Metals	Iron (Dissolved)	0.05	mg/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Metals	Lead	0.005	mg/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Metals	Lead (Dissolved)	0.0024	mg/L	J		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Metals	Magnesium	21	mg/L			
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Metals	Magnesium (Dissolved)	20	mg/L			
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Metals	Manganese	0.21	mg/L			
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Metals	Manganese (Dissolved)	0.01	mg/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Metals	Mercury	0.0002	mg/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Metals	Mercury (Dissolved)	0.0002	mg/L	U		

Sauget Area 2
Surface Water Sample Results

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers	URS Qualifier Code
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Metals	Nickel	0.0046	mg/L	J		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Metals	Nickel (Dissolved)	0.04	mg/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Metals	Potassium	5.4	mg/L			
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Metals	Potassium (Dissolved)	4.7	mg/L			
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Metals	Selenium	0.01	mg/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Metals	Selenium (Dissolved)	0.0066	mg/L	J B	U	P
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Metals	Silver	0.01	mg/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Metals	Silver (Dissolved)	0.01	mg/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Metals	Sodium	35	mg/L			
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Metals	Sodium (Dissolved)	33	mg/L			
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Metals	Thallium	0.025	mg/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Metals	Thallium (Dissolved)	0.025	mg/L	U		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Metals	Vanadium	0.0084	mg/L	J		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Metals	Vanadium (Dissolved)	0.002	mg/L	J		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Metals	Zinc	0.019	mg/L	J		
Surface Water	RIVER	PDA2	DUP SW	9/22/05	Metals	Zinc (Dissolved)	0.0037	mg/L	J		

Sauget Area 2
Sediment Sample Results

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers	URS Qualifier Code
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	VOCs	1,1,1-Trichloroethane	11	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	VOCs	1,1,2,2-Tetrachloroethane	11	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	VOCs	1,1,2-Trichloroethane	11	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	VOCs	1,1-Dichloroethane	11	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	VOCs	1,1-Dichloroethylene	11	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	VOCs	1,2-Dichloroethane	11	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	VOCs	1,2-Dichloroethene (total)	21	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	VOCs	1,2-Dichloropropane	11	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	VOCs	2-Butanone (MEK)	53	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	VOCs	4-Methyl-2-pentanone (MIBK)	53	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	VOCs	Acetone	110	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	VOCs	Benzene	11	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	VOCs	Bromodichloromethane	11	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	VOCs	Bromoform	11	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	VOCs	Bromomethane	11	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	VOCs	Carbon Disulfide	11	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	VOCs	Carbon Tetrachloride	11	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	VOCs	Chlorobenzene	78	ug/Kg		J	F
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	VOCs	Chlorodibromomethane	11	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	VOCs	Chloroethane	11	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	VOCs	Chloroform	11	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	VOCs	Chloromethane	11	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	VOCs	cis-1,2-Dichloroethene	11	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	VOCs	cis-1,3-Dichloropropene	11	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	VOCs	Dichloromethane	11	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	VOCs	Ethylbenzene	2.1	ug/Kg	J		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	VOCs	Methyl N-Butyl Ketone	53	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	VOCs	Styrene (Monomer)	11	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	VOCs	Tetrachloroethene	11	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	VOCs	Toluene	11	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	VOCs	trans-1,2-Dichloroethene	11	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	VOCs	trans-1,3-Dichloropropene	11	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	VOCs	Trichloroethene	11	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	VOCs	Vinyl chloride	11	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	VOCs	Xylenes, Total	21	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	1,2,4-Trichlorobenzene	720	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	1,2-Dichlorobenzene	240	ug/Kg	J		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	1,3-Dichlorobenzene	720	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	1,4-Dichlorobenzene	200	ug/Kg	J		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	2,2'-Oxybis(1-Chloropropane) (bis-2-chloroisopropyl ether)	720	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	2,4,5-Trichlorophenol	720	ug/Kg	U		

