US EPA RECORDS CENTER REGION 5
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FINAL SITE INVESTIGATION REPORT

AOC SITE
CANTEEN TOWNSHIP
ST. CLAIR COUNTY, ILLINOIS

May 07, 2004

RAPPS Project ID: SA03035/010

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RAPPS Project ID: SA03035/010

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ESTABLISHED IN 1978
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May 07, 2004

Mike Harris, OSC
Emergency Response Branch, Region 5
United States Environmental Protection Agency
77 W. Jackson Blvd., SE-5J
Chicago, Illinois 60604-3507

Re: SLAS – AOC Site
Final Site Investigation Report

Dear Mr. Harris.

The enclosed Final Site Investigation Report is intended to include the terms and conditions requested by the U S. EPA in voice mail messages between you, Tom Turner, and Bill Forcade. In particular, the "recommendations" portion (Section 3.3) was revised to incorporate those terms and conditions.

We attempted to contact you by telephone and email yesterday (May 6th) and today (May 7th) to confirm that the revisions accurately characterize what the U.S. EPA is requesting and that they are in an acceptable format. In an effort to keep the project moving forward, we elected to submit the attached report without waiting for your response.

We will forward additional paper copies (and an electronic copy if requested) upon your approval of the report.

Please contact us if you have any questions or comments regarding this report

Sincerely,

Bryan C. Johnsrud

Bryan C. Johnsrud, P E
Project Coordinator

cc w/o enclosure: Tom Turner – United States Environmental Protection Agency
Irv Pielet – St. Louis Auto Shredding
Bill Forcade – Jenner & Block
Dave Beck – RAPPS Engineering & Applied Science

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APPENDIX

A Excerpts and Maps from Previous Investigations

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E Relocated Interstate 70 Fact Sheet & IDOT Preliminary Plans Cross Sections

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1 Introduction

An Administrative Order by Consent (AOC) was executed by St. Louis Auto Shredding (SLAS) and the United States Environmental Protection Agency (U.S. EPA) in the matter of the SLAS Drum Disposal Site under Docket No. V-W-'03-C742. The AOC was issued pursuant to Sections 106 and 122 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended.

The AOC addresses the presence of possible contamination on a portion of the northern parcel ("the AOC Site") of the SLAS property. SLAS has never conducted any business operations on the AOC Site and any drum-related contamination undoubtedly predates SLAS acquisition of the property.

The AOC Site is located on a tract of approximately 9.73 acres north of the Cahokia Canal and west of Illinois Route 203 in Section 6, Township 2 North, Range 9 West of the Third Principal Meridian in St. Clair County, Illinois (See Figure 1-01).

In accordance with the AOC, SLAS will perform, at a minimum, the following hazardous substance assessments and removal actions:

1.) Prepare a work plan that includes tasks and a time line for the activities as well as a site Health and Safety Plan addressing continuous monitoring of airborne contaminants and dust control measures.

2.) Perform a soil characterization survey, with appropriate quality assurance/quality control (QA/QC), to determine the levels of specific metals and PCBs in the surface soil.

3.) Provide site security measures as required.

4.) Characterize, remove and properly dispose of hazardous substances and wastes (contaminated soils) located at the AOC Site in accordance with U.S. EPA's Off-Site Rule (40 CFR 300.440) as necessary. Perform confirmation sampling of these areas.

5.) Backfill the excavated areas with clean material and topsoil as necessary. Restore and vegetate to prevent soil erosion.

6.) Properly address any additional hazardous waste and/or materials identified during the removal action.

7.) Ensure that the proposed cleanup adequately protects human health, welfare, and the environmental from the hazardous waste described in the Action Memo.

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According to the AOC's Conclusions of Law and Determinations, the conditions at the AOC Site constitute a threat to public health and welfare or the environment based upon the considerations set forth in the National Contingency Plan (NCP), 40 CFR Section 300.415 (b)(2) which include, but are not limited to the following:

1.) Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances, or pollutants, or contaminants. The AOC Site is located near a commercial and recreational area of the Gateway National Golf Links golf course and within wooded and wetland areas. The AOC Site therefore poses the threat of potential exposure to animals and the food chain from polychlorinated biphenyls (PCBs) and metals contamination in AOC Site soil. Access to the AOC Site is uncontrolled, which poses health concerns through the potential exposure of human populations to PCB and lead contamination in AOC Site soil.

Harmful effects of lead include low birth weight, premature birth, decreased mental ability in infants, reduced growth in young children, and learning difficulties. Effects of exposure to lead are most severe in developing fetuses in pregnant woman and in young children. Effects of lead exposure in adults include decreased reaction time, inhibition of hemoglobin synthesis (causing anemia), damaged male reproductive system, and increased blood pressure. U.S. EPA considers lead to be a class B2 or probable human carcinogen.

2.) Hazardous substances or pollutants or contaminants in soils largely at or near the surface that may migrate or pose a threat of release. Elevated levels of PCBs and metals are present in surface soil according to XRF screening data results and soil sample analytical results. Concentrations of PCBs and metals at elevated levels in surface soil at the AOC Site indicate a threat of contaminant migration in melting snow or rain. Airborne contaminant migration is also possible through PCB adsorption to dust particles. Contaminants could also be tracked off site by people and animals that have contacted contaminated areas at the AOC Site. Migration of contaminants from the AOC Site has been determined a potential source of contamination to nearby wetland areas.

3.) Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released. Elevated levels of PCBs and metals are present in surface soil at the AOC Site. Contaminants could migrate off site through heavy rains or winds that would transport PCBs and heavy metals adsorbed to dust particles. As a result of such weather conditions, PCBs and metals could be continuously released to surrounding soil and air. Migration of contaminants from the AOC Site has been determined a potential source of contamination to nearby wetland areas.

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4.) The availability of other appropriate federal or state response mechanisms to respond to the release. Illinois EPA requested U.S. EPA, Region 5, assistance with the AOC Site. The State of Illinois does not have the funds to undertake removal of the hazardous wastes found at this site.

RAPPS Engineering & Applied Science (RAPPS) is an environmental engineering consulting firm headquartered in Springfield, Illinois, with branch offices in Carbondale, Illinois, and Elmwood, Illinois. RAPPS has been selected as the Project Coordinator and Contractor responsible for administration and implementation of all SLAS actions required by the U.S. EPA.

The scope of the approved work plan included the following objectives. These objectives were met to the extent feasible under the approved scope. The objectives were as follows:

- Determine the magnitude and the lateral and vertical extent of potential soil contamination at the AOC Site. Contamination impact of the uppermost groundwater unit will also be evaluated if groundwater is encountered during the investigation.
- Prepare a site investigation report with findings, conclusions, and recommendations as well as a remediation scope of work, based upon the results of chemical analysis of soil and groundwater samples. The remediation scope of work will include an estimate of contaminated soil excavation quantities and an associated estimated cost for remediation. If groundwater has been impacted and sufficient data on the extent and source of contamination are available, remedial alternatives will be provided to implement cleanup.
- Assess the potential for adjacent properties to be affected by the migration of contaminants from the AOC Site. If the potential is high, present recommendations for reducing or eliminating such contaminant migration.

Section 2 of this site investigation report discusses the scope of work including field activities and testing results. Section 3 describes the evaluation of results including conclusions and recommendations for the site.

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2 Scope of Work

Based on RAPPS' understanding of conditions at the AOC Site and the data requirements identified in the AOC, RAPPS developed a multitask approach to complete the scope of work.

2.1 Background Review and Work Plan Preparation

This task included RAPPS' activities associated with the initiation of this project and the production of the work plan for the investigation of known or suspected site conditions.

RAPPS reviewed background information for the AOC Site to evaluate potential environmental impacts and to determine potential boring locations and sampling parameters. The information included reports, correspondence, and legal descriptions obtained from RAPPS files and from contacts at the Illinois Department of Transportation (IDOT) and the Illinois Environmental Protection Agency (Illinois EPA).

Brief AOC Site History

A. Numerous abandoned drums of unknown waste material were first discovered in early 1993 at the site by hunters in the area or by the Illinois EPA during the performance of a tire cleanup in the vicinity. The Illinois EPA later determined that the property ownership was associated with SLAS. Site inspections were conducted by the Illinois EPA and Andrews Environmental Engineering, Inc. in 1993.

B. Various correspondences occurred from 1993 through 1996 between the Illinois EPA and SLAS.

C. SLAS completed removal and disposal of 27 drums of waste in early 1996. This process did not include soil removal or an investigation of the horizontal or vertical extent of soil contamination associated with the abandoned drums. Illinois EPA file information indicated that the drums contained paint sludge, paint pigments, and an epoxy material.

D. The IDOT completed designs in late 1997 for the relocation of Interstate 70. At least one of the alternate routes involved highway construction over the subject site.

E. The IDOT tasked the Illinois State Geological Survey (ISGS) and Ecology & Environment, Inc. (E&E) in 1998 to conduct a Preliminary Environmental Site Assessment (PESA) and a Preliminary Site Investigation (PSI), respectively. The associated reports indicated the presence of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), PCBs, and metals. As a result, the IDOT

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referred the AOC Site to the Illinois EPA's Site Assessment Unit (SAU).

F. The Illinois EPA's SAU performed field investigation activities in early 2000. Elevated levels of metals and PCBs were found on-site and in surrounding wetland areas. The Illinois EPA referred the AOC Site to the U.S. EPA.

G. The U.S. EPA conducted a removal evaluation during the fall of 2001. Sample analysis results exceeded regulatory limits for some metals and PCBs.

H. Various correspondences occurred in mid to late 2002 between the United States EPA and SLAS.

Excerpts and maps from previous investigations are provided in Appendix A.

Based on the information obtained, RAPPS' approved work plan included the project tasks, the investigation plan, project personnel, and the project schedule for the investigation and report production.

2.2 Field Activities

This task included the preparation of a site-specific health and safety plan; mobilization and demobilization of equipment, supplies, and personnel; and performance of field activities.

2.2.1 Health and Safety

Prior to the initiation of any fieldwork, a detailed health and safety plan (HSP) specific to the work order was prepared by RAPPS. The HSP described site-entry and monitoring requirements, personnel assignments, physical and chemical risks, personal protective equipment to be used, and decontamination procedures. The HSP was be reviewed and approved by a qualified safety officer. The plan meets Occupational Safety and Health Administration (OSHA) requirements for hazardous waste operations and emergency response set forth in 29 CFR 1910-120. Copies of the HSP were maintained on or near the site by RAPPS' personnel during field activities.

A site safety officer was assigned to the project and was responsible for proper implementation of the HSP, briefing of field personnel, and maintenance of site related safety records. All RAPPS' personnel had completed the OSHA required 40-hour health and safety training, and maintained their annual refresher training. Ambient air monitoring was conducted during all soil boring and groundwater monitoring activities. Level D safety precautions were implemented during intrusive boring and groundwater sampling activities. All health and safety related site activities were performed in accordance with the site specific HSP, which is consistent with RAPPS' Corporate Health and Safety Plan.

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A Health and Safety Briefing was held on September 17, 2003 at the St. Louis Auto Shredding office prior to the initiation of site clearing activities. A Health and Safety Briefing was held on September 30, 2003 at the site prior to the initiation of investigation activities. Morning health and safety meetings were held on October 1 and 2, 2003 to define work objectives for that day of investigation activities and any modifications to the HSP. Only authorized personnel were allowed access to the site during field activities.

2.2.2 General Approach

RAPPS conducted the following activities to determine the extent of surface or subsurface soil or groundwater contamination identified in the ISGS PESA, the IDOT PSI, the Illinois and U.S. EPA investigations, or by other, yet unknown sources. RAPPS used a Giddings Machine Company Model HDGSRPST trailer mounted drilling machine for the field investigation. No geotechnical subcontractors were needed to complete field activities. Teklab, Inc. of Collinsville, Illinois was used for laboratory analyses. The selection of the RAPPS-approved geotechnical and analytical subcontractors was based on project location and personnel availability.

RAPPS selected boring locations to characterize soil and groundwater conditions and to characterize the lateral and vertical extent of soil and groundwater contamination at the site. Locations were modified in the field by the field team leader, based on site observations or the accessibility of various areas of the site. Actual boring locations are depicted on Figure 2-01.

Boring locations were placed in a biased manner to best characterize suspected contamination areas. Four of the borings were located near previous investigation borings that exhibited the highest contamination. These four borings (B-01 through B-04) were advanced on September 30, 2003 and continuously sampled to an approximate depth of 20 feet, in order to collect a groundwater sample. A groundwater-sampling screen was then installed as described later in this section. Subsequently, 12 borings (B-05 through B-16) were advanced between September 30 and October 01, 2003, and continuously sampled to an approximate depth of 12 feet. The boring depths were selected based on information in the ISGS PESA and the IDOT PSI. Additionally, nine borings were advanced between October 01 and 02, 2003, and continuously sampled to an approximate depth of 4 feet in order to investigate shallow contamination identified by the Illinois EPA and U.S. EPA investigations. All borings were logged in the field by a RAPPS geologist. Field boring logs are provided in Appendix B.

2.2.3 Soil Sampling/Analysis Methodology

Soil samples obtained using the drilling machine were continuously collected by Zero Contamination System subsurface soil sampling procedures using a

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steel soil tube 4 feet long and PETG plastic liners according to RAPPS Standard Operating Procedures (SOPs).

Soil samples were collected at each of the boring locations to characterize soil conditions at the site. The soil samples were evaluated for laboratory analysis using field-screening techniques. These techniques include volatile organic compounds (VOCs) testing using a photo-ionization detector (PID), polychlorinated biphenyls (PCBs) testing using immunoassay test kits, and metals testing using x-ray fluorescence (XRF) equipment. Samples from each boring were selected for laboratory analysis to represent contaminated and uncontaminated materials, if present. The sampling and analytical methods comply with American Public Health Association (APHA) publication "Standard Methods for the Examination of Water and Wastewater, 18th Edition" and U.S. EPA publication SW-846 entitled "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods".

Soil samples were screened for the presence of VOCs by headspace procedures. Screening was conducted for each 1-foot interval collected from the Zero Contamination System sampler. The field screening entailed using a RAE Systems PGM-76 MINIRAE+ portable photoionization detector (PID) in accordance with the SOPs. The equipment and procedures used comply with SW-846 Method 3815 entitled "Screening Solid Samples for Volatile Organics". The results are indicated on the Field Boring Logs in Appendix B and a table in Appendix C.

Select soil samples were screened for the presence of metals by x-ray fluorescence (XRF) procedures. The field screening entailed using an Innov-X Systems PMI X-Series handheld XRF analyzer in accordance with the SOPs. The analyzer can identify 22 metals at varying limits of detection. These metals include antimony (Sb), arsenic (As), barium (Ba), bromine (Br), cadmium (Cd), chromium (Cr), cobalt (Co), copper (Cu), iron (Fe), lead (Pb), manganese (Mn), mercury (Hg), molybdenum (Mo), nickel (Ni), rubidium (Rb), selenium (Se), silver (Ag), strontium (Sr), tin (Sn), titanium (Ti), zinc (Zn), and zirconium (Zr). The equipment and procedures used comply with SW-846 Method 6200 entitled "Field Portable X-ray Fluorescence Spectrometry for the Determination of Elemental Concentrations in Soil and Sediment". The results are indicated on tables in Appendix C.

Select soil samples were screened for the presence of PCBs by immunoassay procedures. The field screening entailed using Strategic Diagnostics EnviroGard PCB in Soil Test Kits in accordance with the SOPs. The kits can provide semi-quantitative results (greater or less than) at calibrator (action) levels of 1, 5, 10, and 50 ppm PCBs as Aroclor 1248. Different Aroclors are detected with varying sensitivity. The equipment and procedures used comply with SW-846 Method 4020 entitled "Screening for Polychlorinated Biphenyls by Immunoassay". The results are indicated in the field testing results portion of this report.

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Select soil samples were analyzed for arsenic (As), barium (Ba), chromium (Cr), lead (Pb), toxicity characteristic leaching procedure (TCLP) Pb, PCBs, and pH by laboratory procedures. The procedures were performed by Teklab, Inc. of Collinsville, Illinois. The equipment and procedures used comply with the methods listed below. The results are indicated in a table and reports provided in Appendix D.

SW-846 Method 3050B entitled "Acid Digestion of Sediments, Sludges, and Soils" (As, Ba, Cr, and Pb)

SW-846 Method 6010B entitled "Inductively Coupled Plasma-atomic Emission Spectrometry" (As, Ba, Cr, and Pb)

SW-846 Method 1311 entitled "Toxicity Characteristic Leaching Procedure" (TCLP Pb)

SW-846 Method 3020A entitled "Acid Digestion of Aqueous Samples and Extracts for Total Metals for Analysis by GFAA Spectroscopy" (TCLP Pb)

APHA Method 2540G entitled "Total, Fixed and Volatile Solids" (PCBs)

SW-846 Method 3550B entitled "Ultrasonic Extraction" (PCBs)

SW-846 Method 8082 entitled "Polychlorinated Biphenyls (PCBs) by Gas Chromatography" (PCBs)

SW-846 Method 9045C entitled "Soil and Waste pH" (pH)

2.2.4 Groundwater Sampling/Analysis Methodology

Groundwater was encountered within four borings (B-01, B-02, B-03, and B-04) in a volume deemed sufficient to collect a groundwater sample; therefore groundwater-sampling screens were installed. Groundwater samples were collected to determine whether groundwater has been impacted and to compare groundwater results with nearby soil analytical results. The sampling and analytical methods comply with American Public Health Association (APHA) publication "Standard Methods for the Examination of Water and Wastewater, 18th Edition" and U.S. EPA publication SW-846 entitled "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods".

The groundwater-sampling screen consisted of an EON Products ¾" (ID) PrePak Well Screen lowered into the open probe hole to the total depth of the boring. The PrePak has an outer layer 65 mesh stainless steel screen over a 5' long 0.010" mill-slotted Schedule 40 PVC pipe with a 20x40 silica sand pack. A flush threaded PVC end plug was installed on each PrePak. Five-foot long ¾" (ID) PVC risers extended from the screen to a position above the ground surface. Depth to water measurements were obtained using a Solinst water level indicator. Watts polyethylene tubing was placed within the slotted

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well point to provide access to the groundwater. Groundwater samples were collected on October 02, 2003 using a Cole-Parmer Easy-load Masterflex Model 7518-02 portable peristaltic sampling pump and C-flex tubing. The groundwater samples were placed in laboratory grade sample bottles. An Oakton Waterproof pH/CON 10 Meter was used to measure pH in the field. All samples were packaged and shipped according to RAPPS' SOP.

Groundwater samples were analyzed for arsenic (As), barium (Ba), chromium (Cr), lead (Pb), and PCBs by laboratory procedures. The procedures were performed by Teklab, Inc. of Collinsville, Illinois. The equipment and procedures used comply with the methods listed below. The results are indicated in a table and reports provided in Appendix D.

APHA Method 3030E entitled "Preliminary Treatment of Samples" (Pb)

APHA Method 3113B entitled "Metals in Water by GFAA" (Pb)

APHA Method 3030F entitled "Preliminary Treatment of Samples" (As, Ba, Cr)

APHA Method 3120B entitled "Metals in Water by ICP" (As, Ba, Cr)

SW-846 Method 3510C entitled "Separatory Funnel Liquid-Liquid Extraction" (PCBs)

SW-846 Method 8082 entitled "Polychlorinated Biphenyls (PCBs) by Gas Chromatography" (PCBs)

Suspended solids were visibly present in the original groundwater samples. Samples were again collected on October 30, 2003. This time, Voss 0.45 micron Single Sample Disposable Groundwater Capsules were used to filter out the suspended solids. The samples were then analyzed for arsenic, barium, chromium, and lead. In addition, surface water samples were collected from the Cahokia Canal downstream of the site and from a marshy area north of the site. The Cahokia Canal sample was filtered and analyzed for arsenic, barium, chromium, lead, and PCBs. The marshy area sample could not be filtered due to the high solids content. That unfiltered sample was analyzed for arsenic, barium, chromium, and lead. The marshy area sample was of insufficient size to be analyzed for PCBs. The results are indicated in a table and reports provided in Appendix D.

2.2.5 Sample Handling, Decontamination, & Investigation-derived Waste

To prevent loss of contaminants from samples, proper sampling and handling procedures were followed by RAPPS field personnel. Sample bottle and preservation protocols followed established procedures for the parameters being tested. Samples were sealed in coolers and shipped to the laboratory for analyses in accordance with the established SOPs.

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To prevent cross-contamination during the boring and sampling program, a decontamination regimen was implemented by the field team. Reusable sampling equipment (spoons, bowls, trowels, etc.) was decontaminated before and after the collection of each sample. The drilling and reusable sampling equipment was decontaminated in accordance with approved SOPs before fieldwork was initiated. The equipment was decontaminated between borings according to approved SOPs.

RAPPS SOPs covering the following activities were adhered to during the investigation of the site:

- Direct push sampling.
- Headspace screening.
- Groundwater sampling.
- Sample containers and documentation.
- Sample control and documentation.
- Handling, packaging, and shipping of samples.
- General equipment decontamination.

These SOPs are on file at RAPPS and were utilized in the performance of fieldwork by RAPPS personnel.

Investigation-derived waste was generated during the field activities. No soil samples were returned to the borings. Expendable materials utilized in the investigation were decontaminated, if necessary, in the field and disposed of as general refuse. No purge water was generated in the investigation. Groundwater collected for chemical analysis using the procedures outlined in this section was representative of formation water, so no purging was necessary. All soil and water samples will be disposed of by the laboratory in accordance with regulatory requirements.

2.3 Field Testing Results

Ground elevations were measured at 40 locations using survey equipment. Elevation contours were developed and are depicted on Figure 2-02.

Groundwater elevations were determined at 16 locations from top of riser measurements using survey equipment and depth to water measurements using the water level indicator. Elevation contours were developed and are depicted on Figure 2-03.

VOC concentrations were determined for 246 soil samples obtained from the 25 borings using the PID. Concentrations ranged from 0.0 ppm to >1,999 ppm, the upper detection limit of the instrument. Concentration contours were developed for the upper 4 samples from each boring. The contours for the 0-1', 1-2', 2-3', and 3-4' depths are depicted on Figures 2-04, 2-05, 2-06, and 2-07, respectively.

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Metals concentrations were determined at 47 surface locations and for 245 soil samples obtained from the 25 borings using the XRF analyzer. Note: one sample was misplaced during the metals testing. Metals of interest for the site are arsenic, barium, chromium, and lead.

Arsenic was detected at 11 surface locations with concentrations ranging from 31.04 to 952.27 ppm. Arsenic was not detected at the other 36 surface locations. Concentration contours are depicted on Figure 2-08. Arsenic was detected in 18 of the samples with concentrations ranging from 17.96 to 1,041.74 ppm. Arsenic was not detected in the other 227 samples. Concentration contours for the 0-1' depth are depicted on Figure 2-09.

Barium was detected at 7 surface locations with concentrations ranging from 1,404.23 to 12,364.83 ppm. Barium was not detected at the other 40 surface locations. Concentration contours are depicted on Figure 2-11. Barium was detected in 10 of the samples with concentrations ranging from 1,473.53 to 11,108.88 ppm. Barium was not detected in the other 235 samples. Concentration contours for the 0-1' depth are depicted on Figure 2-12.

Chromium was detected at 7 surface locations with concentrations ranging from 637.38 to 1,597.54 ppm. Chromium was not detected at the other 40 surface locations. Concentration contours are depicted on Figure 2-15. Chromium was detected in 8 of the samples with concentrations ranging from 656.78 to 5,563.95 ppm. Chromium was not detected in the other 237 samples. Concentration contours for the 0-1' depth are depicted on Figure 2-16.

Lead was detected at all 47 surface locations with concentrations ranging from 20.32 to 20,193.18 ppm. Concentration contours are depicted on Figure 2-19. Lead was detected in 99 of the samples with concentrations ranging from 22.19 to 19,804.91 ppm. Lead was not detected in the other 146 samples. Concentration contours for the 0-1' depth are depicted on Figure 2-20.

PCBs concentrations were determined for 36 soil samples obtained from the 25 borings using EnviroGard PCB in Soil Test Kits. PCBs <5 ppm were detected in 6 of the samples. PCBs <1 ppm were detected in the other 30 samples. The results were consistent with subsequent laboratory analyses.

The pH was determined for 4 groundwater samples. The results ranged from 6.54 to 6.85 standard units.

2.4 Laboratory Testing Results

Arsenic concentrations were determined for 64 soil samples. Arsenic was detected in 63 of the samples with concentrations ranging from 3.06 to 24.7 mg/kg. Arsenic was not detected in the other sample. Concentration

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contours for the 1-2' depth are depicted on Figure 2-10. Arsenic concentrations were determined for 10 water samples. Arsenic was detected in 4 of the unfiltered samples (B-01, B-02, B-03, and B-04) with concentrations ranging from 1.27 to 2.37 mg/l. Arsenic was not detected in the other 6 samples.

Barium concentrations were determined for 55 soil samples. Barium was detected in all of the samples with concentrations ranging from 149 to 692 mg/kg. Concentration contours for the 1-2' and 2-3' depths are depicted on Figures 2-13 and 2-14, respectively. Barium concentrations were determined for 10 water samples. Barium was detected in all of the samples with concentrations ranging from 0.128 to 35.2 mg/l.

Chromium concentrations were determined for 68 soil samples. Chromium was detected in all of the samples with concentrations ranging from 13.4 to 89.6 mg/kg. Concentration contours for the 1-2' and 2-3' depths are depicted on Figures 2-17 and 2-18, respectively. Chromium concentrations were determined for 10 water samples. Chromium was detected in 4 of the unfiltered samples (B-01, B-02, B-03, and B-04) with concentrations ranging from 0.753 to 2.28 mg/l. Chromium was not detected in the other 6 samples.

Lead concentrations were determined for 54 soil samples. Lead was detected in all of the samples with concentrations ranging from 12.9 to 156 mg/kg. Concentration contours for the 1-2' depth are depicted on Figure 2-21. Lead concentrations were determined for 10 water samples. Lead was detected in 6 of the samples with concentrations ranging from 0.016 to 23.5 mg/l. Lead was not detected in the other 4 samples.

TCLP Lead concentrations were determined for 56 soil samples. TCLP Lead was detected in 26 of the samples with concentrations ranging from 0.002 to 0.036 mg/l. TCLP Lead was not detected in the other 30 samples. Concentration contours for the 1-2' depth are depicted on Figure 2-22.

PCB concentrations were determined for 89 soil samples. PCBs were detected in 32 of the samples with Aroclor concentrations ranging from 69.7 to 22,200 ppb. PCBs were not detected in the other 57 samples. Concentration contours for the 1-2' and 2-3' depths are depicted on Figures 2-23 and 2-24, respectively. PCB concentrations were determined for 5 water samples. PCBs were not detected in any of the samples.

The pH was determined for 47 soil samples. The readings ranged from 5.42 to 8.27 standard units. As was not detected in the other sample. Reading contours for the 1-2' depth are depicted on Figure 2-25.

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3 Evaluation of Results

3.1 Remediation Objectives and Comparisons

The parameters of interest for the site are arsenic, barium, chromium, lead, and PCBs. The analytical results for each soil sample were compared to the lowest applicable cleanup objective for each parameter from the Tier 1 Soil Remediation Objectives for Residential and Industrial/Commercial Properties presented in Appendix B (Tables A and B) of 35 Illinois Administrative Code [IAC] Part 724 Tiered Approach to Corrective Action Objectives (TACO). In addition, the results were compared to the pH Specific Soil Remediation Objectives for arsenic and barium presented in Appendix B (Table C) of TACO. Such pH specific objectives are not available for chromium (total), lead, and PCBs. Background concentrations for Counties within Metropolitan Statistical Areas, including St. Clair County, are presented in Appendix A (Table G) of TACO. A background concentration for PCBs has not been established since PCBs are not naturally occurring compounds. The analytical results for each water sample were compared to the values for each parameter from the Tier 1 Groundwater Remediation Objectives for the Groundwater Component of the Groundwater Ingestion Route presented in Appendix B (Table E) of TACO.

3.1.1 Arsenic

The lowest soil remediation objective for the ingestion/inhalation exposure route is the background concentration of 13.0 mg/kg. The pH specific objective ranges from 27 to 32 mg/kg for the readings measured at the site. The arsenic concentrations at 11 surface locations, in 18 samples (field testing), and in 3 samples (laboratory testing) exceed these values. The testing results are not consistent with depth in B-02, B-04, B-07, B-12, B-14, and B-15, suggesting that the background concentration may not be appropriate for this site. Surface contamination is indicated near B-01, B-02, B-03, B-04, B-05, B-08, and B-10. Contamination is evident to over 3' in depth near B-04 and is likely present offsite to the east and south, particularly near B-05 and B-10.

The groundwater remediation objective is 0.05 mg/L. This value was exceeded by unfiltered samples from B-01, B-02, B-03, and B-04. However, subsequent filtered samples had concentrations less than the objective. In addition, surface water samples from the Cahokia Canal downstream of the site and from a marshy area north of the site had concentrations less than the objective. Note: the General Use Water Quality Standard (35 IAC 302.208) is 0.19 mg/L. Therefore, groundwater and surface water have not been impacted by arsenic contamination at or near the site.

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3.1.2 Barium

The lowest soil remediation objective for the ingestion/inhalation exposure route is 5,500 mg/kg. The pH specific objective ranges from 850 to 2,100 mg/kg for the readings measured at the site. The barium concentrations at 6 surface locations, in 8 samples (field testing), and in 0 samples (laboratory testing) exceed these values. The testing results exceeded the background concentration of 110 mg/kg in all of the field and lab testing detections suggesting that the background concentration may not be appropriate for this site. Surface contamination is indicated near B-01, B-02, B-03, B-04, B-05, and B-10. Contamination is evident at 12-13' in depth near B-04, at 1-2' in depth near B-22, and is likely present offsite to the east, particularly near B-05 and B-10.

The groundwater remediation objective is 2.0 mg/L. This value was exceeded by unfiltered samples from B-01, B-02, B-03, and B-04. However, subsequent filtered samples had concentrations less than the objective. In addition, surface water samples from the Cahokia Canal downstream of the site and from a marshy area north of the site had concentrations less than the objective. Note: the General Use Water Quality Standard (35 IAC 302.208) is 5.0 mg/L. Therefore, groundwater and surface water have not been impacted by barium contamination at or near the site.

3.1.3 Chromium

The lowest soil remediation objective for the ingestion/inhalation exposure route is 230 mg/kg. The chromium concentrations at 7 surface locations, in 8 samples (field testing), and in 0 samples (laboratory testing) exceed this value. The testing results exceeded the background concentration of 16.2 mg/kg in all but 2 of the field and lab testing detections suggesting that the background concentration may not be appropriate for this site. Surface contamination is indicated near B-01, B-02, B-04, B-05, B-07, B-08, and B-10. Contamination is evident at 12-13' in depth near B-04 and is likely present offsite to the east, particularly near B-05 and B-10.

The groundwater remediation objective is 0.1 mg/L. This value was exceeded by unfiltered samples from B-01, B-02, B-03, and B-04. However, subsequent filtered samples had concentrations less than the objective. In addition, surface water samples from the Cahokia Canal downstream of the site and from a marshy area north of the site had concentrations less than the objective. Note: there is no General Use Water Quality Standard (35 IAC 302.208) for chromium (total) but the Public Water Supply Standard (35 IAC 302.304) is 0.05 mg/L. The filtered and surface water samples had concentrations less than the standard. Therefore, groundwater and surface water have not been impacted by chromium contamination at or near the site.

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3.1.4 Lead

The lowest soil remediation objective for the ingestion/inhalation exposure route is 400 mg/kg. The lead concentrations at 16 surface locations, in 19 samples (field testing), and in 0 samples (laboratory testing) exceed this value. The testing results exceeded the background concentration of 36.0 mg/kg in approximately 62% of the field and lab testing detections. Surface contamination is indicated near B-01, B-02, B-03, B-04, B-05, B-06, B-07, B-08, B-10, B-11, and B-17. Contamination is evident at 12-15' in depth near B-02, 0-3' and 12-14' in depth near B-04, 8-9' in depth near B-06, and 8-9' in depth near B-07. Contamination is likely present offsite to the east, particularly near B-05, B-06, B-10, B-11, and B-17.

The lowest soil remediation objective for the soil component of the groundwater ingestion exposure route is 0.0075 mg/L. The TCLP lead concentrations in 10 samples (laboratory testing) exceed this value. Surface contamination is indicated near B-18, B-19, and B-22. Contamination is evident at 1-2' in depth near B-01, 15-16' in depth near B-02, 1-2' and 11-12' in depth near B-04, 9-10' in depth near B-06, 9-10' in depth near B-07, and 1-2' in depth near B-13. Contamination may be present offsite to the east.

The groundwater remediation objective is 0.0075 mg/L. This value was exceeded by unfiltered samples from B-01, B-02, B-03, and B-04. However, subsequent filtered samples from B-02, B-03, and B-04 had concentrations less than the objective. In addition, a surface water sample from the Cahokia Canal downstream of the site had a concentration less than the objective. The General Use Water Quality Standard (35 IAC 302.208) is 0.100 mg/L. A surface water sample from a marshy area north of the site had a concentration less than the standard. Therefore, groundwater has been impacted by lead contamination at or near the site but surface water has not been impacted by lead contamination at or near the site.

3.1.5 PCBs

The lowest soil remediation objective for the ingestion/inhalation exposure route is 1 mg/kg. The lowest soil preliminary remediation goal (U.S. EPA Region 9) for direct contact exposure pathways is 0.22 mg/kg. Individual Aroclor (PCB compounds) concentrations in 21 samples (laboratory testing) exceed these values. Surface contamination is indicated near B-04, B-07, B-08, B-19, and B-22. Contamination is evident at up to 4' and 5-9' in depth near B-04, up to 9' in depth near B-07, and up to 4' and 8-10' in depth near B-08. PCB contamination may be present offsite to the east and south.

The groundwater remediation objective is 0.0005 mg/L. PCBs were not detected in any of the water samples. Note: there is no General Use Water Quality Standard (35 IAC 302.208) or Public Water Supply Standard (35 IAC

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302.304) for PCBs. Therefore, groundwater and surface water have not been impacted by PCB contamination at or near the site.

3.2 Conclusions

The AOC site was heavily vegetated prior to the activities described herein with the exception of an area of approximately 0.4 acres in the central portion of the site. This area was the subject of previous investigations conducted between 1998 and 2001. The removal and disposal of 27 non-intact drums of waste from this area occurred in 1996.

The current owner of the property has never conducted any business operations or placed any material at the site. The soil survey for St. Clair County includes a 1973 map indicating a sanitary landfill encompassing the site and an area to the east up to Illinois Route 203. There is no record of any activities at the site other than the construction and operation of the adjacent Cahokia Canal and the (former) Alton Granite & St. Louis Traction Company railway. The canal levees and railway grade may have been constructed using contaminated materials.

Site clearing activities exposed the presence of large areas of debris. This debris consisted of broken glass and brick, miscellaneous small metal objects and shavings, and deteriorated rubber-like masses presumed to be burned tire casings. No analysis of the debris was conducted. No waste was encountered in the borings.

Field and laboratory testing indicated arsenic, barium, chromium, lead, and PCB contamination of site soil and impacted groundwater by lead contamination at or near the site. Arsenic, barium, chromium, and lead soil contamination is likely to be present offsite, primarily in an easterly direction. PCB soil contamination may be present offsite to the east and south. There is no surface water present at the site, however no surface water impacts were identified in samples collected from the Cahokia Canal downstream of the site and from a marshy area north of the site.

The contamination was likely caused by the unauthorized disposal of waste liquids at or near the site. While contamination is present on the AOC site and is likely present offsite, there is no clear indication that offsite contamination originated from the AOC site. It is more likely that contamination is widespread throughout the area as a result of historic improper disposal practices. It is believed that much of such disposal occurred in the area from Illinois Route 203 up to and including the site. The disposal may have been conducted by individuals associated with properties adjacent to Illinois Route 203.

The conditions at the site which constitute a threat to public health and welfare or the environment, as listed in the AOC's Conclusions of Law and

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Determinations, are confirmed. Recommendations to reduce or eliminate contaminant migration are provided in the following section.

The IDOT wants to acquire the southern 7.29 acres of the site as part of the U.S. Interstate Route I-70 relocation project. The project involves placement of up to 28' of fill over the existing ground surface to construct a highway and access ramps. A fact sheet for the "Relocated Interstate 70" portion of the New Mississippi River Bridge Project is provided in Appendix E.

3.3 Recommendations

Partial removal of contaminated soils and backfilling will eliminate or reduce contaminant migration from the site. Contaminated soil exceeding a remediation objective would be excavated and removed from the site for disposal at a properly permitted facility. All related activities would be performed in accordance with the approved Health and Safety Plan.

Contaminated soils will be excavated from an area bounded by Borings B-17, B-07, B-08, B-09, B-12, B-13, B-14, B-15, B-16, B-11, B-10, B-05, and B-06. In addition, contaminated soils exceeding the remediation objective for PCBs will be excavated from 100' grid areas with centers at Borings B-04, B-07, B-08, B-19, and B-22. These areas were depicted on a January 21, 2004 fax transmittal from the U.S. EPA. Up to 270,000 ft^3 of contaminated soil may require excavation. This is equivalent to 14,850 tons at an assumed earthen material density of 110 lb/ft^3.

Contaminated soil volumes were calculated based on the boring grid pattern and the sample location. Surface contamination was assumed to be equivalent to 0-1' in depth for purposes of volume calculations. For example, contaminated soil at up to 4' in depth near B-04 has a volume of (100')(100')(4'-0') = 40,000 cubic feet. Volumes were adjusted relative to locations near the site boundary. For example, contaminated soil at 9-10' in depth near B-06 has a volume of (50%)(100')(100')(10'-9') = 5,000 cubic feet.

The excavated areas will be backfilled by a minimum of 10" of uncontaminated compacted soil. The cover would eliminate exposure to nearby human populations, animals, or the food chain from contaminated soil. The cover would also prevent migration or release of contaminants to surrounding soil, air, or water. The upper portion of the cover would be lightly disked and seeded with an IDOT Class 3 Slope seeding mixture. Portions of any on-site borrow areas above the water table would be lightly disked and seeded with an IDOT Class 4B Wetland Grass and Sedge seeding mixture. Portions of any on-site borrow areas below the water table would be seeded with an IDOT Class 5B Wetland Forb seeding mixture. These mixtures are amenable to the soil quality and thickness, slopes, and moisture and climatological conditions that exist without the need for continued maintenance. Additional seeding using an IDOT Class 7 Temporary Turf Cover seeding

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mixture may be performed to ensure proper establishment of the vegetative growth.

In summary, SLAS will take the following actions to remediate the AOC site:

1. Excavate contaminated soils within the area depicted by the U.S. EPA and transport the materials off-site to appropriate facilities permitted to accept such materials.
2. Test the soil after the initial excavation to ensure that the following remediation objectives have been met. If not, additional excavation and off-site transport will occur:

   Arsenic - 260 mg/kg
   Barium - 67,000 mg/kg
   Chromium - 450 mg/kg
   Lead - 1,000 mg/kg

3. Conduct soil sampling and analysis, once all non-PCB remediation objectives have been met, in accordance with 40 C.F.R. Part 761, Subpart O, without compositing of samples pursuant to 40 C.F.R. §761.312. The samples will be grab samples (not composite samples). If the grab samples start to show a decrease in contamination, compositing of samples for larger areas will be allowed.
4. If any individual sample has a total PCB concentration above 10 ppm, SLAS will excavate additional soil, transport that material to an appropriate facility, and resample.
5. When each sample has a total PCB concentration at or below 10 ppm, SLAS will consider the remediation activity complete.
6. SLAS will enter a "low occupancy" deed restriction on the AOC excavation site meeting all the requirements of 40 C.F.R. §761.61(a)(8) for all locations where total PCB concentrations exceed 1 ppm.
7. After excavation is complete, SLAS will place marking around the AOC excavation site at all locations exceeding 1 ppm total PCBs, and enter deed restrictions requiring such marking to remain in place in perpetuity, as required by 40 C.F.R. §761.61(a)(4)(i)(B)(2).
8. Backfill all excavated areas with 10" of clean fill.
9. Any future alteration of land use at the site to where it would reach high occupancy, as defined at 40 C.F.R. §761.61(a)(4)(i)(A), would require SLAS to perform additional removal of the remaining PCB contaminated soil to a 1 ppm remediation objective.
10. Accept these terms and conditions as a modification of the AOC.

The following remediation costs are based upon the author's "informed judgment" of actual third party costs. References include knowledge of current engineering fees and published manuals for estimation of heavy

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construction costs. The cost for each item was rounded to the nearest "tens" place.

Contaminated Soil

Excavate/Load	14,850 tons @ $4.26/ton =	$63,260
Transport/Dispose Non-hazardous Material	9,900 tons @ $30.00/ton =	$297,000
Transport/Dispose Hazardous Material	2,750 tons @ $121.18/ton =	$333,250
Transport/Dispose TSCA Regulated Material	2,200 tons @ $237.06/ton =	$531,530

Silty Clay Compacted Cover

Excavate/load, haul, place/compact	3,900 yd^3 @ $11.30/$yd^3$ =	$44,070

Revegetation

Disk, Seed	4.3 acres @$1,300/acre =	$5,590

Oversight/Monitoring/Testing

	14,850 tons @ $2.54/ton =	$37,720
	Total	**$1,312,420**

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4 Figures

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Figure 2-01: Boring Location Map
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Figure 2-03: Groundwater Elevation
Figure 2-04: VOCs 0-1' Depth
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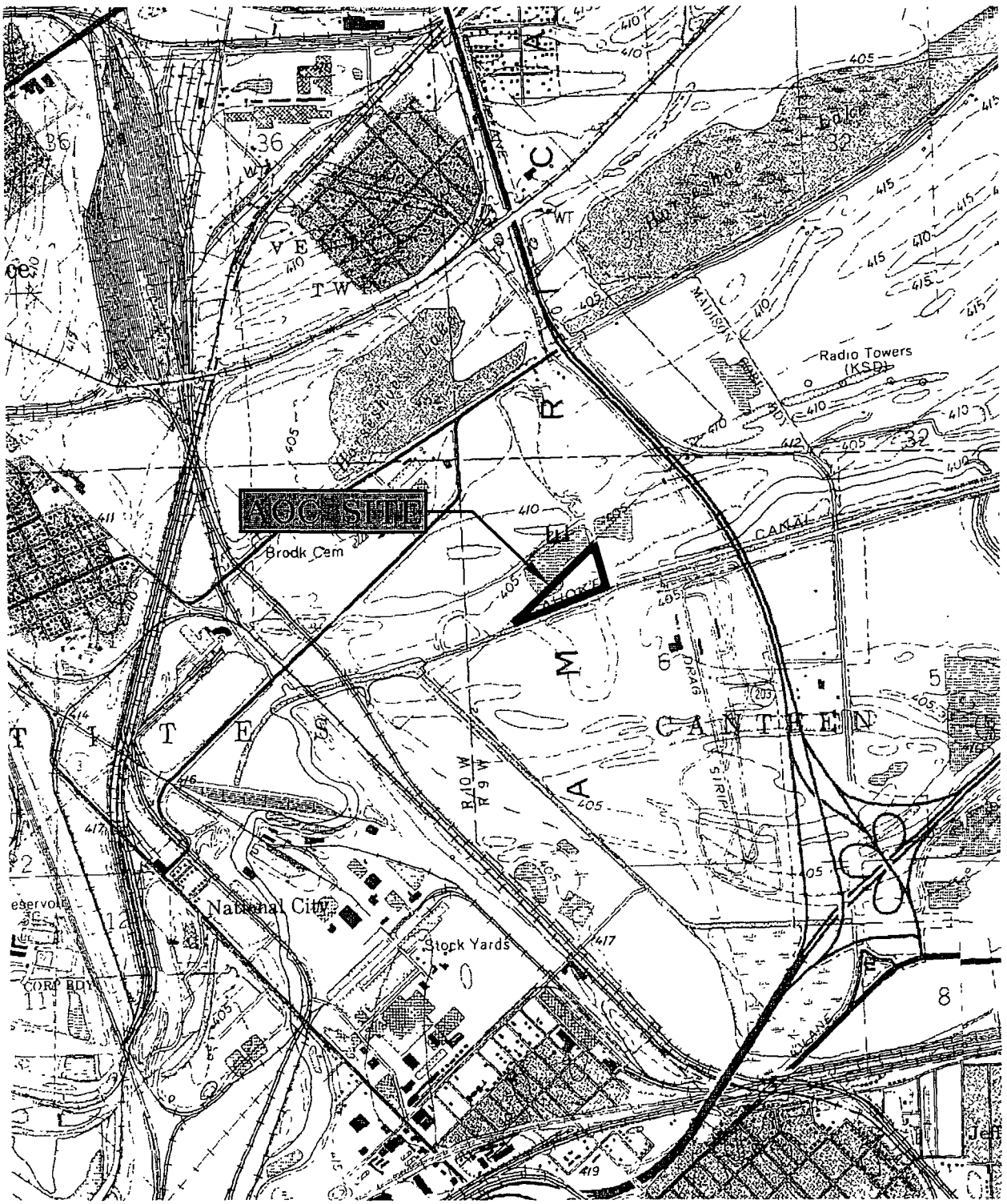
Figure 2-06: VOCs 2-3' Depth
Figure 2-07: VOCs 3-4' Depth
Figure 2-08: Arsenic Ground Surface
Figure 2-09: Arsenic 0-1' Depth
Figure 2-10: Arsenic 1-2' Depth
Figure 2-11: Barium Ground Surface
Figure 2-12: Barium 0-1' Depth
Figure 2-13: Barium 1-2' Depth
Figure 2-14: Barium 2-3' Depth
Figure 2-15: Chromium Ground Surface
Figure 2-16: Chromium 0-1' Depth
Figure 2-17: Chromium 1-2' Depth
Figure 2-18: Chromium 2-3' Depth
Figure 2-19: Lead Ground Surface
Figure 2-20: Lead 0-1' Depth
Figure 2-21: Lead 1-2' Depth
Figure 2-22: TCLP Lead 1-2' Depth
Figure 2-23: PCBs 1-2' Depth
Figure 2-24: PCBs 2-3' Depth
Figure 2-25: pH 1-2' Depth

Note: The figures do not include data obtained from previous investigations.