Sauget Area 2
Sediment Sample Results

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers	URS Qualifier Code
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	2,4,6-Trichlorophenol	720	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	2,4-Dichlorophenol	720	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	2,4-Dimethylphenol	720	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	2,4-Dinitrophenol	3700	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	2,4-Dinitrotoluene	720	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	2,6-Dinitrotoluene	720	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	2-Chloronaphthalene	720	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	2-Chlorophenol	720	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	2-Methylnaphthalene	720	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	2-Methylphenol (o-Cresol)	720	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	2-Nitroaniline	3700	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	2-Nitrophenol	720	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	3 & 4 Methylphenol	720	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	3,3'-Dichlorobenzidine	1400	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	3-Nitroaniline	3700	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	4,6-Dinitro-2-methylphenol	3700	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	4-Bromophenyl Phenyl Ether	720	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	4-Chloro-3-methylphenol	720	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	4-Chlorophenyl Phenyl Ether	720	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	4-Nitrophenol	3700	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	Acenaphthene	720	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	Acenaphthylene	720	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	Anthracene	720	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	Benzo(a)anthracene	720	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	Benzo(a)pyrene	720	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	Benzo(b)fluoranthene	720	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	Benzo(g,h,i)perylene	720	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	Benzo(k)fluoranthene	720	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	Benzyl Butyl Phthalate	720	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	bis(2-Chloroethoxy)methane	720	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	bis(2-Ethylhexyl)phthalate	720	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	Carbazole	720	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	Chrysene	720	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	Dibenzo(a,h)anthracene	720	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	Dibenzofuran	720	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	Diethyl Phthalate	720	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	Dimethyl Phthalate	720	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	Di-n-butylphthalate	720	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	Di-n-octylphthalate	720	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	Dinoseb	720	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	Fluoranthene	720	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	Fluorene	720	ug/Kg	U		

Sauget Area 2
Sediment Sample Results

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers	URS Qualifier Code
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	Hexachlorobenzene	720	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	Hexachlorobutadiene	720	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	Hexachlorocyclopentadiene	720	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	Hexachloroethane	720	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	Indeno(1,2,3-cd)pyrene	720	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	Isophorone	720	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	Naphthalene	720	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	Nitrobenzene	720	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	N-Nitroso-di-n-propylamine	720	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	N-Nitrosodiphenylamine	720	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	P-Chloroaniline	500	ug/Kg	J		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	Phenanthrene	720	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	Phenol	720	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	P-Nitroaniline	3700	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	SVOCs	Pyrene	45	ug/Kg	J		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	Pesticides	4,4'-DDD	73	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	Pesticides	4,4'-DDE	73	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	Pesticides	4,4'-DDT	73	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	Pesticides	Aldrin	37	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	Pesticides	alpha-BHC	37	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	Pesticides	alpha-Chlordane	37	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	Pesticides	beta-BHC	37	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	Pesticides	delta-BHC	37	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	Pesticides	Dieldrin	73	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	Pesticides	Endosulfan I	37	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	Pesticides	Endosulfan II	73	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	Pesticides	Endosulfan Sulfate	73	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	Pesticides	Endrin	73	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	Pesticides	Endrin Aldehyde	73	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	Pesticides	Endrin Ketone	73	ug/Kg	U	UJ	L
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	Pesticides	gamma-BHC (Lindane)	37	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	Pesticides	gamma-Chlordane	37	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	Pesticides	Heptachlor	37	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	Pesticides	Heptachlor Epoxide	37	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	Pesticides	Methoxychlor	370	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	Pesticides	Toxaphene	3700	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	Herbicides	2,4,5-T	18	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	Herbicides	2,4,5-TP (Silvex)	18	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	Herbicides	2,4-D	120	ug/Kg		J	F
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	Herbicides	2,4-DB	18	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	Herbicides	Dalapon	720	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	Herbicides	Dicamba	18	ug/Kg	U		