SCALE

1000 0 2000 FEET

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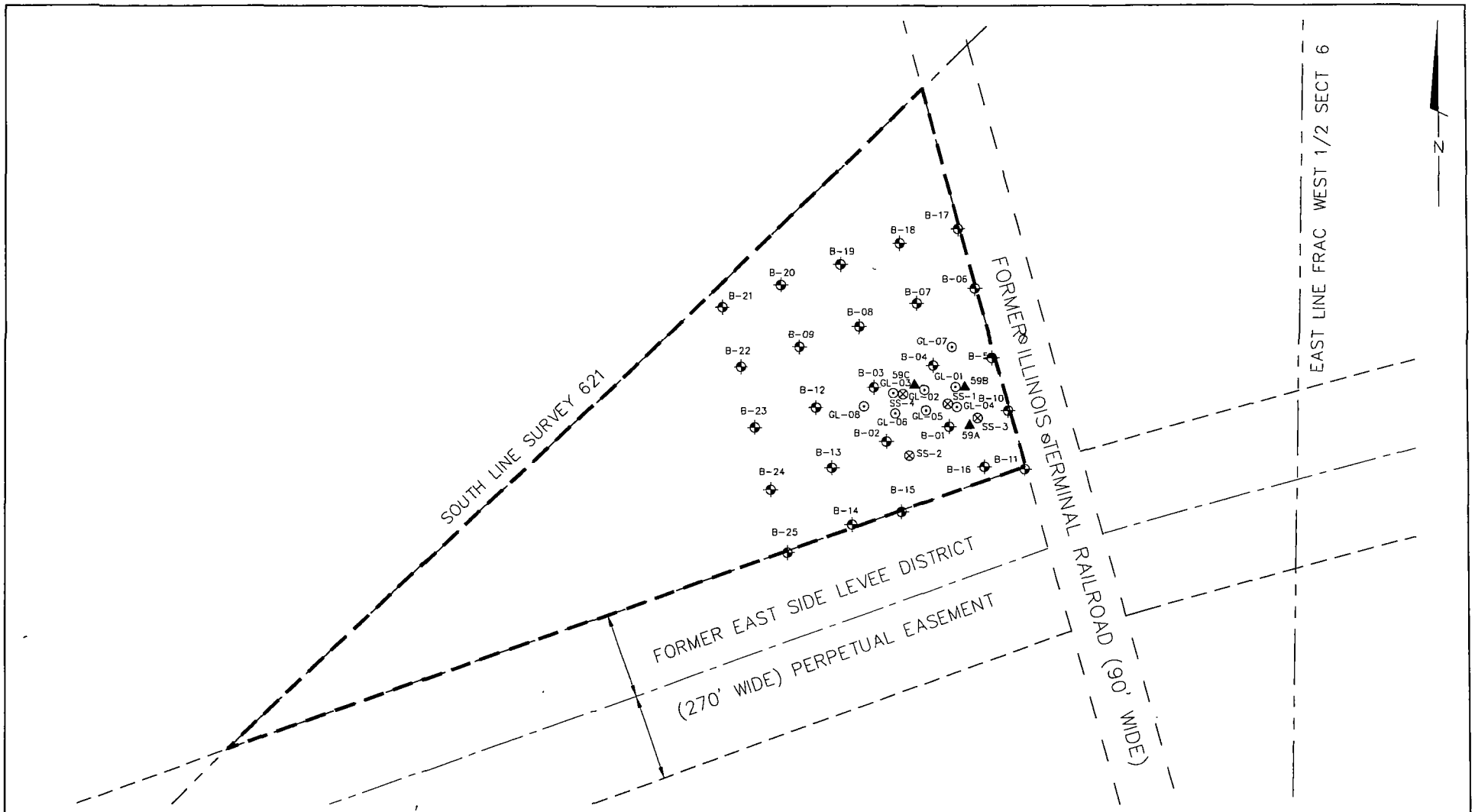
Figure 1-01

SITE LOCATION MAP
USGS GRANITE CITY QUAD (1993)

AOC SITE
CANTEEN TOWNSHIP
ST. CLAIR COUNTY, ILLINOIS

PROJECT. SA03035 DRAWING: FIGURE 1-01 DATE: 12/2003



LEGEND

- GL-XX ⊙ PSI BORINGS
- XXX ▲ PESA BORINGS
- B-XX ⊕ INVESTIGATION BORINGS
- SS-X ⊗ U S EPA SAMPLE LOCATION
- SITE BOUNDARY

SCALE

75 0 150 FEET

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Figure 2-01

BORING LOCATION MAP
10/21/03 SITE SURVEY
AOC SITE
CANTEEN TOWNSHIP
ST CLAIR COUNTY, ILLINOIS

PROJECT SA03035 DRAWING FIGURE 2-01 DATE 12/2003

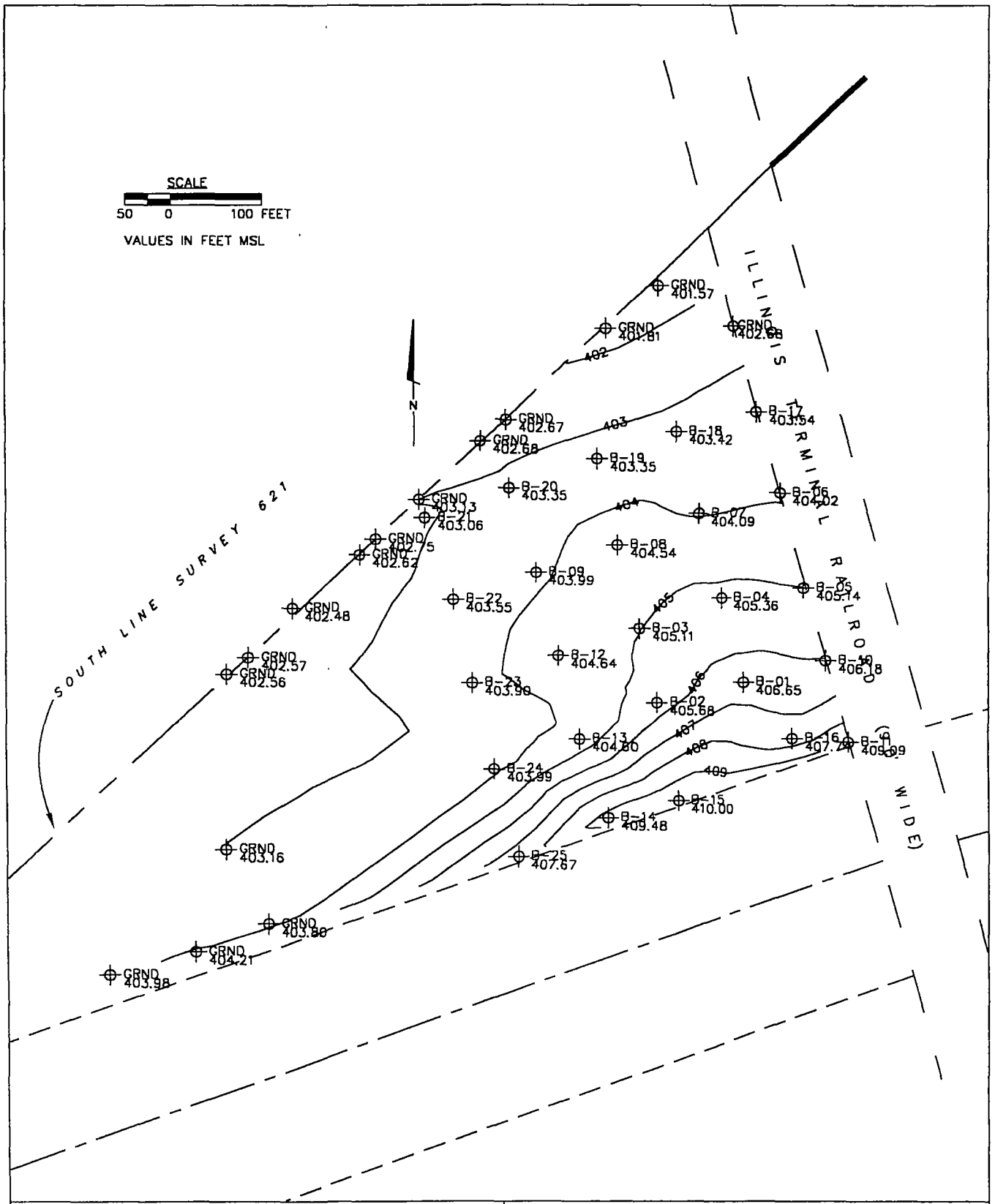

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Figure 2-02

GROUND ELEVATION
10/21/03 SURVEY

AOC SITE
CANTEEN TOWNSHIP
ST. CLAIR COUNTY, ILLINOIS

PROJECT: SA03035 DRAWING: DRUMXRF DATE: 12/2003

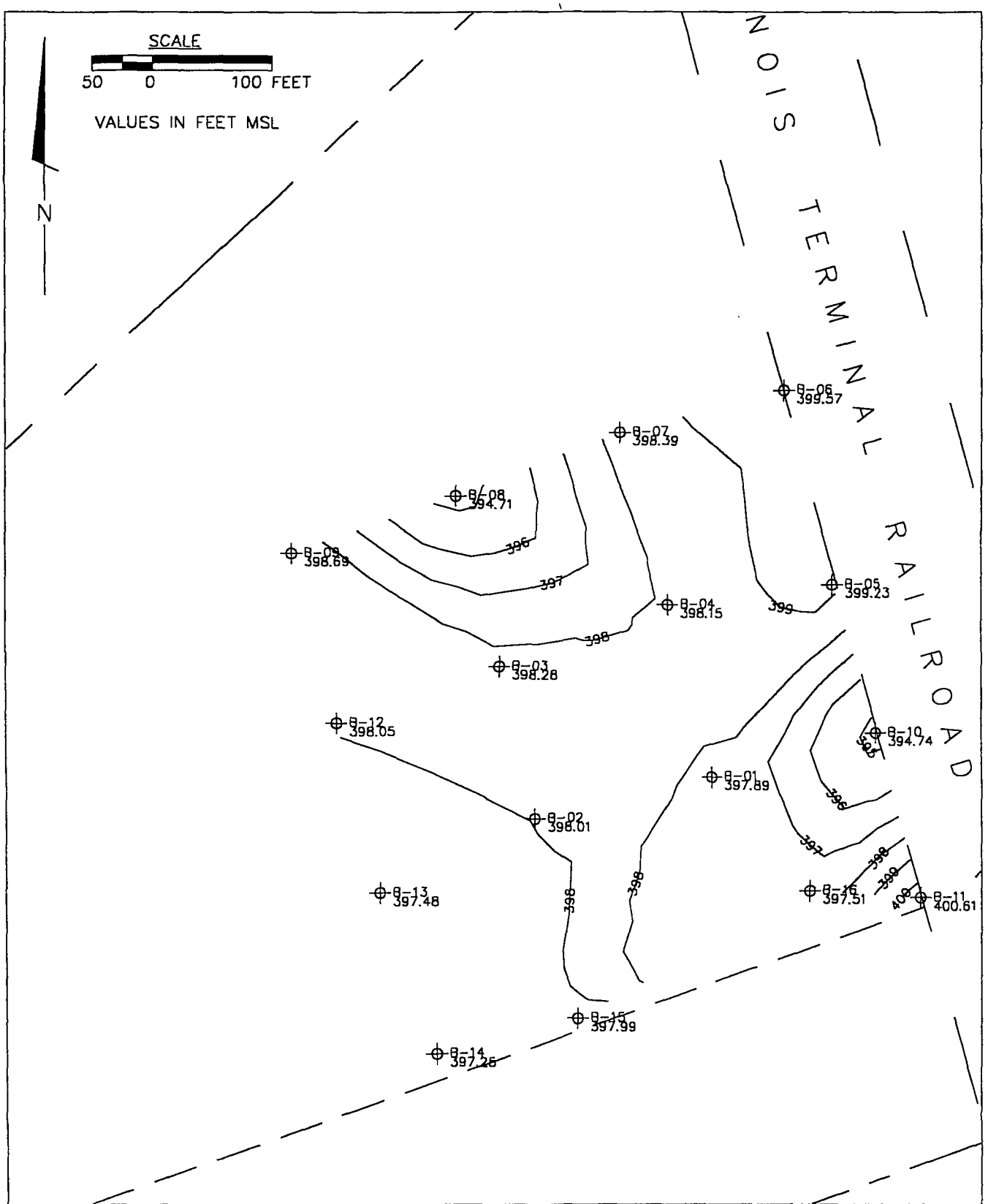

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Figure 2-03

GROUNDWATER ELEVATION 10/21/03 MEASUREMENTS

AOC SITE

CANTEEN TOWNSHIP

ST. CLAIR COUNTY, ILLINOIS

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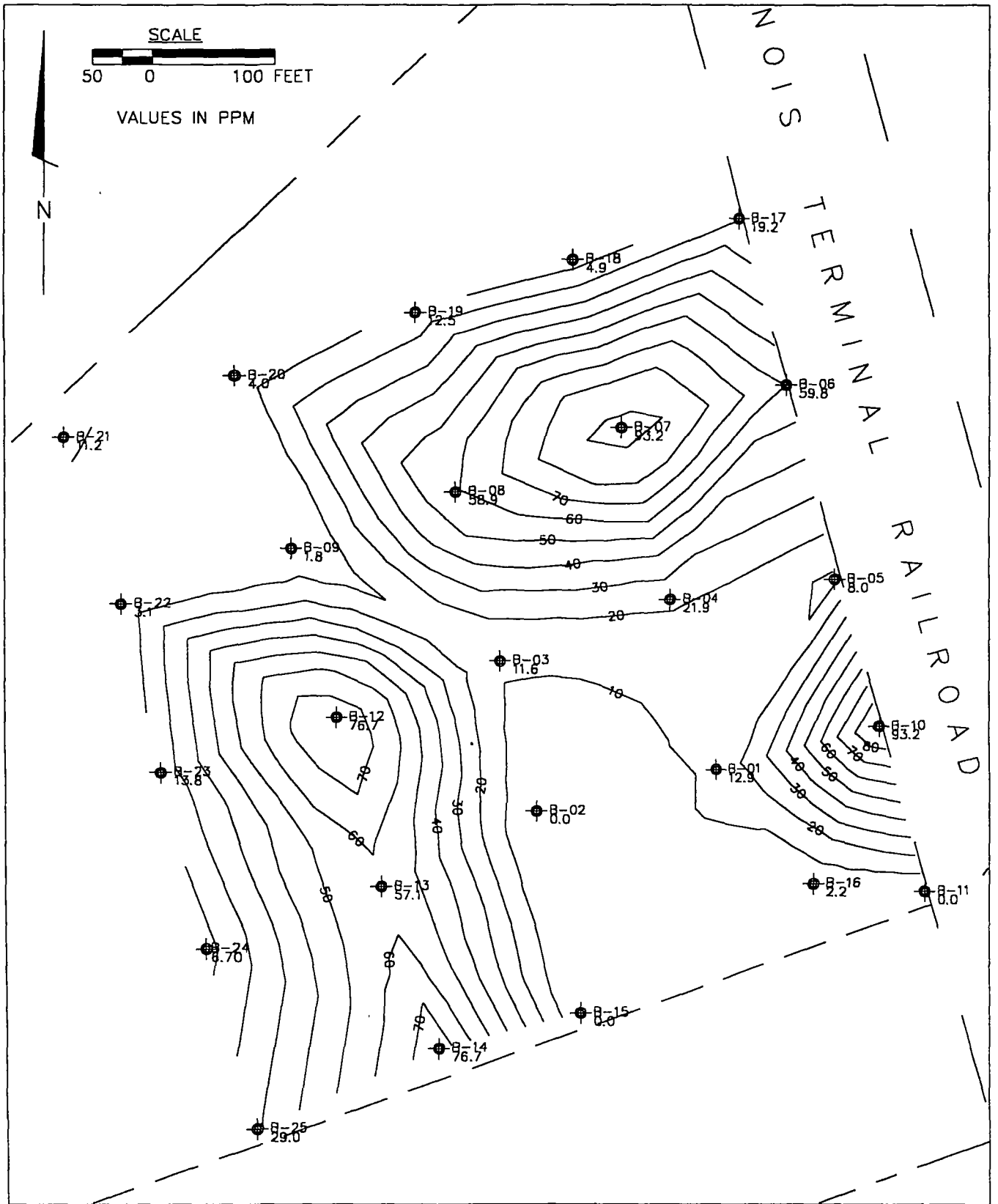

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Figure 2-04

VOCs 0-1' DEPTH FIELD ANALYSES

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CANTEEN TOWNSHIP
ST. CLAIR COUNTY, ILLINOIS

PROJECT: SA08085 DRAWING: DRUMXRF DATE: 12/2008

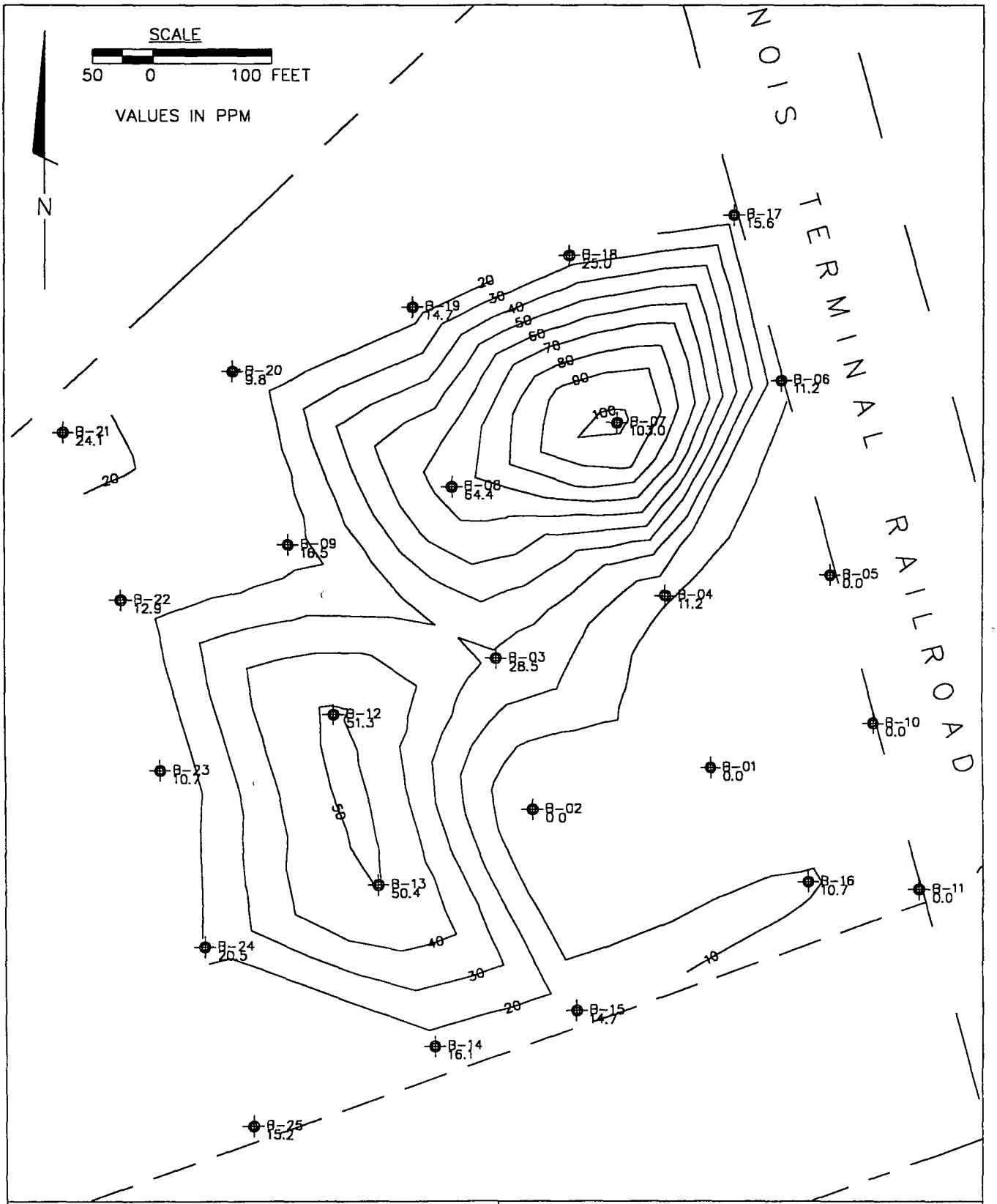

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Figure 2-05

VOCs 1-2' DEPTH FIELD TESTING

AOC SITE
CANTEEN TOWNSHIP
ST. CLAIR COUNTY, ILLINOIS

PROJECT: SA03035 DRAWING: DRUMXRF DATE: 12/2003

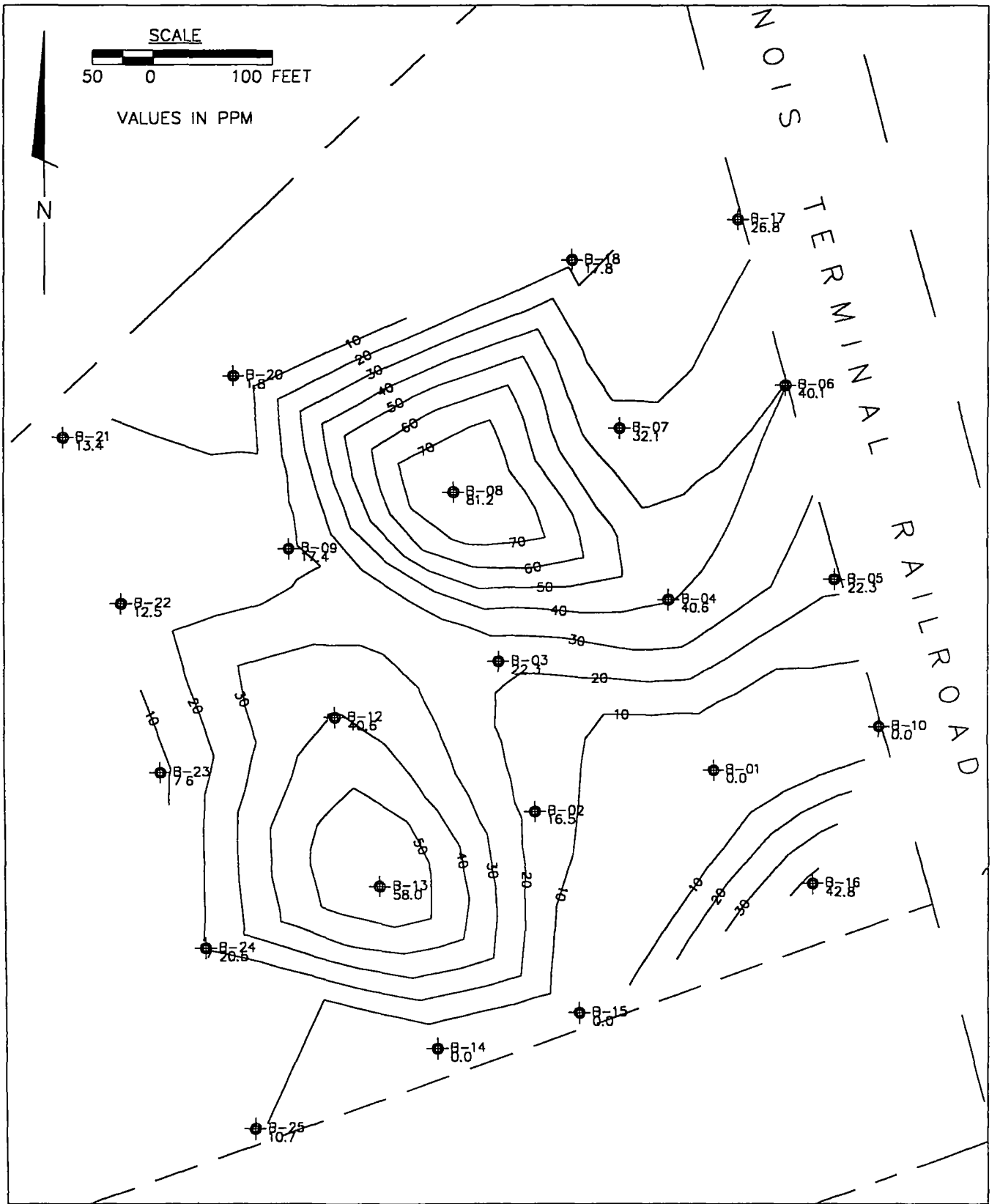

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Figure 2-06

VOCs 2-3' DEPTH FIELD TESTING

AOC SITE
CANTEEN TOWNSHIP
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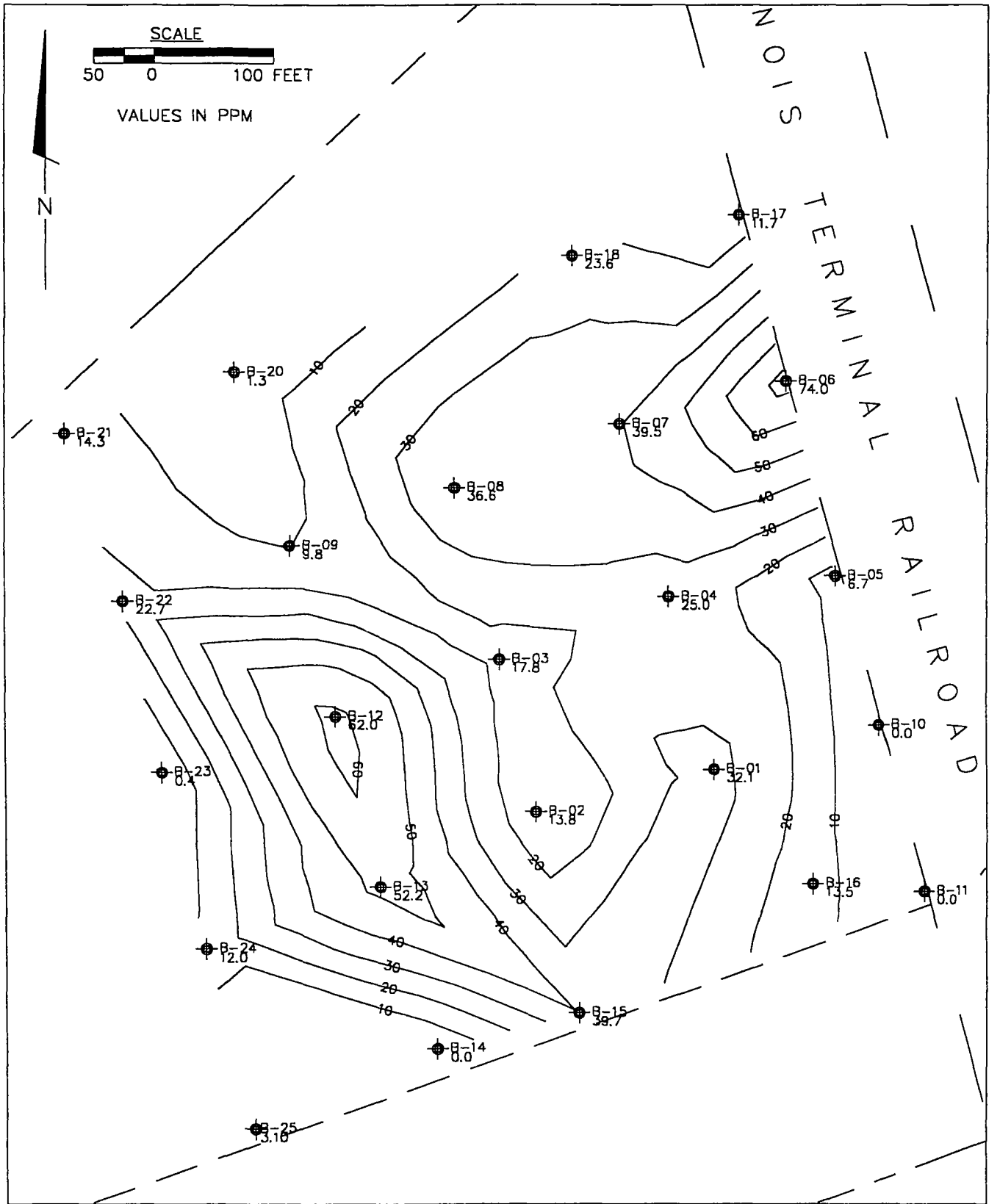

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Figure 2-07

VOCs 3-4' DEPTH
FIELD TESTING

AOC SITE
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ST. CLAIR COUNTY, ILLINOIS

PROJECT: SA03085 DRAWING: DRUMXRF DATE: 12/2003

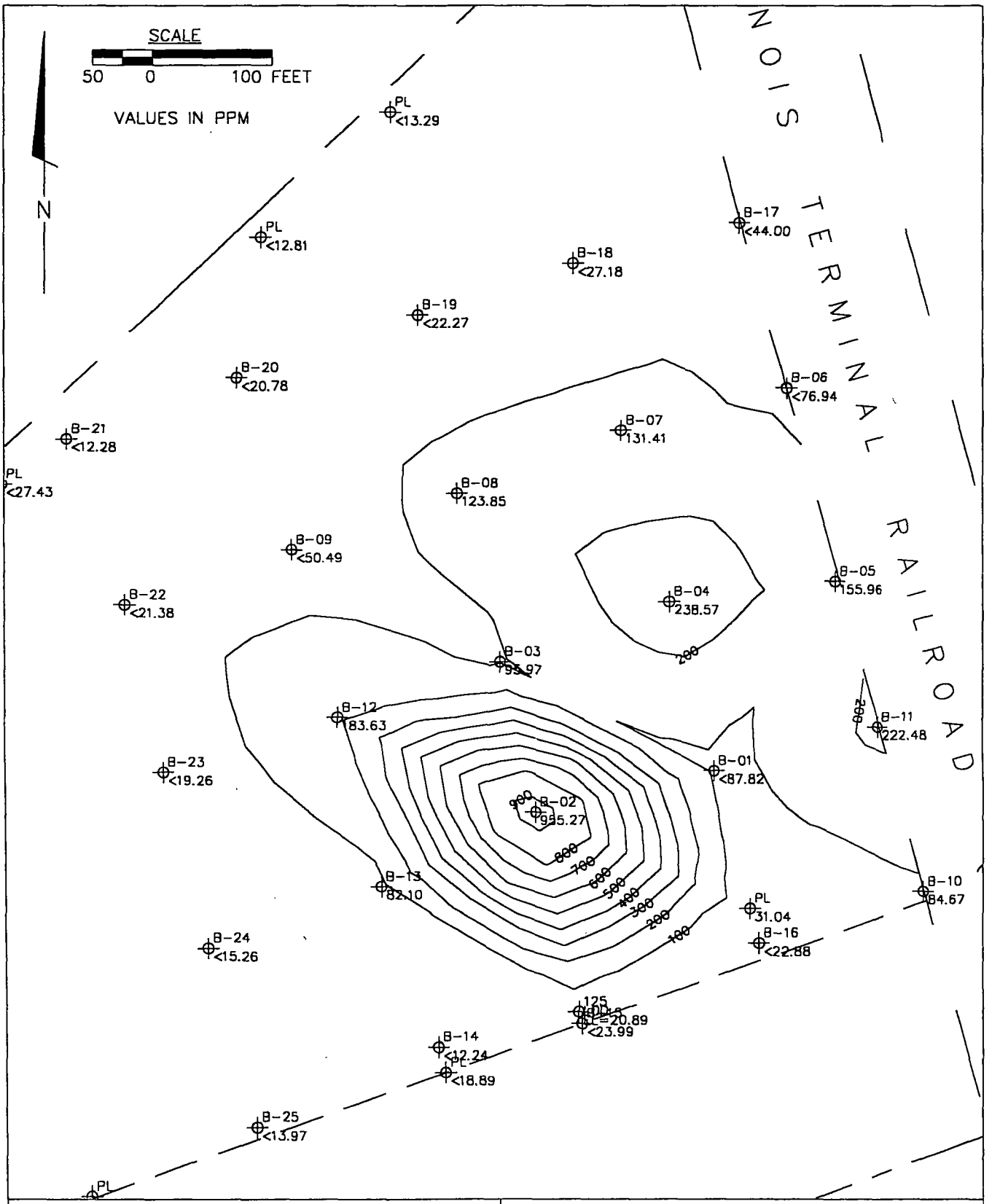

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Figure 2-08

ARSENIC GROUND SURFACE FIELD TESTING

AOC SITE
CANTEEN TOWNSHIP
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PROJECT: SA03035 DRAWING: DRUMXRF DATE: 12/2003

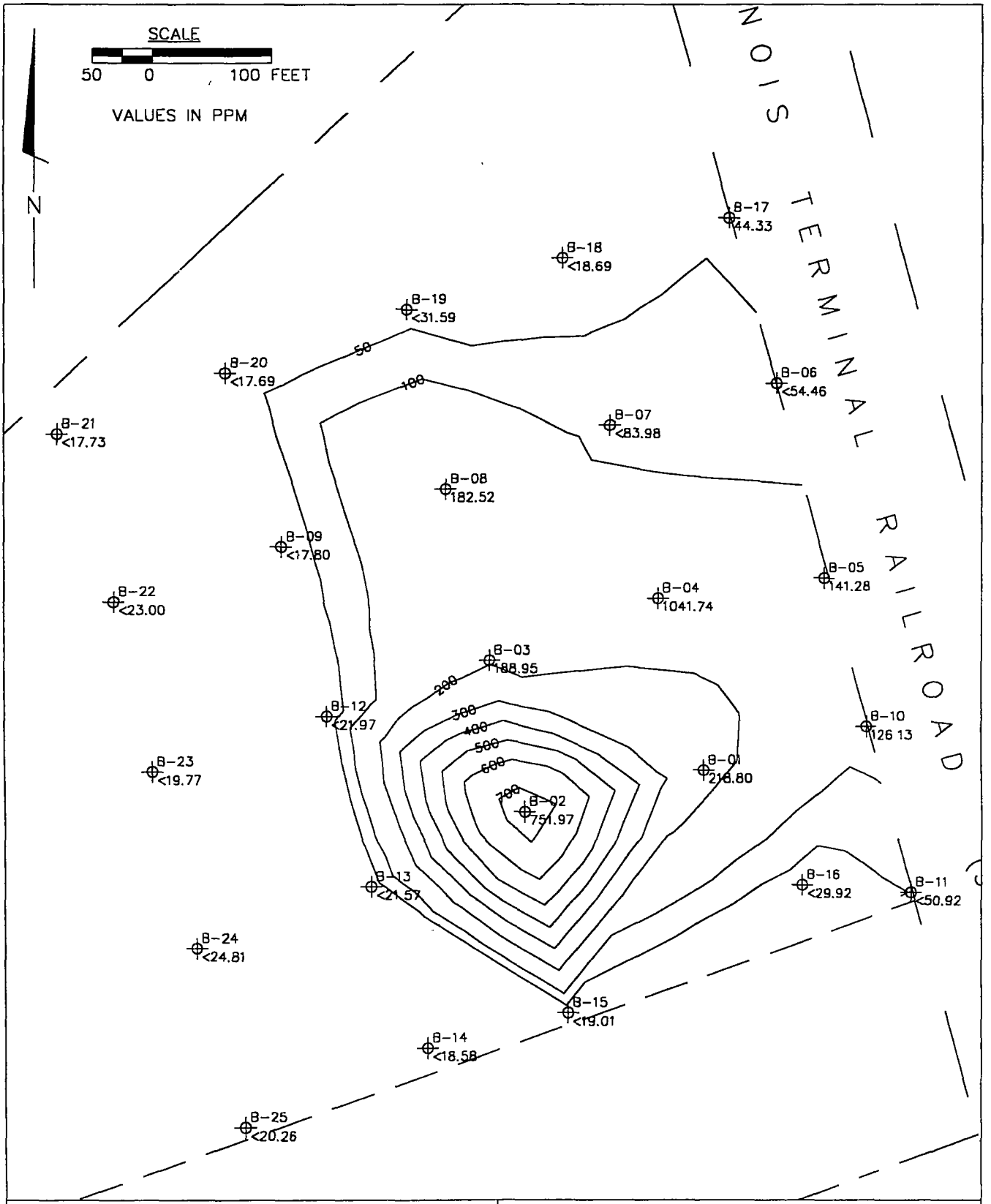

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Figure 2-09

ARSENIC 0-1' DEPTH FIELD TESTING

AOC SITE
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PROJECT: SA03085 DRAWING: DRUMXRF DATE: 12/2003

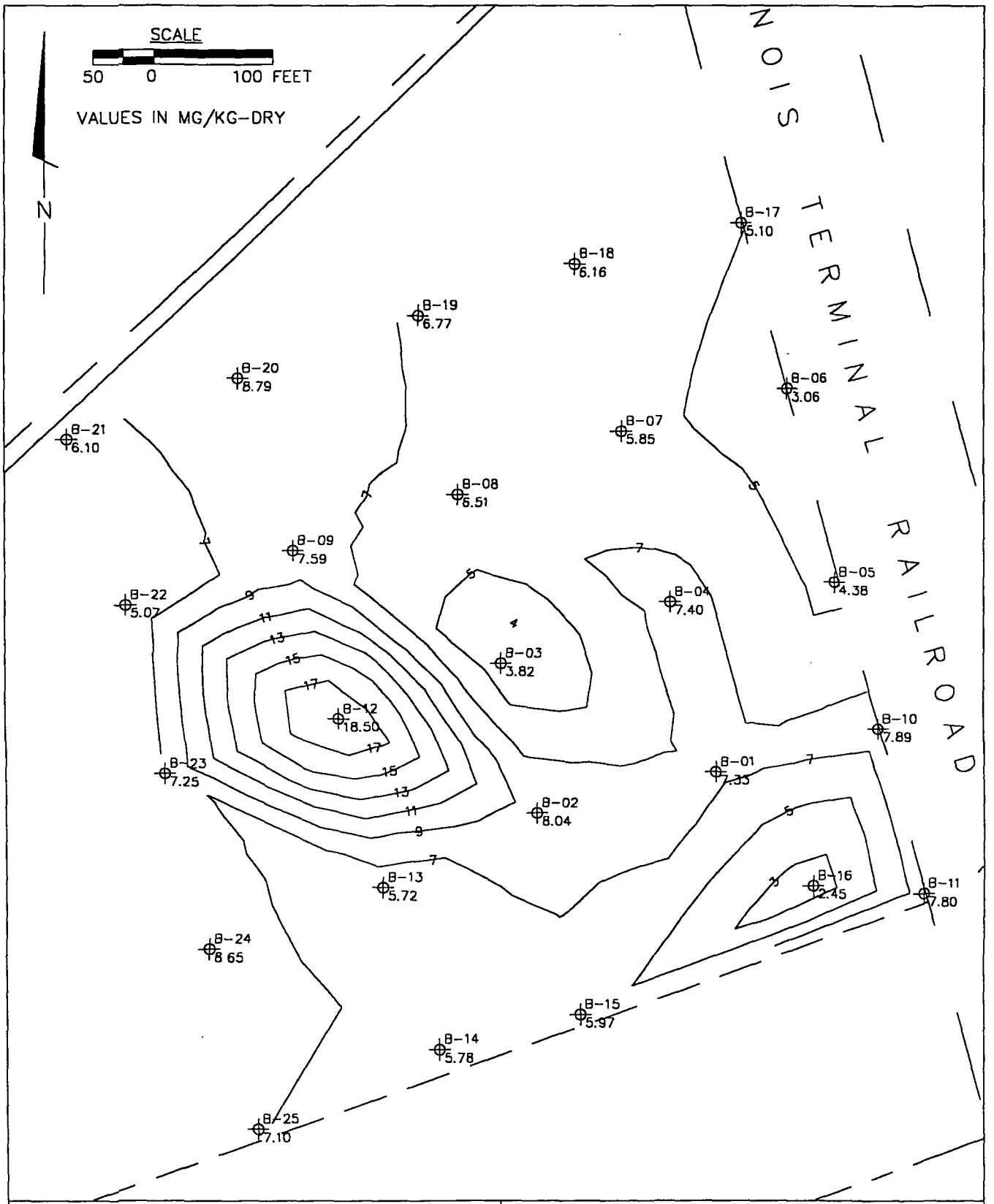

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Figure 2-10

ARSENIC 1-2' DEPTH LABORATORY TESTING

AOC SITE

CANTEEN TOWNSHIP

ST. CLAIR COUNTY, ILLINOIS

PROJECT: SA03035 DRAWING: DRUMLAB DATE: 12/2003

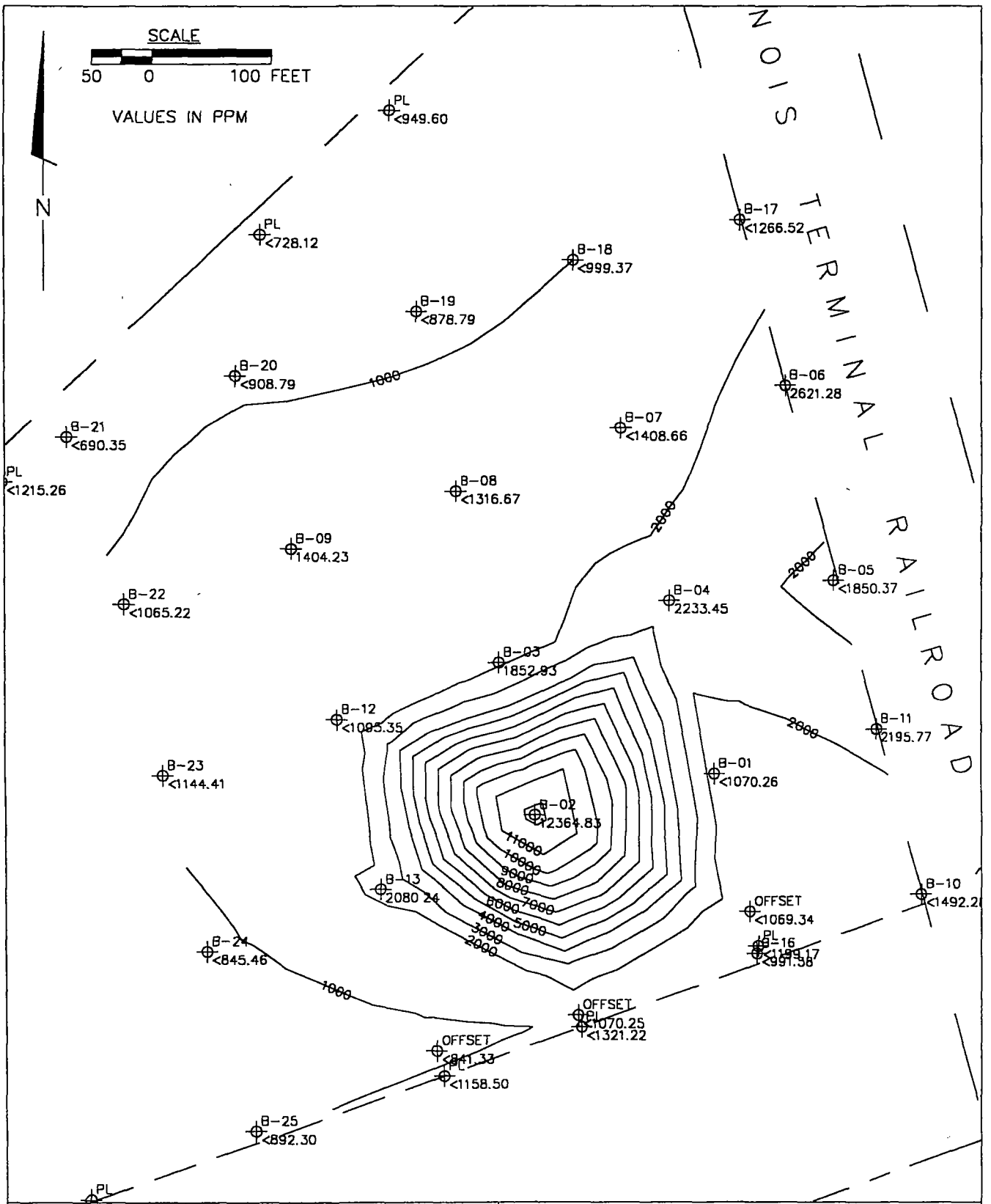

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Figure 2-11

BARIUM GROUND SURFACE FIELD TESTING

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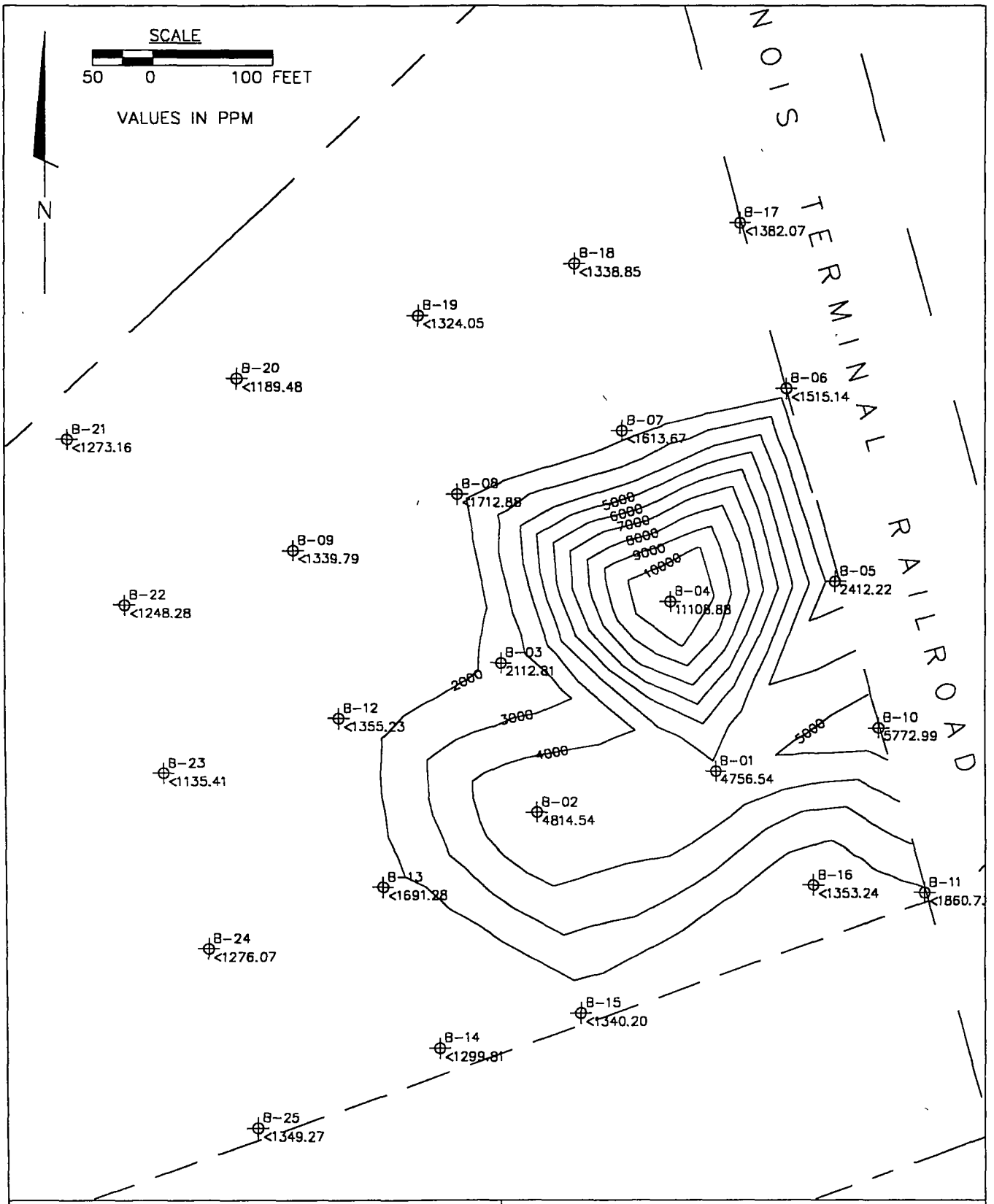

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Figure 2-12

BARIUM 0-1' DEPTH FIELD TESTING

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ST. CLAIR COUNTY, ILLINOIS

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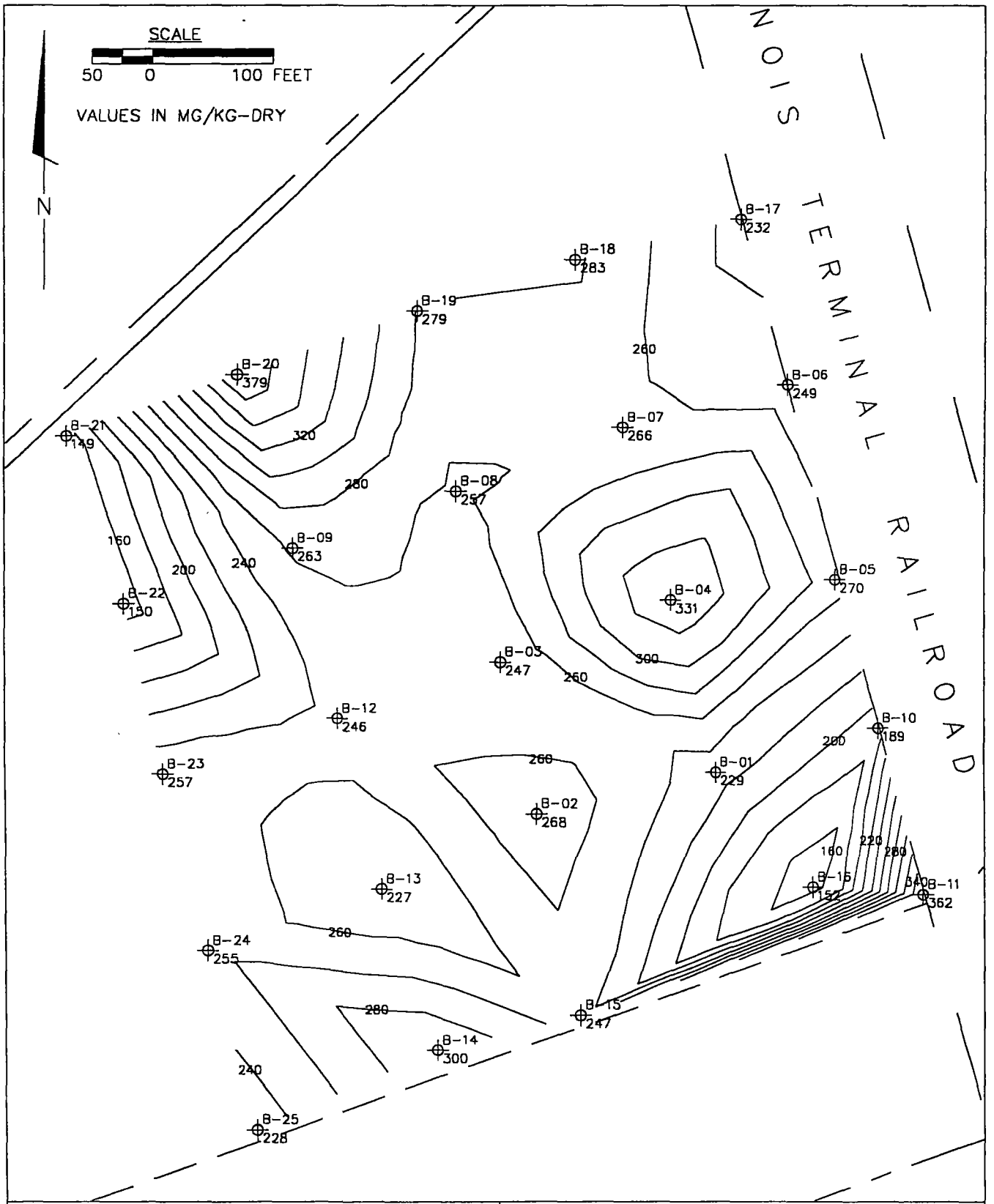

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Figure 2-13

BARIUM 1-2' DEPTH LABORATORY TESTING

AOC SITE
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ST. CLAIR COUNTY, ILLINOIS

PROJECT: SA03035 DRAWING: DRUMLAB DATE: 12/2003

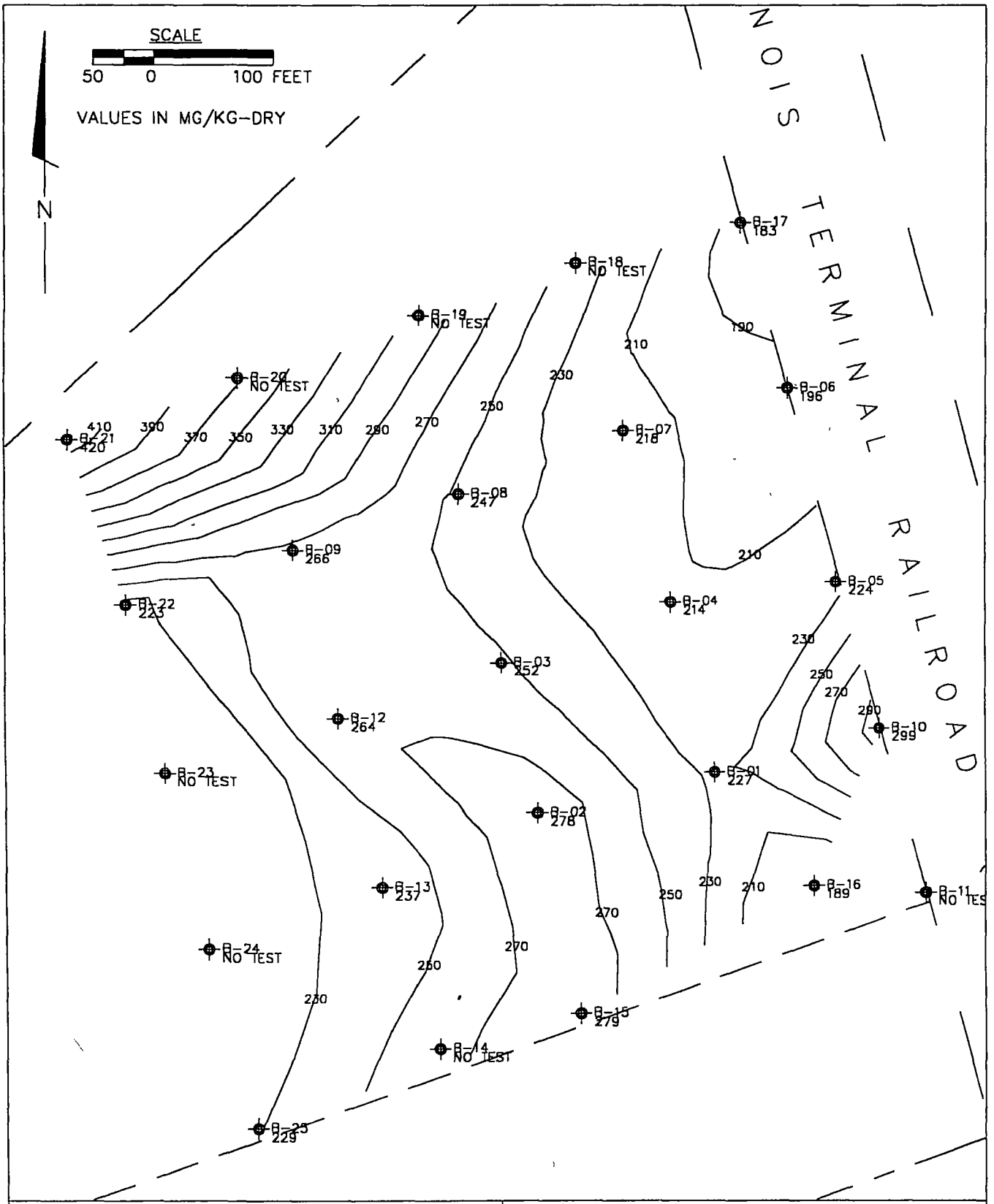

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Figure 2-14

BARIUM 2-3' DEPTH LABORATORY TESTING

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PROJECT: SA03035 DRAWING: DRUMLAB DATE: 12/2003

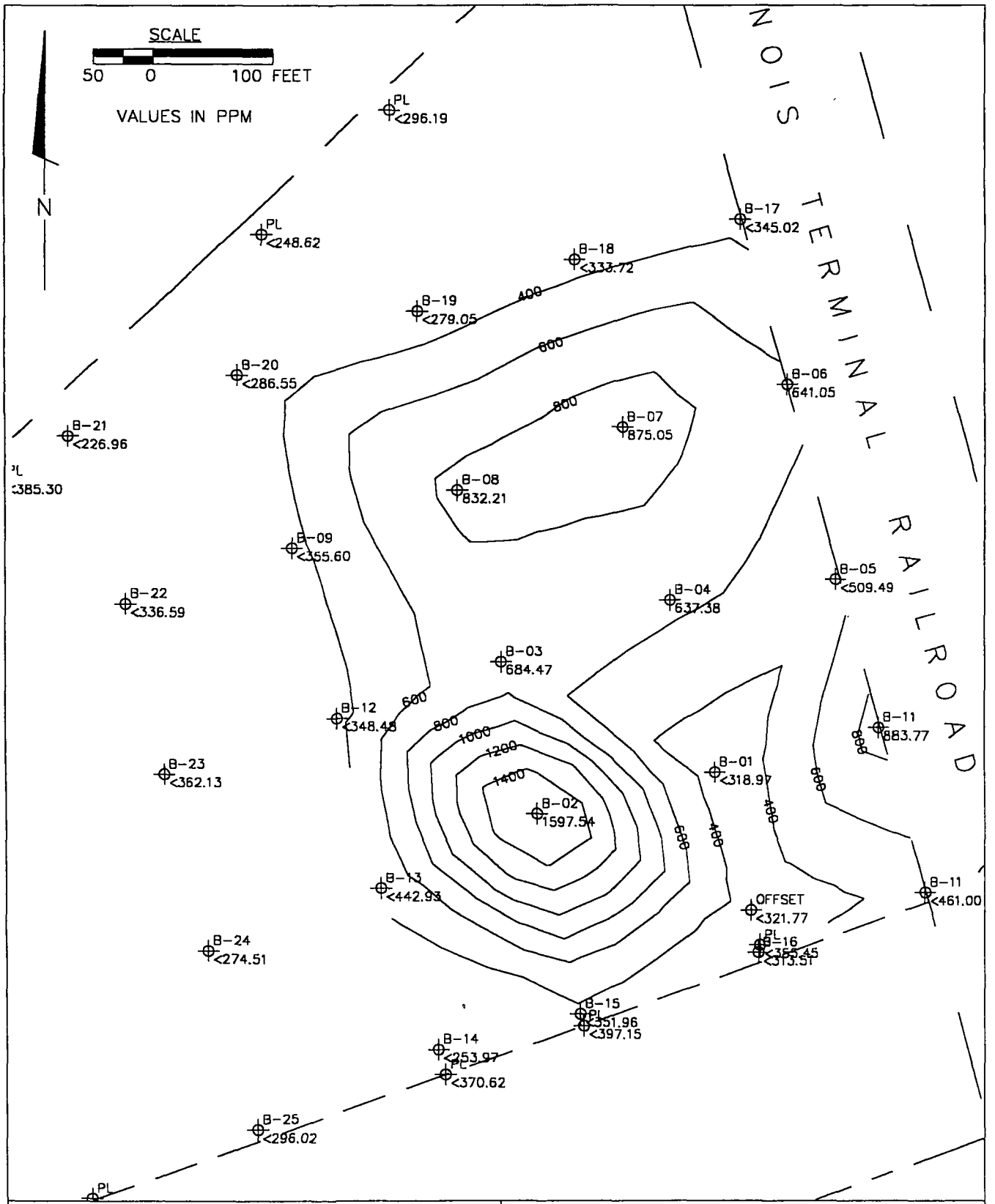

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Figure 2-15

CHROMIUM GROUND SURFACE FIELD TESTING

AOC SITE
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ST. CLAIR COUNTY, ILLINOIS

PROJECT: SA03086 DRAWING: DRUMXRF DATE: 12/2008

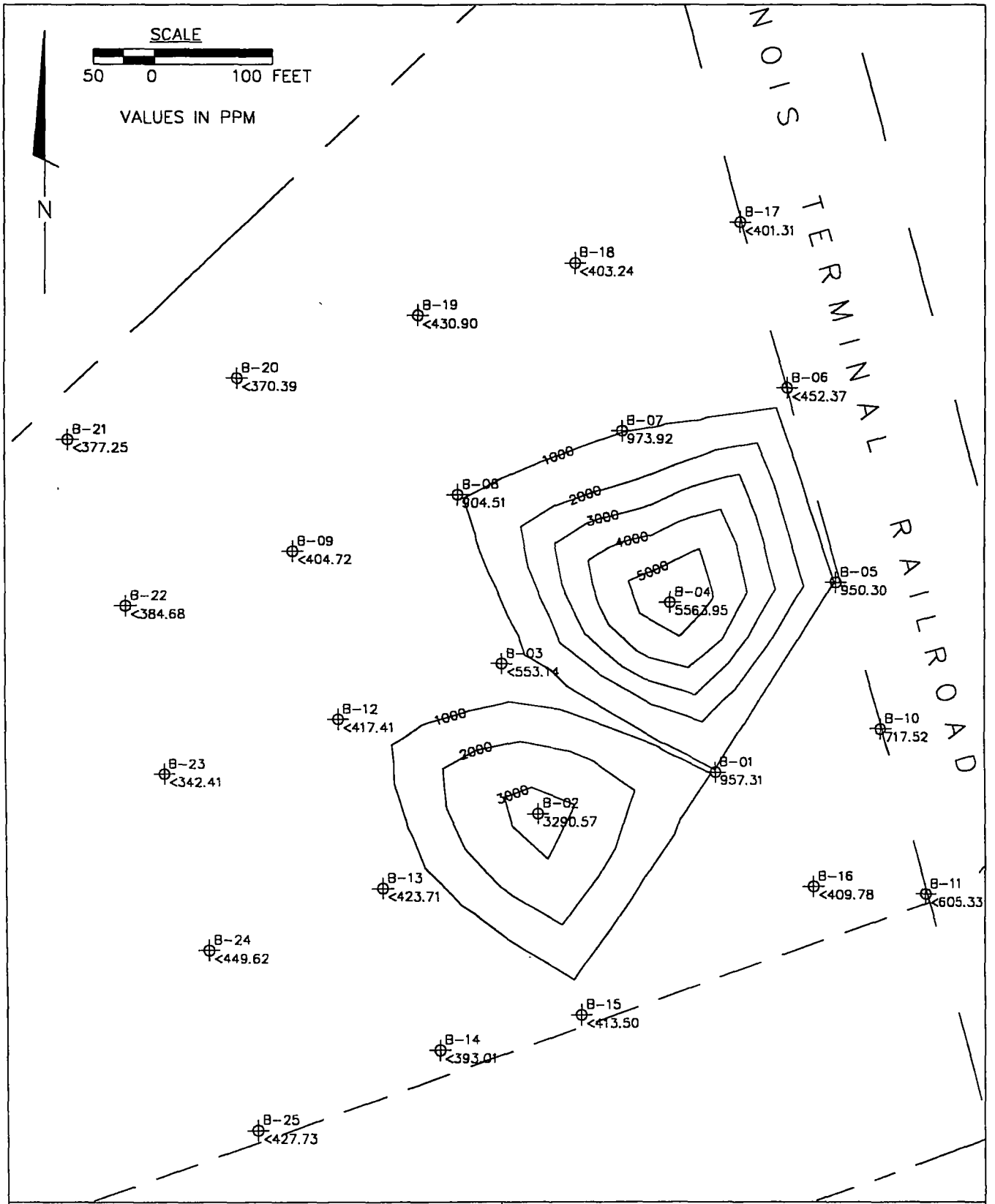

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Figure 2-16

CHROMIUM 0-1' DEPTH FIELD TESTING

AOC SITE
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ST. CLAIR COUNTY, ILLINOIS

PROJECT: SA03085 DRAWING: DRUMXRF DATE: 12/2003

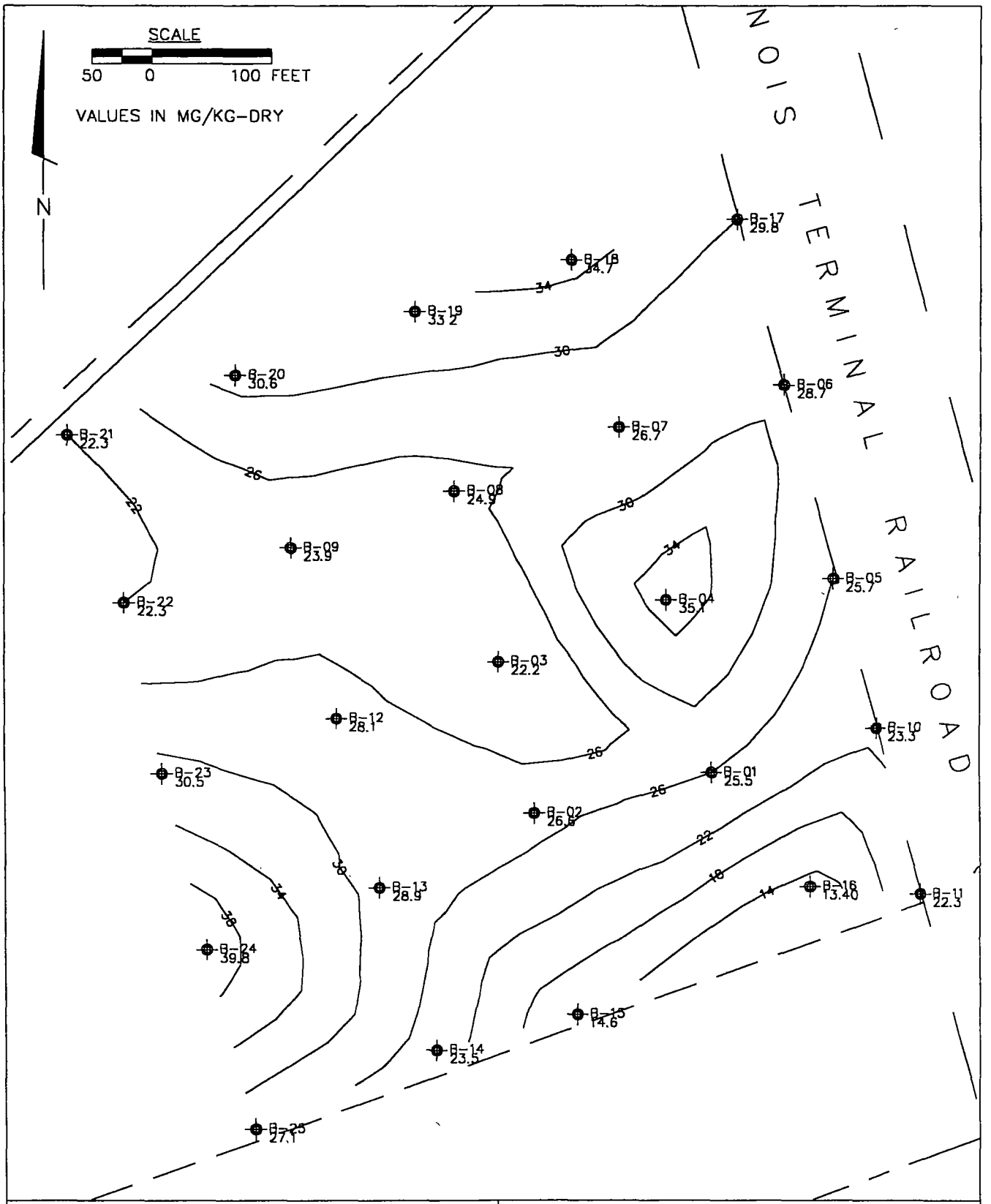

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Figure 2-17

CHROMIUM 1-2' DEPTH LABORATORY TESTING

AOC SITE
CANTEEN TOWNSHIP
ST. CLAIR COUNTY, ILLINOIS

PROJECT: SA03035 DRAWING: DRUMLAB DATE: 12/2003

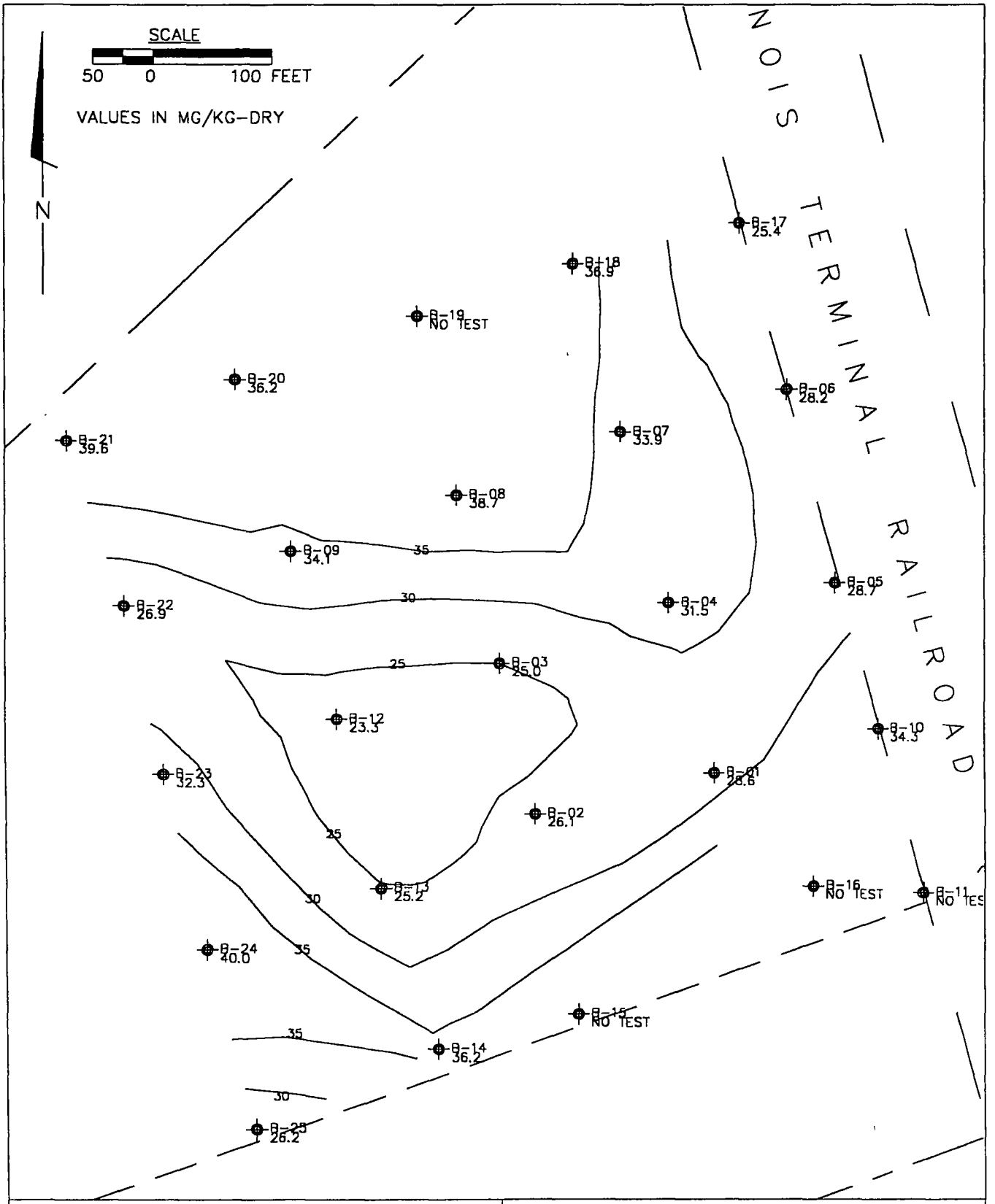

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Figure 2-18

CHROMIUM 2-3' DEPTH LABORATORY TESTING

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ST. CLAIR COUNTY, ILLINOIS

PROJECT: SA03035 DRAWING: DRUMLAB DATE: 12/2003

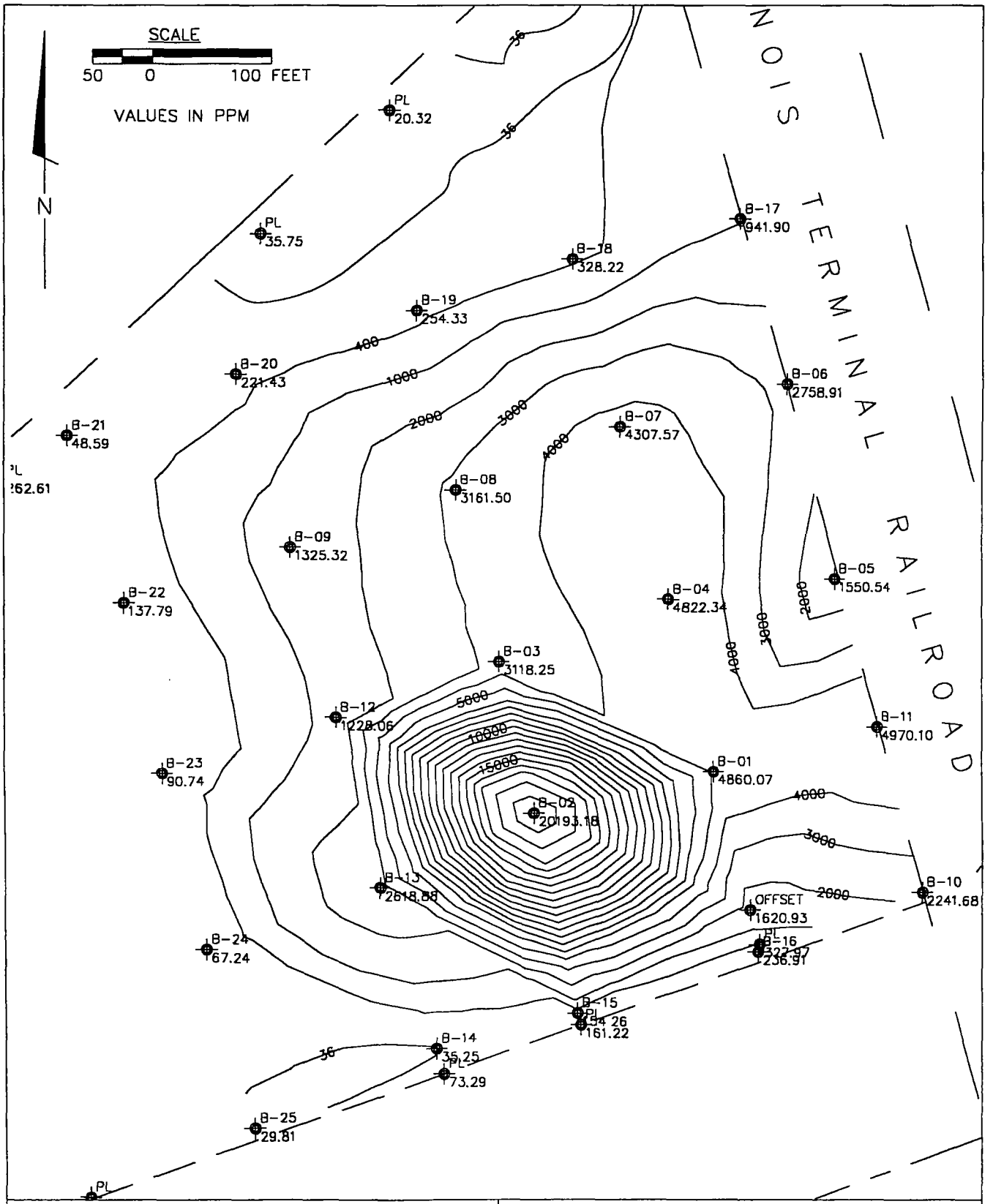

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Figure 2-19

LEAD GROUND SURFACE FIELD TESTING

AOC SITE
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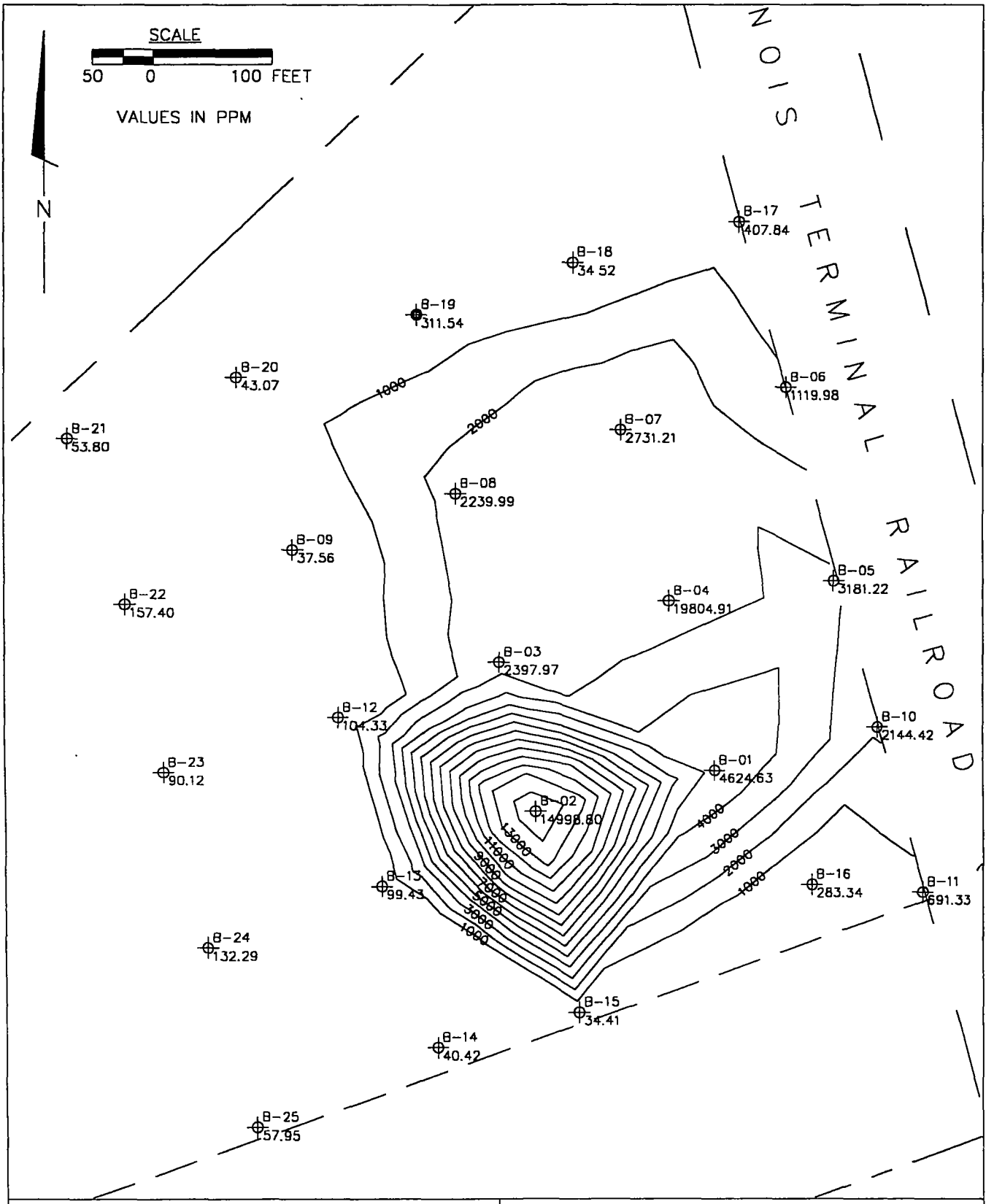

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Figure 2-20

LEAD 0-1' DEPTH FIELD TESTING

AOC SITE
CANTEEN TOWNSHIP
ST. CLAIR COUNTY, ILLINOIS

PROJECT: SA03035 DRAWING: DRUMXRF DATE: 12/2003

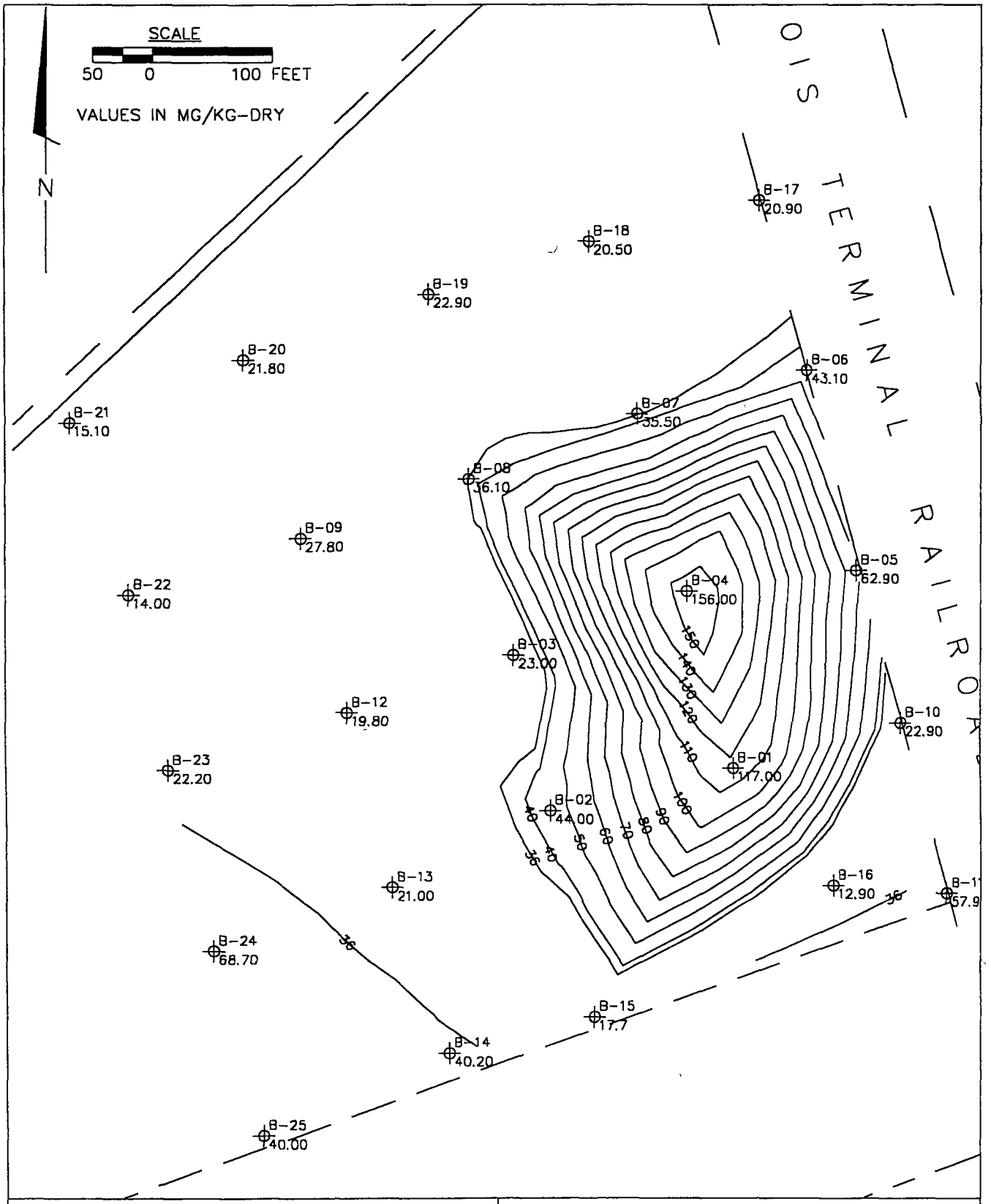

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Figure 2-21

LEAD 1-2' DEPTH LABORATORY TESTING

AOC SITE

CANTEEN TOWNSHIP

ST. CLAIR COUNTY, ILLINOIS

PROJECT: SA03035 DRAWING: DRUMLAB DATE: 12/2003

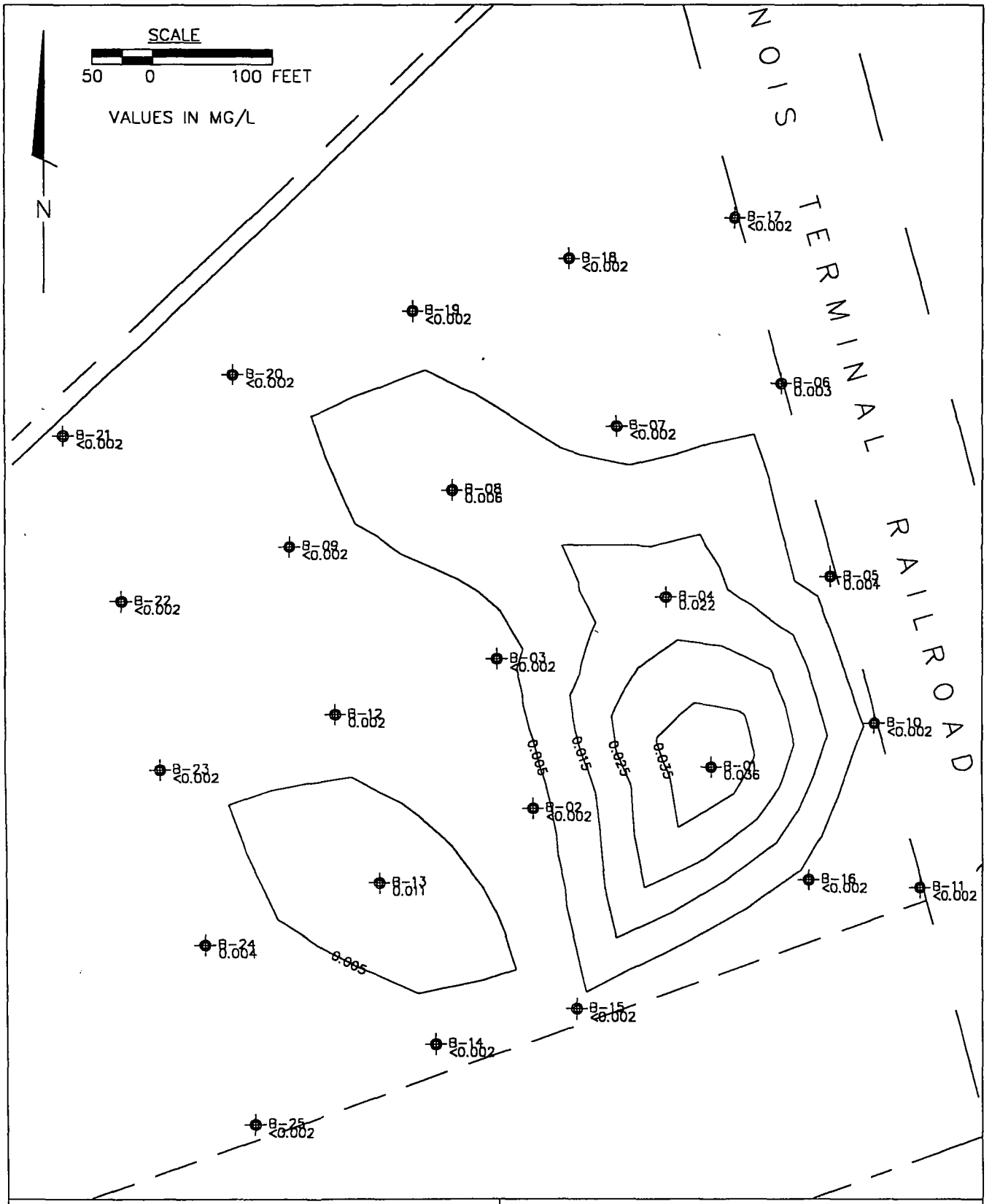

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Figure 2-22

TCLP LEAD 1-2' DEPTH LABORATORY TESTING

AOC SITE
CANTEEN TOWNSHIP
ST. CLAIR COUNTY, ILLINOIS

PROJECT: SA03035 DRAWING: DRUMLAB DATE: 12/2003

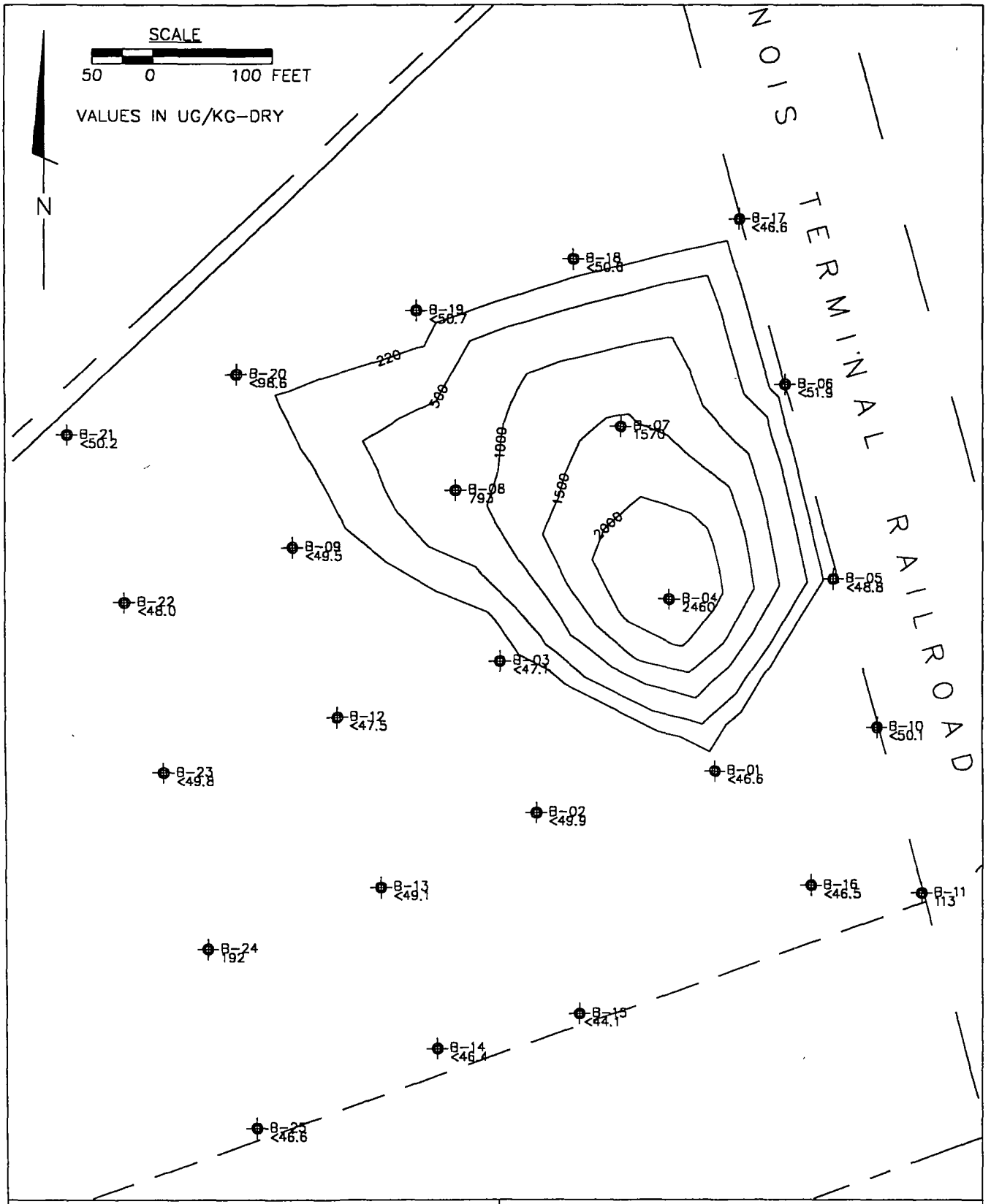

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Figure 2-23

PCBs 1-2' DEPTH LABORATORY TESTING

AOC SITE
CANTEEN TOWNSHIP
ST. CLAIR COUNTY, ILLINOIS

PROJECT: SA08035 DRAWING: DRUMLAB DATE: 12/2008

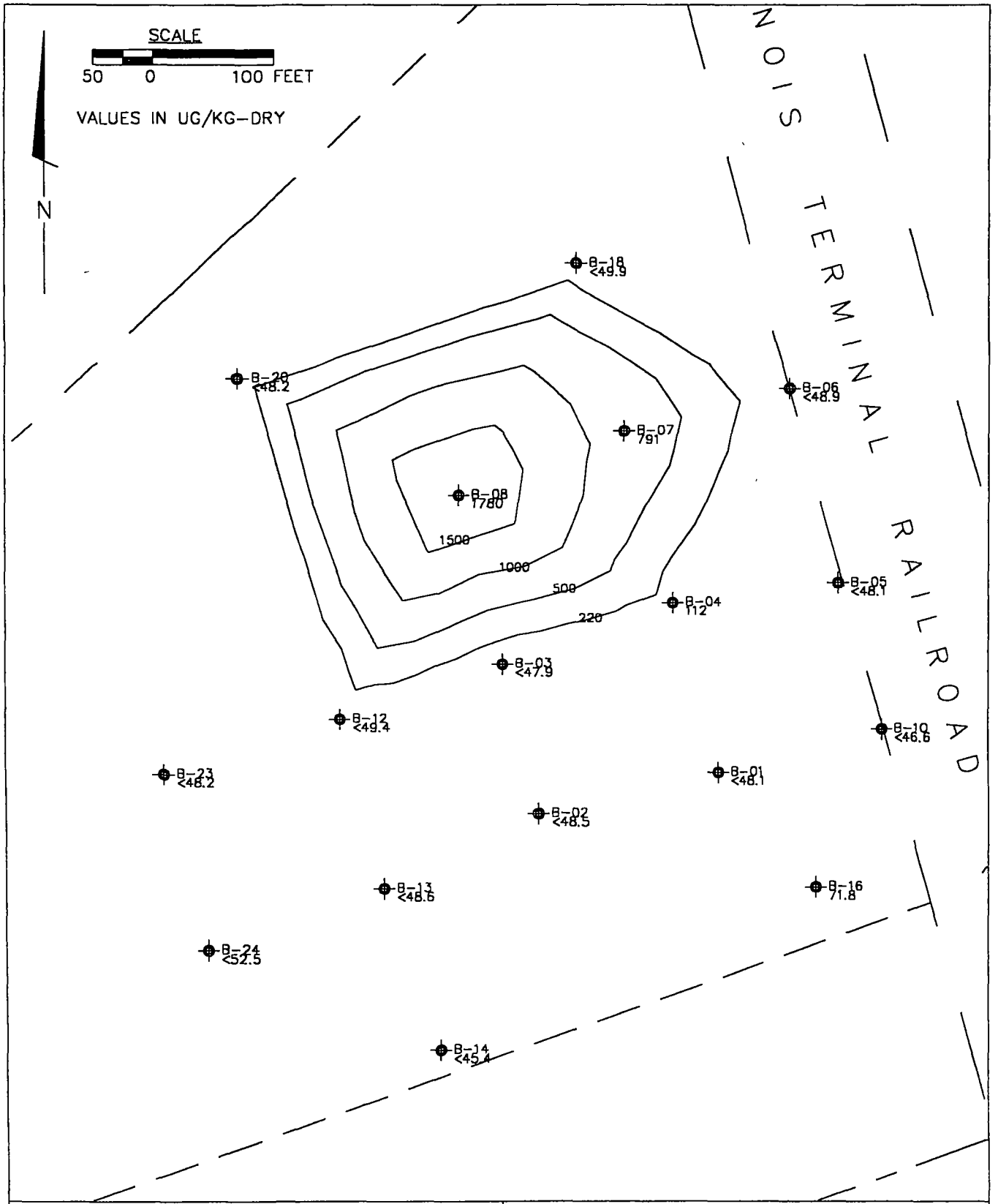

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Figure 2-24

PCBs 2-3' DEPTH
LABORATORY TESTING

AOC SITE
CANTEEN TOWNSHIP
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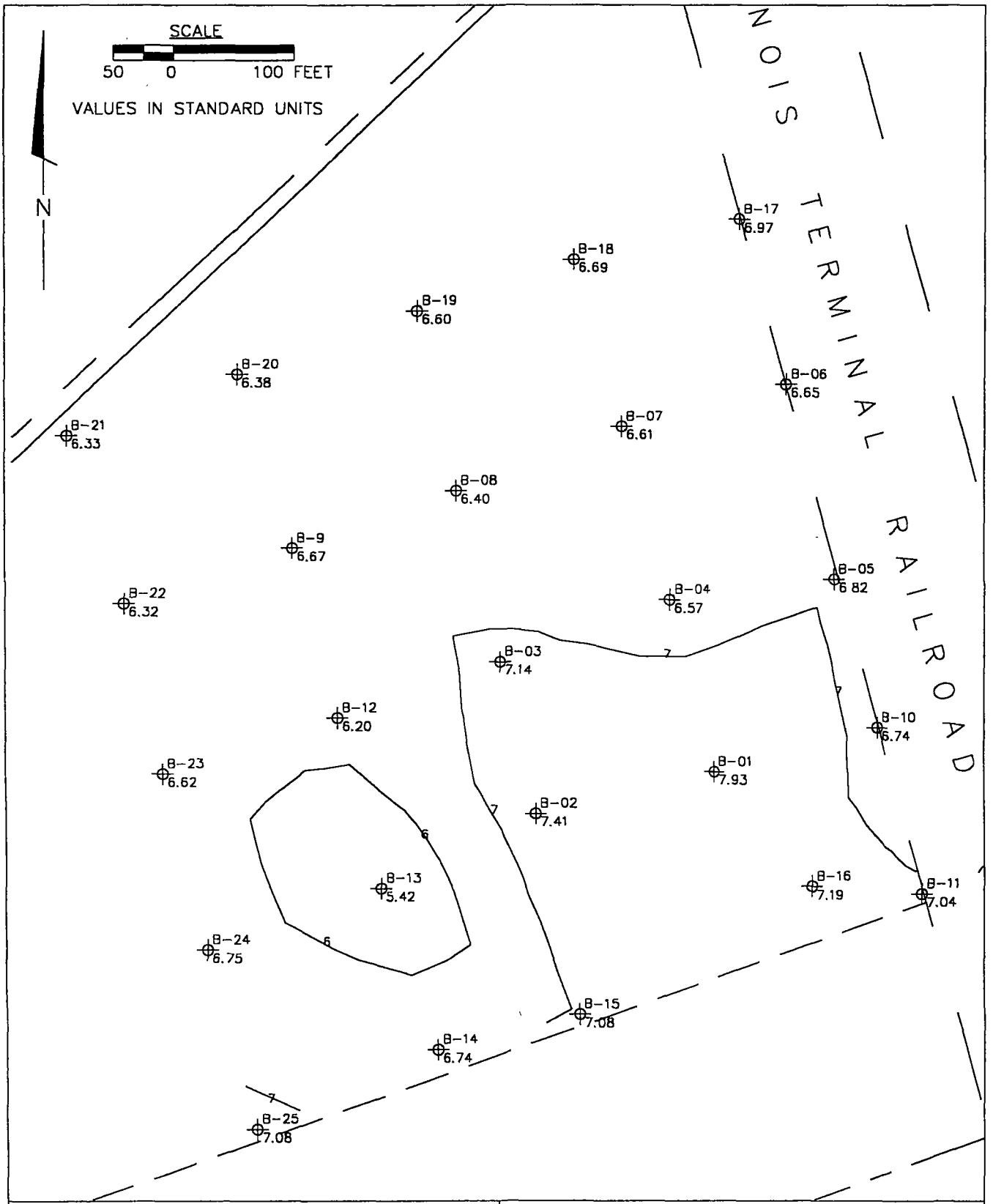

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Figure 2-25

pH 1-2' DEPTH
LABORATORY TESTING

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A Excerpts and Maps from Previous Investigations

(Only the portions of previous investigations related to the RAPPS work plan and site investigation are included in this appendix. Disregard any references in the text excerpts to attachments, photographs, figures, and similar material, which have not been included in this appendix.

SITE ASSESSMENT REPORT
ST. LOUIS AUTO SHREDDING DRUM DISPOSAL SITE
MADISON, ST. CLAIR COUNTY, ILLINOIS

Prepared for:

U.S. ENVIRONMENTAL PROTECTION AGENCY
Region 5 Emergency Response Branch
c/o Crab Orchard National Wildlife Refuge
8588 Route 148
Marion, IL 62959

TDD No.:	S05-0108-037
Date Prepared:	04 Dec 01
Contract No.:	68-W-00-129
Prepared by:	Tetra Tech EM Inc.
START Project Manager:	Jennifer Mueller
Telephone No.:	(314) 892-6322, ext. 26
U.S. EPA On-Scene Coordinator:	Kevin Turner
Telephone No.:	(618) 997-0115

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3.0	SITE ASSESSMENT ACTIVITIES	5
	3.1 SITE RECONNAISSANCE	5
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Appendix

A	VALIDATED ANALYTICAL DATA PACKAGE
B	LIST OF WITNESSES

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2	SAMPLE DESCRIPTIONS	8
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1.0 INTRODUCTION

The Tetra Tech EM Inc. Superfund Technical Assessment and Response Team (START) was tasked by the U. S. Environmental Protection Agency (U.S. EPA) under Technical Direction Document (TDD) No. S05-0108-037 to perform a site assessment at the St. Louis Auto Shredding Drum Disposal (Drum Disposal) site in Madison, St. Clair County, Illinois. START was assigned to compile available site information, develop a site safety plan, perform a site inspection, collect soil samples, procure an analytical laboratory for the samples, conduct analytical data validation, provide a written log documenting all on-site activities, evaluate potential threats to human health and the environment, and prepare this site assessment report.

The site assessment was performed in accordance with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) and Title 40 of the *Code of Federal Regulations* (40 CFR), Section 300.415, Paragraph (b)(2), to evaluate on-site conditions and possible site-related threats to human health, welfare, and the environment. This report discusses the site background, site assessment activities (including sampling activities), sampling activities, analytical results, and potential site-related threats, and provides a summary of the assessment. Appendix A contains validated analytical results for soil samples collected during the site assessment, and Appendix B provides a list of witnesses present during site assessment activities.

2.0 SITE BACKGROUND

The description and history of the Drum Disposal site are discussed below.

2.1 SITE DESCRIPTION

The Drum Disposal site is located in Madison, St. Clair County, Illinois (see Figure 1). The geographical coordinates of the Drum Disposal site are latitude 38° 39' 20.18" North and longitude 90° 08' 25.99" West. The Drum Disposal site is the former main disposal area for the St. Louis Auto Shredding site, which is currently listed on the Comprehensive Environmental Response, Compensation, and Liability Inventory System (CERCLIS) list. The Drum Disposal site is located nearly 0.75 mile north of the St. Louis Auto Shredding site.

The Drum Disposal site is located in the northwest corner of the crossing of the former Illinois Terminal Electric Railroad grade running north to south and the Cahokia Canal running east to west (see Figure 2). The Gateway National Golf Links golf course surrounds the Drum Disposal site on the east, north, and west, and the Cahokia Canal borders the site to the south. The main disposal area is a clearing in a wooded area containing burn residue, patches of rubbery matter, and stressed vegetation. The clearing measures approximately 100 by 150 feet. START assessed an area encompassing approximately 150 by 200 feet, which extends into the wooded area. The Drum Disposal site slightly slants west-southwest toward a heavily wooded area. The wooded area extends to an area of wetland vegetation near the site. The wetland is located around the outer edge of the golf course and is not observed to flow into any other surface water body.