Sauget Area 2
Sediment Sample Results

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers	URS Qualifier Code
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	Herbicides	Dichlorprop	31	ug/Kg	J		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	Herbicides	MCPA (2-Methyl-4-Chlorophenoxyacetic Acid)	4400	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	Herbicides	MCPP	4400	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	Herbicides	Pentachlorophenol	18	ug/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	Metals	Aluminum	12000	mg/Kg			
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	Metals	Antimony	4.2	mg/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	Metals	Arsenic	6.7	mg/Kg			
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	Metals	Barium	180	mg/Kg			
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	Metals	Beryllium	0.65	mg/Kg	J		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	Metals	Cadmium	0.57	mg/Kg	J		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	Metals	Calcium	11000	mg/Kg			
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	Metals	Chromium	17	mg/Kg			
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	Metals	Cobalt	7.7	mg/Kg			
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	Metals	Copper	18	mg/Kg			
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	Metals	Iron	17000	mg/Kg			
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	Metals	Lead	20	mg/Kg			
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	Metals	Magnesium	4100	mg/Kg			
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	Metals	Manganese	770	mg/Kg			
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	Metals	Mercury	0.046	mg/Kg			
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	Metals	Nickel	19	mg/Kg			
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	Metals	Potassium	1700	mg/Kg	B		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	Metals	Selenium	5.3	mg/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	Metals	Silver	2.1	mg/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	Metals	Sodium	360	mg/Kg	B	U	P
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	Metals	Thallium	5.3	mg/Kg	U		
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	Metals	Vanadium	28	mg/Kg			
Sediment	RIVER	PDA2	SED-SA2-GMCS-PDA2	9/22/05	Metals	Zinc	210	mg/Kg			
Sediment	RIVER	PDA2	DUP SED	9/22/05	VOCs	1,1,1-Trichloroethane	15	ug/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	VOCs	1,1,2,2-Tetrachloroethane	15	ug/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	VOCs	1,1,2-Trichloroethane	15	ug/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	VOCs	1,1-Dichloroethane	15	ug/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	VOCs	1,1-Dichloroethylene	15	ug/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	VOCs	1,2-Dichloroethane	15	ug/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	VOCs	1,2-Dichloroethene (total)	30	ug/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	VOCs	1,2-Dichloropropane	15	ug/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	VOCs	2-Butanone (MEK)	75	ug/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	VOCs	4-Methyl-2-pentanone (MIBK)	75	ug/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	VOCs	Acetone	25	ug/Kg	J		
Sediment	RIVER	PDA2	DUP SED	9/22/05	VOCs	Benzene	4.9	ug/Kg	J		
Sediment	RIVER	PDA2	DUP SED	9/22/05	VOCs	Bromodichloromethane	15	ug/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	VOCs	Bromoform	15	ug/Kg	U		

Sauget Area 2
Sediment Sample Results

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers	URS Qualifier Code
Sediment	RIVER	PDA2	DUP SED	9/22/05	VOCs	Bromomethane	15	ug/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	VOCs	Carbon Disulfide	15	ug/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	VOCs	Carbon Tetrachloride	15	ug/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	VOCs	Chlorobenzene	450	ug/Kg		J	F
Sediment	RIVER	PDA2	DUP SED	9/22/05	VOCs	Chlorodibromomethane	15	ug/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	VOCs	Chloroethane	15	ug/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	VOCs	Chloroform	15	ug/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	VOCs	Chloromethane	15	ug/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	VOCs	cis-1,2-Dichloroethene	15	ug/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	VOCs	cis-1,3-Dichloropropene	15	ug/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	VOCs	Dichloromethane	15	ug/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	VOCs	Ethylbenzene	3.1	ug/Kg	J		
Sediment	RIVER	PDA2	DUP SED	9/22/05	VOCs	Methyl N-Butyl Ketone	75	ug/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	VOCs	Styrene (Monomer)	15	ug/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	VOCs	Tetrachloroethene	15	ug/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	VOCs	Toluene	8.5	ug/Kg	J		
Sediment	RIVER	PDA2	DUP SED	9/22/05	VOCs	trans-1,2-Dichloroethene	15	ug/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	VOCs	trans-1,3-Dichloropropene	15	ug/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	VOCs	Trichloroethene	15	ug/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	VOCs	Vinyl chloride	15	ug/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	VOCs	Xylenes, Total	30	ug/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	1,2,4-Trichlorobenzene	710	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	1,2-Dichlorobenzene	180	ug/Kg	J	J	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	1,3-Dichlorobenzene	710	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	1,4-Dichlorobenzene	160	ug/Kg	J	J	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	2,2'-Oxybis(1-Chloropropane) (bis-2-chloroisopropyl ether)	710	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	2,4,5-Trichlorophenol	710	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	2,4,6-Trichlorophenol	710	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	2,4-Dichlorophenol	710	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	2,4-Dimethylphenol	710	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	2,4-Dinitrophenol	3700	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	2,4-Dinitrotoluene	710	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	2,6-Dinitrotoluene	710	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	2-Chloronaphthalene	710	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	2-Chlorophenol	710	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	2-Methylnaphthalene	710	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	2-Methylphenol (o-Cresol)	710	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	2-Nitroaniline	3700	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	2-Nitrophenol	710	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	3 & 4 Methylphenol	710	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	3,3'-Dichlorobenzidine	1400	ug/Kg	U	UJ	S

Sauget Area 2
Sediment Sample Results

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers	URS Qualifier Code
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	3-Nitroaniline	3700	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	4,6-Dinitro-2-methylphenol	3700	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	4-Bromophenyl Phenyl Ether	710	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	4-Chloro-3-methylphenol	710	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	4-Chlorophenyl Phenyl Ether	710	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	4-Nitrophenol	3700	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	Acenaphthene	710	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	Acenaphthylene	710	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	Anthracene	710	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	Benzo(a)anthracene	710	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	Benzo(a)pyrene	710	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	Benzo(b)fluoranthene	710	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	Benzo(g,h,i)perylene	710	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	Benzo(k)fluoranthene	710	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	Benzyl Butyl Phthalate	710	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	bis(2-Chloroethoxy)methane	710	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	bis(2-Ethylhexyl)phthalate	710	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	Carbazole	710	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	Chrysene	710	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	Dibenzo(a,h)anthracene	710	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	Dibenzofuran	710	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	Diethyl Phthalate	710	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	Dimethyl Phthalate	710	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	Di-n-butylphthalate	710	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	Di-n-octylphthalate	710	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	Dinoseb	710	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	Fluoranthene	710	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	Fluorene	710	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	Hexachlorobenzene	710	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	Hexachlorobutadiene	710	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	Hexachlorocyclopentadiene	710	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	Hexachloroethane	710	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	Indeno(1,2,3-cd)pyrene	710	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	Isophorone	710	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	Naphthalene	710	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	Nitrobenzene	710	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	N-Nitroso-di-n-propylamine	710	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	N-Nitrosodiphenylamine	710	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	P-Chloroaniline	380	ug/Kg	J	J	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	Phenanthrene	710	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	Phenol	710	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	P-Nitroaniline	3700	ug/Kg	U	UJ	S