2.2 SITE HISTORY

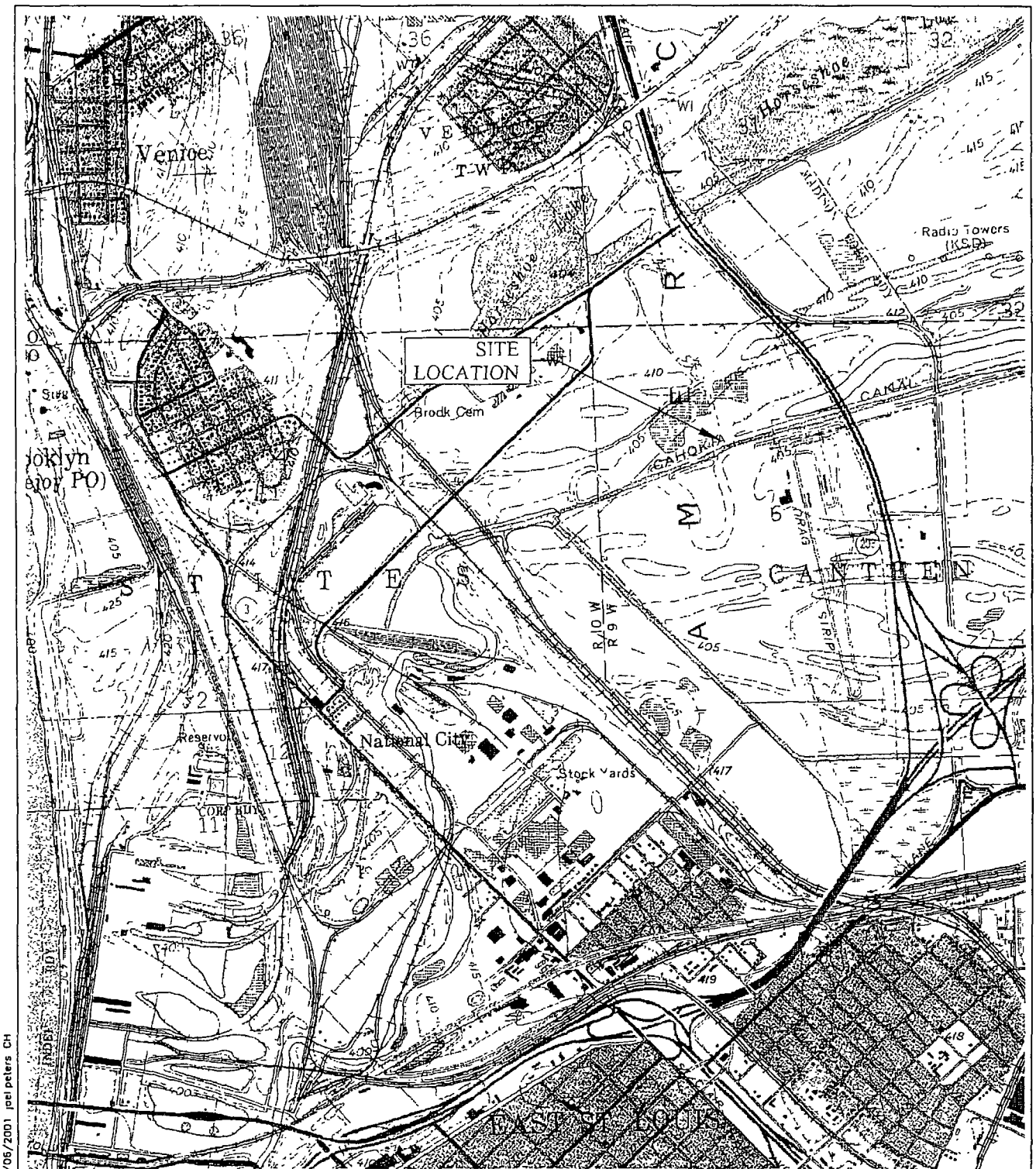
In 1993, a group of hunters walking along the railroad grade east of the site reported numerous overturned and unlidded drums at the Drum Disposal site. Later that year, a privately funded site inspection (SI) was conducted at the Drum Disposal site. The SI report documents the presence of more than 25 drums at the Drum Disposal site. Various drums were unlidded, turned upside-down, or riddled with bullet holes. The drum contents were categorized as paint pigments, paint sludge, and epoxy material. Analytical results from the SI drum sampling activities revealed that the drum contents

contained polychlorinated biphenyls (PCB), metals, volatile organic compounds (VOC), and semivolatile organic compounds (SVOC). In 1996, these drums were removed from the Drum Disposal site during privately funded removal activities.

In 1998, the Illinois State Geological Survey (ISGS) collected several soil samples from 1 to 9 feet below ground surface (bgs) at the Drum Disposal site. Analytical results showed levels of various metals, including lead, that exceeded the Tiered Approach to Corrective Action Objectives (TACO) Tier 1 soil remediation levels (400 milligrams per kilogram [mg/kg] for lead) and Toxicity Characteristic Leaching Procedure (TCLP) levels (5 milligrams per liter [mg/L] for lead). PCBs were also detected at concentrations exceeding the Toxic Substances Control Act (TSCA) regulatory limit of 50 parts per million (ppm). Also in 1998, the Illinois Department of Transportation (IDOT) assigned Ecology & Environment, Inc. (E & E), to characterize site soil as part of an IDOT project to relocate a roadway. Analytical results from the E & E investigation confirmed previous soil analytical results that revealed PCB, metal, VOC, and SVOC contamination. As a result of E & E's assessment, the Drum Disposal site was referred to the Illinois Environmental Protection Agency's (IEPA) Site Assessment Unit (SAU).

In Spring 2000, the IEPA SAU began a pre-CERCLIS screening action in conjunction with the U.S. EPA at the Drum Disposal site. Previous investigations showed that the contaminated soil at the site could potentially affect nearby wetland areas. The intent of the pre-CERCLIS screening action was to ascertain if potentially contaminated sites should be placed onto CERCLIS. Analytical results from the IEPA pre-CERCLIS screening action activities confirmed that soil at the site contains elevated concentrations of PCBs and metals. IEPA's activities also indentified elevated levels of PCBs, zinc, and lead in sediment in the wetland areas near the Drum Disposal site. The IEPA pre-CERCLIS screening action report recommends that the Drum Disposal site be referred to the U.S. EPA for potential removal activities and placement on CERCLIS.

On 14 Sep 01, U.S. EPA On-Scene Coordinator (OSC) Kevin Turner, Tetra Tech START, and Project Resources, Inc. (PRI), conducted a site assessment at the Drum Disposal site. Site assessment activities are discussed in Section 3.0.



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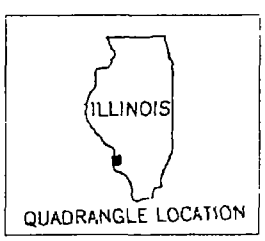


SOURCE MODIFIED FROM U S GEOLOGICAL SURVEY, GRANITE CITY' ILLINOIS-MISSOURI QUADRANGLE. 1993

ST. LOUIS AUTO SHREDDING DRUM DISPOSAL SITE
MADISON, ST CLAIR COUNTY, ILLINOIS
TDD NO S05-0108-037

FIGURE 1
SITE LOCATION MAP

Tetra Tech EM Inc.

G:\G\9009\L0108037\ stlouisauto dwg 12/06/2001 joel peters CH

3.0 SITE ASSESSMENT ACTIVITIES

START was tasked to perform site assessment activities that included a site reconnaissance and sampling activities. Each activity is discussed below.

3.1 SITE RECONNAISSANCE

At approximately 0900 on 14 Sep 01, START members Jennifer Mueller and Sara Giedeman; U.S. EPA OSC Turner; IEPA representative Mark Wagner; and PRI representative James Sheehan arrived at the parking lot of the Gateway National Golf Links golf course in Madison, Illinois. Golf carts were rented and driven along the railroad grade to the southeast corner of the Drum Disposal site. A cart path was created through the wooded area west of the railroad grade to the site clearing. At 0920, U.S. EPA and START conducted the site reconnaissance, which consisted of observing site conditions and determining locations for x-ray fluorescence (XRF) screening and soil sampling.

At 0930, PRI began XRF screening and START began soil sampling activities (see Section 3.2). The site assessment was completed at 1230 on 14 Sep 01.

3.2 SAMPLING ACTIVITIES

A total of 35 locations in a rough grid pattern were screened with an XRF, and 4 soil samples were collected. XRF screening and soil sampling locations are shown in Figure 2. START sampled soil at potentially sensitive areas specified by U.S. EPA OSC Turner based on locations showing high XRF contaminant concentrations and marked the sampled areas with survey flags. Table 1 summarizes XRF screening results for detected metals. START collected grab surface soil samples SS-1 through SS-4 (see Figure 2) in Level D personal protective equipment using dedicated sampling equipment. The collected samples were placed in sample jars and submitted for laboratory analysis based on the judgment of U.S. EPA OSC Turner and XRF field screening results. Sample descriptions are presented in Table 2. Section 4.0 discusses soil sample analytical results.

TABLE 1

XRF SCREENING RESULTS

Location	Description	Concentration Detected (ppm)										
		Fe	Zn	Pb	Cu	Cr	Hg	Sr	Zr	As	Co	Mo
1	Surface	118,000	117,000	22,400	4,110	ND	514	264	ND	1,500	ND	532
2	Surface	100,000	14,500	63,900	3,180	4,180	ND	228	ND	4,920	ND	260
3	Surface	19,900	2,780	19,000	ND	ND	ND	ND	ND	1,900	ND	ND
4	Surface	48,000	16,200	27,900	ND	ND	ND	212	ND	1,120	ND	105
5	Surface	45,000	8,680	24,600	ND	1,680	ND	175	ND	ND	ND	138
6	Surface	40,200	7,400	20,500	ND	2,750	ND	267	ND	1,200	ND	242
7	Surface	35,000	30,800	16,500	ND	1,750	ND	213	ND	737	ND	146
8	Surface	41,900	17,200	13,300	14,000	4,510	3,080	110	ND	ND	ND	296
9	Surface	144,000	24,200	77,900	6,720	4,140	ND	ND	ND	4,180	ND	211
10	Surface	41,600	9,310	31,700	2,090	ND	ND	78.4	ND	1,890	ND	150
11	Depth = 3 to 4 inches bgs	17,500	4,170	14,300	ND	ND	ND	184	ND	1,040	ND	190
12	Surface	85,500	19,000	35,600	5,080	5,780	650	ND	ND	2,160	ND	163
13	Surface	67,000	16,100	42,700	4,900	6,990	823	ND	ND	2,600	ND	845
14	Surface	78,600	30,200	37,100	ND	2,390	ND	163	ND	1,290	ND	129
15	Surface	260,000	139,000	4,650	ND	6,620	ND	1,050	ND	ND	ND	69.8
16	Surface	19,000	3,720	3,800	916	1,630	231	52.6	ND	ND	ND	ND
17	Surface	332,000	11,200	7,490	6,260	ND	1,450	240	ND	ND	ND	95.9
18	Surface	42,100	13,800	4,750	17,300	3,500	3,890	ND	41.8	ND	2,230	108
19	Surface	59,000	39,900	13,300	ND	2,180	ND	125	ND	755	ND	438
20	Surface	39,200	26,200	13,600	ND	1,790	ND	151	ND	ND	ND	346
21	Depth = 3 to 4 inches bgs	22,100	8,000	25,400	1,250	1,870	ND	114	ND	ND	ND	838
22	Surface	19,200	1,900	1,220	ND	ND	ND	64.9	ND	ND	ND	ND
23	Surface	28,900	6,300	5,580	ND	1,480	ND	175	ND	ND	ND	276
24	Surface	73,300	20,300	13,300	ND	ND	ND	177	ND	1,250	ND	97.2
25	Surface	42,400	7,870	18,700	ND	1,980	ND	257	ND	902	ND	41.3
26	Depth = 3 to 4 inches	25,000	4,760	10,500	ND	1,620	ND	99.9	ND	ND	ND	36.3
27	Surface	39,000	13,900	7,440	ND	1,200	ND	93	ND	ND	ND	28
28	Surface	68,000	81,600	3,260	ND	ND	ND	79	ND	ND	ND	ND

TABLE 1 (Continued)

XRF SCREENING RESULTS

Location	Description	Concentration Detected (ppm)										
		Fe	Zn	Pb	Cu	Cr	Hg	Sr	Zr	As	Co	Mo
29	Surface	109,000	17,900	9,050	ND	6,440	ND	469	ND	ND	ND	ND
30	Surface	62,700	22,600	29,400	ND	1,920	ND	189	ND	2,200	ND	216
31	Surface	324,000	39,000	175,000	4,830	ND	ND	ND	ND	13,600	ND	ND
32	Depth = 3 to 4 inches bgs	67,200	13,100	35,300	ND	2,770	ND	512	ND	2,910	ND	368
33	Depth = 2 inches bgs	34,900	17,400	6,500	ND	4,010	ND	532	ND	ND	ND	117
34	Depth = 3 to 4 inches bgs	24,700	6,780	32,100	1,730	2,730	ND	204	ND	1,680	ND	1,090
35	Surface	8,220	5,410	795	ND	ND	ND	42.3	ND	ND	ND	ND

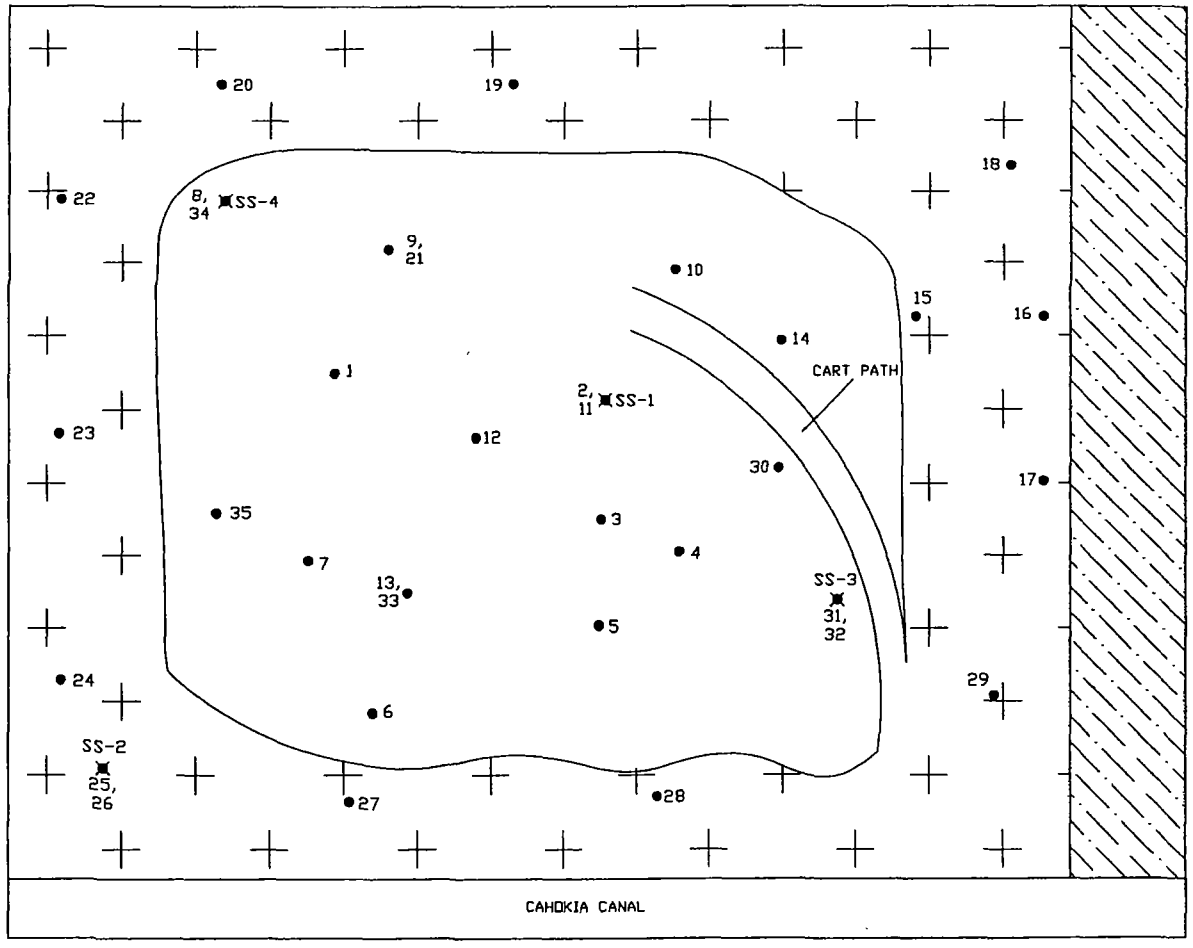
Notes:

As	Arsenic	Mo	Molybdenum
bgs	Below ground surface	ND	Not detected
Co	Cobalt	Pb	Lead
Cr	Chromium	ppm	Part per million
Cu	Copper	Sr	Strontium
Fe	Iron	Zn	Zinc
Hg	Mercury	Zr	Zirconium

TABLE 2

SAMPLE DESCRIPTIONS

Sample No.	Date	Time	Description
SS-1	14 Sep 01	0955	Collected from XRF screening locations 2 and 11
SS-2	14 Sep 01	1105	Collected from XRF screening locations 25 and 26
SS-3	14 Sep 01	1135	Collected from XRF screening locations 31 and 32
SS-4	14 Sep 01	1155	Collected from XRF screening locations 8 and 34



WOODED AREA

RAILROAD GRADE

XRF SCREENING LOCATION

SOIL SAMPLING LOCATION

NOTE: DIMENSIONS OF AREA SHOWN ARE 150 BY 200 FEET

NOT TO SCALE

N

ST. LOUIS AUTO SHREDDING DRUM DISPOSAL SITE
MADISON, ST. CLAIR COUNTY, ILLINOIS
TDD NO S05-0108-037

FIGURE 2
SITE FEATURES,
XRF SCREENING LOCATIONS,
AND SOIL SAMPLING LOCATIONS

Tetra Tech EM Inc.

G9009-L0108037 STLOUISAUTOSHREDDING2.DWG GAS 12/7/01

4.0 ANALYTICAL RESULTS

START submitted all four surface soil samples collected to Pace Analytical Services in Lenexa, Kansas, for analysis under analytical TDD No. S05-0109-003. The samples submitted for analysis and the parameters analyzed for were chosen by U.S. EPA OSC Turner. Analytical results are summarized in Table 3.

All samples were analyzed for total metals (Method 6010), mercury (Method 7471), Toxicity Characteristic Leaching Procedure (TCLP) metals (Method 6010), TCLP mercury (Method 7470), PCBs (Method 8082), and pH (Method 9045).

The pH levels of all samples were within the regulatory limit of 2.0 to 12.5. According to 40 CFR Section 261.22, Paragraph (a)(1), none of the samples are considered to have the hazardous waste characteristic of corrosivity.

For total metals analyses, sample concentrations were compared to residential soil preliminary remediation goals (PRG) set by U.S. EPA Region 9. Results for all samples except Sample No. SS-4 exceeded the regulatory limit for arsenic. All sample concentrations exceeded the regulatory limits for chromium and lead. Samples No. SS-1 and SS-4 exceeded the regulatory limit for barium. No sample results exceeded the regulatory limits for cadmium, selenium, silver, or mercury. For TCLP metals analyses, sample concentrations were compared to toxicity limits set forth in 40 CFR Section 261.24, Paragraph (b), Table 1. For the TCLP metals analyses, all samples exceeded the regulatory limit for lead. No sample concentrations exceeded the TCLP regulatory limits for arsenic, barium, cadmium, chromium, selenium, silver, or mercury. For PCB analyses, sample concentrations were compared to residential soil preliminary remediation goals (PRG) set by U.S. EPA Region 9. All sample concentrations exceeded the regulatory limit for the PCB congener Aroclor-1254. Results for all samples except Sample No. SS-3 exceeded the regulatory limit for the PCB congener Aroclor-1260. No sample concentrations exceeded the regulatory limits for Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, or Aroclor-1248.

TABLE 3

SURFACE SOIL SAMPLE ANALYTICAL RESULTS

Parameter	Regulatory Limit	Sample No.			
		SS-1	SS-2	SS-3	SS-4
Metals (mg/kg)					
Arsenic	0.39	479	12.4	894	1.7 J
Barium	5,400	6,190	4,910	3,230	6,220
Cadmium	37	12.6	17	22.7	5.91
Chromium	30	535	1,390	339	1,530
Lead	400	103,000	34,400	80,600	20,100
Selenium	390	ND	4.8 J	ND	2.0 J
Silver	390	14.6	2.86	30.3	1.43
Mercury	23	2.24	1.06	2.89	1.88
TCLP Metals (mg/L)					
Arsenic	5.0	0.0335 J	ND	0.0069 J	ND
Barium	100	0.732	2.22	0.442	3.44
Cadmium	1.0	0.0583	0.0737	0.169	0.0234
Chromium	5.0	ND	0.0038 J	ND	0.0067 J
Lead	5.0	856	51.8	906	15.7
Selenium	1.0	ND	0.0239 J	ND	0.0106 J
Silver	5.0	0.0239	0.0039 J	0.0274	ND
Mercury	0.2	0.000085 J	ND	ND	ND
PCBs (µg/kg)					
Aroclor-1016	3,900	ND	ND	ND	ND
Aroclor-1221	220	ND	ND	ND	ND
Aroclor-1232	220	ND	ND	ND	ND
Aroclor-1242	220	ND	ND	ND	ND
Aroclor-1248	220	ND	ND	ND	ND
Aroclor-1254	220	34,000	39,000	7,900	120,000
Aroclor-1260	220	23,000	28,000	ND	110,000
General Chemistry					
pH	>2 or <12.5	7.19	7.9	7.98	7.02

TABLE 3 (Continued)

ANALYTICAL RESULTS

Notes:

µg/kg	Microgram per kilogram	J	Sample concentration above method detection limit but below reportable limit
mg/L	Milligram per liter	PCB	Polychlorinated biphenyl
mg/kg	Milligram per kilogram	TCLP	Toxicity characteristic leaching procedure
ND	Sample concentration below method detection limit		

Shaded cells indicate results above the regulatory limits set forth in (1) 40 CFR Section 261 for TCLP metals and pH and (2) U. S. EPA Region 9 PRGs for metals and PCBs. The residential soil limit was used to be the most conservative.

Paragraph (b)(2) of 40 CFR Section 300.415 lists factors to be considered when determining the appropriateness of a potential removal action at a site. The discussion below summarizes factors applicable to the Drum Disposal site.

- **Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances, or pollutants, or contaminants.**
  The Drum Disposal site is located near a commercial and recreational area of the Gateway National Golf Links golf course and within a wooded area and wetland areas. The site therefore poses the threat of potential exposure to animals and the food chain from PCB and metals contamination at high levels in site soil. Access to the Drum Disposal site is uncontrolled, which poses health concerns through the potential exposure of human populations to PCB and lead contamination at high levels in site soil.

  Harmful effects of lead include low birth weight, premature birth, decreased mental ability in infants, reduced growth in young children, and learning difficulties. Effects of exposure to lead are most severe in developing fetuses in pregnant woman and in young children. Effects of lead exposure in adults include decreased reaction time, inhibition of hemoglobin synthesis (causing anemia), damaged male reproductive system, and increased blood pressure. U.S. EPA considers lead to be a class B2 or probable human carcinogen.

- **Hazardous substances or pollutants or contaminants in soils largely at or near the surface that may migrate or pose a threat of release.** Elevated levels of PCBs and metals are present in site surface soil according to XRF screening data results and soil sample analytical results. Concentrations of PCBs and metals at elevated levels in surface soil at the site indicate a threat of contaminant migration in melting snow or rain. Airborne contaminant migration is also possible through PCB adsorption to dust particles. Contaminants could also be tracked off site by people and animals that have contacted contaminated areas at the Drum Disposal site. Migration of contaminants from the Drum Disposal site has been determined a potential source of contamination to nearby wetland areas.

- **Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released.** Elevated levels of PCBs and metals are present in surface soil at the site. Contaminants could migrate off site through heavy rains or winds that would transport PCBs and heavy metals adsorbed to dust particles. As a result of such weather conditions, PCBs and metals could be continuously released to surrounding soil and air. Migration of contaminants from the Drum Disposal site has been determined a potential source of contamination to nearby wetland areas.

6.0 SUMMARY

The Drum Disposal site is located in a commercial and recreational area of the Gateway National Golf Links golf course in Madison, St. Clair County, Illinois. The site is also located in a wooded area near wetland areas. Access to the site is uncontrolled. Analysis of surface soil samples collected during the site assessment indicate high concentrations of several metals and PCBs. Contaminants present in surface soil at the Drum Disposal site could potentially migrate to off-site areas through surface runoff and wind dispersion.

Because analytical results show high levels of lead and PCBs in soil at the site and because of the site's proximity to the golf course and wetland areas, the Drum Disposal site poses a direct threat to human health and the environment. The site therefore meets the criteria for initiating a removal action as outlined in the NCP and 40 CFR Section 300.415, Paragraph (b)(2).

APPENDIX A

VALIDATED ANALYTICAL DATA PACKAGE

(Five Pages)

MEMORANDUM

Date: 5 Dec 01

To: Bryan Williams, Project Manager, Tetra Tech EM Inc (Tetra Tech)
Superfund Technical Assessment and Response Team (START) for Region 5

From: Harry Ellis, Chemist for Tetra Tech START for Region 5

Subject: Data Validation for
St. Louis Auto Shredding Drum Disposal Site
East St. Louis, Illinois
Analytical Technical Direction Document (TDD) No. S05-0109-003
Project TDD No. S05-0108-037

Laboratory. Pace Analytical Services, Inc. (Pace), Lenexa, Kansas
Work Order No 6052609
Polychlorinated Biphenyl (PCB), pH, Total Metals, and Toxicity Characteristic Leaching Procedure (TCLP) Metals Analyses of Four Soil Samples

1.0 INTRODUCTION

The Tetra Tech START for Region 5 validated PCB, pH, total metals, and TCLP metals analytical data for four soil samples collected during site assessment activities on 14 Sep 01 at the St. Louis Auto Shredding Drum Disposal site in East St. Louis, Illinois. The samples were analyzed under the above-referenced work order by Pace using U.S. Environmental Protection Agency (U.S. EPA) SW-846 Method 8082 for PCB analysis, SW-846 Method 9045 for pH analysis, SW-846 Method 6010 for total metals analysis, SW-846 Method 7471 for mercury analysis, and SW-846 Methods 6010 and 7470 for TCLP metals analysis.

The data were validated in general accordance with U.S. EPA's "Contract Laboratory Program National Functional Guidelines for Organic Data Review" dated Oct 99 and "Contract Laboratory Program

National Functional Guidelines for Inorganic Data Review" dated Feb 94. Organic data validation consisted of a review of the following quality control (QC) parameters: holding times, initial and continuing calibrations, blank results, surrogate results, matrix spike and matrix spike duplicate (MS/MSD) results, laboratory control sample (LCS) results, and target compound identification. Inorganic data validation (including indicator parameter data validation) consisted of a review of the following QC parameters: holding times, initial and continuing calibrations, blank results, LCS results, MS/MSD results, inductively coupled plasma (ICP) serial dilutions, ICP interference check sample results, and sample analytical result quantitation. The attachment to this memorandum contains Pace's summary of analytical results, including START's handwritten data qualifications where warranted

Section 2.0 discusses the results of the organic data validation, Section 3.0 discusses the results of the inorganic data validation, and Section 4.0 presents an overall assessment of the data. The attachment to this memorandum contains Pace's summary of analytical results, including START's handwritten data qualifications where warranted.

2.0 ORGANIC DATA VALIDATION RESULTS

The results of START's organic data validation are summarized below in terms of the QC parameters reviewed.

2.1 HOLDING TIMES

All holding time requirements were met.

2.2 INITIAL AND CONTINUING CALIBRATIONS

All initial calibration results had acceptable relative standard deviations. The continuing calibration percent difference (%D) results were acceptable. Therefore, no qualifications are required for calibration irregularities

2.3 BLANK RESULTS

During the PCB analyses, method blanks were run with each analytical batch in the proper sequence. No target analytes were detected in the blanks.

2.4 SURROGATE RESULTS

All surrogate recovery results for the PCB analysis were not usable because of the high dilution factors required to bring the results within calibration range.

2.5 MS/MSD RESULTS

MS/MSD samples were analyzed for the PCB analysis and yielded acceptable results.

2.6 LCS RESULTS

An LCS was analyzed with the samples in each analytical batch. The LCS results were within the QC limits specified by the laboratory.

2.7 TARGET COMPOUND IDENTIFICATION

For the PCB analyses, the reported identity of PCB congeners in the sample mixtures was verified by the good match of the sample congener chromatogram patterns to the standard congener chromatogram patterns.

3.0 INORGANIC DATA VALIDATION RESULTS

The results of START's inorganic data validation (including pH data) are summarized below in terms of the QC parameters reviewed. The data qualifiers below were applied to the sample analytical results as appropriate (see the attachment).

- U - The analyte was analyzed for but not detected in the sample. The associated numerical value is the sample detection limit.
- J - The analyte was detected in the sample. The associated numerical value is considered estimated for QC reasons.
- UJ - The analyte was analyzed for but not detected in the sample. The reported sample detection limit is considered estimated for QC reasons.

3.1 HOLDING TIMES

All samples were analyzed for metals within the holding time limits of (1) 28 days for mercury and (2) 6 months for all other metals. All samples for pH analysis were not analyzed within the established or recommended 24-hour holding time limit. This situation often occurs because of sample transportation constraints. The recommended holding time limit was exceeded by a relatively short period and should not dramatically affect pH results because the samples were stored at the proper temperature of 4 ± 2 °C. Therefore, no data qualifications are warranted.

3.2 INITIAL AND CONTINUING CALIBRATIONS

All initial calibration results were satisfactory, with high correlation coefficients or appropriate recoveries as required by the various methods. Continuing calibration recoveries were also all within the QC limits.

3.3 BLANK RESULTS

Appropriate blanks, such as initial calibration, continuing calibration, and preparation blanks, were run with each analytical batch. Low concentrations (less than the reporting limit) of mercury, arsenic, chromium, and selenium were detected in some of the blanks in the TCLP extract analyses and of arsenic, lead, and selenium in the total metals analyses. Similar low concentrations detected in several TCLP extracts and the soil samples were flagged "U" to indicate that they are laboratory artifacts.

3.4 LCS RESULTS

An LCS was analyzed with each analytical batch. All of the LCS results were within the QC limits specified by the laboratory.

3.5 MS/MSD RESULTS

MS/MSD samples were analyzed as required using sample SS1. Arsenic, barium, chromium, and lead recovery results for the total metals MS/MSD samples and lead recovery results for the TCLP extract MS sample were not usable because the samples contained much higher concentrations of the metals than the spikes. No qualifications are warranted for this data gap. For the total metals analyses, the MS had low recoveries for selenium and silver. The acceptable post-digestion spike recoveries confirmed the presence of matrix interference. All results for total selenium and silver in the soil samples are therefore

flagged "J" or "UJ" as appropriate to indicate that they are estimates and biased low. Recoveries from the MS and matrix duplicate analyses of the TCLP extract were within QC limits.

3.6 ICP SERIAL DILUTIONS

ICP serial dilution analyses were performed as required. All results were within QC limits.

3.7 ICP INTERFERENCE CHECK SAMPLE RESULTS

ICP interference check sample analyses were performed as required. All results were within QC limits.

3.8 SAMPLE ANALYTICAL RESULT QUANTITATION

Some analytical results were above the sample detection limit but below the sample reporting limit, which corresponds to the low calibration standard. These extrapolations are flagged "J" to indicate that they are considered estimates.

4.0 OVERALL ASSESSMENT OF DATA

Overall, the sample analytical data generated by Pace are acceptable for use as qualified. No data were rejected for nondetected results for compounds unlikely to be associated with the St. Louis Auto Shredding Drum Disposal site, nor were there any serious problems with interference to sample results by major concentrations of constituents.

ATTACHMENT

PACE SUMMARY OF SAMPLE ANALYTICAL RESULTS

(30 Sheets)

APPENDIX B

LIST OF WITNESSES

(One Page)

LIST OF WITNESSES

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St. Clair Co.-1631000003
St. Louis Auto Shredding
Drum Disposal Site
SF/HRS

CERCLA

Pre-Cerclis Screening Action

Illinois Environmental Protection Agency

CERCLA
PRE-CERCLIS ACTION REPORT

for:

Saint Louis Auto Shredding Drum Disposal Site
Madison, Illinois

PREPARED BY:
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
BUREAU OF LAND
FEDERAL SITES REMEDIATION SECTION
SITE ASSESSMENT UNIT

OCTOBER 2000

RELEASABLE
APR 2 4 2002
REVIEWER MD

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2.1 Reconnaissance Activities....3
Analytical Results....3

3.0 SITE RECOMMENDATION FOR FUTURE CERCLA ACTIVITIES AND/OR LISTING ON CERCLIS....4

FIGURES and TABLES

Figure 1....Site Area Map
Figure 2....Sample Location Map
Table1....KEY XRF/PCB Results
Table 2....BULK XRF Results

1.0 SITE BACKGROUND

1.1 Site Introduction

In March of 2000, the Illinois Environmental Protection Agency's (Illinois EPA) Site Assessment Program, working in cooperation with the United States Environmental Protection Agency (U.S.EPA) initiated work on a Pre-CERCLIS (Comprehensive Environmental Response, Compensation, and Liability Inventory System List) Screening Action at Saint Louis Auto Shredding Drum Disposal Site, in Madison, Illinois (Figure 1). The Pre-CERCLIS Screening Action was designed to identify potentially contaminated sites and determine if their placement onto CERCLIS is necessary. Past investigations identified this site as a potential source of contamination potentially impacting a wetland area. Note: This former drum disposal site is located approximately 0.75 miles north of the Saint Louis Auto Shredding site that is presently list on CERCLIS (ILD 984767392).

1.2 Site Description

Saint Louis Auto Shredding Drum Disposal site occupies the northwest corner of the intersection of the Cahokia Canal and the former Illinois Terminal Electric Railroad grade (see Figure 1). The site is bordered in three side by the Gateway International Golf Course. The main disposal area is an approximate 100 by 150 foot clearing in a wooded area. This clearing is characterized by stressed vegetation, burn residue, and patches of rubbery material. This area

slopes slightly to the west, southwest toward a heavily wooded area. These woods have a definite end point where wetland vegetation begins. These wetlands flow into a series of other wetlands located around the outer perimeter of the golf course. No outlet was observed form any of these wetlands to the canal or other surface water body. The author of this report has concluded that they are an "isolated wetland".

1.3 Site History

The site was discovered by hunters in 1993, walking along the railroad grade north of the site. At that time the site was reported to contained numerous drums turned upside down with no lids. In that same year a privately funded Site Inspection (SI) report found more than 25 drums were present, many were over-turned, had no lids, and were filled with bullet holes. This report also characterized the material in the drums as paint sludge, paint pigments, and an epoxy material. Sampling of these waste streams was conducted at this time. Later the analytical results from the SI, revealed the presence of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), and metals. Based on these findings a privately funded drum removal was conducted in the spring of 1996. In 1998, ISGS, collected several samples from the site ranging in depth from 1 foot to 9 feet. Results for several metals including lead, exceeded the TACO, Tier 1 soil remediation levels, RCRA, TCLP, for lead, and had PCBs greater than 50 ppm. In this same year as part of a roadway relocation project the Illinois DOT, tasked Ecology and Environment to perform additional soil characterization of this area. Again this area was found to be heavily contaminated with VOCs, SVOCs, PCBs, and Metals. As a result of this investigation the site was then referred to the Illinois EPA's CERCLA

Site Assessment Unit (SAU).

2.0 FIELD INVESTIGATION ACTIVITIES AND ANALYTICAL RESULTS

2.1 Reconnaissance Activities

In March of 2000, Illinois EPA Site Assessment Unit conducted a reconnaissance visit of the site and met with a representative for the Illinois Department of Transportation and Ecology and Environment. During this visit, potential screening locations at the site and in the wetland area were noted for the collection of sample screening data. During this same visit, Illinois EPA collected information about past and present ownership of the contaminated areas. A representative from Gateway National Golf Links did grant the Illinois EPA access for the screening inspection.

2.2 Analytical Results

On March 30 , 2000, Illinois EPA personnel collected 16 soil/sediment samples for PCB screening using Envirogard immunoassay test kits and performed 78 soil/sediment XRF readings with a Niton 700-Series X-Ray Fluorescence (XRF) device. See Figure 2, for sample locations. XRF screening and PCB analysis of the soil/sediment samples can be found in Table 1.

Several on-site soil readings reported high lead levels. They ranged from 22- 94,000 ppm. The corresponding Removal Action Level (RAL) for lead is 500-1000 ppm. PCBs were also detected at concentrations greater than 5 ppm.

XRF readings of the sediments in the wetland areas surrounding the drum disposal area

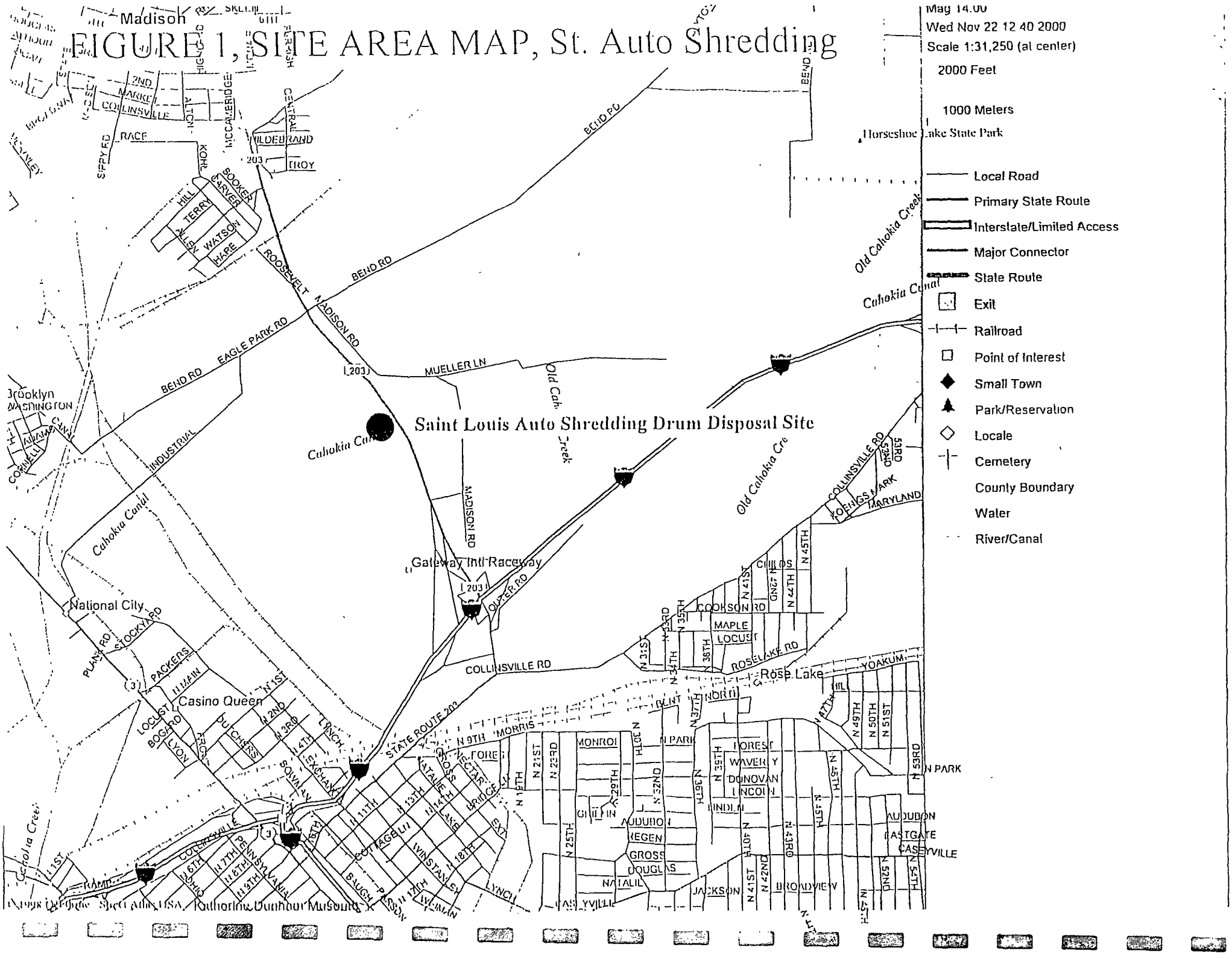
reported high lead and zinc levels. Lead levels ranged from 27-1859 ppm and zinc levels were 38-766 ppm. The corresponding sediment screening benchmarks for lead is 47 ppm and zinc 150 ppm. Surface sediment PCB results were in the greater than 1ppm and less than 5 ppm range. The corresponding sediment screening benchmark for PCBs is .023 ppm.

3.0 SITE RECOMMENDATION FOR FUTURE CERCLA ACTIVITIES AND/OR LISTING AND/OR CERCLIS

Screening data collected during Pre-CERCLIS Screening activities indicated elevated levels of several metals (see Table 2) and the presence of PCBs on-site. The lead levels are in excess of the RALs and it is recommended that the site be referred to the USEPA as a potential removal candidate.

Elevated levels of lead, zinc and PCBs were also found to extend into the surrounding wetland areas. All three exceed their sediment screening benchmarks and it is recommended that the site be placed on CERCLIS and advance to the next stage of the CERCLA process.

FIGURE 1, SITE AREA MAP, St. Auto Shredding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Primary State Route
Interstate/Limited Access
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Small Town
Park/Reservation
Locale
Cemetery
County Boundary
Water
River/Canal
Saint Louis Auto Shredding Drum Disposal Site
Gateway Intl Raceway
National City
Casino Queen
Brooklyn
Cahokia Canal
Old Cahokia Creek
BEND RD
EAGLE PARK RD
MADISON RD
MUELLER LN
INDUSTRIAL
COLLINSVILLE RD
STATE ROUTE 203
ROSELAKE RD
Rose Lake
YOAKUM
MARYLAND
COOKSON RD
MAPLE
LOCUST
PACKERS
STOCKYARD RD
PLANK RD
BOGARD
LYON
LYNCH
MORRIS
MONROE
WAVERLY
DONOVAN
LINCOLN
LINDELL
AUDUBON
REGEN
GROSS
DOUGLAS
NATALIE
JACKSON
BROADVIEW
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CASEYVILLE
N PARK
N 53RD
N 45TH
N 41ST
N 42ND
N 49TH
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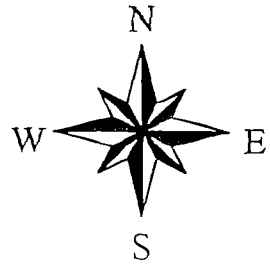
FIGURE 2
SAMPLE LOCATION MAP
ST. LOUIS AUTO SHREDDING
DRUM DISPOSAL SITE
L-1634655002

0.06 0 0.06 0.12 Miles



- Xrf.shp
- Pcbs.shp

St Louis Auto Shredding
Drum Disposal Site

TABLE 1 KEY RESULTS

PPM			Depth	PCBs	Pb	Pb	Zn	Zn
Sediment Screening Benchmarks				0.023	47	precision	150	precision
XRF No	PCB No	matrix						
2		soil	0-3"		7948 8	290	3080	240
3		soil	0-3"		NA	NA	67 35	4268 8
4		soil	0-3"		NA	NA	66 6	2449 6
5		soil	0-3"		5008	190	10496	390
6		soil	0-3"		1340	71.3	2468 8	140
7		soil	0-3"		NA	NA	44 4	1020
8		sediment	0-3"		NA	NA	38 25	471 6
9		sediment	0-3"		27 1	15 6	129 6	41 3
10		sediment	0-3"		42 1	14 3	163 7	36 7
11		sediment	0-3"		42	14.5	202 5	39 9
12		sediment	0-3"		56 1	19	198 6	46 9
13		sediment	0-3"		46.6	18.6	167.7	46 3
14		sediment	0-3"		63.4	18.6	161 3	43.2
15		sediment	0-3"		51 6	17.8	192.5	44.9
16		sediment	0-3"		58 1	17.5	169.9	41 8
17		sediment	0-3"		38.3	13	113 8	31.9
18		sediment	0-3"		30.7	12.8	168.8	36.7
19		sediment	0-3"		92 1	21 1	235.2	48.5
20		sediment	0-3"		281 2	32 3	488 4	62 5
21		sediment	0-3"		267 6	39.2	347 8	69 3
22		soil	0-3"		3798 4	130	1369 6	110
23		soil	0-3"		94668 8	2699.2	65689 6	2099 2
24		soil	0-3"		NA	NA	126 15	2068 8
25		soil	0-3"		NA	NA	126 15	23897 6
26		soil	0-3"		17600	460	16896	550
27		soil	0-3"		12800	320	12896	400
28		soil	0-3"		NA	NA	106 05	11596 8
29		soil	0-3"		NA	NA	57 9	5228 8
30		soil	0-3"		3148 8	110	1788 8	120
31		soil	0-3"		532.4	47 2	396 8	62 6
32		soil	0-3"		249 6	29	355 4	53
33		sediment	0-3"		138.2	24 8	248	51
34		sediment	0-3"		67.9	18 6	256 6	47.6
35		sediment	0-3"		39	15 3	166 7	40 5
36		sediment	0-3"		30.8	15.5	245 4	46 4
37		sediment	0-3"		49.5	18 6	207 6	48 9
38		sediment	0-3"		34	16.5	201.5	47 1
39		soil	0-3"		15296	360	5878.4	260
40		soil	0-3"		NA	NA	135	27084 8
41		soil	0-3"		2559 2	100	10694 4	300
42		soil	0-3"		NA	NA	85.95	6508 8
43		soil	0-3"		1689 6	72.1	770 4	72 1
44		sediment	0-3"		164 9	22 2	664 8	61.1
45		sediment	0-3"		88 6	17.5	236	41.4
46		sediment	0-3"		57.3	15.2	212.6	39 2
47		sediment	0-3"		37 9	12.7	122.5	31.7
49		soil	0-3"		<LOD	25 85	147.3	50.1
50		soil	0-3"		41.7	19.3	181.3	49 8
51		soil	0-3"		44 5	22.2	270	63 5
52		soil	0-3"		71.5	25 6	258.2	67.7
53		soil	0-3"		65 8	18.7	237	47 7
54		soil	0-3"		22 4	9 9	129 7	27 9
55		soil	0-3"		47 2	18.6	249 8	53 5
56		soil	0-3"		39.7	14.2	282	45
58	1	sediment	0-3"	N/A	80 9	16 9	365 4	47.5
59	2	sediment	0-3"	N/A	85 3	20	362.8	53 6
60	3	sediment	0-3"	N/A	29.4	12.4	273 8	41.5
61	4	soil	0-3"	>5	14092.8	400	8800	380
62	5	soil	6"	>1, <5	8595.2	280	5507 2	280
63	6	soil	0-3"	>5	13196 8	390	16691 2	570
64	7	soil	18"	<1	314 6	39 7	3558 4	180
65	8	soil	0-3"	>5	1960	150	1069 6	170
66	9	soil	18"	>1, <5	1399.2	93.1	3619.2	190
67	11	soil	18"	>1, <5	1500	81 4	896 8	93.2
68	12	sediment	0-3"	>1, <5	71.2	20 1	237 6	50
69	13	sediment	18"	<1	<LOD	27 45	114 6	45
70	14	sediment	0-3"	>1, <5	351 8	37 4	428 8	63.3
71	15	sediment	18"	<1	207 8	31.2	272.4	56 7
72	16	sediment	0-3"	>1, <5	944 8	61	631 6	75 8
73	17	sediment	18"	<1	153 7	29.4	232 6	56 1
74	18	sediment	0-3"	ND	152 2	21 9	313	46 4
75	19	sediment	18"	ND	<LOD	25.5	133 2	51
76	20	sediment	0-3"	N/A	1859 2	75 4	766 4	73.4
77	21	sediment	0-3"	N/A	283 8	25 9	318 4	42 7
78	22	sediment	0-3"	N/A	250 2	32 2	739 6	77 3
79	23	sediment	0-3"	N/A	374 8	33 4	406 6	53 7
80	10	soil	0-3"	>5	20390 4	510	5699 2	300