Sauget Area 2
Sediment Sample Results

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers	URS Qualifier Code
Sediment	RIVER	PDA2	DUP SED	9/22/05	SVOCs	Pyrene	710	ug/Kg	U	UJ	S
Sediment	RIVER	PDA2	DUP SED	9/22/05	Pesticides	4,4'-DDD	71	ug/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	Pesticides	4,4'-DDE	71	ug/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	Pesticides	4,4'-DDT	71	ug/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	Pesticides	Aldrin	37	ug/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	Pesticides	alpha-BHC	37	ug/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	Pesticides	alpha-Chlordane	37	ug/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	Pesticides	beta-BHC	37	ug/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	Pesticides	delta-BHC	37	ug/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	Pesticides	Dieldrin	71	ug/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	Pesticides	Endosulfan I	37	ug/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	Pesticides	Endosulfan II	71	ug/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	Pesticides	Endosulfan Sulfate	71	ug/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	Pesticides	Endrin	71	ug/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	Pesticides	Endrin Aldehyde	71	ug/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	Pesticides	Endrin Ketone	71	ug/Kg	U	UJ	L
Sediment	RIVER	PDA2	DUP SED	9/22/05	Pesticides	gamma-BHC (Lindane)	37	ug/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	Pesticides	gamma-Chlordane	37	ug/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	Pesticides	Heptachlor	37	ug/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	Pesticides	Heptachlor Epoxide	37	ug/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	Pesticides	Methoxychlor	370	ug/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	Pesticides	Toxaphene	3700	ug/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	Herbicides	2,4,5-T	18	ug/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	Herbicides	2,4,5-TP (Silvex)	18	ug/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	Herbicides	2,4-D	51	ug/Kg	P	J	F
Sediment	RIVER	PDA2	DUP SED	9/22/05	Herbicides	2,4-DB	18	ug/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	Herbicides	Dalapon	710	ug/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	Herbicides	Dicamba	18	ug/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	Herbicides	Dichlorprop	19	ug/Kg	J		
Sediment	RIVER	PDA2	DUP SED	9/22/05	Herbicides	MCPA (2-Methyl-4-Chlorophenoxyacetic Acid)	4300	ug/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	Herbicides	MCPP	4300	ug/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	Herbicides	Pentachlorophenol	18	ug/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	Metals	Aluminum	12000	mg/Kg			
Sediment	RIVER	PDA2	DUP SED	9/22/05	Metals	Antimony	4	mg/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	Metals	Arsenic	5.9	mg/Kg			
Sediment	RIVER	PDA2	DUP SED	9/22/05	Metals	Barium	160	mg/Kg			
Sediment	RIVER	PDA2	DUP SED	9/22/05	Metals	Beryllium	0.65	mg/Kg	J		
Sediment	RIVER	PDA2	DUP SED	9/22/05	Metals	Cadmium	0.53	mg/Kg	J		
Sediment	RIVER	PDA2	DUP SED	9/22/05	Metals	Calcium	11000	mg/Kg			
Sediment	RIVER	PDA2	DUP SED	9/22/05	Metals	Chromium	17	mg/Kg			
Sediment	RIVER	PDA2	DUP SED	9/22/05	Metals	Cobalt	7.5	mg/Kg			

Sauget Area 2
Sediment Sample Results

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers	URS Qualifier Code
Sediment	RIVER	PDA2	DUP SED	9/22/05	Metals	Copper	18	mg/Kg			
Sediment	RIVER	PDA2	DUP SED	9/22/05	Metals	Iron	17000	mg/Kg			
Sediment	RIVER	PDA2	DUP SED	9/22/05	Metals	Lead	21	mg/Kg			
Sediment	RIVER	PDA2	DUP SED	9/22/05	Metals	Magnesium	4200	mg/Kg			
Sediment	RIVER	PDA2	DUP SED	9/22/05	Metals	Manganese	760	mg/Kg			
Sediment	RIVER	PDA2	DUP SED	9/22/05	Metals	Mercury	0.04	mg/Kg	J		
Sediment	RIVER	PDA2	DUP SED	9/22/05	Metals	Nickel	18	mg/Kg			
Sediment	RIVER	PDA2	DUP SED	9/22/05	Metals	Potassium	1800	mg/Kg	B		
Sediment	RIVER	PDA2	DUP SED	9/22/05	Metals	Selenium	5	mg/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	Metals	Silver	2	mg/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	Metals	Sodium	360	mg/Kg	B	U	P
Sediment	RIVER	PDA2	DUP SED	9/22/05	Metals	Thallium	5	mg/Kg	U		
Sediment	RIVER	PDA2	DUP SED	9/22/05	Metals	Vanadium	29	mg/Kg			
Sediment	RIVER	PDA2	DUP SED	9/22/05	Metals	Zinc	200	mg/Kg			