	Mo	[illegible]	[illegible]	[illegible]	Pb	Pb [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	LOD		[illegible]	[illegible]	LOD	[illegible]	LOD	[illegible]	LOD	[illegible]	NA		[illegible]	
	NA		[illegible]		NA		NA		NA		NA		NA		NA		[illegible]	[illegible]	[illegible]	[illegible]
	NA		[illegible]		NA		NA		NA		NA		NA		NA		[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]		[illegible]		LOD	[illegible]	LOD	[illegible]	[illegible]	[illegible]	NA		NA	
6	LOD		[illegible]	[illegible]	[illegible]	21	LOD		[illegible]	[illegible]	LOD	[illegible]	LOD	[illegible]	LOD	[illegible]	NA		[illegible]	
7	NA		[illegible]		NA		NA		NA		NA		NA		NA		[illegible]	[illegible]	[illegible]	[illegible]
8	NA		[illegible]		NA		NA		NA		NA		NA		NA		[illegible]	[illegible]	[illegible]	[illegible]
9	LOD	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	LOD		[illegible]	[illegible]	LOD	[illegible]	LOD	180	LOD	[illegible]	NA		NA	
10	LOD	[illegible]	[illegible]	5.4	42.1	[illegible]	LOD	[illegible]	[illegible]	36.7	LOD	[illegible]	LOD	[illegible]	LOD	[illegible]	NA		NA	
11	<LOD	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	LOD	[illegible]	[illegible]	[illegible]	LOD	[illegible]	LOD	[illegible]	LOD	[illegible]	NA		NA	
12	[illegible]	[illegible]	12.7	[illegible]	[illegible]	[illegible]	<LOD	27.15	[illegible]	46.9	<LOD	[illegible]	LOD	180	LOD	500	NA		[illegible]	
13	LOD	5.7	[illegible]	5.1	[illegible]	18.6	<LOD	27.25	162.7	46.3	<LOD	[illegible]	LOD	195	LOD	420	NA			
14	LOD	7.65	[illegible]	7.6	63.4	18.6	<LOD	27.15	[illegible]	15.2	<LOD	91.15	<LOD	165	<LOD	390	NA		NA	
15	<LOD	7.95	37.2	7.7	51.6	17.8	<LOD	27	192.5	48.9	<LOD	93.15	LOD	165	<LOD	175	NA		NA	
16	<LOD	7.5	21.5	6.7	58.1	17.5	<LOD	21.9	169.9	41.8	<LOD	89.55	<LOD	165	<LOD	405	NA		NA	
17	<LOD	5.7	<LOD	7.15	38.1	33	<LOD	19.05	113.8	31.9	<LOD	70.5	<LOD	111.3	<LOD	270	NA		NA	
18	<LOD	6	13.2	5.5	30.7	12.8	<LOD	19.35	168.8	36.7	<LOD	78.9	LOD	123.9	<LOD	270	NA		NA	
19	<LOD	7.95	21.8	7.1	92.1	21.1	<LOD	31.2	235.2	48.5	<LOD	98.1	<LOD	165	<LOD	360	NA		NA	
20	24.4	6	28	7.6	281.2	32.3	<LOD	44.1	488.4	62.5	<LOD	108.3	LOD	165	<LOD	375	NA		NA	
21	1009.6	50.8	20.8	9.3	267.6	39.2	<LOD	55.8	347.8	69.3	<LOD	133.05	<LOD	210	<LOD	495	NA		NA	
22	43.9	7.3	64.6	12.1	1798.4	130	<LOD	150	1369.6	110	<LOD	165	<LOD	210	672.4	330	NA		NA	
23	113.4	18.9	<LOD	89.25	94668.8	2699.2	4067.2	900	65689.6	2099.2	<LOD	1650	5600	920	<LOD	2400	NA		NA	
24	NA		NA		NA		NA		NA		NA		NA		NA		2068.8	470	8707.2	1300
25	NA		NA		NA		NA		NA		NA		NA		NA		23897.6	1800	901.2	230
26	98.3	12.6	204	28.3	17600	460	363.6	300	16896	550	<LOD	615	<LOD	480	1549.6	770	NA		NA	
27	133.8	11.8	103.8	20.3	12809	320	<LOD	330	12896	400	<LOD	410	<LOD	360	844.8	560	NA		NA	
28	NA		NA		NA		NA		NA		NA		NA		NA		11596.8	909.6	491.2	130
29	NA		NA		NA		NA		NA		NA		NA		NA		5228.8	450	<LOD	97.8
30	40.7	7.1	123.4	12.6	3148.8	110	<LOD	141.6	1788.8	130	<LOD	180	<LOD	210	679.2	250	NA		NA	
31	<LOD	9.15	48	9.2	382.4	47.2	<LOD	62.1	396.8	62.6	<LOD	119.25	<LOD	210	<LOD	465	NA		NA	
32	<LOD	7.5	36	7.5	249.6	29	<LOD	39.9	355.4	53	<LOD	100.05	<LOD	165	<LOD	405	NA		NA	
33	<LOD	7.8	18.6	7.2	138.2	24.8	<LOD	31.6	248	51	<LOD	100.05	<LOD	165	446	260	NA		NA	
34	<LOD	7.65	30	7.3	67.9	18.6	<LOD	25.65	256.6	47.6	<LOD	90.75	<LOD	149.7	<LOD	360	NA		NA	
35	<LOD	7.05	31.6	6.9	39	15.3	<LOD	22.95	166.7	40.5	<LOD	87	LOD	148.8	<LOD	345	NA		NA	
36	8.1	5.4	45.6	7.7	30.8	15.5	<LOD	21.1	245.4	46.4	<LOD	93.45	<LOD	165	<LOD	375	NA		NA	
37	<LOD	8.85	51.3	8.6	49.5	18.6	<LOD	27.45	207.6	48.9	<LOD	103.65	<LOD	195	<LOD	420	NA		NA	
38	<LOD	8.4	43.6	8.1	34	16.6	<LOD	21.9	201.3	47.1	<LOD	93.85	<LOD	165	<LOD	390	NA		NA	
39	431.2	19.6	163.1	23.3	15296	360	512	250	5878.4	260	930.4	250	<LOD	315	2339.2	610	NA		NA	
40	NA		NA		NA		NA		NA		NA		NA		NA		27083.8	1899.2	243	130
41	73.1	8	102.6	12.6	2659.2	100	<LOD	130.05	10694.4	300	<LOD	360	<LOD	285	<LOD	585	NA		NA	
42	NA		NA		NA		NA		NA		NA		NA		NA		6508.8	550	LOD	97.9
43	19.2	5.5	35.1	8.4	1689.6	72.1	<LOD	93.45	770.4	72.1	<LOD	113.43	30	165	<LOD	405	NA		NA	
44	<LOD	6.15	<LOD	8.1	164.9	22.2	<LOD	30	664.8	61.1	<LOD	102.3	<LOD	139.35	<LOD	300	NA		NA	
45	8.6	4.4	<LOD	7.95	88.6	17.5	<LOD	25.2	236	41.4	<LOD	82.65	<LOD	130.2	<LOD	285	NA		NA	
46	<LOD	6.15	<LOD	7.5	57.3	15.2	<LOD	21.75	212.6	39.2	<LOD	74.25	LOD	109.5	<LOD	240	NA		NA	
47	6.8	3.8	<LOD	6.45	37.9	12.7	<LOD	18.75	122.5	31.7	<LOD	69.9	<LOD	105.75	<LOD	210	NA		NA	
49	<LOD	10.05	79.2	10.8	<LOD	26.85	<LOD	27.75	147.3	50.1	<LOD	117.25	<LOD	195	<LOD	480	NA		NA	
50	<LOD	9.9	79	10.4	41.7	19.3	<LOD	29.25	181.3	49.8	<LOD	163.2	<LOD	180	<LOD	435	NA		NA	
51	12	7.5	82.9	11.8	44.5	22.2	<LOD	32.7	270	63.5	<LOD	131.7	<LOD	210	<LOD	510	NA		NA	
52	<LOD	11.1	39.9	10.7	71.5	26.6	<LOD	36.75	258.2	67.7	<LOD	138.3	<LOD	255	<LOD	510	NA		NA	
53	10.7	3.3	24.6	7.1	65.8	18.7	<LOD	26.4	237	47.7	<LOD	96.45	<LOD	149.7	<LOD	330	NA		NA	
54	<LOD	4.8	<LOD	5.7	22.4	9.9	<LOD	15.15	129.7	27.9	<LOD	51.2	<LOD	87.3	<LOD	195	NA		NA	
55	<LOD	8.1	20.1	7.5	47.2	18.6	<LOD	27.6	249.8	53.5	<LOD	108.15	<LOD	180	<LOD	405	NA		NA	
56	<LOD	6.3	<LOD	8.1	39.7	14.2	<LOD	21.15	587	45	<LOD	83.25	<LOD	121.2	<LOD	240	NA		NA	
58	<LOD	6.6	30.8	6.4	80.9	16.9	<LOD	24.45	365.4	47.5	<LOD	88.65	<LOD	128.55	<LOD	285	NA		NA	
59	<LOD	7.05	28.3	7	85.3	20	<LOD	28.05	362.8	53.6	<LOD	103.5	<LOD	195	<LOD	450	NA		NA	
60	<LOD	5.85	<LOD	7.8	29.4	12.4	<LOD	19.5	273.8	41.5	<LOD	77.55	<LOD	115.35	<LOD	240	NA		NA	
61	179.6	35.7	264.6	29.2	14092.8	400	<LOD	405	8800	380	<LOD	465	<LOD	405	1840	690	NA		NA	
62	74.7	11.1	75.8	19.9	8593.2	280	<LOD	315	5507.2	280	<LOD	360	<LOD	330	1109.6	570	NA		NA	
63	77.5	12	165	26.6	13196.8	390	652	270	16691.2	370	<LOD	630	<LOD	510	1708.8	790	NA		NA	
64	<LOD	8.25	29.9	8.9	314.6	39.7	<LOD	51.85	3558.4	180	<LOD	240	720.4	200	770.4	440	NA		NA	
65	38.3	11.6	39	16.2	1960	150	<LOD	195	10089.6	170	<LOD	345	<LOD	1020	<LOD	1400	NA		NA	
66	<LOD	9.9	67.1	12.6	1899.2	98.1	<LOD	129.9	3619.2	190	<LOD	270	<LOD	300	781.2	490	NA		NA	
67	41.7	8	33.6	11	1300	81.4	144.7	74.1	896.8	93.2	<LOD	150	<LOD	225	<LOD	555	NA		NA	
68	<LOD	8.25	13.4	7.9	71.2	20.1	<LOD	28.65	237.6	40	<LOD	101.7	<LOD	165	<LOD	405	NA		NA	
69	<LOD	8.7	44.5	9	<LOD	27.45	<LOD	26.55	114.6	45	<LOD	97.8	<LOD	195	<LOD	480	NA		NA	
70	<LOD	8.55	37	8.5	351.8	37.4	<LOD	51.75	424.8	63.3	<LOD	118.05	<LOD	195	<LOD	465	NA		NA	
71	<LOD	8.85	43.1	9.1	207.8	31.2	<LOD	41.5	272.4	56.7	<LOD	116.25	LOD	210	<LOD	480	NA		NA	
72	14.5	6.2	34.7	9.1	944.8	61	<LOD	80.4	631.6	75.8	<LOD	179.3	LOD	195	<LOD	435	NA		NA	
73	<LOD	9.9	34.6	10	151.7	29.4	<LOD	42.45	232.6	36.1	<LOD	109.95	<LOD	225	<LOD	525	NA		NA	
74	<LOD	6.6	21.6	6.3	152.1	21.9	<LOD	29.85	313	46.4	<LOD	87.6	<LOD	134.55	<LOD	300	NA		NA	
75	10.2	6.7	46.4	9.8	<LOD	25.5	<LOD	26.1	133.2	51	<LOD	116.25	<LOD	225	<LOD	525	NA		NA	
76	61.6	7	34.5	8.7	1859.2	76.4	<LOD	97.05	766.4	73.4	<LOD	123.45	<LOD	165	<LOD	360	NA		NA	
77	<LOD	6	10.9	5.4	283.8	23.9	<LOD	33.85	335.4	42.7	<LOD	78.9	<LOD	116.25	<LOD	255	NA		NA	
78	<LOD	7.95	33	8.2	250.2	32.2	<LOD	43.35	739.6	77.3	<LOD	129.6	<LOD	180	<LOD	335	NA		NA	
79	<LOD	7.05	25.1	6.9	171.9	31.4	<LOD	41.65	106.6	53.7	<LOD	98.55	<LOD	150	<LOD	345	NA		NA	
80	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	LOD	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	LOD	190	2810	740	NA		NA	

Preliminary Site Investigation Report for One Property Along the Interstate 70 Relocation Project in Madison City, St. Clair County, Illinois

Contract No.: PSB 096-024
Task Order No.: 032
IDOT Project No.: P98-088-91
ISGS Report No.: 601D
Anticipated Design Approval Date: August 1998
Bid Letting Date: Not specified

July 1999

Prepared for:

ILLINOIS DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN AND ENVIRONMENT
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1 Introduction

IDOT
Illinois Department of Transportation

E & E
Ecology and Environment, Inc.

ROW
right-of-way

I-70
Interstate 70

This preliminary site investigation report was prepared for the Illinois Department of Transportation (IDOT) pursuant to Work Order 32 issued to Ecology and Environment, Inc. (E & E), under IDOT's Work Order Agreement for Consultant Services, PSB No. 096-024, Statewide Hazardous Waste Investigations. The purpose of this limited investigation was to evaluate environmental conditions on proposed IDOT right-of-way (ROW) along the Interstate 70 (I-70) relocation project in Madison City, St. Clair County, Illinois. The focus of the investigation was to identify potential property acquisition environmental liabilities and to determine potential impacts on planned construction activities in the area. Under this work order, E & E was directed to conduct a subsurface soil and groundwater investigation to evaluate the potential presence of contamination on one property in the project area (see Figure 1-1).

Fieldwork for the investigation was conducted by E & E from December 16 to December 18, 1998. The objectives of the investigation as defined in the IDOT-approved work plan dated November 1998 (E & E 1998) are as follows:

- Determine the source, magnitude, and lateral and vertical extent of potential soil contamination associated with previous and current property activities within the defined study area and within the limitations of the IDOT-approved work plan. Contamination impact on the uppermost groundwater unit will also be evaluated if groundwater is encountered during the investigation.

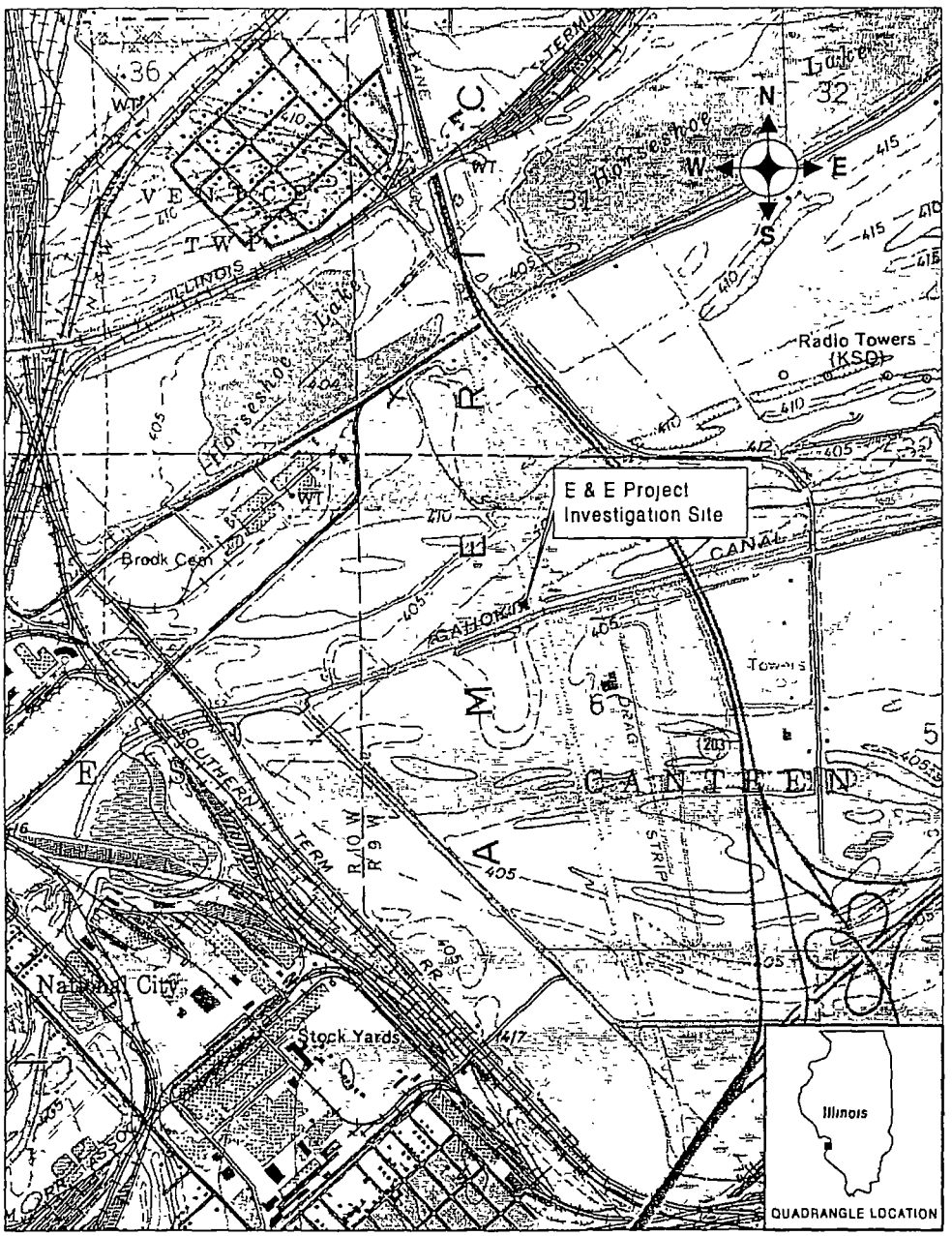
- Prepare a site investigation report with findings, conclusions, and recommendations as well as a remediation scope of work, based upon the results of chemical analysis of soil and groundwater samples. The remediation scope of work will include an estimate of contaminated soil excavation quantities and an associated estimated cost for remediation. If groundwater has

been impacted and sufficient data on the extent and source of contamination are available, remedial alternatives will be provided to implement cleanup. This scope of work also addresses surface runoff, which may become contaminated as a result of activities associated with road construction.

- Assess the potential for existing IDOT property to be affected by the migration of contaminants from other properties within the project area. If the potential is high, present recommendations for reducing or eliminating such contamination migration.

- Assess the potential for contamination resulting from the proposed construction activities within the project area. If the potential is high for further or increased release of contaminants, present recommendations for reducing or eliminating such releases.

This report presents the findings of E & E's investigation and consists of seven sections. In the remainder of the report, Section 2 provides pertinent property background information. Section 3 describes the procedures and sampling rationale used during the field investigation. Section 4 summarizes E & E's field investigation results including observations, field measurements, sampling rationale, and analytical results. Section 5 presents the conclusions of the report, which include a discussion of the nature and extent of contamination, an estimate of contaminated soil and groundwater volumes, and estimated remedial costs. Section 6 provides recommendations for further investigation and contaminant migration reduction techniques, if necessary. Section 7 lists the references cited in this report.



Source: USGS Granite City, Ill -MO Quadrangle, 1954, photorevised 1982

Figure 1-1
E & E PROJECT INVESTIGATION SITE

Scale
(Kilometers)

1 .5 0 1

B

Summary of Analytical Results

IDOT Analytical Data

St. Louis Drum

SOIL BORING SAMPLES
Volatile Organic Compounds (UG/KG)

Sample Number	GL8IRB01		GL8IRB02		GL8IRB03		GL8IRB04	
Sample Depth (m)	610mm-915mm	TACO	305mm-915mm	TACO	305mm-915mm	TACO	305mm-610mm	TACO
ISGS Location	NA		NA		NA		NA	
Date Collected	36147		36147		36147		36147	
% Solids	72		74		75		94	
VOC								
Chloromethane	ND		ND		ND		ND	
Bromomethane	ND		ND		ND		ND	
Vinyl chloride	ND		ND		3 J		ND	
Chloroethane	ND		ND		ND		ND	
Methylene chloride	ND		26	†	6 3 J		ND	
1,1-Dichloroethene	ND		ND		ND		ND	
1,1-Dichloroethane	ND		ND		ND		ND	
1,2-Dichloroethene (total)	ND		ND		ND		ND	
Chloroform	ND		ND		ND		ND	
1,2-Dichloroethane	ND		ND		ND		ND	
1,1,1-Trichloroethane	ND		ND		ND		ND	
Carbon Tetrachloride	ND		ND		ND		ND	
Bromodichloromethane	ND		ND		ND		ND	
1,2-Dichloropropane	ND		ND		1.7 J		ND	
trans-1,3-dichloropropene	ND		ND		ND		ND	
Trichloroethene	ND		19		2 6 J		9 8	
Dibromochloromethane	ND		ND		ND		ND	
1,1,2-Trichloroethane	ND		ND		ND		ND	
Benzene	16		120	†	17		570	†
cis-1,3-dichloropropene	ND		ND		ND		ND	
2-Chloroethylvinyl ether	ND		ND		ND		ND	
Bromoform	ND		ND		ND		ND	
Tetrachloroethene	ND		ND		ND		ND	
1,1,2,2-Tetrachloroethane	ND		ND		ND		ND	
Toluene	ND		22000	†	920		53000	‡
Chlorobenzene	ND		ND		ND		ND	
Ethylbenzene	220		12000		2100		56000	†
Acetone	60		270		56		900	
Carbon disulfide	ND		ND		ND		ND	
2-Butanone	ND		ND		11 J	¥	ND	
Vinyl acetate	ND		ND		ND		ND	
2-Hexanone	ND		ND		ND		ND	
Styrene	ND		ND		ND		ND	
Total xylenes	500		100000 E		22000		350000	†
4-Methyl-2-pentanone	ND		ND		ND		ND	

recycled paper

IDOT Analytical Data

St. Louis Drum

SOIL BORING SAMPLES

Volatile Organic Compounds (UG/KG)

Sample Number	GL8IRB01		GL8IRB01		GL8IRB01		GL8IRB02		GL8IRB02		GL8IRB02		GL8IRB03		GL8IRB03		GL8IRB03		GL8IRB04	
Sample Depth (m)	0-0	T	610mm-1.2m	T	1 8-2 4	T	0-0	T	610mm-1 2m	T	1 8-2 4	T	0-0	T	1 2-1 8	T	1 8-2 4	T	0-0	T
ISGS Location	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A
Date Collected	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C
% Solids	74	O	77	O	73	O	72	O	77	O	75	O	69	O	73	O	76	O	64	O
VOC																				
Chloromethane	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Bromomethane	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Vinyl chloride	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Chloroethane	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Methylene chloride	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
1,1-Dichloroethene	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
1,1-Dichloroethane	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
1,2-Dichloroethene (total)	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Chloroform	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
1,2-Dichloroethane	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
1,1,1-Trichloroethane	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Carbon Tetrachloride	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Bromodichloromethane	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
1,2-Dichloropropane	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
trans-1,3-dichloropropene	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Trichloroethene	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Dibromochloromethane	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
1,1,2-Trichloroethane	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Benzene	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
cis-1,3-dichloropropene	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
2-Chloroethylvinyl ether	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Bromoform	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Tetrachloroethene	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
1,1,2,2-Tetrachloroethane	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Toluene	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Chlorobenzene	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Ethylbenzene	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Acetone	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Carbon disulfide	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
2-Butanone	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Vinyl acetate	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
2-Hexanone	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Styrene	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Total xylenes	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
4-Methyl-2-pentanone	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	

IDOT Analytical Data

St. Louis Drum

SOIL BORING SAMPLES
Volatile Organic Compounds (UG/KG)

Sample Number	GL8IRB04		GL8IRB04		GL8IRB05		GL8IRB05		GL8IRB05		GL8IRB06		GL8IRB06		GL8IRB06		GL8IRB07		GL8IRB07	
Sample Depth (m)	610mm-1.2m	T	1 8-2 4	T	0-0	T	610mm-1 2m	T	1 8-2 4	T	0-0	T	610mm-1 2m	T	1 8-2 4	T	0-0	T	305mm-915mm	T
ISGS Location	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A
Date Collected	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/18/98	C	12/18/98	C
% Solids	78	O	72	O	64	O	76	O	70	O	62	O	73	O	69	O	66	O	72	O
VOC																				
Chloromethane	ND		NA		NA		ND		NA		NA		ND		NA		NA		ND	
Bromomethane	ND		NA		NA		ND		NA		NA		ND		NA		NA		ND	
Vinyl chloride	ND		NA		NA		ND		NA		NA		ND		NA		NA		ND	
Chloroethane	ND		NA		NA		ND		NA		NA		ND		NA		NA		ND	
Methylene chloride	ND		NA		NA		ND		NA		NA		1.8 J	¥	NA		NA		6 J	
1,1-Dichloroethene	ND		NA		NA		ND		NA		NA		ND		NA		NA		ND	
1,1-Dichloroethane	ND		NA		NA		ND		NA		NA		ND		NA		NA		ND	
1,2-Dichloroethene (total)	ND		NA		NA		ND		NA		NA		ND		NA		NA		ND	
Chloroform	ND		NA		NA		ND		NA		NA		ND		NA		NA		ND	
1,2-Dichloroethane	ND		NA		NA		ND		NA		NA		ND		NA		NA		ND	
1,1,1-Trichloroethane	ND		NA		NA		ND		NA		NA		ND		NA		NA		ND	
Carbon Tetrachloride	ND		NA		NA		ND		NA		NA		ND		NA		NA		ND	
Bromodichloromethane	ND		NA		NA		ND		NA		NA		ND		NA		NA		ND	
1,2-Dichloropropane	ND		NA		NA		ND		NA		NA		ND		NA		NA		ND	
trans-1,3-dichloropropene	ND		NA		NA		ND		NA		NA		ND		NA		NA		ND	
Trichloroethene	ND		NA		NA		ND		NA		NA		ND		NA		NA		ND	
Dibromochloromethane	ND		NA		NA		ND		NA		NA		ND		NA		NA		ND	
1,1,2-Trichloroethane	ND		NA		NA		ND		NA		NA		ND		NA		NA		ND	
Benzene	ND		NA		NA		ND		NA		NA		ND		NA		NA		6 J	
cis-1,3-dichloropropene	ND		NA		NA		ND		NA		NA		ND		NA		NA		ND	
2-Chloroethylvinyl ether	ND		NA		NA		ND		NA		NA		ND		NA		NA		ND	
Bromoform	ND		NA		NA		ND		NA		NA		ND		NA		NA		ND	
Tetrachloroethene	ND		NA		NA		ND		NA		NA		ND		NA		NA		ND	
1,1,2,2-Tetrachloroethane	ND		NA		NA		ND		NA		NA		ND		NA		NA		ND	
Toluene	1 4 J		NA		NA		ND		NA		NA		ND		NA		NA		13	
Chlorobenzene	ND		NA		NA		ND		NA		NA		ND		NA		NA		ND	
Ethylbenzene	2 3 J		NA		NA		1 6 J		NA		NA		ND		NA		NA		52	
Acetone	130		NA		NA		160 B		NA		NA		48 B	¥	NA		NA		61	
Carbon disulfide	ND		NA		NA		ND		NA		NA		ND		NA		NA		ND	
2-Butanone	21	¥	NA		NA		27	¥	NA		NA		9.2 J	¥	NA		NA		ND	
Vinyl acetate	ND		NA		NA		ND		NA		NA		ND		NA		NA		ND	
2-Hexanone	ND		NA		NA		ND		NA		NA		ND		NA		NA		ND	
Styrene	ND		NA		NA		ND		NA		NA		ND		NA		NA		ND	
Total xylenes	21		NA		NA		11		NA		NA		ND		NA		NA		130	
4-Methyl-2-pentanone	ND		NA		NA		ND		NA		NA		ND		NA		NA		ND	

IDOT Analytical Data

St. Louis Drum

SOIL BORING SAMPLES

Volatile Organic Compounds (UG/KG)

Sample Number	GL8IRB07		GL8IRB08		GL8IRB08D		GL8IRB08		GL8IRB08D		GL8IRB08									
Sample Depth (m)	1 2-1 8	T	0-0	T	0-0	T	610mm-1.2m	T	610mm-1 2m	T	1 8-2 4	T		T		T		T		T
ISGS Location	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A		A		A		A		A
Date Collected	12/18/98	C	12/18/98	C	12/18/98	C	12/18/98	C	12/18/98	C	12/18/98	C		C		C		C		C
% Solids	74	O	68	O	66	O	75	O	75	O	70	O		O		O		O		O
VOC																				
Chloromethane	ND		NA		NA		ND		ND		NA									
Bromomethane	ND		NA		NA		ND		ND		NA									
Vinyl chloride	ND		NA		NA		ND		ND		NA									
Chloroethane	ND		NA		NA		ND		ND		NA									
Methylene chloride	ND		NA		NA		5.6 J		ND		NA									
1,1-Dichloroethene	ND		NA		NA		ND		ND		NA									
1,1-Dichloroethane	ND		NA		NA		ND		ND		NA									
1,2-Dichloroethene (total)	ND		NA		NA		ND		ND		NA									
Chloroform	ND		NA		NA		ND		ND		NA									
1,2-Dichloroethane	ND		NA		NA		ND		ND		NA									
1,1,1-Trichloroethane	ND		NA		NA		ND		ND		NA									
Carbon Tetrachloride	ND		NA		NA		ND		ND		NA									
Bromodichloromethane	ND		NA		NA		ND		ND		NA									
1,2-Dichloropropane	ND		NA		NA		ND		ND		NA									
trans-1,3-dichloropropene	ND		NA		NA		ND		ND		NA									
Trichloroethene	ND		NA		NA		ND		ND		NA									
Dibromochloromethane	ND		NA		NA		ND		ND		NA									
1,1,2-Trichloroethane	ND		NA		NA		ND		ND		NA									
Benzene	ND		NA		NA		ND		ND		NA									
cis-1,3-dichloropropene	ND		NA		NA		ND		ND		NA									
2-Chloroethylvinyl ether	ND		NA		NA		ND		ND		NA									
Bromoform	ND		NA		NA		ND		ND		NA									
Tetrachloroethene	ND		NA		NA		ND		ND		NA									
1,1,2,2-Tetrachloroethane	ND		NA		NA		ND		ND		NA									
Toluene	ND		NA		NA		ND		ND		NA									
Chlorobenzene	ND		NA		NA		ND		ND		NA									
Ethylbenzene	ND		NA		NA		ND		ND		NA									
Acetone	ND		NA		NA		ND		ND		NA									
Carbon disulfide	ND		NA		NA		ND		ND		NA									
2-Butanone	ND		NA		NA		ND		ND		NA									
Vinyl acetate	ND		NA		NA		ND		ND		NA									
2-Hexanone	ND		NA		NA		ND		ND		NA									
Styrene	ND		NA		NA		ND		ND		NA									
Total xylenes	ND		NA		NA		ND		ND		NA									
4-Methyl-2-pentanone	ND		NA		NA		ND		ND		NA									

IDOT Analytical Data

St. Louis Drum

SOIL BORING SAMPLES

Base Neutrals/Acids (UG/KG)

Sample Number	GL8IRB01		GL8IRB01		GL8IRB01		GL8IRB02		GL8IRB02		GL8IRB02		GL8IRB03		GL8IRB03		GL8IRB03		GL8IRB04	
Sample Depth (m)	0-0	T	610mm-1.2m	T	1.8-2 4	T	0-0	T	610mm-1 2m	T	1 8-2 4	T	0-0	T	1 2-1 8	T	1 8-2 4	T	0-0	T
ISGS Location	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A
Date Collected	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C
% Solids	74	O	77	O	73	O	72	O	77	O	75	O	69	O	73	O	76	O	64	O
BNAs																				
Bis(2-chloroethyl)ether	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,3-Dichlorobenzene	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,4-Dichlorobenzene	ND		ND		ND		ND		ND		50 J		ND		ND		ND		ND	
1,2-Dichlorobenzene	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Bis(2-chloroisopropyl)ether	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
N-nitrosodipropylamine	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Hexachloroethane	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Nitrobenzene	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Isophorone	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Bis(2-chloroethoxy)methane	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,2,4-Trichlorobenzene	ND		380 J		ND		ND		4400 J		ND		ND		ND		ND		ND	
Naphthalene	400 J		35000		ND		ND		180000	†	ND		85000	†	51 J		ND		3400 J	
Hexachlorobutadiene	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Hexachlorocyclopentadiene	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
2-Chloronaphthalene	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Dimethyl phthalate	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Acenaphthylene	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Fluorene	ND		570 J		ND		ND		ND		ND		3600 J		ND		ND		ND	
Acenaphthene	ND		1800 J		ND		ND		13000 J		ND		2900 J		ND		ND		ND	
2,4-Dinitrotoluene	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
2,6-Dinitrotoluene	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Diethyl phthalate	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
4-Chlorophenyl phenyl ether	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
N-nitrosodiphenylamine	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
4-Bromophenyl phenyl ether	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Hexachlorobenzene	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Phenanthrene	96 J	¥	2800	¥	ND		ND		14000 J	¥	ND		13000 J	¥	140 J	¥	ND		1500 J	¥
Anthracene	ND		ND		ND		ND		ND		ND		2500 J		ND		ND		ND	
Di-n-butyl-phthalate	790		3000		ND		ND		14000 J		ND		3600 J		ND		ND		59000	
Fluoranthene	ND		260 J		ND		ND		ND		ND		3300 J		ND		ND		ND	
Benzidine	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Pyrene	120 J		2400		560 J		ND		5500		ND		11000 J		68 J		ND		2800 J	
Butyl benzyl phthalate	ND		37000		ND		ND		200000		58 J		ND		ND		ND		ND	
3,3'-Dichlorobenzidine	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	

IDOT Analytical Data

St. Louis Drum

SOIL BORING SAMPLES
Base Neutrals/Acids (UG/KG)

	Sample Number	GL8IRB01		GL8IRB01		GL8IRB01		GL8IRB02		GL8IRB02		GL8IRB02		GL8IRB03		GL8IRB03		GL8IRB03		GL8IRB04	
	Sample Depth (m)	0-0	T	610mm-1 2m	T	1 8-2 4	T	0-0	T	610mm-1 2m	T	1 8-2 4	T	0-0	T	1 2-1 8	T	1 8-2 4	T	0-0	T
	ISGS Location	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A
	Date Collected	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C
	% Solids	74	O	77	O	73	O	72	O	77	O	75	O	69	O	73	O	76	O	64	O
BNAs																					
Benzo(a)anthracene		ND		680 J		ND		ND		ND		ND		2500 J	†	ND		ND		ND	
Bis(2-ethylhexyl)phthalate		82 J		5000		ND		ND		240000	†	ND		150000	†	390 J		ND		16000	
Chrysene		85 J		1400 J		530 J		ND		ND		ND		3300 J		ND		ND		ND	
Di-n-octyl phthalate		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Benzo(b)fluoranthene		ND		420 J		810 J		ND		ND		ND		ND		ND		ND		ND	
Benzo(k)fluoranthene		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Benzo(a)pyrene		58 J		940 J	†	2300 J	†	ND		ND		ND		ND		ND		ND		ND	
Indeno(1,2,3-cd)pyrene		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Dibenzo(a,h)anthracene		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Benzo(ghi)perylene		ND		560 J	¥	ND		ND		ND		ND		ND		ND		ND		ND	
Benzyl alcohol		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
4-Chloroaniline		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
1-Methylnaphthalene		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
2-Methylnaphthalene		200 J	¥	10000	¥	ND		ND		63000	¥	ND		24000	¥	ND		ND		ND	
2-Nitroaniline		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
3-Nitroaniline		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Dibenzofuran		ND		1600 J	¥	ND		ND		11000 J	¥	ND		ND		ND		ND		ND	
4-Nitroaniline		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Phenol		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
2-Chlorophenol		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
2-Nitrophenol		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
2,4-Dimethylphenol		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
2,4-Dichlorophenol		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
4-Chloro-3-methylphenol		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
2,4,6-Trichlorophenol		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
2,4-Dinitrophenol		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
4-Nitrophenol		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
4,6-Dinitro-2-methylphenol		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Pentachlorophenol		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
2-Methylphenol		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
4-Methylphenol		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Benzoic acid		ND		5400		10000		ND		ND		ND		ND		ND		ND		1500 J	
2,4,5-Trichlorophenol		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	

ecology and environment

IDOT Analytical Data

St. Louis Drum

SOIL BORING SAMPLES
Base Neutrals/Acids (UG/KG)

Sample Number	GL8IRB04		GL8IRB04		GL8IRB05		GL8IRB05		GL8IRB05		GL8IRB06		GL8IRB06		GL8IRB06		GL8IRB07		GL8IRB07	
Sample Depth (m)	610mm-1 2m	T	1 8-2 4	T	0-0	T	610mm-1 2m	T	1 8-2.4	T	0-0	T	610mm-1 2m	T	1 8-2 4	T	0-0	T	305mm-915mm	T
ISGS Location	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A
Date Collected	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/18/98	C	12/18/98	C
% Solids	78	O	72	O	64	O	76	O	70	O	62	O	73	O	69	O	66	O	72	O
BNA																				
Bis(2-chloroethyl)ether	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,3-Dichlorobenzene	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,4-Dichlorobenzene	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,2-Dichlorobenzene	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Bis(2-chloroisopropyl)ether	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
N-nitrosodipropylamine	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Hexachloroethane	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Nitrobenzene	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Isophorone	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Bis(2-chloroethoxy)methane	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,2,4-Trichlorobenzene	ND		ND		ND		ND		ND		ND		ND		ND		ND		61 J	
Naphthalene	ND		ND		2100 J		ND		ND		1400 J		ND		ND		9500		1900	
Hexachlorobutadiene	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Hexachlorocyclopentadiene	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
2-Chloronaphthalene	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Dimethyl phthalate	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Acenaphthylene	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Fluorene	ND		ND		ND		ND		ND		ND		ND		ND		ND		50 J	
Acenaphthene	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
2,4-Dinitrotoluene	ND		ND		ND		ND		ND		ND		ND		ND	*	ND		ND	
2,6-Dinitrotoluene	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Diethyl phthalate	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
4-Chlorophenyl phenyl ether	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
N-nitrosodiphenylamine	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
4-Bromophenyl phenyl ether	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Hexachlorobenzene	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Phenanthrene	ND		ND		1800 J	¥	ND		ND		2000 J	¥	ND		ND		1600 J	¥	170 J	¥
Anthracene	ND		ND		ND		ND		ND		ND		ND		ND		5000		ND	
Di-n-butyl-phthalate	370 J		ND		ND		ND		ND		ND		ND		ND		1100 J		130 J	
Fluoranthene	ND		ND		ND		ND		ND		ND		ND		ND		630 J		63 J	
Benzidine	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Pyrene	ND		ND		3300 J		ND		ND		6500 J		ND		ND		4800 J		350 J	
Butyl benzyl phthalate	ND		ND		2100 J		ND		ND		ND		ND		ND		ND		ND	
3,3'-Dichlorobenzidine	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	

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IDOT Analytical Data

St. Louis Drum

SOIL BORING SAMPLES
Base Neutrals/Acids (UG/KG)

Sample Number	GL8IRB04		GL8IRB04		GL8IRB05		GL8IRB05		GL8IRB05		GL8IRB06		GL8IRB06		GL8IRB06		GL8IRB07		GL8IRB07	
Sample Depth (m)	610mm-1.2m	T	1.8-2.4	T	0-0	T	610mm-1.2m	T	1.8-2.4	T	0-0	T	610mm-1.2m	T	1.8-2.4	T	0-0	T	305mm-915mm	T
ISGS Location	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A
Date Collected	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/18/98	C	12/18/98	C
% Solids	78	O	72	O	64	O	76	O	70	O	62	O	73	O	69	O	66	O	72	O
BNAs																				
[illegible]	[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]	
Benzo(a)anthracene	ND		ND		ND		ND		ND		1400 J	†	ND		ND		ND		89 J	
Bis(2-ethylhexyl)phthalate	ND		130 J		38000		ND		54 J		8400		ND		ND		34000		1700	
Chrysene	ND		ND		1500 J		ND		ND		3500		ND		ND		1800 J		210 J	
Di-n-octyl phthalate	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Benzo(b)fluoranthene	ND		ND		ND		ND		ND		1500 J	†	ND		ND		ND		100 J	
Benzo(k)fluoranthene	ND		ND		ND		ND		ND		ND		ND		ND		ND		60 J	
Benzo(a)pyrene	ND		ND		ND		ND		ND		2000 J	†	ND		ND		ND		370 J	†
Indeno(1,2,3-cd)pyrene	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Dibenzo(a,h)anthracene	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Benzo(ghi)perylene	ND		ND		ND		ND		ND		1000 J	¥	ND		ND		ND		140 J	¥
Benzyl alcohol	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
4-Chloroaniline	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
1-Methylnaphthalene	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
2-Methylnaphthalene	ND		ND		1800 J	¥	ND		ND		1400 J	¥	ND		ND		2100 J	¥	400 J	¥
2-Nitroaniline	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
3-Nitroaniline	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Dibenzofuran	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
4-Nitroaniline	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Phenol	ND		ND		ND		ND		ND		ND		ND		ND		940 J		ND	
2-Chlorophenol	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
2-Nitrophenol	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
2,4-Dimethylphenol	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
2,4-Dichlorophenol	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
4-Chloro-3-methylphenol	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
2,4,6-Trichlorophenol	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
2,4-Dinitrophenol	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
4-Nitrophenol	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
4,6-Dinitro-2-methylphenol	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Pentachlorophenol	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
2-Methylphenol	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
4-Methylphenol	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Benzoic acid	ND		60 J		ND		ND		ND		ND		ND		ND		ND		ND	
2,4,5-Trichlorophenol	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	

Environmental Geology and Hydrogeology

IDOT Analytical Data

St. Louis Drum

SOIL BORING SAMPLES

Base Neutrals/Acids (UG/KG)

	Sample Number	GL8IRB07		GL8IRB06		GL8IRB08D		GL8IRB08		GL8IRB08D		GL8IRB08									
	Sample Depth (m)	1 2-1 8	T	0-0	T	0-0	T	610mm-1.2m	T	610mm-1 2m	T	1 8-2 4	T		T		T		T		T
	ISGS Location	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A		A		A		A		A
	Date Collected	12/18/98	C	12/18/98	C	12/18/98	C	12/18/98	C	12/18/98	C	12/18/98	C		C		C		C		C
	% Solids	74	O	68	O	66	O	75	O	75	O	70	O		O		O		O		O
BNAs																					
Bis(2-chloroethyl)ether		ND		ND		ND		ND		NA		ND									
1,3-Dichlorobenzene		ND		ND		ND		ND		NA		ND									
1,4-Dichlorobenzene		ND		ND		ND		ND		NA		ND									
1,2-Dichlorobenzene		ND		ND		ND		ND		NA		ND									
Bis(2-chloroisopropyl)ether		ND		ND		ND		ND		NA		ND									
N-nitrosodipropylamine		ND		ND		ND		ND		NA		ND									
Hexachloroethane		ND		ND		ND		ND		NA		ND									
Nitrobenzene		ND		ND		ND		ND		NA		ND									
Isophorone		ND		ND		ND		ND		NA		ND									
Bis(2-chloroethoxy)methane		ND		ND		ND		ND		NA		ND									
1,2,4-Trichlorobenzene		ND		ND		ND		ND		NA		ND									
Naphthalene		ND		560 J		ND		ND		NA		ND									
Hexachlorobutadiene		ND		ND		ND		ND		NA		ND									
Hexachlorocyclopentadiene		ND		ND		ND		ND		NA		ND									
2-Chloronaphthalene		ND		ND		ND		ND		NA		ND									
Dimethyl phthalate		ND		ND		ND		ND		NA		ND									
Acenaphthylene		ND		ND		ND		ND		NA		ND									
Fluorene		ND		ND		ND		ND		NA		ND									
Acenaphthene		ND		ND		ND		ND		NA		ND									
2,4-Dinitrotoluene		ND		ND		ND		ND		NA		ND									
2,6-Dinitrotoluene		ND		ND		ND		ND		NA		ND									
Diethyl phthalate		ND		ND		ND		ND		NA		ND									
4-Chlorophenyl phenyl ether		ND		ND		ND		ND		NA		ND									
N-nitrosodiphenylamine		ND		ND		ND		ND		NA		ND									
4-Bromophenyl phenyl ether		ND		ND		ND		ND		NA		ND									
Hexachlorobenzene		ND		ND		ND		ND		NA		ND									
Phenanthrene		ND		ND		ND		ND		NA		ND									
Anthracene		ND		ND		ND		ND		NA		ND									
Di-n-butyl-phthalate		ND		ND		1300 J		ND		NA		ND									
Fluoranthene		ND		ND		ND		ND		NA		ND									
Benzidine		ND		ND		ND		ND		NA		ND									
Pyrene		ND		ND		ND		ND		NA		ND									
Butyl benzyl phthalate		ND		ND		ND		ND		NA		ND									
3,3'-Dichlorobenzidine		ND		ND		ND		ND		NA		ND									

IDOT Analytical Data

St. Louis Drum

SOIL BORING SAMPLES
Base Neutrals/Acids (UG/KG)

	Sample Number	GL8IRB07		GL8IRB08		GL8IRB08D		GL8IRB08		GL8IRB08D		GL8IRB08									
	Sample Depth (m)	1.2-1 8	T	0-0	T	0-0	T	610mm-1 2m	T	610mm-1 2m	T	1 8-2 4	T		T		T		T		T
	ISGS Location	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A		A		A		A		A
	Date Collected	12/18/98	C	12/18/98	C	12/18/98	C	12/18/98	C	12/18/98	C	12/18/98	C		C		C		C		C
	% Solids	74	O	68	O	66	O	75	O	75	O	70	O		O		O		O		O
BNAs																					
Benzo(a)anthracene		ND		ND		ND		ND		NA		ND									
Bis(2-ethylhexyl)phthalate		68 J		12000		18000		ND		NA		49 J									
Chrysene		ND		ND		ND		ND		NA		ND									
Di-n-octyl phthalate		ND		ND		ND		ND		NA		ND									
Benzo(b)fluoranthene		ND		ND		ND		ND		NA		ND									
Benzo(k)fluoranthene		ND		ND		ND		ND		NA		ND									
Benzo(a)pyrene		ND		ND		ND		ND		NA		ND									
Indeno(1,2,3-cd)pyrene		ND		ND		ND		ND		NA		ND									
Dibenzo(a,h)anthracene		ND		ND		ND		ND		NA		ND									
Benzo(ghi)perylene		ND		600 J	¥	ND		ND		NA		ND									
Benzyl alcohol		ND		ND		ND		ND		NA		ND									
4-Chloroaniline		ND		ND		ND		ND		NA		ND									
1-Methylnaphthalene		ND		ND		ND		ND		NA		ND									
2-Methylnaphthalene		ND		ND		ND		ND		NA		ND									
2-Nitroaniline		ND		ND		ND		ND		NA		ND									
3-Nitroaniline		ND		ND		ND		ND		NA		ND									
Dibenzofuran		ND		ND		ND		ND		NA		ND									
4-Nitroaniline		ND		ND		ND		ND		NA		ND									
Phenol		ND		ND		ND		ND		NA		ND									
2-Chlorophenol		ND		ND		ND		ND		NA		ND									
2-Nitrophenol		ND		ND		ND		ND		NA		ND									
2,4-Dimethylphenol		ND		ND		ND		ND		NA		ND									
2,4-Dichlorophenol		ND		ND		ND		ND		NA		ND									
4-Chloro-3-methylphenol		ND		ND		ND		ND		NA		ND									
2,4,6-Trichlorophenol		ND		ND		ND		ND		NA		ND									
2,4-Dinitrophenol		ND		ND		ND		ND		NA		ND									
4-Nitrophenol		ND		ND		ND		ND		NA		ND									
4,6-Dinitro-2-methylphenol		ND		ND		ND		ND		NA		ND									
Pentachlorophenol		ND		ND		ND		ND		NA		ND									
2-Methylphenol		ND		ND		ND		ND		NA		ND									
4-Methylphenol		ND		ND		ND		ND		NA		ND									
Benzoic acid		ND		ND		ND		ND		NA		ND									
2,4,5-Trichlorophenol		ND		ND		ND		ND		NA		ND									

Geology and Environment

IDOT Analytical Data

St. Louis Drum

SOIL BORING SAMPLES
Pesticides/PCBs (MG/KG)

Sample Number	GL8IRB01		GL8IRB01		GL8IRB01		GL8IRB02		GL8IRB02		GL8IRB02		GL8IRB03		GL8IRB03		GL8IRB03		GL8IRB04	
Sample Depth (m)	0-0	T	610mm-1 2m	T	1 8-2 4	T	0-0	T	610mm-1.2m	T	1 8-2 4	T	0-0	T	1 2-1 8	T	1 8-2 4	T	0-0	T
ISGS Location	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A
Date Collected	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C
% Solids	74	O	77	O	73	O	72	O	77	O	75	O	69	O	73	O	76	O	64	O
Pesticides/PCBs																				
Aldrin	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
alpha-BHC	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
beta-BHC	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
gamma-BHC (Lindane)	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
delta-BHC	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Chlordane	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
4,4'-DDD	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
4,4'-DDE	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
4,4'-DDT	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Dieldrin	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Endosulfan I	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Endosulfan II	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Endosulfan sulfate	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Endrin	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Endrin aldehyde	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Heptachlor	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Heptachlor epoxide	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Toxaphene	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Methoxychlor	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
PCB-1016	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
PCB-1221	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
PCB-1232	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
PCB-1242	ND		3.5	#	ND		ND		ND		ND		ND		ND		ND		ND	
PCB-1248	ND		ND		ND		ND		640	#	ND		ND		ND		ND		2 8 J	#
PCB-1254	ND		12	#	ND		ND		410	#	ND		150	#	0 099		0 033		26	#
PCB-1260	12	#	17	#	84	#	ND		220	#	ND		160	#	0 19		0.041		9.2	#

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IDOT Analytical Data

St. Louis Drum

SOIL BORING SAMPLES
Pesticides/PCBs (MG/KG)

Sample Number	GL8IRB04		GL8IRB04		GL8IRB05		GL8IRB05		GL8IRB05		GL8IRB06		GL8IRB06		GL8IRB06		GL8IRB07		GL8IRB07	
Sample Depth (m)	610mm-1 2m	T	1 8-2.4	T	0-0	T	610mm-1.2m	T	1 8-2 4	T	0-0	T	610mm-1 2m	T	1 8-2 4	T	0-0	T	305mm-915mm	T
ISGS Location	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A
Date Collected	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/18/98	C	12/18/98	C
% Solids	78	O	72	O	64	O	76	O	70	O	62	O	73	O	69	O	66	O	72	O
Pesticides/PCBs																				
Aldrin	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
alpha-BHC	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
beta-BHC	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
gamma-BHC (Lindane)	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
delta-BHC	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Chlordane	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
4,4'-DDD	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
4,4'-DDE	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
4,4'-DDT	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Dieldrin	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Endosulfan I	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Endosulfan II	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Endosulfan sulfate	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Endrin	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Endrin aldehyde	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Heptachlor	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Heptachlor epoxide	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Toxaphene	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Methoxychlor	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
PCB-1016	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
PCB-1221	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
PCB-1232	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
PCB-1242	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
PCB-1248	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
PCB-1254	0.71		ND		78	#	ND		ND		ND		ND		ND		82	#	0 28	
PCB-1260	0 04		ND		70	#	0 18		0.021 J		300	#	0.12		0 013 J		59	#	0.24 J	

IDOT Analytical Data

St. Louis Drum

SOIL BORING SAMPLES
Pesticides/PCBs (MG/KG)

Sample Number	GL8IRB07		GL8IRB08		GL8IRB08D		GL8IRB08		GL8IRB08D		GL8IRB08							
Sample Depth (m)	1 2-1 8	T	0-0	T	0-0	T	610mm-1 2m	T	610mm-1 2m	T	1 8-2 4	T		T		T		T
ISGS Location	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A		A		A		A
Date Collected	12/18/98	C	12/18/98	C	12/18/98	C	12/18/98	C	12/18/98	C	12/18/98	C		C		C		C
% Solids	74	O	68	O	66	O	75	O	75	O	70	O		O		O		O
Pesticides/PCBs																		
Aldrin	ND		ND		ND		ND		NA		ND							
alpha-BHC	ND		ND		ND		ND		NA		ND							
beta-BHC	ND		ND		ND		ND		NA		ND							
gamma-BHC (Lindane)	ND		ND		ND		ND		NA		ND							
delta-BHC	ND		ND		ND		ND		NA		ND							
Chlordane	ND		ND		ND		ND		NA		ND							
4,4'-DDD	ND		ND		ND		ND		NA		ND							
4,4'-DDE	ND		ND		ND		ND		NA		ND							
4,4'-DDT	ND		ND		ND		ND		NA		ND							
Dieldrin	ND		ND		ND		ND		NA		ND							
Endosulfan I	ND		ND		ND		ND		NA		ND							
Endosulfan II	ND		ND		ND		ND		NA		ND							
Endosulfan sulfate	ND		ND		ND		ND		NA		ND							
Endrin	ND		ND		ND		ND		NA		ND							
Endrin aldehyde	ND		ND		ND		ND		NA		ND							
Heptachlor	ND		ND		ND		ND		NA		ND							
Heptachlor epoxide	ND		ND		ND		ND		NA		ND							
Toxaphene	ND		ND		ND		ND		NA		ND							
Methoxychlor	ND		ND		ND		ND		NA		ND							
PCB-1016	ND		ND		ND		ND		NA		ND							
PCB-1221	ND		ND		ND		ND		NA		ND							
PCB-1232	ND		ND		ND		ND		NA		ND							
PCB-1242	ND		ND		ND		ND		NA		ND							
PCB-1248	ND		ND		ND		ND		NA		ND							
PCB-1254	0 087		28 J	#	22 J	#	0 022 J		NA		ND							
PCB-1260	ND		52	#	45	#	0.042		NA		ND							

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IDOT Analytical Data

St. Louis Drum

SOIL BORING SAMPLES
RCRA Metals (MG/KG)

Sample Number	GL8IRB01		GL8IRB01		GL8IRB01		GL8IRB02		GL8IRB02		GL8IRB02		GL8IRB03		GL8IRB03		GL8IRB03		GL8IRB04	
Sample Depth (m)	0-0	T	610mm-1 2m	T	1 8-2 4	T	0-0	T	610mm-1 2m	T	1 8-2 4	T	0-0	T	1 2-1 8	T	1 8-2.4	T	0-0	T
ISGS Location	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A
Date Collected	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C
% Solids	74	O	77	O	73	O	72	O	77	O	75	O	69	O	73	O	76	O	64	O
pH	7 8		7 7		7 3		7 3		7 1		7		6 9		7 1		7 1		7 1	
RCRA Metals																				
Silver	ND		ND		6 4		ND		ND		ND		ND		ND		ND		29	
Arsenic	5 6	†	ND		230	#	4 4	†	4 2	†	6 3	†	19	†	7 9	†	5	†	60	†
Barium	210		1700		6800	†	210		5300		200		9600	†	350		220		8400	†
Cadmium	14		14		20		ND		ND		ND		10		ND		ND		30	
Chromium Total	330	†	320	†	430	†	12		12		12		1200	†	18		15		1500	†
Lead	100		3400	#	58000	#	15		72000	#	18		23000	#	52		18		42000	#
Selenium	11		11		43		5 5		5 2		6 8		16		8 6		6 6		24	
Mercury	ND		0 052		0 16		ND		0 52		ND		1.4		ND		ND		0 095	

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IDOT Analytical Data

St. Louis Drum

SOIL BORING SAMPLES
RCRA Metals (MG/KG)

Sample Number	GL8IRB04		GL8IRB04		GL8IRB05		GL8IRB05		GL8IRB05		GL8IRB06		GL8IRB06		GL8IRB06		GL8IRB07		GL8IRB07	
Sample Depth (m)	610mm-1 2m	T	1 8-2 4	T	0-0	T	610mm-1 2m	T	1 8-2 4	T	0-0	T	610mm-1 2m	T	1 8-2 4	T	0-0	T	305mm-915mm	T
ISGS Location	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A
Date Collected	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/18/98	C	12/18/98	C
% Solids	76	O	72	O	64	O	76	O	70	O	62	O	73	O	69	O	66	O	72	O
pH	7 2		7.4		7 3		7 6		7 3		7 4		7 3		7 3		8		7 9	
RCRA Metals																				
Silver	ND		ND		1 6		ND		ND		1 9		ND		ND		ND		ND	
Arsenic	5 7	†	9 2	†	25	†	5	†	7 7	†	38	†	4 9	†	7 9	†	4 5	†	5	†
Barium	170		270		12000	†	180		260		6100	†	170		170		7000	†	640	
Cadmium	ND		ND		26		ND		ND		13		ND		ND		36		3.2	
Chromium Total	16		17		500	†	13		18		210		9 7		12		1400	†	53	
Lead	30		20		16000	#	24		23		14000	#	18		18		23000	#	620	#
Selenium	8.1		9 1		15		6 5		9 4		19		6 1		7 9		13		7 7	
Mercury	ND		ND		0 11		ND		0 043		0 063		ND		ND		0 32		0 097	

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St. Louis Drum

SOIL BORING SAMPLES
RCRA Metals (MG/KG)

Sample Number	GL8IRB07		GL8IRB08		GL8IRB08D		GL8IRB08		GL8IRB08D		GL8IRB08									
Sample Depth (m)	1 2-1 8	T	0-0	T	0-0	T	610mm-1 2m	T	610mm-1.2m	T	1 8-2 4	T		T		T		T		T
ISGS Location	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A		A		A		A		A
Date Collected	12/18/98	C	12/18/98	C	12/18/98	C	12/18/98	C	12/18/98	C	12/18/98	C		C		C		C		C
% Solids	74	O	68	O	66	O	75	O	75	O	70	O		O		O		O		O
pH	8		7 9		8 1		8 1		8 1		8 4									
RCRA Metals																				
Silver	ND		ND		ND		ND		NA		ND									
Arsenic	5 5	†	18	†	21	†	5 3	†	NA		8 9	†								
Barium	230		7400	†	8200	†	190		NA		180									
Cadmium	ND		16		18		ND		NA		ND									
Chromium Total	9 6		450	†	420	†	10		NA		11									
Lead	26		9900	#	10000	#	42		NA		19									
Selenium	5 6		11		13		5.4		NA		7 2									
Mercury	ND		ND		0 26		ND		NA		ND									

IDOT Analytical Data

St. Louis Drum

SOIL BORING SAMPLES
TCLP Metals (MG/L)

Sample Number	GL8IRB01		GL8IRB01		GL8IRB01		GL8IRB02		GL8IRB02		GL8IRB02		GL8IRB03		GL8IRB03		GL8IRB03		GL8IRB04	
Sample Depth (m)	0-0	T	610mm-1 2m	T	1 8-2 4	T	0-0	T	610mm-1 2m	T	1 8-2 4	T	0-0	T	1 2-1 8	T	1 8-2.4	T	0-0	T
ISGS Location	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A
Date Collected	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C
% Solids	74	O	77	O	73	O	72	O	77	O	75	O	69	O	73	O	76	O	64	O
TCLP Metals																				
[illegible]	[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]	
Mercury	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Arsenic	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Barium	0.22		0 11		0 3		0.074		0 37		0 083		0 88		ND		0.2		0 43	
Cadmium	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Chromium Total	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Lead	0 022	†	0 021	†	0 092	†	ND		0 55	†	ND		0 24	†	ND		ND		0 53	†
Selenium	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Silver	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	

IDOT Analytical Data

St. Louis Drum

SOIL BORING SAMPLES

TCLP Metals (MG/L)

Sample Number	GL8IRB04		GL8IRB04		GL8IRB05		GL8IRB05		GL8IRB05		GL8IRB06		GL8IRB06		GL8IRB06		GL8IRB07		GL8IRB07	
Sample Depth (m)	610mm-1.2m	T	1.8-2 4	T	0-0	T	610mm-1 2m	T	1 8-2 4	T	0-0	T	610mm-1 2m	T	1.8-2.4	T	0-0	T	305mm-915mm	T
ISGS Location	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A
Date Collected	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/17/98	C	12/18/98	C	12/18/98	C
% Solids	78	O	72	O	64	O	76	O	70	O	62	O	73	O	69	O	66	O	72	O
TCLP Metals																				
Mercury	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Arsenic	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Barium	0 12		0 2		0 44		0 15		0 12		0 41		0 14		0 1		0 49		0 33	
Cadmium	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Chromium Total	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Lead	ND		ND		0 45	†	ND		ND		0 05	†	ND		ND		0 082	†	ND	
Selenium	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Silver	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	

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IDOT Analytical Data

St. Louis Drum

SOIL BORING SAMPLES

TCLP Metals (MG/L)

Sample Number	GL8IRB07		GL8IRB08		GL8IRB08D		GL8IRB08		GL8IRB08D		GL8IRB08									
Sample Depth (m)	1 2-1 8	T	0-0	T	0-0	T	610mm-1 2m	T	610mm-1 2m	T	1 8-2 4	T		T		T		T		T
ISGS Location	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A		A		A		A		A
Date Collected	12/18/98	C	12/18/98	C	12/18/98	C	12/18/98	C	12/18/98	C	12/18/98	C		C		C		C		C
% Solids	74	O	68	O	66	O	75	O	75	O	70	O		O		O		O		O
TCLP Metals																				
Mercury	ND		ND		ND		ND		NA		ND									
Arsenic	ND		ND		ND		ND		NA		ND									
Barium	0 21		0.58		0 62		0 16		NA		0 15									
Cadmium	ND		ND		ND		ND		NA		ND									
Chromium Total	*ND*		*ND*		*ND*		*ND*		NA		ND									
Lead	ND		0 074	†	0 094	†	ND		NA		ND									
Selenium	ND		ND		ND		ND		NA		ND									
Silver	ND		ND.		ND		ND		NA		ND									

IDOT Analytical Data

St. LOUIS DRUM

SOIL BORING SAMPLES
Disposal Parameters

	Sample Number	GL8IRB01																
	Sample Depth (m)	0-0	Q		Q		Q		Q		Q		Q		Q		Q	
	ISGS Location	NA	U		U		U		U		U		U		U		U	
	Date Collected	12/17/98	A		A		A		A		A		A		A		A	
	% Solids	74	L		L		L		L		L		L		L		L	
DISPOSAL PARAMETERS / UNITS																		
pH / Standard Units		7.8																
Paint Filter Test / % liquid		ND																
Ignitability / degrees F		Does not Ignite																
TCLP VOC/BNA/PESTICIDES/HERBICIDES (MG/L)																		
2,4-D		ND																
2,4,5-TP (Silvex)		ND																
Chlordane		ND																
Endrin		ND																
Heptachlor		ND																
Gamma-BHC (Lindane)		ND																
Methoxychlor		ND																
Heptachlor epoxide		ND																
Toxaphene		ND																
Pentachlorophenol		ND																
2,4,5-Trichlorophenol		ND																
2,4,6-Trichlorophenol		ND																
2-Methylphenol		ND																
3-Methyl phenol & 4-Methyl phenol		ND																
Hexachlorobenzene		ND																
Hexachlorobutadiene		ND																
Hexachloroethane		ND																
Nitrobenzene		ND																
1,4-Dichlorobenzene		ND																
2,4-Dinitrotoluene		ND																
Pyridine		ND																
Benzene		NA																
Carbon Tetrachloride		NA																
Chlorobenzene		NA																
Chloroform		NA																
1,2-Dichloroethane		NA																
1,1-Dichloroethylene		NA																
Methyl ethyl ketone		NA																
Tetrachloroethylene		NA																
Vinyl Chloride		NA																
Trichloroethylene		NA																

IDOT Analytical Data

St. Louis Drum

MONITORING WELL SAMPLES
Volatile Organic Compounds (UG/L)

Sample Number	GL8IRG01		GL8IRG01D		GL8IRTB01	
ISGS Location	NA	T	NA	T	NA	T
Date Collected	12/17/98	A	12/17/98	A	12/17/98	A
		C		C		C
		O		O		O
VOC						
Chloromethane	ND		ND		ND	
Bromomethane	ND		ND		ND	
Vinyl chloride	ND		ND		ND	
Chloroethane	ND		ND		ND	
Methylene chloride	ND		ND		ND	
1,1-Dichloroethene	ND		ND		ND	
1,1-Dichloroethane	ND		ND		ND	
1,2-Dichloroethene (total)	ND		ND		ND	
Chloroform	ND		ND		ND	
1,2-Dichloroethane	ND		ND		ND	
1,1,1-Trichloroethane	ND		ND		ND	
Carbon Tetrachloride	ND		ND		ND	
Bromodichloromethane	ND		ND		ND	
1,2-Dichloropropane	ND		ND		ND	
trans-1,3-dichloropropene	ND		ND		ND	
Trichloroethene	ND		ND		ND	
Dibromochloromethane	ND		ND		ND	
1,1,2-Trichloroethane	ND		ND		ND	
Benzene	ND		ND		ND	
cis-1,3-dichloropropene	ND		ND		ND	
2-Chloroethylvinyl ether	ND		ND		ND	
Bromoform	ND		ND		ND	
Tetrachloroethene	ND		ND		ND	
1,1,2,2-Tetrachloroethane	ND		ND		ND	
Toluene	ND		ND		ND	
Chlorobenzene	ND		ND		ND	
Ethylbenzene	5 6		6		ND	
Acetone	4.6 J		6 5 J		5 7 J	
Carbon disulfide	ND		ND		ND	
2-Butanone	ND		ND		ND	
Vinyl acetate	ND		ND		ND	
2-Hexanone	ND		ND		ND	
Styrene	ND		ND		ND	
Total xylenes	15		17		ND	
4-Methyl-2-pentanone	ND		ND		ND	

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IDOT Analytical Data

St. Louis Drum

MONITORING WELL SAMPLES
Base Neutrals/Acids (UG/L)

Sample Number	GL8IRG01		GL8IRG01D		GL8IRTB01	
ISGS Location	NA	T	NA	T	NA	T
Date Collected	12/17/98	A	12/17/98	A	12/17/98	A
		C		C		C
		O		O		O
BNAs						
Bis(2-chloroethyl)ether	ND		ND		NA	
1,3-Dichlorobenzene	ND		ND		NA	
1,4-Dichlorobenzene	ND		ND		NA	
1,2-Dichlorobenzene	ND		ND		NA	
Bis(2-chloroisopropyl)ether	ND		ND		NA	
N-nitrosodipropylamine	ND		ND		NA	
Hexachloroethane	ND		ND		NA	
Nitrobenzene	ND		ND		NA	
Isophorone	ND		ND		NA	
Bis(2-chloroethoxy)methane	ND		ND		NA	
1,2,4-Trichlorobenzene	ND		ND		NA	
Naphthalene	ND		ND		NA	
Hexachlorobutadiene	ND		ND		NA	
Hexachlorocyclopentadiene	ND		ND		NA	
2-Chloronaphthalene	ND		ND		NA	
Dimethyl phthalate	ND		ND		NA	
Acenaphthylene	ND		ND		NA	
Fluorene	ND		ND		NA	
Acenaphthene	ND		ND		NA	
2,4-Dinitrotoluene	ND		ND		NA	
2,6-Dinitrotoluene	ND		ND		NA	
Diethyl phthalate	ND		ND		NA	
4-Chlorophenyl phenyl ether	ND		ND		NA	
N-nitrosodiphenylamine	ND		ND		NA	
4-Bromophenyl phenyl ether	ND		ND		NA	
Hexachlorobenzene	ND		ND		NA	
Phenanthrene	ND		ND		NA	
Anthracene	ND		ND		NA	
Di-n-butyl-phthalate	ND		ND		NA	
Fluoranthene	ND		ND		NA	
Benzidine	ND		ND		NA	
Pyrene	ND		ND		NA	
Butyl benzyl phthalate	ND		ND		NA	
3,3'-Dichlorobenzidine	ND		ND		NA	

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IDOT Analytical Data

St. Louis Drum

MONITORING WELL SAMPLES

Base Neutrals/Acids (UG/L)

Sample Number	GL8IRG01		GL8IRG01D		GL8IRTB01	
ISGS Location	NA	T	NA	T	NA	T
Date Collected	12/17/98	A	12/17/98	A	12/17/98	A
		C		C		C
		O		O		O
BNAs						
Benzo(a)anthracene	ND		ND		NA	
Bis(2-ethylhexyl)phthalate	ND		ND		NA	
Chrysene	ND		ND		NA	
Di-n-octyl phthalate	ND		ND		NA	
Benzo(b)fluoranthene	ND		ND		NA	
Benzo(k)fluoranthene	ND		ND		NA	
Benzo(a)pyrene	ND		ND		NA	
Indeno(1,2,3-cd)pyrene	ND		ND		NA	
Dibenzo(a,h)anthracene	ND		ND		NA	
Benzo(ghi)perylene	ND		ND		NA	
Benzyl alcohol	ND		ND		NA	
4-Chloroaniline	ND		ND		NA	
2-Methylnaphthalene	ND		ND		NA	
2-Nitroaniline	ND		ND		NA	
3-Nitroaniline	ND		ND		NA	
Dibenzofuran	ND		ND		NA	
4-Nitroaniline	ND		ND		NA	
Phenol	ND		ND		NA	
2-Chlorophenol	ND		ND		NA	
2-Nitrophenol	ND		ND		NA	
2,4-Dimethylphenol	ND		ND		NA	
2,4-Dichlorophenol	ND		ND		NA	
4-Chloro-3-methylphenol	ND		ND		NA	
2,4,6-Trichlorophenol	ND		ND		NA	
2,4-Dinitrophenol	ND		ND		NA	
4-Nitrophenol	ND		ND		NA	
4,6-Dinitro-2-methylphenol	ND		ND		NA	
Pentachlorophenol	ND		ND		NA	
2-Methylphenol	ND		ND		NA	
4-Methylphenol	ND		ND		NA	
Benzoic acid	ND		ND		NA	
2,4,5-Trichlorophenol	ND		ND		NA	

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IDOT Analytical Data

St. Louis Drum

MONITORING WELL SAMPLES
Pesticides/PCBs (UG/L)

Sample Number	GL8IRG01	TACO	GL8IRG01D	TACO	GL8IRTB01	TACO
ISGS Location	NA		NA		NA	
Date Collected	12/17/98		12/17/98		12/17/98	
Pesticides/PCBs						
Aldrin	ND		ND		NA	
alpha-BHC	ND		ND		NA	
beta-BHC	ND		ND		NA	
gamma-BHC (Lindane)	ND		ND		NA	
delta-BHC	ND		ND		NA	
Chlordane	ND		ND		NA	
4,4'-DDD	ND		ND		NA	
4,4'-DDE	ND		ND		NA	
4,4'-DDT	ND		ND		NA	
Dieldrin	ND		ND		NA	
Endosulfan I	ND		ND		NA	
Endosulfan II	ND		ND		NA	
Endosulfan sulfate	ND		ND		NA	
Endrin	ND		ND		NA	
Endrin aldehyde	ND		ND		NA	
Heptachlor	ND		ND		NA	
Heptachlor epoxide	ND		ND		NA	
Toxaphene	ND		ND		NA	
Methoxychlor	ND		ND		NA	
PCB-1016	ND		ND		NA	
PCB-1221	ND		ND		NA	
PCB-1232	ND		ND		NA	
PCB-1242	ND		ND		NA	
PCB-1248	ND		ND		NA	
PCB-1254	0.53		1.3	#	NA	
PCB-1260	1.2	#	3.3	#	NA	

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IDOT Analytical Data

St. Louis Drum

MONITORING WELL SAMPLES

Total Metals (UG/L)

Sample Number	GL8IRG01		GL8IRG01D		GL8IRTB01	
ISGS Location	NA	T	NA	T	NA	T
Date Collected	12/17/98	A	12/17/98	A	12/17/98	A
		C		C		C
		O		O		O
Metals						
Silver	ND		ND		NA	
Arsenic	*84*	†	*86*	†	NA	
Barium	220		220		NA	
Cadmium	ND		ND		NA	
Chromium Total	ND		ND		NA	
Lead	ND		ND		NA	
Selenium	ND		ND		NA	
Mercury	0.2		0.2		NA	

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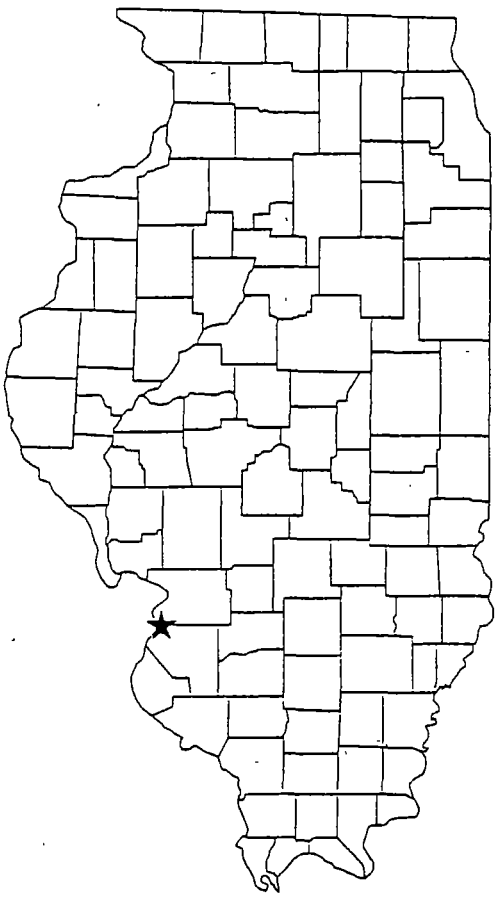
Geology and Environment

IDOT: P98-088-91 ISGS: 601D

PRELIMINARY ENVIRONMENTAL SITE ASSESSMENT

FINAL REPORT

DATE:	September 9, 1998
IDOT DESIGN DATE:	December 31, 1997
DATE REQUEST RECEIVED:	April 6, 1998
LOCATION:	FAP 14 (I-70, New Mississippi River Bridge Crossing/Illinois Route 3 Relocation); Madison and St. Clair Counties, IL; Cahokia, French Village, Granite City, and Monks Mound Quadrangles (USGS 7.5-minute topographic maps); T4N, R8W, Section 33; T3N, R8W, Sections 4-7, 18; T3N, R9W, Sections 1, 2, 12, and 13.



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GLOSSARY OF ACRONYMS

ACM - Asbestos-Containing Material
AST - Aboveground Storage Tank
ASTM - American Society for Testing and Materials
BTEX - Benzene, Toluene, Ethyl Benzene, and total Xylenes
℄ - Centerline
CERCLA- Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS- Comprehensive Environmental Response, Compensation, and Liability Information System
FEMA - Federal Emergency Management Agency
FHBM - Flood Hazard Boundary Map
FID - Flame Ionization Detector
FIRM - Flood Insurance Rate Map
GC - Gas Chromatograph
ICC - Illinois Commerce Commission
IDNR - Illinois Department of Natural Resources
IDOT - Illinois Department of Transportation
IEMA - Illinois Emergency Management Agency
IEPA - Illinois Environmental Protection Agency
IMD - Illinois Manufacturers Directory
IRPTA - Illinois Responsible Property Transfer Act
ISD - Illinois Services Directory
ISGS - Illinois State Geological Survey
ISM - Illinois State Museum
ISV - Initial Site Visit
ISWS - Illinois State Water Survey
JULIE - Joint Utility Locating Information for Excavators
LUST - Leaking Underground Storage Tank
µg/kg - micrograms per kilogram (ppb)
µg/l - micrograms per liter (ppb)
mg/kg - milligrams per kilogram (ppm)
mg/l - milligrams per liter (ppm)
M.P. - Milepost
MSDS - Material Safety Data Sheet
MU - Meter Units
NFR - No Further Remediation
NFRAP - No Further Remedial Action Planned
NIPC - Northeastern Illinois Planning Commission
NPL - National Priority Listing
NRCS - Natural Resources Conservation Service (formerly Soil Conservation Service)
OCS - Office of Chemical Safety
OSFM - Office of the State Fire Marshal
OSHA - Occupational Safety and Health Administration
OVA - Organic Vapor Analyzer
PAH/PNA- Polynuclear Aromatic Hydrocarbon
PCB - Polychlorinated Biphenyl
PESA - Preliminary Environmental Site Assessment
PGC - Photovac Gas Chromatograph
PID - Photoionization Detector
POTW - Publicly-Owned Treatment Works
ppb - parts per billion (equivalent to µg/kg for solids, and µg/l in liquids)
ppm - parts per million (equivalent to mg/kg in solids, and mg/l in liquids)
PRP - Potentially Responsible Party
RCRA - Resource Conservation and Recovery Act
ROD - Record of Decision
ROW - Right-of-Way
SIA - Surface Impoundment Assessment
SIC - Standard Industrial Classification
TACO - Tiered Approach to Cleanup Objectives
TCLP - Toxicity Characteristic Leaching Procedure
TRI - Toxic Release Inventory
TSCA - Toxic Substances Control Act
TVA - Toxic Vapor Analyzer
TVOC - Total Volatile Organic Compound
USDA - United States Department of Agriculture
USDI - United States Department of the Interior
USEPA - United States Environmental Protection Agency
USGS - United States Geological Survey
UST - Underground Storage Tank
VOC - Volatile Organic Compound
WMRC - Waste Management and Research Center (formerly Hazardous Waste Research and Information Center)

PRELIMINARY ENVIRONMENTAL RISK ASSESSMENT[1]

Based upon the following and as of June 5, 1998, the date of the last physical examination of the project area, it is determined that this addendum has **HIGH** (defined below) risk for the occurrence of regulated substances or natural hazards. **Petroleum compounds were detected in immunoassay analyses of soil samples taken from a depth of 5 cm (2 in) at Site 601-2IL-25 and from a borehole and the surface at Site 601-2IL-59. In soil samples taken from Site 601-2IL-59 at a depth of 0-5 cm (0-2 in), the following heavy metals exceeded the ingestion or the inhalation values for the IEPA Tier 1 residential TACO objectives: arsenic, barium, chromium, and lead. In addition, the samples exceeded the TCLP migration to Class I groundwater values for the IEPA Tier 1 residential TACO objectives for lead; values for pH-dependent migration to Class I groundwater were not available. PCBs at concentrations of more than 50 ppm were detected in soil samples taken from the surface at Site 601-2IL-59. Site 601-2IL-59 is an archived CERCLIS site.**

HIGH. A **HIGH** risk is based on the presence of potentially hazardous compounds, either as detected by ISGS testing or as documented by the Illinois Environmental Protection Agency. The specific presence and levels of regulated substances, to the extent that they are known, will be incorporated in the report. Further investigation may be desired to determine the nature, source, and extent of the problem.

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[1] Risk Assessment is the method used to assign a relative risk factor to the probability and likely consequence of encountering man-made and natural hazards. A hazard is the set of inherent properties known to be dangerous to the environment. This rating has an implication for the level of hazard which might be encountered. However, a MODERATE or HIGH risk site might also be easily mitigated by proper methods.

IRPTA COMPLIANCE INFORMATION

The following listed properties within or along the proposed project require IRPTA compliance. The reason(s) for this action are noted and described in the IRPTA Compliance Key on the page following.

Parcel/Address	Reason
Former American Cold Storage (Site 601-2IL-25) Between Front Street and St. Clair Avenue (IL 3) south of Packers Avenue and north of Stockyard Avenue "C", National City	4
St. Louis Auto Shredding Drum Disposal Site Northwest quadrant of Cahokia Canal and former Illinois Terminal Electric Railroad grade, Nameoki Township	4

IRPTA COMPLIANCE KEY

The decision as to whether property is subject to IRPTA compliance is based on several considerations. The following is a key to the reason why parcels identified in the report are subject to IRPTA compliance.

1. This parcel contains a facility that is required to prepare or have available a MSDS for a hazardous chemical, as defined under the OSHA Hazard Communication Standard and falls under one of the following categories:

   A. Hazardous chemicals on the parcel are present in amounts equal to or greater than 4,536 kg (10,000 lbs).

   B. Extremely hazardous substances on the parcel are present in amounts greater than or equal to 227 kg (500 lbs) or their threshold planning quantity, whichever is less.

2. This parcel appears on the OSFM list of registered USTs.

   A. At least one UST is still present on the parcel.

   B. The parcel is on the UST list, but the UST(s) have been removed, have a status of "closed", or have a status of "exempt".

3. This parcel contains one or more USTs that do not appear on the OSFM's UST list but that may be subject to IRPTA.[2]

4. This parcel may be subject to IRPTA compliance upon further investigation. Present information is inadequate, inconclusive, or suggests caution. See report for details.

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[2] USTs/facilities exempt from IRPTA are:

- Farm or residential tank of 4,164 L (1,100 gal) or less capacity used for storing motor fuel for noncommercial purposes;
- Tank used for storing heating oil for consumptive use on the premises where stored;
- Septic tank;
- Pipeline facility (including gathering lines) regulated under the Natural Gas Pipeline Safety Act of 1968; the Hazardous Liquid Pipeline Safety Act of 1979; or which is an intrastate pipeline regulated under comparable state laws.
- Surface impoundment, pit, pond, or lagoon;
- Stormwater or wastewater collection system;
- Flow-through process tank;
- Liquid trap or associated gathering lines directly related to oil or gas production and gathering operations;
- Storage tank situated in an underground area (such as a basement, cellar, mine working, drift, shaft, tunnel) if the storage tank is situated above or upon the surface of the floor.

BACKGROUND

Introduction

This is the **Final Report** of a preliminary environmental assessment by the ISGS of natural and man-made hazards that may be encountered on or along the right-of-way (ROW) to be acquired for this project located in Madison and St. Clair Counties, Illinois. This is an addendum to ISGS PESA 601-2IL/601C-2IL, which covered the project route for a bridge and highway corridor for a proposed new bridge over the Mississippi River (see Attachment 1). The report for PESA 601-2IL/601C-2IL covered the Illinois side of Alternate 2, which crosses the river approximately 1.4 km (0.9 mi) south of the St. Clair-Madison County line and extends approximately 1.6 km (1 mi) west into St. Louis, MO, and approximately 7 km (4.4 mi) east into Madison and St. Clair Counties, IL. This addendum presents additional information concerning two sites on the Illinois side of the river (see Attachment 1 for addendum location). This report identifies and evaluates known or potential occurrences of regulated substances and natural hazards.

This assessment has been prepared using historical and geological information including aerial photographs, U.S. Geological Survey topographic maps, plat maps, file information of the ISGS and other state agencies, and various other sources of information. An on-site investigation has been completed. The specific methods used to conduct the assessment are contained in "A Manual for Conducting Preliminary Environmental Site Assessments for Illinois Department of Transportation Highway Projects" (Erdmann et al., 1996). Natural and man-made hazards have been identified and other potential detriments or considerations have been listed as are suitable within the scope of this preliminary survey. If new environmental information is received concerning this site, this report will be updated accordingly and the information made part of the permanent file. If such information is considered to have a significant impact on the findings of this report, the report will be corrected by addendum and resubmitted to IDOT Bureau of Design and Environment.

Geology

Soils. See PESA #601-2IL/601C-2IL for information regarding soils.

Surficial geology. See PESA #601-2IL/601C-2IL for information regarding surficial geology.

Bedrock geology. See PESA #601-2IL/601C-2IL for information regarding bedrock geology.

Hydrogeology

Drainage direction. See PESA #601-2IL/601C-2IL for information regarding drainage direction.

Depth to water in project boreholes. Water was encountered in one borehole completed for this addendum in June 1998. Depth to water in this borehole was 2.4 m (8 ft).

Surficial public water supplies. See PESA #601-2IL/601C-2IL for information regarding surficial public water supplies.

Groundwater recharge. See PESA #601-2IL/601C-2IL for information regarding groundwater recharge.

Groundwater protection areas. See PESA #601-2IL/601C-2IL for information regarding groundwater protection areas.

Potential for contamination of shallow aquifers. See PESA #601-2IL/601C-2IL for information regarding potential for contamination of shallow aquifers.

Well information. See PESA #601-2IL/601C-2IL for information regarding well log information.

DISCUSSION

Man-Made Hazards

Site 601-2IL-25. PCB/LUST/possible UST/former industrial site: Former American Cold Storage, between Front Street and St. Clair Avenue (IL 3) south of Packers Avenue and north of Stockyard Avenue "C", National City. Since submitting ISGS PESA 601-2IL/601C-2IL, additional information has been discovered concerning this parcel, located in the southwest quadrant of Packers Avenue and Front Street in National City. This parcel is a LUST site (IEMA #961298, IEPA #L1631005010) under the name Ed Vollmer at 30 Front Street. According to information received from the IEPA on June 9, 1998, the LUST was discovered on July 18, 1996. It involved a spill from a pipe connected to a 7,571-L (2,000-gal) UST that was being removed during efforts to convert the parcel to a mobile-home park. An investigation by the IEPA was prompted by a call from the St. Clair County Health Department, alleging that an UST had been punctured and was leaking gasoline.

According to information received by the ISGS on February 2, 1998, from the IEPA's Collinsville office, the tank had already been removed and transported to St. Louis Auto Shredders for disposal, when the site was investigated by the IEPA in July 1996. A visit by IEPA personnel to the shredding company revealed no evidence of the tank, suggesting that it had already been disposed of. A second tank was also observed on the Vollmer parcel. It contained a glossy brown solid, which IEPA personnel believed to be a resin. IEPA personnel found pieces of the resin material in other locations on the Vollmer parcel. Analysis of a sample from the former tank pit detected methylene chloride (35 ppb), acetone (180 ppb), 1,2-dichloroethane (63 ppb), butanol (44 ppb), 2-propylfuran (180 ppb), ethylmethyl dioxolane (430 ppm), and toluene 2,4-diisocyanate (2,000 ppm), the latter four compounds being tentative identifications, according to IEPA file material.

In August 1996, the site was again visited by the IEPA to investigate allegations made by a Mr. Sam Apponey, a former employee of the stockyards. Mr. Apponey claimed that he had been involved in preparation of the former American Cold Storage facility for demolition. He stated that two dispensers were located on site near the former location of the smoke stack. He further stated that the dispensers had been operational until the early 1980s, perhaps having been taken out of service in 1981. He also claimed that three transformers had been drained directly onto the ground in 1984, with excess runoff of transformer oil being directed into the USTs. The largest transformer had contained 41,639 L (11,000 gal) of oil.

In September 1996, contaminated soil was removed from the site by Mississippi River Festival, Inc., overseen by Engleton Environmental, consultant to the company. Water was encountered at an unknown depth in the bottom of the excavation during removal activities. Approximately 31 m^3 (40 yd^3) of soil was removed from the site.

In December 1996, a notice of violation was issued to Mr. Ed Vollmer concerning activities at the site. He was cited for failure to report a release, failure to properly investigate the area for possible contamination of soils and groundwater, failure to submit a 20-day report, failure to assemble information about the site and the nature of the release, failure to submit a 45-day report, and depositing of contaminants so as to create a water pollution hazard. He was instructed to submit evidence of abatement actions within 45 days of that letter. No other information was available in IEPA files.

Mr. Apponey stated to the IEPA that the dispensers were located adjacent to the smoke stack at the facility. Review of aerial photographs from 1940 to 1993 revealed that there were two smoke stacks at the facility. One was along the west side of Front Street and protruded from the roof of a large building. The other was situated at the rear (west side) of that building and appeared to stand by itself. The free-standing smoke stack is believed to have been the one adjacent to the former dispensers. Because none of the drawings in the IEPA files was to scale, the Collinsville regional office of the IEPA was contacted to determine the former location of the USTs and transformers. Ms. Kathy Vieregge, who had been involved with the investigation of the site, stated that Mr. Apponey was deceased. She provided a map, not to scale, that showed the relative location of the former USTs and transformers on the parcel. According to that map, the USTs were located in the west-central portion of the parcel, along the east side of IL 3. The map also suggested that the transformers had been located just west of Front Street approximately half way between the south edge of the Ed Vollmer parcel and the curve from Front Street to Main. However, Sanborn Fire Insurance Maps from 1962 show that the smoke stack was located directly in line with Main Street, approximately half way between Front Street and IL 3.

This parcel was tested for VOCs, PNAs, and metals for ISGS PESA #601-2IL/601C-2IL. The locations of sample sites are shown on Attachment 2A. No additional testing was conducted for this addendum.

Two additional samples were collected from the area of the former transformers to test for PCBs (see Attachment 2A for sample locations). Soil sample 2IL-25A was collected from the ground surface at a location 28.2 m (93 ft) west of the centerline of Front Street and 78.2 m (257 ft) south of the centerline of Main Street, in the area that maps in IEPA files suggested as the former location of the smoke stack. Soil sample 2IL-25B was collected from a depth of approximately 15.2 cm (6 in) at a location approximately 58 m (190 ft) west of the centerline of Front Street and 6 m (20 ft) south of the centerline of Main Street. This location is estimated to have been adjacent to the location of the former smoke stack shown on Sanborn maps. Results of this testing indicate that PCBs were not detected in the soil samples at concentrations greater than 1 ppm, the lower test detection limit.

Soil sample 2IL-25B was a sandy gravel. The sample had an oily appearance. Therefore, a Petro-Risc immunoassay test was run on the sample to test for petroleum compounds. Results of this analysis indicate that petroleum products were detected in the soil sample in concentrations greater than 100 ppm, the upper test detection limit.

Site 601-2IL-59. Archived CERCLIS site: St. Louis Auto Shredding Drum Disposal Site, northwest quadrant of Cahokia Canal and former Illinois Terminal Electric Railroad grade. This site is a clearing in a wooded area located south of the western part of the Gateway International Golf Course. It is currently an L-shaped clearing in a grove of trees. The clearing is covered by a few large scrap tires, burn residue, and minor weeds. The ground is patchily covered with rubbery mats of material. Little vegetation was observed growing in the area.

This parcel is an archived CERCLIS site (USEPA #ILD984767392; IEPA #L1631000003). Mr. Tom Miller of the IEPA Collinsville regional office stated that the site was discovered in 1993 by hunters walking along the railroad grade. IEPA file information was received on April 13, 1998, from the Collinsville regional office. A Site Inspection Report prepared in August 1993 by Andrews Environmental Engineering, Inc., consultant to St. Louis Auto Shredding, reported that more than 25 drums or parts of drums were located in the drum disposal area. Most of the drums had been turned over and their lids removed. The drums were also filled with bullet holes. A few drums still contained solid or semi-solid material. A gray putty-like substance was believed to be a type of epoxy. This material emitted a strong VOC odor. Also present were several white cylinders that were porous, brown, and elastic on the inside, suggesting they originated as paint sludge. Other waste in the area included metal shavings, flat washers, and a solid blue material that may have been paint pigment. Tires, glass, and hardened gray material were located adjacent to the drum disposal site. The waste had been burned and was coated with black soot or burn residue. The consultant concluded that most of the waste on site was related to painting or metal working operations.

A March 1996 letter report by Environmental Waste Consultants, consultant to St. Louis Auto Shredding, reported the following analytical data on drum contents:

PCBs	6 to 30,539 ppm
VOCs	
Benzene	one sample 13 ppb
Tetrachloroethene	one sample 320 ppb
Metals	
Barium	0.063-0.221 ppm
Cadmium	0.034-0.139 ppm
Lead	one sample 8.55 ppm
SVOCs (semi-volatile organic compounds)	
4-Methylphenol	one sample 28.6 ppb
Nitrobenzene	one sample 13.4 ppb

The drums were removed in April 1996 by Cunningham Remediation Services under subcontract with Environmental Waste Consultants. IEPA files indicate that there were 27 drums of mixed PCB and paint waste. Twenty of the drums contained greater than 50 ppb PCBs; these were shipped to an incineration facility in Utah. The remaining seven drums were disposed of as non-hazardous special waste at a landfill in Illinois. No other information was available in IEPA files.

The site was visited by the ISGS on June 5, 1998, to test for VOCs and to gather samples for metals testing. Borehole 601-2IL-59a was probed to a depth of 2.7 m (9 ft) in the southern part of the clearing (see Attachment 2B); water was encountered at a depth of 2.4 m (8 ft). Soil samples were collected from depths of 0.9, 1.8, and 2.7 m (3, 6, and 9 ft) to test for VOCs. In Photovac GC analysis of the samples, no VOCs significantly above background levels were detected.

The site for borehole 601-2IL-59b was in the northeastern portion of the clearing (see Attachment 2B). A hard soil layer beneath about 5 cm (2 in) of sandy fine gravel prevented penetration by the soil probe. Therefore, a soil sample was collected from the top 5 cm (2 in) of sediment for analysis of VOCs. In Photovac GC analysis of the sample, no VOCs significantly above background levels were detected. The soil sample was also analyzed using a Petro-Risc immunoassay kit. Results of this analysis indicate that petroleum products were detected in the soil sample in concentrations greater than 100 ppm, the upper test detection limit.

The site for borehole 601-2IL-59c was located in the western part of the clearing. The same hard layer beneath about 5 cm (2 in) of sandy fine gravel prevented completion of the hole. Also, a strong odor of VOCs was noted in the area, which prevented extended stay at the site. Therefore, a soil sample was collected from the top 5 cm (2 in) of sediment for VOC analysis. In Photovac GC analysis of the sample, no VOCs significantly above background levels were detected. This may indicate escape of volatile compounds from the sandy matrix of the soil. The soil sample was also analyzed using a Petro-Risc immunoassay kit. Results of this analysis indicate that petroleum products were detected in the soil sample in concentrations greater than 100 ppm, the upper test detection limit.

Soil samples 2IL-59A, 2IL-59B, and 2IL-59C were taken from the top 5 cm (2 in) of soils at the sites of boreholes 601-2IL-59a, 601-2IL-59b, and 601-2IL-59c, respectively, for total metals and TCLP analyses. These analyses were performed by RECRA LabNet Chicago. The pH values for the soil samples were 7.5, 7.8, and 7.5, respectively. The results are presented in the table below, along with the ingestion and inhalation cleanup objectives for total metals (mg/kg), and migration to Class I groundwater cleanup objectives for both pH-dependent total metals (mg/kg) and TCLP metals (mg/L), as determined for TACO Tier 1 standards for residential properties. NA = no toxicity criteria available for route of exposure. ND = not present above detection limit. – = analysis not performed.

Sample # [depth]	Total metals (mg/kg)		TCLP metals (mg/L)		Ingestion (mg/kg)	Inhalation (mg/kg)	Migration to Class I GW: pH-dependent (mg/kg)	Migration to Class I GW (mg/L)
Metal	Result	Detection limit	Result	Detection limit				
2IL-59A [0-5 cm (0-2 in)]							pH 7.25 to 7.74	
arsenic	**13.9**	7.2	ND	0.05	**0.4**	750	30	0.05
barium	**6,110**	60.5	0.81	0.5	**5,500**	690,000	1,800	2.0
cadmium	26	0.6	–	–	78	1,800	59	0.005
chromium (total)	**797**	2.4	ND	0.05	**390**	**270**	32	0.1
lead	**19,000**	36.2	**2.1**	0.0075	**400**	NA	NA	**0.0075**
mercury	1.2	0.07	–	–	23	10	6.4	0.002
selenium	0.86	0.6	–	–	390	NA	3.3	0.05
silver	1.9	1.2	–	–	390	NA	39	0.05

Sample # [depth]	Total metals (mg/kg)		TCLP metals (mg/L)		Ingestion (mg/kg)	Inhalation (mg/kg)	Migration to Class I GW: pH-dependent (mg/kg)	Migration to Class I GW (mg/L)
Metal	Result	Detection limit	Result	Detection limit				
2IL-59B [0- cm (0-2 in)]							pH 7.75 to 8.0	
arsenic	**1,460**	5.5	ND	0.05	**0.4**	**750**	31	0.05
barium	**5,890**	52.8	1.9	0.5	**5,500**	690,000	2,100	2.0
cadmium	27.3	0.53	–	–	78	1,800	430	0.005
chromium (total)	**542**	2.1	ND	0.05	**390**	**270**	28	0.1
lead	**138,000**	137	**1,470**	0.75	**400**	NA	NA	**0.0075**
mercury	0.71	0.57	–	–	23	10	8.0	0.002
selenium	ND	5.3	–	–	390	NA	2.4	0.05
silver	60.5	1.1	–	–	390	NA	110	0.05
2IL-59C [0- cm (0-2 in)]							pH 7.25 to 7.74	
arsenic	**44.6**	6.1	ND	0.05	**0.4**	750	30	0.05
barium	**11,100**	56.8	1.8	0.5	**5,500**	690,000	1,800	2.0
cadmium	14.9	0.57	–	–	78	1,800	59	0.005
chromium (total)	**1,900**	2.3	ND	0.05	**390**	**270**	32	0.1
lead	**28,700**	30.3	**177**	0.75	**400**	NA	NA	**0.0075**
mercury	1.7	0.57	–	–	23	10	6.4	0.002
selenium	1	0.57	–	–	390	NA	3.3	0.05
silver	7.3	1.1	–	–	390	NA	39	0.05

Soil samples 2IL-59A, 2IL-59B, and 2IL-59C were also analyzed for PCBs. Results of the testing of sample 2IL-59A indicated that PCBs were present in the soil sample at concentrations greater than 1 ppm but less than 50 ppm. Results of the testing of samples 2IL-59B and 2IL-59C indicated that PCBs were detected in the soil samples at concentrations greater than 50 ppm, the upper test detection limit.

Borehole 601-2IL-59a penetrated approximately 0.3 m (1 ft) of topsoil overlying 2.4 m (8 ft) of gray silt. The surface sediment at sites 601-2IL-59b and 601-2IL-59c consisted of approximately 5 cm (2 in) of sandy fine gravel overlying an impenetrable layer of sediment probably hardened by paint waste.

Other potential man-made hazards

Dumping. See PESA #601-2IL/601C-2IL for information regarding dumping.

Landfilling. See PESA #601-2IL/601C-2IL for information regarding landfilling.

Asbestos-containing materials. See PESA #601-2IL/601C-2IL for information regarding asbestos-containing materials.

Natural Hazards

Wetlands. See PESA #601-2IL/601C-2IL for information regarding wetlands.

Floodplains. See PESA #601-2IL/601C-2IL for information regarding floodplains.

Seismic risk. See PESA #601-2IL/601C-2IL for information regarding seismic risk.

Karst region. See PESA #601-2IL/601C-2IL for information regarding karst.

No other observed or known natural hazards were identified for this project.

FINDINGS

1. **Petroleum compounds were detected in immunoassay analyses of soil samples taken from a depth of 5 cm (2 in) at Site 601-2IL-25 and from a borehole and the surface at Site 601-2IL-59.** Further investigation into the nature, extent, and source(s) of petroleum compounds may be warranted.

2. **In soil samples taken from Site 601-2IL-59 at a depth of 0-5 cm (0-2 in), the following heavy metals exceeded the ingestion or the inhalation values for the IEPA Tier 1 residential TACO objectives: arsenic, barium, chromium, and lead. In addition, the samples exceeded the TCLP migration to Class I groundwater values for the IEPA Tier 1 residential TACO objectives for lead; values for pH-dependent migration to Class I groundwater were not available.** Further investigation into the nature, extent, and source(s) of heavy metals may be warranted.

3. **PCBs at concentrations of more than 50 ppm were detected in soil samples taken from the surface at Site 601-2IL-59.** Further investigation into the nature, extent, and source(s) of PCBs may be warranted.

4. **Site 601-2IL-59 is an archived CERCLIS site.** See findings 1, 2, and 3 for results of testing at this site.

ENDORSEMENTS

Project Manager: C. Brian Trask — Date: 9/9/98

Approved: Anne L. Erdmann — Date: 09/09/98

INFORMATION SOURCES

The material listed below should be consulted if more detailed information is desired.

Lists, Databases, and Publications

See PESA #601-2IL/601C-2IL for information regarding lists, databases, and publications consulted for this project.

Maps

See PESA #601-2IL/601C-2IL for information regarding maps.

Aerial Photographs

Markhurd photographs
- 1993 Line 45, photographs 469, 470
- 1988 Line 45, photographs 469, 470

Dept. of Agriculture photographs
- 1973 173-147
- 1962 SK-3CC-249, 250
- 1940 SK-6A-86

Other

Telephone conversations with:
- Miller, Tom, IEPA Collinsville office.
- Vieregge, Kathy, IEPA Collinsville office.

APPENDIX A

See PESA #601-2IL/601C-2IL for Appendix A.

APPENDIX B

Initial Site Visit Checklist

IDOT NO. P98-088-91 Date: 6/3-5/98
ISGS NO. 601D By: C. B. Trask

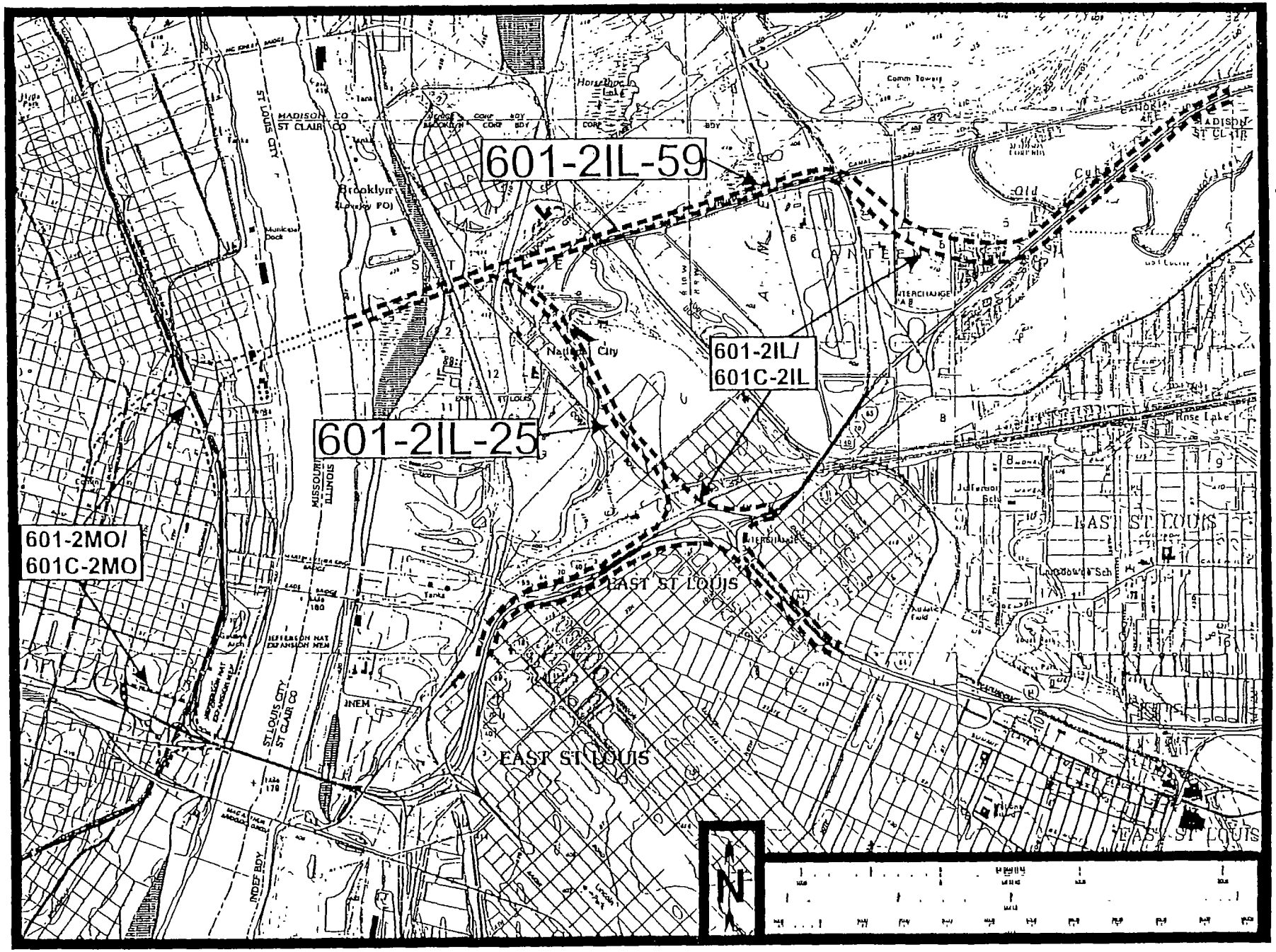
ITEM	YES	NO	UNK	COMMENT
FLORA/FAUNA				
Vegetation present	X			
Vegetation stressed	X			Comment 1.
Animal activity or presence	X			
NATURAL FEATURES AND CONDITIONS				
Depressions	X			Comment 2.
Mounding or soil piles	X			Comment 3.
Wetlands, ponds, lakes		X		
Rivers, streams, creeks	X			
Lagoons, surface impoundments		X		
Surface soil discoloration	X			Comment 1.
Water discoloration		X		
CULTURAL FEATURES AND CONDITIONS				
Buildings/structures		X		
Landfills		X		
Industry		X		
Asbestos source/presence			X	Comment 4.
Storage tanks (above or underground)		X		
Pumps/protruding pipes	X			Comment 5.
Drums		X		
Railroad spurs/tracks/ROW		X		
Dead end roads/trails		X		
Sewer lines	X			
Water wells		X		
Monitoring wells		X		
Septic tanks		X		
Pits/quarries		X		
Solid waste (garbage)	X			Comment 6.
Transformers/substations		X		
AMBIENT ENVIRONMENTAL CONDITIONS				
Unusual or noxious odors	X			Comment 1.
Noise pollution		X		
Dust/smoke		X		

COMMENTS:

1. St. Louis Auto Shredding Drum Disposal Site (Site 601-2IL-59).
2. Excavations for utilities at former American Cold Storage (Site 601-2IL-25).
3. Fill dumped at former American Cold Storage (Site 601-2IL-25).
4. Asbestos-containing materials may be present in demolition debris in soils at former American Cold Storage (Site 601-2IL-25).
5. New utilities being installed at former American Cold Storage (Site 601-2IL-25).
6. Tires and other debris at St. Louis Auto Shredding Drum Disposal Site (Site 601-2IL-59).

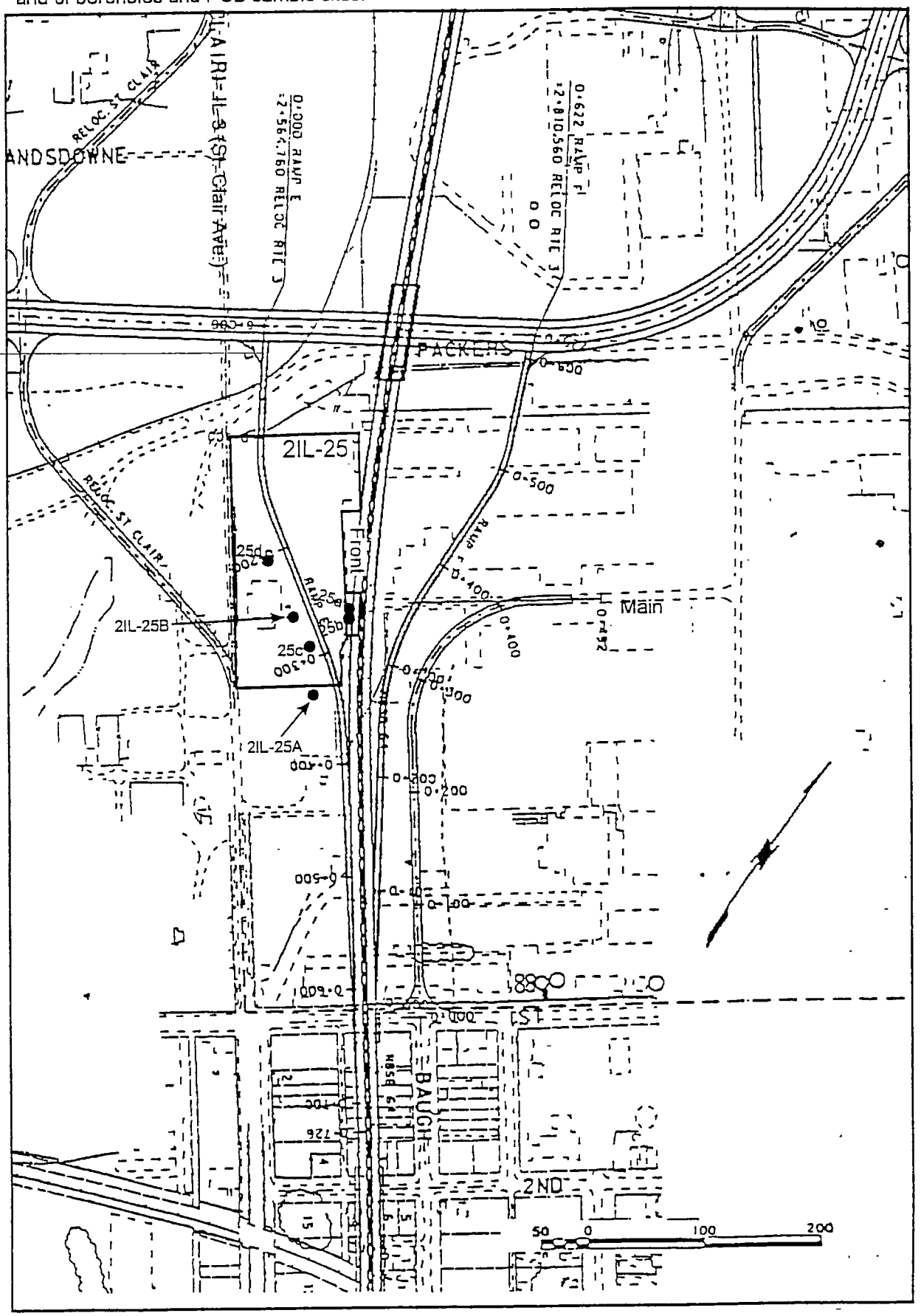
LIST OF ATTACHMENTS

1. Project location map.
2A. Map showing location of former American Cold Storage and of boreholes and PCB sample site.
2B. Map showing location of St. Louis Auto Shredding Drum Disposal Site and of test sites on parcel.
3. Results of testing for volatile organic compounds.

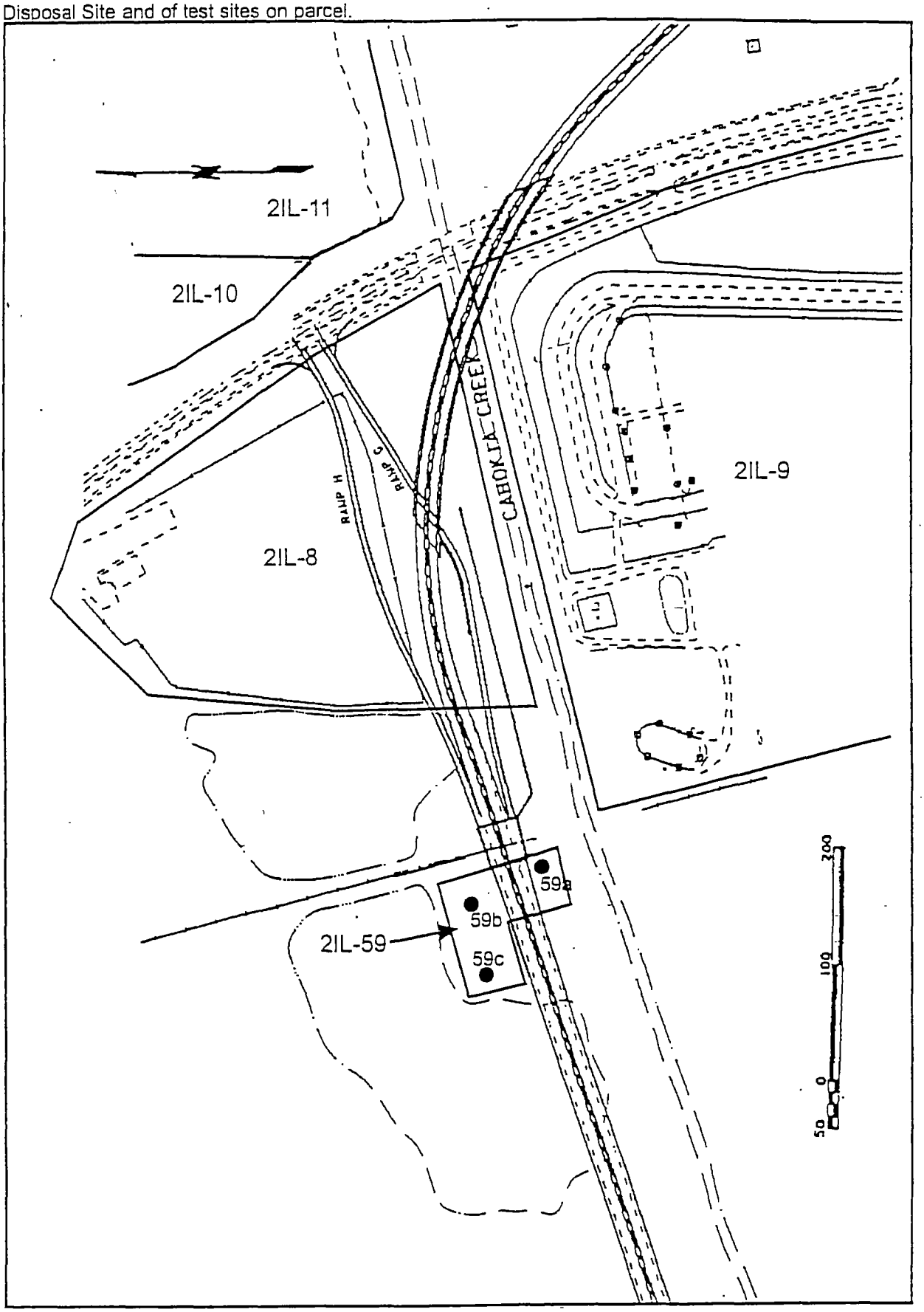


Attachment 1. Project location map.

Attachment 2A. Map showing location of former American Cold Storage and of boreholes and PCB sample sites.



Attachment 2B. Map showing location of St. Louis Auto Shredding Drum Disposal Site and of test sites on parcel.



Attachment 3—Results of testing for volatile organic compounds

Borehole # Date Method	Borehole location and information *All location distances are from roadway centerlines unless otherwise noted*	Sample depth(s)[1]	Sample type(s)	Analytical results[2] *OVA (sm) total VOCs detected with the OVA in survey mode* *OVA (gc) tentative identification of VOCs using the OVA in GC mode* *PGC tentative identification of VOCs using the Photovac GC*
601-2IL-59a 6/5/98 soil probe	St Louis Auto Shredding Drum Disposal Site (northwest quadrant of Cahokia Canal and former Illinois Terminal Electric Railroad grade), 18 m (60 ft) west of railroad grade and 11 m (35 ft) north of southern utility pole on railroad grade	0 9 m (3 ft)	soil sample headspace	PGC: no VOCs significantly above background levels
		1 8 m (6 ft)	soil sample headspace	PGC: no VOCs significantly above background levels
	• final hole depth. 2 7 m (9 ft) • water encountered at 2 4 m (8 ft)	2.7 m (9 ft)	soil sample headspace	PGC: no VOCs significantly above background levels
601-2IL-59b 6/5/98 grab sample	—; 23 m (75 ft) west of railroad grade and 35 m (115 ft) north of southern utility pole on railroad grade	(0-2 in)	soil sample headspace	PGC. no VOCs significantly above background levels
	• final hole depth: (2 in) • dry hole		petroleum immunoassay	Petro-Risc: > 100 ppm
601-2IL-59c 6/5/98 grab sample	—; 43 m (140 ft) west of railroad grade and 35 m (115 ft) north of southern utility pole on railroad grade	(0-2 in)	soil sample headspace	PGC. no VOCs significantly above background levels
	• final hole depth· (2 in) • dry hole		petroleum immunoassay	Petro-Risc: > 100 ppm

[1] The depth to which the well point was lowered down the borehole to sample the soil gas or the depth at which a water or soil sample was collected from the borehole Unless otherwise noted, sample depths that are less than the final depth of the borehole are due to water in the hole or hole collapse

[2] Using the Photovac GC (gas chromatograph), a compound is identified based on its retention time Because many compounds have similar retention times, this identification is not absolute Concentrations determined by the Photovac GC are valid only in the range from ½ to 3 times the concentration of the standards used to calibrate the instrument, concentrations outside this range are reported as either less than or greater than the valid limits for a compound Note that these Photovac concentrations reflect only the headspace conditions in the sample vial, and are not representative of the soil or water conditions *in situ* Concentrations determined by the OVA in survey mode are reported relative to the response generated by the methane standard used to calibrate the instrument Any concentration in this table greater than 20 ppm has been rounded to the appropriate multiple of 10

B

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ENGINEERING & APPLIED SCIENCE

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B Field Boring Logs

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FIELD BORING LOG

ENGINEERING + APPLIED SCIENCE
821 S DURKIN DR - SPRINGFIELD IL 62704 - (217)787-2118

Client: National City Environmental **Project:** AOC Site **Boring No:** B-01

Drilling Firm: Rapps Engineering **Drilling Method:** Direct Push **Surface Elev:** 405.68'

Logged By: KJM **Checked By:** BCJ **Date Started:** 09/30/03 **Completed:** 09/30/03

Depth	Material Description (Classification System: USC)	Tube No.	Type	% Rec.	PID	Qu 1/st PEN	Moist	Comments	Well
0	Black Clayey Topsoil (0.8')				12.9				
	Dark Brown Clayey Silt (CL-ML); Trace Sand; Moist; Firm; Iron Oxide Staining	1	Giddings Machine Co. 4' Zero Contamination Tube	100	0.0			Cahokia Formation (Alluvium)	
					0.0				
					32.1				
5		2		100	0.0				
					12.0				
					16.5				
					23.2				
	(9.0')	3		100	0.0				
10	Bluish Gray Silty Clay (ML-CL); Moist to Wet; Soft to Firm				8.9				
					9.8				
					15 2				
		4		100	12.5				
					25.9				
					57.5				
15					81.2				
		5		85	26.8				
					33.9				
					44.2				
					33.9				
20	End of boring @ 20'; Set 0.75" I.D. well with 5' pre-packed screen in open borehole								
25									
30									

Water Level 398.01' **after** 24 **hrs.** **Note:** Refer to Standard Legend Sheet. **Sheet** 1 **of** 1

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FIELD BORING LOG

ENGINEERING + APPLIED SCIENCE
821 S DURKIN DR - SPRINGFIELD IL 62704 - (217)787-2118

Client: National City Environmental **Project:** AOC Site **Boring No:** B-02

Drilling Firm: Rapps Engineering **Drilling Method:** Direct Push **Surface Elev:** 405.68'

Logged By: KJM **Checked By:** BCJ **Date Started:** 09/30/03 **Completed:** 09/30/03

Depth	Material Description (Classification System: USC)	Tube No.	Type	% Rec.	PID	Qu t/sf PEN	Moist	Comments	Well
0	Black Clayey Topsoil and Refuse (0.8')				0.0				
	Dark Brown Clayey Silt (CL-ML); Trace Sand; Moist; Firm; Iron Oxide Staining	1	Giddings Machine Co. 4' Zero Contamination Tube	100	0.0			Cahokia Formation (Alluvium)	
					16.5				
					13.8				
5		2		100	2.7				
					0.9				
					0.0				
	(8.0')				1.3				
	Bluish Gray Silty Clay (ML-CL); Moist to Wet; Soft to Firm	3		100	5.8				
10					3.6				
					0.0				
					4.0				
	No Recovery 13'-14'	4		75	8.0				
					–				
					3.6				
15					15.2				
	Wet Below 16'	5		65	12.0				
	No Recovery 17'-18.4'				–				
					13.4				
					0.0				
20	End of boring @ 20'; Set 0.75" I.D. well with 5' pre-packed screen in open borehole								
25									
30									

Water Level 398.01' **after** 24 **hrs.** **Note:** Refer to Standard Legend Sheet. **Sheet** 1 **of** 1

RAPPS

FIELD BORING LOG

ENGINEERING + APPLIED SCIENCE
821 S DURKIN DR - SPRINGFIELD IL 62704 - (217)787-2118

Client: National City Environmental **Project:** AOC Site **Boring No:** B-03

Drilling Firm: Rapps Engineering **Drilling Method:** Direct Push **Surface Elev:** 405.11'

Logged By: KJM **Checked By:** BCJ **Date Started:** 09/30/03 **Completed:** 09/30/03

Depth	Material Description (Classification System: USC)	Tube No.	Type	% Rec.	PID	Qu t/sf PEN	Moist	Comments	Well	Depth
0	Dark Brown Clayey Silt (CL-ML); Trace Sand; Moist; Firm; Iron Oxide Staining	1	Giddings Machine Co. 4' Zero Contamination Tube	100	11.6			Cahokia Formation (Alluvium)		0
	Buff Very Fine to Fine Sand 2.7'-3.1'				28.5					
	Buff Very Fine to Fine Sand 3.4'-3.7'				22.3					
	Buff Very Fine to Fine Sand 4'-4.2'				17.8					
5		2		100	25.4					5
					11.6					
					13.4					
	Buff Very Fine to Fine Sand 7.4'-7.6'				11.2					
8.0'	Bluish Gray Silty Clay (ML-CL); Moist to Wet; Soft to Firm	3		100	13.8					
10					<1999					10
	Slight Odor 10'-11'				1381					
					70.0					
	No Recovery 12.5'-14'	4		60	42.4					
					–					
	Wet Below 14'				51.7					
15					41.5					15
		5		60	610					
					105					
					141.8					
					41.9					
20	End of boring @ 20'; Set 0.75" I.D. well with 5' pre-packed screen in open borehole									20
25										25
30										30

Water Level 398.28 **after** 24 **hrs.** **Note:** Refer to Standard Legend Sheet. **Sheet** 1 **of** 1

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BORING LOG

ENGINEERING + APPLIED SCIENCE
821 S DURKIN DR - SPRINGFIELD IL 62704 - (217)787-2118

Client: National City Environmental **Project:** AOC Site **Boring No:** B-06

Drilling Firm: Rapps Engineering **Drilling Method:** Direct Push **Surface Elev:** 404.02'

Logged By: KJM **Checked By:** BCJ **Date Started:** 09/30/03 **Completed:** 09/30/03

DEPTH	Material Description (Classification System: USC)	Sampling: Tube No.	Sampling: Type	Sampling: % Rec.	Tests: PID	Tests: Qu t/sf PEN	Tests: Moist	Comments	Well	DEPTH
0	Dark Brown Clayey Silt (CL-ML); Moist; Firm; Iron Oxide Staining	1	Giddings Machine Co. 4' Zero Contamination Tube	100	59.8			Cahokia Formation (Alluvium)	PIEZOMETER	0
					11.2					
					40.1					
					74.0					
5		2		80	12.9					5
					2.2					
	No Recovery 6.4'-7.4'				8.9					
	7.4' Greenish Gray Silty Clay (ML-CL); Moist to Wet; Soft to Hard				14.3					
10		3		100	6.2					10
					16.5					
					15.2					
					72.3					
	End of boring @ 12'; Set 0.75" I.D. piezometer in open borehole									
15										15
20										20
25										25
30										30

Water Level 399.57' **after** 24 **hrs.** **Note:** Refer to Standard Legend Sheet. **Sheet** 1 **of** 1

RAPPS

FIELD BORING LOG

ENGINEERING + APPLIED SCIENCE
821 S DURKIN DR - SPRINGFIELD IL 62704 - (217)787-2118

Client: National City Environmental **Project:** AOC Site **Boring No:** B-07

Drilling Firm: Rapps Engineering **Drilling Method:** Direct Push **Surface Elev:** 404.09'

Logged By: KJM **Checked By:** BCJ **Date Started:** 09/30/03 **Completed:** 09/30/03

DEPTH	Material Description (Classification System: USC)	Sampling: Tube No.	Sampling: Type	Sampling: % Rec.	Tests: PID	Tests: Qu t/sf PEN	Tests: Moist	Comments	Well	DEPTH
0	Dark Brown Clayey Silt (CL-ML); Trace Sand; Moist; Firm; Iron Oxide Staining	1	Giddings Machine Co. 4' Zero Contamination Tube	90	93.2			Cahokia Formation (Alluvium)	PIEZOMETER	0
					103.0					
	Buff Very Fine to Fine Sand 2.9'-3.3'				32.1					
					39.5					
5		2		100	1999					5
					41.5					
	6.6'				1999					
	Greenish Gray Silty Clay (ML-CL); Moist to Wet; Soft to Hard; Strong Odor				1999					
		3		100	1999					
10	Prominent Yellowish Discoloration 9.4'-10.4'				1999					10
					1752					
	No Odor 10.5'-12'				298 3					
	End of boring @ 12'; Set 0.75" I.D. piezometer in open borehole									
15										15
20										20
25										25
30										30

Water Level 398.39' **after** 24 **hrs.** **Note:** Refer to Standard Legend Sheet. **Sheet** 1 **of** 1

RAPPS

FIELD BORING LOG

ENGINEERING + APPLIED SCIENCE
821 S DURKIN DR - SPRINGFIELD IL 62704 - (217)787-2118

Client: National City Environmental **Project:** AOC Site **Boring No:** B-08

Drilling Firm: Rapps Engineering **Drilling Method:** Direct Push **Surface Elev:** 404.54'

Logged By: KJM **Checked By:** BCJ **Date Started:** 09/30/03 **Completed:** 09/30/03

DEPTH	Material Description (Classification System: USC)	Sampling: Tube No.	Sampling: Type	Sampling: % Rec.	Tests: PID	Tests: Qu t/sf PEN	Tests: Moist	Comments	Well	DEPTH
0	Dark Brown Clayey Silt (CL-ML); Trace Sand; Moist; Firm; Iron Oxide Staining	1	Giddings Machine Co. 4' Zero Contamination Tube	100	58.9			Cahokia Formation (Alluvium)	PIEZOMETER	0
					64.4					
	Buff Very Fine to Fine Sand 2.3'-2.5'				81.2					
	Buff Very Fine to Fine Sand 3.1'-3.6'				36.6					
5		2		25	26.8					5
	No Recovery 5'-8'				–					
					–					
					–					
	9.5'	3		100	187.3					
10	Bluish Gray Silty Clay (ML-CL); Moist to Wet; Soft to Hard; Strong Odor				<1999					10
					<1999					
					<1999					
	End of boring @ 12'; Set 0.75" I.D. piezometer in open borehole									
15										15
20										20
25										25
30										30

Water Level 394.71 **after** 24 **hrs.** **Note:** Refer to Standard Legend Sheet. **Sheet** 1 **of** 1

RAPPS

FIELD BORING LOG

ENGINEERING + APPLIED SCIENCE
821 B DURKIN DR - SPRINGFIELD IL 62704 - (217)787-2118

Client: National City Environmental **Project:** AOC Site **Boring No:** B-09

Drilling Firm: Rapps Engineering **Drilling Method:** Direct Push **Surface Elev:** 403.99'

Logged By: KJM **Checked By:** BCJ **Date Started:** 10/01/03 **Completed:** 10/01/03

DEPTH	Material Description (Classification System: USC)	Sampling: Tube No.	Sampling: Type	Sampling: % Rec.	Tests: PID	Tests: Qu t/sf PEN	Tests: Moist	Comments	Well	DEPTH
0	Dark Brown Clayey Silt (CL-ML); Trace Sand; Moist; Firm; Iron Oxide Staining	1	Giddings Machine Co. 4' Zero Contamination Tube	90	1.8			Cahokia Formation (Alluvium)	PIEZOMETER	0
					16.5					
					17.4					
	Buff Very Fine to Fine Sand 3.7'-4'				9.8					
5		2		100	30.3					5
					37.0					
					76.7					
	7.0' Greenish Gray Silty Clay (ML-CL); Moist to Wet; Soft to Hard; Strong Odor				1552					
		3		100	1452					
10					875.7					10
					1402					
					<1999					
	End of boring @ 12'; Set 0.75" I.D. piezometer in open borehole									
15										15
20										20
25										25
30										30

Water Level 398.69 **after** 24 **hrs.** **Note:** Refer to Standard Legend Sheet. **Sheet** 1 **of** 1

RAPPS

ENGINEERING + APPLIED SCIENCE

FIELD BORING LOG

821 S DURKIN DR - SPRINGFIELD IL 62704 - (217)787-2118

Client: National City Environmental **Project:** AOC Site **Boring No:** B-10

Drilling Firm: Rapps Engineering **Drilling Method:** Direct Push **Surface Elev:** 406.18'

Logged By: KJM **Checked By:** BCJ **Date Started:** 10/01/03 **Completed:** 10/01/03

DEPTH	Material Description (Classification System: USC)	Sampling: Tube No.	Sampling: Type	Sampling: % Rec.	Tests: PID	Tests: Qu t/sf PEN	Tests: Moist	Comments	Well	DEPTH
0	Refuse/Fill (1.0')				93.2					0
	Dark Brown to Black Clayey Silt (CL-ML); Trace Sand; Moist; Firm; Iron Oxide Staining	1	Giddings Machine Co. 4' Zero Contamination Tube	100	0.0			Cahokia Formation (Alluvium)	PIEZOMETER	
					0.0					
	Buff Very Fine to Fine Sand 3'-3.6'				0.0					
	Buff Very Fine to Fine Sand 4.2'-4.5'	2		100	0.0					
5					0.0					5
	Buff Very Fine to Fine Sand 5.7'-6.1'				0.0					
	Buff Very Fine to Fine Sand 7'-7.5'				0.0					
	Greenish Gray Silty Clay (ML-CL); Moist to Wet; Soft to Hard (8.3')	3		100	717.4					
					155.7					
10	Prominent Iron Oxide Staining 10.5'-11.2'				0.0					10
					0.0					
	End of boring @ 12'; Set 0.75" I.D. piezometer in open borehole									
15										15
20										20
25										25
30										30

Water Level 394.74' **after** 24 **hrs.** **Note:** Refer to Standard Legend Sheet. **Sheet** 1 **of** 1

RAPPS

ENGINEERING + APPLIED SCIENCE

FIELD BORING LOG

821 S DURKIN DR - SPRINGFIELD IL 62704 - (217)787-2118

Client: National City Environmental **Project:** AOC Site **Boring No:** B-11

Drilling Firm: Rapps Engineering **Drilling Method:** Direct Push **Surface Elev:** 409.09'

Logged By: KJM **Checked By:** BCJ **Date Started:** 10/01/03 **Completed:** 10/01/03

DEPTH	Material Description (Classification System: USC)	Sampling: Tube No.	Sampling: Type	Sampling: % Rec.	Tests: PID	Tests: Qu t/sf PEN	Tests: Moist	Comments	Well	DEPTH
0	Gray to Reddish Brown Clayey Silt (CL-ML); Iron Oxide Staining; Roots and Root Traces	1	Giddings Machine Co. 4' Zero Contamination Tube	75	0.0			Fill ??	PIEZOMETER	0
					0.0					
					–					
					0.0					
	4.0'									
5	Dark Brown to Black Clayey Silt (CL-ML); Trace Sand; Moist; Firm; Iron Oxide Staining	2		100	25.4			Cahokia Formation (Alluvium)		5
					45.0					
					41.5					
	Buff Very Fine to Fine Sand 7'-7.3'				33.0					
		3		100	26.3					
10	Buff Very Fine to Fine Sand 9.4'-9.8'				6.7					10
	Buff Very Fine to Fine Sand 10.3'-10.7'				26.3					
					12.0					
	End of boring @ 12'; Set 0.75" I.D. piezometer in open borehole									
15										15
20										20
25										25
30										30

Water Level 400.61' **after** 24 **hrs.** **Note:** Refer to Standard Legend Sheet. **Sheet** 1 **of** 1

RAPPS

FIELD BORING LOG

ENGINEERING + APPLIED SCIENCE
821 B DURKIN DR - SPRINGFIELD IL 62704 - (217)787-2118

Client: National City Environmental **Project:** AOC Site **Boring No:** B-12

Drilling Firm: Rapps Engineering **Drilling Method:** Direct Push **Surface Elev:** 404.64'

Logged By: KJM **Checked By:** BCJ **Date Started:** 10/01/03 **Completed:** 10/01/03

DEPTH	Material Description (Classification System: USC)	Sampling: Tube No.	Sampling: Type	Sampling: % Rec.	Tests: PID	Tests: Qu t/sf PEN	Tests: Moist	Comments	Well	DEPTH
0	Dark Brown to Black Clayey Silt (CL-ML); Trace Sand; Moist; Firm; Iron Oxide Staining	1	Giddings Machine Co. 4' Zero Contamination Tube	100	76.7			Cahokia Formation (Alluvium)	PIEZOMETER	0
	Buff Very Fine to Fine Sand 2.5'-3'				51.3					
	Buff Very Fine to Fine Sand 3.5'-4'				40.6					
					62.0					
5		2		40	127.1					5
					78.1					
					–					
					–					
		3		100	45.0					
10	Greenish Gray Silty Clay (ML-CL); Minor Reddish Brown Mottling; Moist to Wet; Soft to Firm (9.2')				333.9					10
	Strong Odor @ 11'				>1999					
					>1999					
	End of boring @ 12'; Set 0.75" I.D. piezometer in open borehole									
15										15
20										20
25										25
30										30

Water Level 398.50' **after** 24 **hrs.** **Note:** Refer to Standard Legend Sheet. **Sheet** 1 **of** 1

RAPPS

FIELD BORING LOG

ENGINEERING + APPLIED SCIENCE
821 S DURKIN DR - SPRINGFIELD IL 62704 - (217)787-2118

Client: National City Environmental **Project:** AOC Site **Boring No:** B-13

Drilling Firm: Rapps Engineering **Drilling Method:** Direct Push **Surface Elev:** 404.61'

Logged By: KJM **Checked By:** BCJ **Date Started:** 10/01/03 **Completed:** 10/01/03

DEPTH	Material Description (Classification System: USC)	Sampling: Tube No.	Sampling: Type	Sampling: % Rec.	Tests: PID	Tests: Qu t/sf PEN	Tests: Moist	Comments	Well	DEPTH
0	Dark Brown to Black Clayey Silt (CL-ML); Trace Sand; Moist; Firm; Iron Oxide Staining	1	Giddings Machine Co. 4' Zero Contamination Tube	100	57.1			Cahokia Formation (Alluvium)	PIEZOMETER	0
					50.4					
					58.0					
	Roots and Root Traces 0'-4'				52.2					
5		2		100	0.0					5
					44.2					
					18.3					
					27.7					
	8.0' Greenish Gray Silty Clay (ML-CL); Minor Reddish Brown Mottling; Moist to Wet; Soft to Firm	3		90	51.3					
10					8.9					10
					19.2					
					0.4					
	End of boring @ 12'; Set 0.75" I.D. piezometer in open borehole									
15										15
20										20
25										25
30										30

Water Level 397.48' **after** 24 **hrs.** **Note:** Refer to Standard Legend Sheet. **Sheet** 1 **of** 1

RAPPS

FIELD BORING LOG

ENGINEERING + APPLIED SCIENCE
821 S DURKIN DR - SPRINGFIELD IL 62704 - (217)787-2118

Client: National City Environmental **Project:** AOC Site **Boring No:** B-14

Drilling Firm: Rapps Engineering **Drilling Method:** Direct Push **Surface Elev:** 409.48'

Logged By: KJM **Checked By:** BCJ **Date Started:** 10/01/03 **Completed:** 10/01/03

DEPTH	Material Description (Classification System: USC)	Sampling: Tube No.	Sampling: Type	Sampling: % Rec.	Tests: PID	Tests: Qu t/sf PEN	Tests: Moist	Comments	Well	DEPTH
0	Dark Brown to Black Clayey Silt (CL-ML); Trace Sand; Moist; Firm; Iron Oxide Staining	1	Giddings Machine Co. 4' Zero Contamination Tube	100	76.7			Cahokia Formation (Alluvium)	PIEZOMETER	0
					16.1					
					0.0					
	Roots and Root Traces 0'-4'				0.0					
5		2		100	15.5					5
					58.0					
					69.1					
	Buff Very Fine to Fine Sand 7.5'-8.5'				41.5					
		3		100	73.6					
10					34.3					10
					19.6					
					79.4					
	End of boring @ 12'; Set 0.75" I.D. piezometer in open borehole									
15										15
20										20
25										25
30										30

Water Level 397.25' **after** 24 **hrs.** **Note:** Refer to Standard Legend Sheet. **Sheet** 1 **of** 1

RAPPS

FIELD BORING LOG

ENGINEERING + APPLIED SCIENCE
821 S DURKIN DR - SPRINGFIELD IL 62704 - (217)787-2118

Client: National City Environmental **Project:** AOC Site **Boring No:** B-15

Drilling Firm: Rapps Engineering **Drilling Method:** Direct Push **Surface Elev:** 410.00'

Logged By: KJM **Checked By:** BCJ **Date Started:** 10/01/03 **Completed:** 10/01/03

DEPTH	Material Description (Classification System: USC)	Sampling: Tube No.	Sampling: Type	Sampling: % Rec.	Tests: PID	Tests: Qu t/sf PEN	Tests: Moist	Comments	Well	DEPTH
0	Dark Brown to Black Clayey Silt (CL-ML); Trace Sand; Moist; Firm; Iron Oxide Staining	1	Giddings Machine Co. 4' Zero Contamination Tube	90	0.0			Cahokia Formation (Alluvium)	PIEZOMETER	0
	Buff Very Fine to Fine Sand 2.2'-2.8'				14.7					
	Roots and Root Traces 0'-4'				0.0					
					39.7					
5		2		100	0.0					5
					0.0					
					6.2					
					3.6					
	Buff Very Fine to Fine Sand 8.7'-9'	3		100	160.1					
10	Buff Very Fine to Fine Sand 10.2'-10.4'				177.9					10
					119.2					
	Buff Very Fine to Fine Sand 11.3'-11.5'				102.1					
	End of boring @ 12'; Set 0.75" I.D. piezometer in open borehole									
15										15
20										20
25										25
30										30

Water Level 397.98' **after** 24 **hrs.** **Note:** Refer to Standard Legend Sheet. **Sheet** 1 **of** 1

RAPPS

FIELD BORING LOG

ENGINEERING + APPLIED SCIENCE
821 S DURKIN DR - SPRINGFIELD IL 62704 - (217)787-2118

Client: National City Environmental **Project:** AOC Site **Boring No:** B-16

Drilling Firm: Rapps Engineering **Drilling Method:** Direct Push **Surface Elev:** 407.74'

Logged By: KJM **Checked By:** BCJ **Date Started:** 10/01/03 **Completed:** 10/01/03

DEPTH	Material Description (Classification System: USC)	Sampling: Tube No.	Sampling: Type	Sampling: % Rec.	Tests: PID	Tests: Qu t/sf PEN	Tests: Moist	Comments	Well	DEPTH
0	Dark Brown Clayey Silt (CL-ML); Trace Sand; Moist; Firm; Iron Oxide Staining	1	Giddings Machine Co. 4' Zero Contamination Tube	100	2.2			Cahokia Formation (Alluvium)	PIEZOMETER	0
					10.7					
					42.8					
					13.5					
5	Buff Very Fine to Fine Sand 4.4'-4.9'	2		100	0.0					5
	Buff Very Fine to Fine Sand 5.2'-6'				0.0					
					0.0					
	Buff Very Fine to Fine Sand 7.1'-7.4'				21.4					
	Buff Very Fine to Fine Sand 8'-8.5'	3		50	0.0					
	Buff Very Fine to Fine Sand 8.9'-9.1'				0.0					
10					-					10
					-					
	End of boring @ 12'; Set 0.75" I.D. piezometer in open borehole									
15										15
20										20
25										25
30										30

Water Level 397.52 **after** 24 **hrs.** **Note:** Refer to Standard Legend Sheet. **Sheet** 1 **of** 1

RAPPS

FIELD BORING LOG

ENGINEERING + APPLIED SCIENCE
821 S DURKIN DR - SPRINGFIELD IL 62704 - (217)787-2118

Client: National City Environmental **Project:** AOC Site **Boring No:** B-17

Drilling Firm: Rapps Engineering **Drilling Method:** Direct Push **Surface Elev:** 403.54'

Logged By: KJM **Checked By:** BCJ **Date Started:** 10/02/03 **Completed:** 10/02/03

DEPTH	Material Description (Classification System: USC)	Sampling: Tube No.	Sampling: Type	Sampling: % Rec.	Tests: PID	Tests: Qu t/sf PEN	Tests: Moist	Comments	Well	DEPTH
0	Dark Brown Clayey Silt (CL-ML); Trace Sand; Moist; Firm; Iron Oxide Staining; Roots and Root Traces	1	Giddings Machine Co. 4' Zero Contamination Tube	100	19.2			Cahokia Formation (Alluvium)		0
					15.6					
					26.8					
					11.7					
	End of boring @ 4'									
5										5
10										10
15										15
20										20
25										25
30										30

Water Level _____ **after** _____ **hrs.** **Note:** Refer to Standard Legend Sheet. **Sheet** 1 **of** 1

RAPPS

FIELD BORING LOG

ENGINEERING + APPLIED SCIENCE
821 S DURKIN DR - SPRINGFIELD IL 62704 - (217)787-2118

Client: National City Environmental **Project:** AOC Site **Boring No:** B-18

Drilling Firm: Rapps Engineering **Drilling Method:** Direct Push **Surface Elev:** 403.42'

Logged By: KJM **Checked By:** BCJ **Date Started:** 10/02/03 **Completed:** 10/02/03

DEPTH	Material Description Classification System USC	Sampling: Tube No.	Sampling: Type	Sampling: % Rec.	Tests: PID	Tests: Qu t/sf PEN	Tests: Moist	Comments	Well	DEPTH
0	Dark Brown Clayey Silt (CL-ML); Trace Sand; Moist; Firm; Iron Oxide Staining; Roots and Root Traces	1	Giddings Machine Co. 4' Zero Contamination Tube	100	4.9 25.0 17.8 23.6			Cahokia Formation (Alluvium)		0
	End of boring @ 4'									
5										5
10										10
15										15
20										20
25										25
30										30

Water Level _____ **after** _____ **hrs.** **Note:** Refer to Standard Legend Sheet. **Sheet** 1 **of** 1

RAPPS

FIELD BORING LOG

ENGINEERING + APPLIED SCIENCE
821 S DURKIN DR - SPRINGFIELD IL 62704 - (217)787-2118

Client: National City Environmental **Project:** AOC Site **Boring No:** B-19

Drilling Firm: Rapps Engineering **Drilling Method:** Direct Push **Surface Elev:** 403.38'

Logged By: KJM **Checked By:** BCJ **Date Started:** 10/02/03 **Completed:** 10/02/03

DEPTH	Material Description Classification System USC	Sampling: Tube No.	Sampling: Type	Sampling: % Rec.	Tests: PID	Tests: Qu t/sf PEN	Tests: Moist	Comments	Well	DEPTH
0	Dark Brown Clayey Silt (CL-ML); Trace Sand; Moist; Firm; Iron Oxide Staining; Roots and Root Traces	1	Giddings Machine Co. 4' Zero Contamination Tube	50	12.5 14.7 – –			Cahokia Formation (Alluvium)		0
5	End of boring @ 4'									5
10										10
15										15
20										20
25										25
30										30

Water Level _____ **after** _____ **hrs.** **Note:** Refer to Standard Legend Sheet. **Sheet** 1 **of** 1

RAPPS

FIELD BORING LOG

ENGINEERING + APPLIED SCIENCE
821 S DURKIN DR - SPRINGFIELD IL 62704 - (217)787-2118

Client: National City Environmental **Project:** AOC Site **Boring No:** B-20

Drilling Firm: Rapps Engineering **Drilling Method:** Direct Push **Surface Elev:** 403.35'

Logged By: KJM **Checked By:** BCJ **Date Started:** 10/02/03 **Completed:** 10/02/03

DEPTH	Material Description Classification System USC	Sampling: Tube No.	Sampling: Type	Sampling: % Rec.	Tests: PID	Tests: Qu t/sf PEN	Tests: Moist	Comments	Well	DEPTH
0	Dark Brown Clayey Silt (CL-ML); Trace Sand; Moist; Firm; Iron Oxide Staining; Roots and Root Traces	1	Giddings Machine Co. 4' Zero Contamination Tube	100	4.0 9.8 1.8 1.3			Cahokia Formation (Alluvium)		0
5	End of boring @ 4'									5
10										10
15										15
20										20
25										25
30										30

Water Level _____ **after** _____ **hrs.** **Note:** Refer to Standard Legend Sheet. **Sheet** 1 **of** 1

RAPPS

FIELD BORING LOG

ENGINEERING + APPLIED SCIENCE
821 S DURKIN DR - SPRINGFIELD IL 62704 - (217)787-2118

Client: National City Environmental **Project:** AOC Site **Boring No:** B-21

Drilling Firm: Rapps Engineering **Drilling Method:** Direct Push **Surface Elev:** 403.06'

Logged By: KJM **Checked By:** BCJ **Date Started:** 10/02/03 **Completed:** 10/02/03

DEPTH	Material Description Classification System USC	Sampling: Tube No.	Sampling: Type	Sampling: % Rec.	Tests: PID	Tests: Qu t/sf PEN	Tests: Moist	Comments	Well	DEPTH
0	Dark Brown Clayey Silt (CL-ML); Trace Sand; Moist; Firm; Iron Oxide Staining; Roots and Root Traces	1	Giddings Machine Co. 4' Zero Contamination Tube	100	11.2 24.1 13.4 14.3			Cahokia Formation (Alluvium)		0
5	End of boring @ 4'									5
10										10
15										15
20										20
25										25
30										30

Water Level _____ **after** _____ **hrs.** **Note:** Refer to Standard Legend Sheet. **Sheet** 1 **of** 1

RAPPS

FIELD BORING LOG

ENGINEERING + APPLIED SCIENCE
821 S DURKIN DR - SPRINGFIELD IL 62704 - (217)787-2118

Client: National City Environmental **Project:** AOC Site **Boring No:** B-22

Drilling Firm: Rapps Engineering **Drilling Method:** Direct Push **Surface Elev:** 403.55'

Logged By: KJM **Checked By:** BCJ **Date Started:** 10/02/03 **Completed:** 10/02/03

DEPTH	Material Description Classification System USC	Sampling: Tube No.	Sampling: Type	Sampling: % Rec.	Tests: PID	Tests: Qu t/sf PEN	Tests: Moist	Comments	Well	DEPTH
0	Dark Brown Clayey Silt (CL-ML); Trace Sand; Moist; Firm; Iron Oxide Staining; Roots and Root Traces	1	Giddings Machine Co. 4' Zero Contamination Tube	100	3.1 12.9 12.5 22.7			Cahokia Formation (Alluvium)		0
5	End of boring @ 4'									5
10										10
15										15
20										20
25										25
30										30

Water Level _____ after _____ hrs. **Note:** Refer to Standard Legend Sheet. Sheet 1 of 1

RAPPS

FIELD BORING LOG

ENGINEERING + APPLIED SCIENCE
821 S DURKIN DR ~ SPRINGFIELD IL 62704 ~ (217)787-2118

Client: National City Environmental **Project:** AOC Site **Boring No:** B-23

Drilling Firm: Rapps Engineering **Drilling Method:** Direct Push **Surface Elev:** 403.90'

Logged By: KJM **Checked By:** BCJ **Date Started:** 10/02/03 **Completed:** 10/02/03

DEPTH	Material Description Classification System USC	Sampling: Tube No.	Sampling: Type	Sampling: % Rec.	Tests: PID	Tests: Qu t/sf PEN	Tests: Moist	Comments	Well	DEPTH
0	Dark Brown Clayey Silt (CL-ML); Trace Sand; Moist; Firm; Iron Oxide Staining; Roots and Root Traces	1	Giddings Machine Co. 4' Zero Contamination Tube	100	13.8 10.7 7.6 0.4			Cahokia Formation (Alluvium)		0
	End of boring @ 4'									
5										5
10										10
15										15
20										20
25										25
30										30

Water Level _____ **after** _____ **hrs.** **Note:** Refer to Standard Legend Sheet. **Sheet** 1 **of** 1

RAPPS

FIELD BORING LOG

ENGINEERING + APPLIED SCIENCE
821 S DURKIN DR - SPRINGFIELD IL 62704 - (217)787-2118

Client: National City Environmental **Project:** AOC Site **Boring No:** B-24

Drilling Firm: Rapps Engineering **Drilling Method:** Direct Push **Surface Elev:** 403.99'

Logged By: KJM **Checked By:** BCJ **Date Started:** 10/02/03 **Completed:** 10/02/03

DEPTH	Material Description Classification System USC	Sampling: Tube No.	Sampling: Type	Sampling: % Rec.	Tests: PID	Tests: Qu t/sf PEN	Tests: Moist	Comments	Well	DEPTH
0	Dark Brown Clayey Silt (CL-ML); Trace Sand; Moist; Firm; Iron Oxide Staining; Roots and Root Traces	1	Giddings Machine Co. 4' Zero Contamination Tube	100	6.7			Cahokia Formation (Alluvium)		0
					20.5					
					20.5					
					12.0					
	End of boring @ 4'									
5										5
10										10
15										15
20										20
25										25
30										30

Water Level _____ **after** _____ **hrs.** **Note:** Refer to Standard Legend Sheet. **Sheet** 1 **of** 1

RAPPS

FIELD BORING LOG

ENGINEERING + APPLIED SCIENCE
821 S DURKIN DR - SPRINGFIELD IL 62704 - (217)787-2119

Client: National City Environmental **Project:** AOC Site **Boring No:** B-25

Drilling Firm: Rapps Engineering **Drilling Method:** Direct Push **Surface Elev:** 407.68'

Logged By: KJM **Checked By:** BCJ **Date Started:** 10/02/03 **Completed:** 10/02/03

DEPTH	Material Description Classification System USC	Sampling: Tube No.	Sampling: Type	Sampling: % Rec.	Tests: PID	Tests: Qu t/st PEN	Tests: Moist	Comments	Well	DEPTH
0	Dark Brown Clayey Silt (CL-ML); Trace Sand; Moist; Firm; Iron Oxide Staining; Roots and Root Traces	1	Giddings Machine Co. 4' Zero Contamination Tube	100	29.0 15.2 10.7 3.1			Cahokia Formation (Alluvium)		0
5	End of boring @ 4'									5
10										10
15										15
20										20
25										25
30										30

Water Level _____ after _____ hrs. **Note:** Refer to Standard Legend Sheet. Sheet 1 of 1

C

RAPPS
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C Field Testing Results

AOC SITE
FIELD TESTING RESULTS - PID

BORING	DEPTH OF SAMPLE (FEET)																			
	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20
B-01	12 9	0 0	0 0	32 1	0 0	12 0	16 5	23 2	0 0	8.9	9 8	15 2	12 5	25 9	57 5	81.2	26.8	33 9	44.2	33.9
B-02	0 0	0 0	16 5	13 8	2 7	0.9	0.0	1.3	5 8	3.6	0 0	4 0	8	-	3.6	15 2	12	-	13 4	0
B-03	11 6	28 5	22 3	17 8	25.4	11.6	13 4	11 2	13.8	>1999	1381	70 0	42 4	-	51 7	41.5	610	105	141 8	41 9
B-04	21 9	11 2	40 6	25.0	8.5	5 8	3 6	0 0	8.5	8.1	83 8	74.5	19 6	83.6	45 9	56.4	23.6	-	4	22.9
B-05	8 0	0 0	22.3	6 7	7 1	20 4	16 4	48 2	14 7	40.6	15 6	81.2								
B-06	59 8	11 2	40 1	74.0	12.9	2 2	8.9	14 3	6.2	16.5	15.2	72.3								
B-07	93.2	103	32 1	39 5	>1999	41.5	>1999	>1999	>1999	>1999	1752	298 3								
B-08	58 9	64 4	81.2	36 6	26 8	-	-	-	187 3	>1999	>1999	>1999								
B-09	1 8	16 5	17 4	9 8	30.3	37.0	76 7	1552	1452	875.7	1402	>1999								
B-10	93 2	0 0	0 0	0.0	0.0	0.0	0 0	0 0	717 4	155 7	0.0	0 0								
B-11	0 0	0 0	-	0 0	25 4	45 0	41.5	33 0	26 3	6 7	26.3	12 0								
B-12	76 7	51 3	40.6	62 0	127 1	78 1	-	-	45 0	333.9	>1999	>1999								
B-13	57 1	50 4	58 0	52.2	0.0	44 2	18.3	27 7	51.3	8.9	19.2	0 4								
B-14	76 7	16 1	0 0	0 0	15 5	58 0	69 1	41 5	73 6	34 3	19.6	79 4								
B-15	0 0	14 7	0 0	39 7	0 0	0 0	6.2	3 6	160 1	177.9	119 2	102 1								
B-16	2 2	10 7	42 8	13 5	0 0	0 0	0 0	21 4	0 0	0 0	-	-								
B-17	19 2	15.6	26 8	11 7																
B-18	4 9	25.0	17 8	23 6																
B-19	12 5	14 7	-	-																
B-20	4 0	9 8	1 8	1 3																
B-21	11 2	24 1	13 4	14 3																
B-22	3 1	12 9	12 5	22 7																
B-23	13 8	10 7	7 6	0 4																
B-24	6 7	20 5	20 5	12 0																
B-25	29 0	15 2	10 7	3 1																

AOC SITE
FIELD TESTING RESULTS - XRF SURFACE

Location	Depth	Arsenic (As)	Barium (Ba)	Chromium (Cr)	Lead (Pb)
NE Prop Cor	Surface	< 18 31	< 842 21	< 253 74	229 25
N Prop Line 100' W	Surface	< 13 46	< 706 06	< 244 03	64 81
N Prop Line 200' W	Surface	< 13 29	< 949 60	< 296 19	20 32
N Prop Line 300' W	Surface	< 12 81	< 728 12	< 248 62	35 75
N Prop Line 500' W	Surface	< 27 43	< 1215.26	< 385 30	262.61
N Prop Line 600' W	Surface	< 19 04	< 989 61	< 305 57	108 30
N Prop Line 700' W	Surface	< 15 66	< 903.47	< 280 17	59 99
N Prop Line 800' W	Surface	< 13 71	< 791 38	< 239 74	92.36
N Prop Line 900' W	Surface	< 14 55	< 980 52	< 301 43	41 18
N Prop Line 1000' W	Surface	< 14 70	< 920.09	< 299 65	43.34
N Prop Line 1100' W	Surface	< 16 58	< 991 81	< 321 75	70 61
N Prop Line 1200' W	Surface	< 16 51	< 1144 96	< 336 70	49 96
N Prop Line 1300' W	Surface	< 16 35	< 1100 59	< 352 49	59.61
N Prop Line 1400' W	Surface	< 16 61	< 1085 03	< 341 61	45 69
NW Prop Cor	Surface	< 15 32	< 1040 97	< 304 44	34 90
E Prop Line 600' N	Surface	< 19 58	< 1271 13	< 407 90	76 80
Boring B-11	Surface	84 67	< 1492 28	< 461 00	2241 68
Boring B-10	Surface	222 48	2195 77	883 77	4970.10
Boring B-05	Surface	155 96	< 1850 37	< 509 49	1550 54
Boring B-06	Surface	< 76.94	2621.28	641 05	2758 91
Boring B-07	Surface	131 41	< 1408.66	875 05	4307 57
Boring B-04	Surface	238 57	2233 45	637 38	4822 34
Boring B-01	Surface	< 87.82	< 1070 26	< 318 97	4860 07
20' off PL	Surface	< 50 73	< 1069.34	< 321 77	1620.93
Boring B-16	Surface	< 22 88	< 991.58	< 313 51	236 91
Boring B-15	Surface	< 20.89	< 1070 25	< 351 96	154.26
Boring B-02	Surface	952 27	12364 83	1597 54	20193 18
Boring B-03	Surface	95.97	1852 93	684 47	3118 25
Boring B-08	Surface	123 85	< 1316.67	832 21	3161 50
Boring B-09	Surface	< 50 49	1404 23	< 355 60	1325 32
Boring B-12	Surface	183.62	< 1095.35	< 348 48	1228.06
Boring B-13	Surface	82 10	2080 24	< 442 93	2618 88
Boring B-14	Surface	< 12 24	< 841 33	< 253 97	35.25
South PL near B-14	Surface	< 18 89	< 1158.50	< 370.62	73.29
South PL Adjacent to B-15	Surface	< 23 99	< 1321 22	< 397 15	161 22
South PL Adjacent to B-16	Surface	31 04	< 1199 17	< 355 45	327 97
East PL Adjacent to B-11	Surface	< 35 64	< 1114 59	< 342 58	643 93
Boring B-17	Surface	< 44 00	< 1266.52	< 345 02	941 90
Boring B-18	Surface	< 27.18	< 999 37	< 333 72	328.22
Boring B-19	Surface	< 22 27	< 878 79	< 279 05	254 33
Boring B-20	Surface	< 20 78	< 908.79	< 286 55	221 43
Boring B-21	Surface	< 12 28	< 690 35	< 226 96	48 59
Boring B-22	Surface	< 21 38	< 1065.22	< 336 59	137 79
Boring B-23	Surface	< 19 26	< 1144 41	< 362.13	90.74
Boring B-24	Surface	< 15 26	< 845.46	< 274 51	67 24
Boring B-25	Surface	< 13 97	< 892.30	< 296 02	29.81
South PL - 500' W of NE Cor	Surface	< 18 85	< 1268.32	< 371.47	67.14

AOC SITE
FIELD TESTING RESULTS - XRF DEPTH

Location	Depth	Arsenic (As)	Barium (Ba)	Chromium (Cr)	Lead (Pb)
Boring B-01	0-1' Deep	218 80	4756.54	957.31	4624.63
Boring B-01	1-2' Deep	< 21 15	< 1229 22	< 419.67	95.30
Boring B-01	2-3' Deep	< 16 78	< 1170 06	< 383 89	32 20
Boring B-01	3-4' Deep	< 17 12	< 1325 66	< 413 90	< 24 51
Boring B-01	4-5' Deep	< 18 02	< 1477 26	< 400 71	< 25 87
Boring B-01	5-6' Deep	< 16 87	< 1414 32	< 412 30	< 25 47
Boring B-01	6-7' Deep	< 19 57	< 1407 59	< 479 77	< 28 52
Boring B-01	7-8' Deep	< 15 96	< 1205.95	< 367 60	< 22 92
Boring B-01	8-9' Deep	< 16 74	< 1195 63	< 383 64	< 22 74
Boring B-01	9-10' Deep	< 13 04	< 1022.97	< 316 44	< 18.61
Boring B-01	10-11' Deep	< 15 63	< 1180 17	< 372 09	< 21 81
Boring B-01	11-12' Deep	< 15 90	< 1200 77	< 362 99	23 72
Boring B-01	12-13' Deep	< 22 85	< 1179.57	< 346.78	166 52
Boring B-01	13-14' Deep	< 22 06	< 1189 80	< 359 07	143 65
Boring B-01	14-15' Deep	< 19 11	< 1156 57	< 385 58	70 51
Boring B-01	15-16' Deep	< 23 37	< 1260 98	< 383 65	139 42
Boring B-01	16-17' Deep	< 17 50	< 1243.69	< 355 36	55 54
Boring B-01	17-18' Deep	< 15 93	< 1178 15	< 357 99	< 22 53
Boring B-01	18-19' Deep	< 15 93	< 1275 00	< 387 29	< 22.65
Boring B-01	19-20' Deep	< 20 37	< 1433 77	< 456 87	56 56
Boring B-02	0-1' Deep	751 97	4814 54	3290.57	14998 80
Boring B-02	1-2' Deep	< 26 25	< 1543.24	< 501.46	135 04
Boring B-02	2-3' Deep	< 17 42	< 1396 53	< 433 40	< 24 66
Boring B-02	3-4' Deep	< 16 90	< 1197 53	< 375 28	36 08
Boring B-02	4-5' Deep	< 22 26	< 1347 48	< 441 12	83 24
Boring B-02	5-6' Deep	< 18 14	< 1396 63	< 405 68	< 24 50
Boring B-02	6-7' Deep	22 86	< 1404 99	< 440.86	< 25.25
Boring B-02	7-8' Deep	< 17 82	< 1382 02	< 405.85	< 25 21
Boring B-02	8-9' Deep	< 17 77	< 1284 15	< 427 82	< 25 12
Boring B-02	9-10' Deep	< 16 87	< 1264 61	< 396.42	25 14
Boring B-02	10-11' Deep	< 14 88	< 1119 83	< 331 47	< 20 80
Boring B-02	11-12' Deep	< 16 12	< 1198 01	< 353 34	30 61
Boring B-02	12-13' Deep	< 42 54	< 1274 87	< 385.39	802 07
Boring B-02	13-14' Deep	NR	NR	NR	NR
Boring B-02	14-15' Deep	< 31 16	< 1113 73	< 360 71	425 60
Boring B-02	15-16' Deep	< 15 58	< 1156.50	< 359 97	< 21.89
Boring B-02	16-17' Deep	< 15 72	< 1023 83	< 336.42	46 03
Boring B-02	17-18' Deep	NR	NR	NR	NR
Boring B-02	18-19' Deep	< 16 87	< 1096 52	< 332.06	57 73
Boring B-02	19-20' Deep	< 17 22	< 1263 41	< 395.59	< 24 79
Boring B-03	0-1' Deep	188 95	2112.81	< 553 14	2397 97
Boring B-03	1-2' Deep	< 17 07	< 1305 45	< 402 06	< 24.88
Boring B-03	2-3' Deep	< 17.27	< 1184 27	< 355.89	< 23 84
Boring B-03	3-4' Deep	< 16 88	< 1243.14	< 419.28	< 23 98
Boring B-03	4-5' Deep	< 16 79	< 1277 23	< 395 79	29 59
Boring B-03	5-6' Deep	< 18 49	< 1342 50	< 412 96	< 25 44

AOC SITE
FIELD TESTING RESULTS - XRF DEPTH

Location	Depth	Arsenic (As)	Barium (Ba)	Chromium (Cr)	Lead (Pb)
Boring B-03	6-7' Deep	< 19 70	< 1484 90	< 458 69	< 26 35
Boring B-03	7-8' Deep	< 19 10	< 1346 05	< 431 47	29 72
Boring B-03	8-9' Deep	< 17 75	< 1326 60	< 403 55	< 24 82
Boring B-03	9-10' Deep	< 16 89	< 1217 71	< 403 11	24 47
Boring B-03	10-11' Deep	< 16 67	< 1211 38	< 395 39	< 22 96
Boring B-03	11-12' Deep	< 16 42	< 1201 87	< 400 89	26 53
Boring B-03	12-13' Deep	< 18 88	< 1208 78	< 343 00	92 15
Boring B-03	13-14' Deep	NR	NR	NR	NR
Boring B-03	14-15' Deep	< 15 40	< 1163 16	< 349 28	< 22 71
Boring B-03	15-16' Deep	< 18 19	< 1416 33	< 419 68	34 75
Boring B-03	16-17' Deep	< 15 43	< 1104 92	< 363 05	< 21 00
Boring B-03	17-18' Deep	< 14.89	< 1022 60	< 333 99	< 21.09
Boring B-03	18-19' Deep	< 15 44	< 1062 65	< 359 14	< 21 64
Boring B-03	19-20' Deep	< 16 48	< 1255 40	< 395 32	< 23 85
Boring B-04	0-1' Deep	1041.74	11108 88	5563.95	19804 91
Boring B-04	1-2' Deep	157 90	< 3286 91	< 930 32	1182.64
Boring B-04	2-3' Deep	100 18	< 1392 79	< 433 18	690 90
Boring B-04	3-4' Deep	22 14	< 1354.30	< 418 54	46.01
Boring B-04	4-5' Deep	< 21 19	< 1549 10	< 468 66	66 00
Boring B-04	5-6' Deep	< 18 21	< 1337 35	< 415 95	25.71
Boring B-04	6-7' Deep	< 18 13	< 1381 78	< 434 22	31 01
Boring B-04	7-8' Deep	< 27 97	< 2067 97	< 693 63	< 39.79
Boring B-04	8-9' Deep	< 16.10	< 1285 72	< 405 02	< 21 93
Boring B-04	9-10' Deep	< 16 78	< 1245.63	< 374 07	< 22.69
Boring B-04	10-11' Deep	< 17 36	< 1273.90	< 405.34	< 23 73
Boring B-04	11-12' Deep	< 14.75	< 1149 75	< 343 14	< 20.19
Boring B-04	12-13' Deep	158 59	3025.78	656 78	1729 03
Boring B-04	13-14' Deep	46 65	< 1392 89	< 399 41	594 11
Boring B-04	14-15' Deep	< 22 24	< 1638 16	< 569 92	< 31 66
Boring B-04	15-16' Deep	< 15 40	< 1169 80	< 383 25	< 22.34
Boring B-04	16-17' Deep	< 17 67	< 1016 06	< 318 22	64 88
Boring B-04	17-18' Deep	NR	NR	NR	NR
Boring B-04	18-19' Deep	< 16 78	< 1204 19	< 362 61	36.98
Boring B-04	19-20' Deep	< 15 77	< 1218 44	< 352 17	< 23 13
Boring B-05	0-1' Deep	141 28	2412 22	950 30	3181.22
Boring B-05	1-2' Deep	< 20 56	< 1433.93	< 456 34	57.08
Boring B-05	2-3' Deep	< 18 77	< 1451.65	< 428 81	< 25.22
Boring B-05	3-4' Deep	< 16 62	< 1302 06	< 396 57	< 24 04
Boring B-05	4-5' Deep	< 17 73	1473 53	< 400 52	< 24.10
Boring B-05	5-6' Deep	< 17.66	< 1331 05	< 392 17	< 25 12
Boring B-05	6-7' Deep	< 17 82	< 1271.20	< 396 67	< 24 11
Boring B-05	7-8' Deep	< 16 23	< 1161 10	< 377 20	< 22 64
Boring B-05	8-9' Deep	< 19 19	< 1251 66	< 375 95	54 62
Boring B-05	9-10' Deep	< 13 81	< 1056 04	< 316 95	< 19 52
Boring B-05	10-11' Deep	< 15.71	< 1186 66	< 410.06	< 23.40
Boring B-05	11-12' Deep	< 16 22	< 1268.45	< 397.92	< 23 09

AOC SITE
FIELD TESTING RESULTS - XRF DEPTH

Location	Depth	Arsenic (As)	Barium (Ba)	Chromium (Cr)	Lead (Pb)
Boring B-06	0-1' Deep	< 54 46	< 1515 14	< 452 37	1119 98
Boring B-06	1-2' Deep	< 18 97	< 1392 03	< 449.74	34 28
Boring B-06	2-3' Deep	< 17 88	< 1297 76	< 408 75	< 24 90
Boring B-06	3-4' Deep	< 24 37	< 1702 11	< 579 54	< 32 63
Boring B-06	4-5' Deep	< 21 05	< 1601 54	< 540 44	< 29 80
Boring B-06	5-6' Deep	< 25 57	< 1900 29	< 600.12	< 36 56
Boring B-06	6-7' Deep	< 17 12	< 1296 74	< 393 59	< 23 80
Boring B-06	7-8' Deep	< 16 85	< 1261 02	< 375 09	25 20
Boring B-06	8-9' Deep	< 39 00	< 1430.01	< 425 94	575 25
Boring B-06	9-10' Deep	< 16 93	< 1260 75	< 394 41	< 24 83
Boring B-06	10-11' Deep	< 14 55	< 1088 76	< 333 92	< 20 28
Boring B-06	11-12' Deep	< 17 30	< 1343 00	< 404 83	< 24 86
Boring B-07	0-1' Deep	< 83 98	< 1613 67	973 92	2731.21
Boring B-07	1-2' Deep	< 19 67	< 1505 17	< 447 15	33 67
Boring B-07	2-3' Deep	< 17 71	< 1284 92	< 385 70	40 65
Boring B-07	3-4' Deep	< 18 21	< 1339 95	< 417 88	< 25 23
Boring B-07	4-5' Deep	< 15 84	< 1183.07	< 345.62	25 03
Boring B-07	5-6' Deep	< 17 61	< 1356 21	< 418 80	< 25 55
Boring B-07	6-7' Deep	< 15 79	< 1312 33	< 396 02	< 22 38
Boring B-07	7-8' Deep	< 18 60	< 1407 72	< 422 63	31 52
Boring B-07	8-9' Deep	90 49	< 1423 94	< 448 23	1276.80
Boring B-07	9-10' Deep	< 15 40	< 1135 94	< 356 00	< 22 75
Boring B-07	10-11' Deep	< 16 56	< 1281 01	< 386 69	< 23.60
Boring B-07	11-12' Deep	< 16 56	< 1259 08	< 366 57	< 23 79
Boring B-08	0-1' Deep	182 52	< 1712 88	904.51	2239.99
Boring B-08	1-2' Deep	< 20 36	< 1384 00	< 437 94	60.07
Boring B-08	2-3' Deep	< 18 61	< 1311 26	< 407 08	34 89
Boring B-08	3-4' Deep	< 17 09	< 1312 74	< 406 60	< 24 01
Boring B-08	4-5' Deep	< 22 90	< 1821.51	< 557.74	< 33.54
Boring B-08	5-6' Deep	NR	NR	NR	NR
Boring B-08	6-7' Deep	NR	NR	NR	NR
Boring B-08	7-8' Deep	NR	NR	NR	NR
Boring B-08	8-9' Deep	< 20 53	< 1405 71	< 441 18	49.05
Boring B-08	9-10' Deep	< 18 90	< 1452 27	< 418 91	< 27 43
Boring B-08	10-11' Deep	< 15 93	< 1241 67	< 392 79	< 24.36
Boring B-08	11-12' Deep	NT	NT	NT	NT
Boring B-09	0-1' Deep	< 17 80	< 1339 79	< 404.72	37 56
Boring B-09	1-2' Deep	< 17.00	< 1309 07	< 393 99	< 24.58
Boring B-09	2-3' Deep	< 16 90	< 1163 44	< 356.42	< 23.30
Boring B-09	3-4' Deep	< 16 29	< 1283 42	< 392.09	< 22.38
Boring B-09	4-5' Deep	< 17 40	< 1453 16	< 430 75	< 24 59
Boring B-09	5-6' Deep	< 17 95	< 1256 59	< 402.29	29 04
Boring B-09	6-7' Deep	< 17.80	< 1366 32	< 405 44	< 25.10
Boring B-09	7-8' Deep	< 17 32	< 1303.61	< 441.42	< 24 89

AOC SITE
FIELD TESTING RESULTS - XRF DEPTH

Location	Depth	Arsenic (As)	Barium (Ba)	Chromium (Cr)	Lead (Pb)
Boring B-09	8-9' Deep	< 15 59	< 1180 39	< 349 76	< 21 63
Boring B-09	9-10' Deep	< 17 33	< 1266 34	< 393 05	< 23 90
Boring B-09	10-11' Deep	< 17 24	< 1384 54	< 436 23	< 25 79
Boring B-09	11-12' Deep	< 18 03	< 1364 30	< 412.93	< 24 75
Boring B-10	0-1' Deep	126 13	5772 99	717 52	2144 42
Boring B-10	1-2' Deep	< 25 45	< 1643 65	< 522.69	93 63
Boring B-10	2-3' Deep	< 18 71	< 1444 33	< 445.86	< 26 24
Boring B-10	3-4' Deep	< 17 91	< 1295 47	< 399 15	< 25 58
Boring B-10	4-5' Deep	< 18 49	< 1308 35	< 424 28	< 26 60
Boring B-10	5-6' Deep	< 19 28	< 1416 44	< 423.26	< 27 04
Boring B-10	6-7' Deep	< 16 66	< 1375 19	< 407 49	< 25 14
Boring B-10	7-8' Deep	< 17 95	< 1295 24	< 415 67	< 25 87
Boring B-10	8-9' Deep	< 21 18	< 1432 41	< 426 99	62 68
Boring B-10	9-10' Deep	< 15 57	< 1135 06	< 368.38	< 22.86
Boring B-10	10-11' Deep	< 15 07	< 1185 14	< 385 80	< 22 37
Boring B-10	11-12' Deep	< 15 63	< 1231 35	< 397 42	< 22 60
Boring B-11	0-1' Deep	< 50 92	< 1860 73	< 605 33	691 33
Boring B-11	1-2' Deep	< 19 14	< 1403 32	< 442 15	33 86
Boring B-11	2-3' Deep	NR	NR	NR	NR
Boring B-11	3-4' Deep	< 20 94	< 1364 88	< 406 51	64.31
Boring B-11	4-5' Deep	< 16 08	< 1096 37	< 384.53	24 32
Boring B-11	5-6' Deep	< 16 49	< 1262 91	< 405 37	< 23 14
Boring B-11	6-7' Deep	< 17 99	< 1417.28	< 436 47	< 25.45
Boring B-11	7-8' Deep	< 16 70	1666 95	< 393 92	< 23 80
Boring B-11	8-9' Deep	< 20 06	< 1479 24	< 444 89	< 28.28
Boring B-11	9-10' Deep	< 15 51	< 1191 57	< 369 84	< 22 28
Boring B-11	10-11' Deep	< 18 27	< 1250.91	< 405 46	< 25 31
Boring B-11	11-12' Deep	< 16 56	< 1204 20	< 382 47	< 23 59
Boring B-12	0-1' Deep	< 21 97	< 1355 23	< 417 41	104 33
Boring B-12	1-2' Deep	17 96	< 1226 72	< 338.87	< 22 86
Boring B-12	2-3' Deep	< 17 24	< 1286.09	< 409 36	< 24.85
Boring B-12	3-4' Deep	< 18 07	< 1327 32	< 422 17	< 25.16
Boring B-12	4-5' Deep	< 21 82	< 1531 43	< 452.68	36 25
Boring B-12	5-6' Deep	< 18 55	< 1314 17	< 419 13	< 25.66
Boring B-12	6-7' Deep	NR	NR	NR	NR
Boring B-12	7-8' Deep	NR	NR	NR	NR
Boring B-12	8-9' Deep	< 22 98	< 1762 08	< 546.39	36 33
Boring B-12	9-10' Deep	< 15.85	< 1189 37	< 363 79	< 22 13
Boring B-12	10-11' Deep	< 18 00	< 1325 98	< 395 28	28.26
Boring B-12	11-12' Deep	< 15.58	< 1243 26	< 344 57	< 22.04
Boring B-13	0-1' Deep	< 21.57	< 1691 28	< 423 71	99 43
Boring B-13	1-2' Deep	< 15 86	< 1199 83	< 365 49	< 21.58
Boring B-13	2-3' Deep	< 16 76	< 1272 11	< 376 04	26 00
Boring B-13	3-4' Deep	< 17.82	< 1334 00	< 410 63	28 77

AOC SITE
FIELD TESTING RESULTS - XRF DEPTH

Location	Depth	Arsenic (As)	Barium (Ba)	Chromium (Cr)	Lead (Pb)
Boring B-13	4-5' Deep	< 19 87	< 1288 46	< 376 26	80 23
Boring B-13	5-6' Deep	< 16 86	< 1234 41	< 412 10	< 22 69
Boring B-13	6-7' Deep	< 17 93	< 1291 08	< 416 36	< 24.56
Boring B-13	7-8' Deep	< 16 17	< 1197 56	< 390 43	25 60
Boring B-13	8-9' Deep	< 16 10	< 1344 11	< 407 80	< 22 90
Boring B-13	9-10' Deep	< 17 63	< 1355 88	< 424 65	< 24 86
Boring B-13	10-11' Deep	< 15 91	< 1216 05	< 381 58	< 23 00
Boring B-13	11-12' Deep	< 18 70	< 1390 78	< 420 46	< 26 85
Boring B-14	0-1' Deep	< 18 58	< 1299 81	< 393 01	40 42
Boring B-14	1-2' Deep	< 15 62	< 1128 24	< 349 57	22.19
Boring B-14	2-3' Deep	< 22 14	< 1662 36	< 485 41	41.87
Boring B-14	3-4' Deep	< 16.07	< 1264 35	< 374 10	< 22 79
Boring B-14	4-5' Deep	< 20 02	< 1554 88	< 459 91	< 28.83
Boring B-14	5-6' Deep	< 19 81	< 1542 81	< 476 37	< 27 63
Boring B-14	6-7' Deep	30 66	< 2101 59	< 651 85	< 38 23
Boring B-14	7-8' Deep	< 16.38	< 1216 17	< 359.24	< 22.56
Boring B-14	8-9' Deep	< 18 74	< 1498 66	< 448 72	< 26 92
Boring B-14	9-10' Deep	< 21.25	< 1540 03	< 501 21	40 91
Boring B-14	10-11' Deep	< 18 90	< 1438 84	< 460 02	< 26 67
Boring B-14	11-12' Deep	< 16 82	< 1246 78	< 388 98	< 23 72
Boring B-15	0-1' Deep	< 19 01	< 1340 20	< 413 50	34 41
Boring B-15	1-2' Deep	< 20 04	< 1529 71	< 497 03	37.27
Boring B-15	2-3' Deep	21 07	< 1436 61	< 471 85	< 26 45
Boring B-15	3-4' Deep	< 18 32	< 1281 28	< 394 43	< 25 72
Boring B-15	4-5' Deep	< 18 85	< 1457.69	< 478 00	< 25 90
Boring B-15	5-6' Deep	< 18 63	< 1430 91	< 435 72	< 26 44
Boring B-15	6-7' Deep	< 19 89	< 1511 78	< 476 14	37 10
Boring B-15	7-8' Deep	< 18 16	< 1402 92	< 431 35	< 25.18
Boring B-15	8-9' Deep	< 19 47	< 1516 56	< 447 53	< 26 99
Boring B-15	9-10' Deep	< 19 42	< 1460 59	< 441.68	< 27 79
Boring B-15	10-11' Deep	< 24 49	< 1843 37	< 571 33	< 34 15
Boring B-15	11-12' Deep	< 24 28	< 1704.96	< 559.54	< 33.30
Boring B-16	0-1' Deep	< 29.92	< 1353 24	< 409 78	283 34
Boring B-16	1-2' Deep	< 21 94	< 1526 30	< 466 47	38 90
Boring B-16	2-3' Deep	< 19 22	< 1308 59	< 424 40	51 01
Boring B-16	3-4' Deep	< 18 03	< 1292 58	< 414 85	< 25 15
Boring B-16	4-5' Deep	< 18 09	< 1451 66	< 434 53	< 25.64
Boring B-16	5-6' Deep	< 19 03	< 1358 60	< 456.26	< 26 66
Boring B-16	6-7' Deep	< 21 19	< 1800 25	< 536 11	< 31.07
Boring B-16	7-8' Deep	< 17.46	< 1359 06	< 423 60	< 24.83
Boring B-16	8-9' Deep	< 16 27	< 1272 01	< 382 10	< 22.41
Boring B-16	9-10' Deep	< 16.12	< 1243.71	< 377 33	< 23.10
Boring B-16	10-11' Deep	NR	NR	NR	NR
Boring B-16	11-12' Deep	NR	NR	NR	NR

AOC SITE
FIELD TESTING RESULTS - XRF DEPTH

Location	Depth	Arsenic (As)	Barium (Ba)	Chromium (Cr)	Lead (Pb)
Boring B-17	0-1' Deep	44 33	< 1382 07	< 401 31	407 84
Boring B-17	1-2' Deep	< 21 05	< 1614 99	< 520 87	45 57
Boring B-17	2-3' Deep	< 21 24	< 1695 43	< 523 42	< 30 16
Boring B-17	3-4' Deep	< 19 29	< 1432 73	< 423 97	< 26 36
Boring B-18	0-1' Deep	< 18 69	< 1338 85	< 403 24	34.52
Boring B-18	1-2' Deep	< 14 00	< 1045 80	< 314 35	24 84
Boring B-18	2-3' Deep	< 16 54	< 1203.34	< 379 30	23.70
Boring B-18	3-4' Deep	< 15 92	< 1210 27	< 370 68	< 22 67
Boring B-19	0-1' Deep	< 31 59	< 1324 05	< 430 90	311 54
Boring B-19	1-2' Deep	< 18 21	< 1347 73	< 423.20	30 58
Boring B-19	2-3' Deep	NR	NR	NR	NR
Boring B-19	3-4' Deep	NR	NR	NR	NR
Boring B-20	0-1' Deep	< 17.69	< 1189 48	< 370 39	43 07
Boring B-20	1-2' Deep	< 17 32	< 1240 27	< 395 24	< 24 13
Boring B-20	2-3' Deep	< 24 76	< 1921 78	< 612.57	< 35 19
Boring B-20	3-4' Deep	< 16 61	< 1175 49	< 375 82	< 22 95
Boring B-21	0-1' Deep	< 17 73	< 1273 16	< 377.25	53 80
Boring B-21	1-2' Deep	< 18 96	< 1454 66	< 450 25	< 27 29
Boring B-21	2-3' Deep	< 17.52	< 1307 24	< 432 04	< 24 40
Boring B-21	3-4' Deep	< 21 06	< 1454.81	< 472 41	< 28 04
Boring B-22	0-1' Deep	< 23 00	< 1248 28	< 384 68	157 40
Boring B-22	1-2' Deep	< 19.21	2015.90	< 464 15	< 26.90
Boring B-22	2-3' Deep	< 17 74	< 1407.07	< 415 17	< 25 53
Boring B-22	3-4' Deep	< 19.48	< 1515 41	< 431 94	< 26 46
Boring B-23	0-1' Deep	< 19 77	< 1135 41	< 342 41	90 12
Boring B-23	1-2' Deep	< 16.00	< 1193 88	< 380 03	< 21.85
Boring B-23	2-3' Deep	< 17 93	< 1299 05	< 406.52	< 24 19
Boring B-23	3-4' Deep	< 16 42	< 1183 02	< 378 45	< 22 95
Boring B-24	0-1' Deep	< 24 81	< 1276 07	< 449 62	132 29
Boring B-24	1-2' Deep	< 14 16	< 1096 42	< 342 65	23 78
Boring B-24	2-3' Deep	< 17 53	< 1366 91	< 410.29	< 24 76
Boring B-24	3-4' Deep	< 17 15	< 1240 74	< 382 88	< 23 00
Boring B-25	0-1' Deep	< 20.26	< 1349 27	< 427 73	57 95
Boring B-25	1-2' Deep	< 19 44	< 1484 49	< 425 41	39 57
Boring B-25	2-3' Deep	< 19 08	< 1377 30	< 451.50	< 26 33
Boring B-25	3-4' Deep	< 20 08	< 1438 31	< 439.83	37 21

Date	Reading	LiveTime	Mode	Pass Fail	Standard	Pass/Fail	Match1	MN1	Match2	MN2	Match3	MN3	Tl	Tl +/-	Cr	Cr +/-	Mn	Mn +/-	Fe	Fe +/-	Co	Co +/-	Ni	Ni +/-	Cu	Cu +/-	Zn	Zn +/-	As	As +/-	Se	Se +/-	Br	Br +/-	Rb	Rb +/-	Sr	Sr +/-	Zr	Zr +/-	Mo	Mo +/-	Ag	Ag +/-	Cd	Cd +/-	Sn	Sn +/-	Sb	Sb +/-	Ba	Ba +/-	Hg	Hg +/-	Pb	Pb +/-	field1	Field2	field3	Field4	Field5	Field6	Field7	Field8
1-Oct-03	1	52.65	Standardization	PASS		0 003	0 0186	282																																																									
1-Oct-03	2	32.08	Soil											6825 99	1356.38	<LOD	481	497 33	100 74	25562.92	407 87	<LOD	344 37	<LOD	107 28	127 81	25.38	1187 92	35 52	84.87	24 04	<LOD	18.08	<LOD	25.29	43.03	4 03	89 37	5 02	82.9	4 45	31 01	5 1	<LOD	77 02	91 65	21 38	<LOD	122.84	<LOD	138.21	<LOD	1492.28	<LOD	47 13	2241 68	41 64	Boring B-11	Surface Shot	10/1/03					
1-Oct-03	3	21 9	Soil											22336 05	1799 04	863 77	186 4	404 56	94 81	18430 04	328 03	<LOD	303 09	<LOD	101 21	170 55	25.7	5092.09	82.95	222.48	35.79	<LOD	22.19	<LOD	32.81	<LOD	11 23	165 38	8 33	20 44	4 04	110 88	5 71	<LOD	74.26	<LOD	51.78	<LOD	98 9	151 88	37 01	2195.77	598 9	<LOD	81 31	4970 1	71 19	Boring B-10	Surface Shot	10/1/03					
1-Oct-03	4	28.58	Soil											18000 84	1807 45	<LOD	509 49	681.28	131 17	68604 83	883 28	<LOD	587 19	<LOD	141 14	<LOD	75.87	1835.57	46 69	155 98	21 89	<LOD	17.04	<LOD	25 44	15 02	3 47	192.28	6 72	30 93	4 15	37 14	5 28	<LOD	79 8	<LOD	61 17	<LOD	117 95	<LOD	131 18	<LOD	1850.37	<LOD	48.62	1550 54	34 62	Boring B-5	Surface Shot	10/1/03					
1-Oct-03	5	29 74	Soil											19765 38	1756.98	641 05	163 13	397 89	99 92	29508.28	440 25	<LOD	358 72	<LOD	109 4	124 38	24 76	1674 28	41 85	<LOD	76.94	<LOD	17 72	<LOD	28 71	57.52	4 34	170 33	6 15	135 97	5 09	107 97	5 72	<LOD	75.3	<LOD	59 6	<LOD	114 86	<LOD	128 6	2821 28	602.72	<LOD	49 71	2758 91	48.58	Boring B-6	Surface Shot	10/1/03					
1-Oct-03	6	28.83	Soil											15138 56	1379 7	875 05	144 94	415 08	87 48	27206 18	370.25	390 87	105 9	<LOD	97 31	153 5	22.08	2069 69	41 91	131 41	28.85	<LOD	18.54	<LOD	25 91	40 6	3.82	78.46	4 37	55.61	3 7	114 01	5 05	<LOD	65.95	<LOD	49 58	<LOD	94 7	220 84	35.8	<LOD	1408.66	<LOD	47 08	4307 57	56.16	Boring B-7	Surface Shot	10/1/03					
1-Oct-03	7	29	Soil											32048 34	1904 46	637 36	157 4	881 45	106 16	31985 67	443 29	436 1	122.32	<LOD	109 39	402.29	30.26	10978 46	134 93	238 57	33.1	<LOD	21 04	<LOD	34 34	13.13	3 74	86 14	4.86	11 03	3 62	182.92	5 67	<LOD	69 84	<LOD	51.2	<LOD	97 32	125 65	36.5	2233.45	610.18	91 87	22.48	4622.34	85.09	Boring B-4	Surface Shot	10/1/03					
1-Oct-03	8	27	Soil											5321 31	988 95	<LOD	318 97	<LOD	175 64	5502.51	143 58	<LOD	167 38	<LOD	70 1	81 35	18.39	1804 74	35 52	<LOD	87.82	<LOD	17 94	<LOD	25 51	<LOD	9 65	92.04	4 48	11 06	3 18	72.07	4 53	<LOD	62.09	<LOD	45.04	<LOD	85 44	168 93	31 77	<LOD	1070.28	57.49	15.37	4860 07	58.83	Boring B-1	Surface Shot	10/1/03					
1-Oct-03	9	25.3	Soil											<LOD	2730 69	<LOD	321 77	399 15	79.28	31055 5	378 25	518 78	105 5	<LOD	90 68	165.27	19 87	1182.2	28 91	<LOD	50 73	<LOD	13.72	<LOD	18 48	10 07	2.6	88.55	3.97	43.69	3 18	<LOD	11 49	<LOD	60 05	87 34	13.79	<LOD	79.02	<LOD	88 05	<LOD	1069 34	<LOD	32.87	1820 93	27 97	20' off PL	Surface Shot	10/1/03					
1-Oct-03	10	28.14	Soil											<LOD	2589 72	<LOD	313 51	253 73	67 13	8825.73	183 51	<LOD	190 1	<LOD	70 65	<LOD	50 07	438 7	19 39	<LOD	22.88	<LOD	11 69	<LOD	15.9	26.47	2.72	78	3.94	80 08	3 61	<LOD	12.11	<LOD	63.69	<LOD	47 19	<LOD	89 98	<LOD	101.25	<LOD	991 58	<LOD	30 47	238 91	11 69	Boring B-16	Surface Shot	10/1/03					
1-Oct-03	11	52.86	Standardization	PASS		0 0041	0 0186	255																																																								
1-Oct-03	12	28.12	Soil											<LOD	2839 89	<LOD	351 98	503.46	83.18	24867 36	340 99	<LOD	222.45	<LOD	87 15	<LOD	53.02	359 49	18 17	<LOD	20 89	<LOD	11 82	<LOD	18 88	51.13	3.2	90 58	4 13	107 77	3 9	<LOD	12.02	<LOD	84 37	82.49	15.79	<LOD	90 71	<LOD	102.78	<LOD	1070 25	<LOD	32.08	154.28	10.14	Boring B-5	Surface Shot	10/1/03					
1-Oct-03	13	28.85	Soil											48514 71	3253.4	1597 54	287.27	1400.6	170 35	64187 06	947 99	849 34	207 37	<LOD	187 3	188 88	37 22	9035.4	148 59	952.27	82.78	<LOD	41 82	<LOD	58.69	<LOD	20.29	844 07	14 88	<LOD	18	87 87	6 74	<LOD	91 99	<LOD	77 02	472 32	50 77	428 91	56.39	12384 83	1129 58	<LOD	103 13	20193 18	285 03	Boring B-2	Surface Shot	10/1/03					
1-Oct-03	14	35.08	Soil											11205 93	1184 69	684 47	123.28	460.25	77 51	28645 85	335 31	<LOD	277 99	242.14	30 92	77 08	18.09	2668.25	42.28	95.97	21 58	<LOD	14.41	<LOD	20 95	30 72	3 04	102 74	4 02	53.33	3 18	22.87	3 75	<LOD	57 5	54 62	14 9	<LOD	85.59	<LOD	98.43	1852.93	414 75	<LOD	38.53	3118.25	38.32	Boring B-3	Surface Shot	10/1/03					
1-Oct-03	15	28.28	Soil											14589 64	1294 74	832.21	133.63	249 68	72.24	12019 01	215 77	<LOD	216 31	<LOD	78.48	127 21	19.74	1590 44	35.28	123.85	24 34	<LOD	18.29	<LOD	24.74	18.94	3 13	78.01	4 17	34.28	3 3	139 97	5 07	<LOD	62.59	<LOD	46.33	<LOD	68.19	<LOD	98.76	<LOD	1316.87	95.97	15 5	3161 5	44.2	Boring B-8	Surface Shot	10/1/03					
1-Oct-03	16	28.16	Soil											<LOD	3180	<LOD	355 6	298 43	80 34	20368 37	315 61	<LOD	278 12	<LOD	89 9	<LOD	58.06	1566 85	37 03	<LOD	50 49	<LOD	14 11	<LOD	20 79	35.75	3 33	69.01	4 11	71 64	3 78	<LOD	12.67	<LOD	67 35	<LOD	51 02	<LOD	97 95	<LOD	110 06	1404.23	418 41	<LOD	38.71	1325.32	27 54	Boring B-9	Surface Shot	10/1/03					
1-Oct-03	17	27 6	Soil											6118.23	1025 73	<LOD	348 48	333 04	79 01	25829 79	348 98	488 88	101 41	123 02	31 47	60 17	18.82	1129.74	29 49	183.62	18.51	<LOD	13.15	<LOD	20 58	22.78	2.88	58.74	3 69	49 93	3 29	<LOD	11 87	<LOD	62.28	80 68	15.23	<LOD	87 04	<LOD	97 08	<LOD	1095.35	<LOD	36.62	1228.06	24 79	Boring B-12	Surface Shot	10/1/03					
1-Oct-03	18	31 31	Soil											10608 4	1482.19	<LOD	442.93	382.65	92.8	25180.21	385 32	<LOD	328 53	<LOD	97 96	<LOD	64 39	2420 65	49 68	82.1	24.7	<LOD	18.86	<LOD	25.78	25.04	3 58	90 12	4 83	60 74	4 02	<LOD	13.97	<LOD	72.97	<LOD	58.48	<LOD	112.34	<LOD	128 5	2080.24	528 92	<LOD	46.79	2818.68	43.89	Boring B-13	Surface Shot	10/1/03					
1-Oct-03	19	25.57	Soil											<LOD	2189 18	<LOD	253 97	199 59	55 79	10868 68	174 98	244 86	80 64	<LOD	60 26	<LOD	37 92	185 5	11 73	<LOD	12.24	<LOD	9 1	<LOD	12.63	32.39	2.37	64.39	3 18	98.92	3 2	<LOD	10 34	<LOD	53.93	<LOD	35.67	<LOD	87 97	<LOD	78.42	<LOD	841 33	<LOD	24.05	35.25	8 08	Boring B-14	Surface Shot	10/1/03					
1-Oct-03	20	27 5	Soil											<LOD	3015 78	<LOD	370 62	386 1	83.42	19474 4	311 07	331 3	98.05	<LOD	86.36	<LOD	55.8	329 84	18 79	<LOD	18.89	<LOD	12.14	<LOD	17 33	52.17	3.43	113 18	4 75	130 59	4 45	<LOD	12.91	<LOD	69 62	<LOD	51 9	<LOD	99.43	<LOD	112.12	<LOD	1158.5	<LOD	33.17	73.29	8 95	South PL near B-14	Surface Shot	10/1/03					
1-Oct-03	21	29 02	Soil											<LOD	3493.82	<LOD	397 15	481 01	94 18	23258 97	372.55	<LOD	324 32	<LOD	96.65	<LOD	61 74	971 53	31 43	<LOD	23.09	<LOD	14.03	<LOD	19 44	63.77	3 91	97 95	4 86	140 02	4 85	<LOD	14 11	<LOD	75 07	<LOD	58.71	<LOD	112.74	<LOD	127 32	<LOD	1321.22	<LOD	38.35	181.22	11 86	South PL Adjacent to B-15	Surface Shot	10/1/03					
1-Oct-03	22	24.32	Soil											<LOD	3165 14	<LOD	355 45	622.44	89.42	28694 3	372.01	397 4	106 85	<LOD	94.3	<LOD	55.2	481 65	21 06	31 04	9 49	<LOD	12.25	<LOD	17 37	57.55	3 48	112.58	4 61	145 36	4 48	<LOD	12.54	<LOD	67 08	<LOD	48.65	<LOD	89 43	<LOD	100 61	<LOD	1199.17	<LOD	32.38	327 97	13.77	South PL Adjacent to B-18	Surface Shot	10/1/03					
1-Oct-03	23	21 93	Soil											3789.39	1003.38	<LOD	342.58	310 38	77 7	21667 55	318.2	<LOD	282.87	107 9	30 17	58.28	18.18	842 85	23.28	<LOD	35.64	<LOD	13.2	<LOD	17.84	42.69	3 19	113 59	4 56	108 39	4 03	<LOD	12.28	<LOD	65 77	<LOD	43.42	<LOD	83.02	<LOD	93.49	<LOD	1114 59	<LOD	33.35	843.93	18.29	East PL Adjacent to B-11	Surface Shot	10/1/03					
1-Oct-03	24	22.78	Soil											5272.79	1144 7	<LOD	345 02	298 08	78.95	18102.35	298 09	<LOD	278 36	<LOD	88.97	71 71	19.44	514 42	22.28	<LOD	44	<LOD	14 26	<LOD	20 4	45.13	3 48	95.18	4 55	123 33	4 38	17 91	4.48	<LOD	68.9	<LOD	47.24	<LOD	90 99	<LOD	102.07	<LOD	1268.52	<LOD	37 88	941 9	23.22	Boring B-17	Surface Shot	10/1/03					
1-Oct-03	25	28.24	Soil											<LOD	2804 09	<LOD	333 72	<LOD	206 31	14198.23	244 5	<LOD	233 23	<LOD	73.51	<LOD	51 81	425 83	18.58	<LOD	27 18	<LOD	12.3	<LOD	16 48	42.43	3.12	48.58	3 55	55.94	3 38	<LOD	12.18	<LOD	64.21	<LOD	48.68	<LOD	88.7	<LOD	98.99	<LOD	998 37	<LOD	30 38	328 22	13.58	Boring B-18	Surface Shot	10/1/03					
1-Oct-03	26	22.46	Soil											<LOD	2282.95	<LOD	279 05	162.4	80 12	11775 37	198 81	245.28	67 03	<LOD	65.99	<LOD	41 13	648 74	20 87	<LOD	22.27	<LOD	10 04	<LOD	15.22	20.95	2.36	44.63	3 11	40.58	2.84	<LOD	10 81	<LOD	57.05	<LOD	37	<LOD	70.25	178 48	28.34	<LOD	878 79	<LOD	29 18	254 33	10.92	Boring B-19	Surface Shot	10/1/03					
1-Oct-03	27	20 06	Soil											3442.6	827 19	<LOD	286 55	292.84	83.29	18633 67	242.77	370 68	78.07	<LOD	71 67	<LOD	43.28	478 53	18.29	<LOD	20 78	<LOD	10 51	18.21	5 03	39.85	2.72	50 76	3 18	60.92	3 04	12.55	3 97	<LOD	56.56	65.93	11 54	<LOD	65.38	<LOD	73.48	<LOD	908 79	<LOD	27.52	221 43	10.37	Boring B-20	Surface Shot	10/1/03					
1-Oct-03	28	17 46	Soil											<LOD	1778.93	<LOD	228 98	223.25	49 63	3268.65	95.2	<LOD	114 32	<LOD	47 58	<LOD	33.78	139 54	10 78	<LOD	12.28	<LOD	8 84	16.57	3 95	13.73	1 97	23.22	2.49	23.73	2.39	<LOD	9 95	<LOD	51 48	<LOD	28.9	<LOD	54.29	<LOD	60 77	<LOD	690 35	<LOD	21 62	48.59	8 19	Boring B-21	Surface Shot	10/1/03					
1-Oct-03	29	23.2	Soil											3809 41	975 17	<LOD	338 59	305 28	78.19	20584 82	313.28	367.24	95.89	<LOD	89 51	<LOD	52.88	399 37	19 53	<LOD	21 38	<LOD	12.38	<LOD	17 43	62.02	3 52	78.09	4 1	73.94	3 68	<LOD	12.43	<LOD	85.93	<LOD	45.67	<LOD	88.58	<LOD	97 53	<LOD	1065.22	<LOD	32.67	137 79	10 19	Boring B-22	Surface Shot	10/1/03					
1-Oct-03	30	22.03	Soil											<LOD	3001 53	<LOD	362.13	<LOD	232.57	20674 06	318 3	<LOD	283 32	<LOD	88.51	<LOD	53.8	352.4	18 78	<LOD	19.28	<LOD	11 96	18.38	8 02	60 92	3.53	88.3	3 97	80 82	3 75	<LOD	12.51	<LOD	86.42	89 51	15.01	<LOD	85.37	98.62	32.01	<LOD	1144 41	<LOD	32.97	90 74	9 14	Boring B-23	Surface Shot	10/1/03					
1-Oct-03	31	21 87	Soil											<LOD	2208.24	<LOD	274 51	<LOD	171 92	7435.49	155 56	<LOD	167 61	<LOD	60 74	<LOD	42.32	203 7	13.59	<LOD	15.28	<LOD	10.23	<LOD	14 75	30 08	2.55	39 62	3.07	53.84	3 01	<LOD	11 22	<LOD	58.38	<LOD	37 6	<LOD	71 21	<LOD	80 37	<LOD	845 48	<LOD	27 45	87.24	7 45	Boring B-24	Surface Shot	10/1/03					
1-Oct-03	32	22.55	Soil											<LOD	2404 43	<LOD	298 02	<LOD	184 4	10169 58	198 12	<LOD	191 38	<LOD	67 59	<LOD	43.85	171 81	13.17	<LOD	13.97	<LOD	10 39	<LOD	14 83	34 83	2.68	72.23	3.81	67 32	3.43	<LOD	11 31	<LOD	59 6	94 28	13.08	<LOD	74 85	<LOD	84 23	<LOD	892.3	<LOD	28.58	29 81	6 64	Boring B-25	Surface Shot	10/1/03					
1-Oct-03	33	24 86	Soil											<LOD	3338.21	<LOD	371 47	381 6	85.58	17386 42	303 98	<LOD	279 17	<LOD	84 46	<LOD	58.34	292.72	18.89	<LOD	18.65	<LOD	13.59	<LOD	17 54	43.68	3 42	80 33	4 46	114 37	4 44	<LOD	13.73	<LOD	72.73	<LOD	53.23	<LOD	102.04	<LOD	114 85	<LOD	1258.32	<LOD	33.28	87 14	9 3	South PL - 500' W of NE Cor	Surface Shot	10/1/03					

Date	Reading	LiveTime	Mode	Pass Fail Standard	Pass/Fail	Match1	MN1	Match2	MN2	Match3	MN3	Ti	Ti +/-	Cr	Cr +/-	Mn	Mn +/-	Fe	Fe +/-	Co	Co +/-	Ni	Ni +/-	Cu	Cu +/-	Zn	Zn +/-	As	As +/-	Se	Se +/-	Br	Br +/-	Rb	Rb +/-	Sr	Sr +/-	Zr	Zr +/-	Mo	Mo +/-	Ag	Ag +/-	Cd	Cd +/-	Sn	Sn +/-	Sb	Sb +/-	Ba	Ba +/-	Hg	Hg +/-	Pb	Pb +/-	field1	Field2	field3	Field4	Field5	Field6	Field7	Field8
2-Oct-03	1	53.34	Standardization	PASS	0.0004	0.0186	261																																																								
2-Oct-03	2	53.9	Standardization	PASS	0.0038	0.0186	261																																																								
2-Oct-03	3	25.65	Soil									<LOD	2160.35	<LOD	253.74	<LOD	148.61	10014.35	156.9	262.37	55.62	<LOD	58.47	55.62	13.1	269.97	12.98	<LOD	18.31	<LOD	9.38	<LOD	12.96	38.34	2.36	67.97	3.04	117.65	3.18	<LOD	9.61	<LOD	51.05	39.23	10.99	<LOD	63.06	216.63	23.78	<LOD	842.21	<LOD	25.04	229.25	9.27	NE Prop Cor	Surface Shot	10/2/03					
2-Oct-03	4	17.41	Soil									<LOD	1833.5	<LOD	244.03	<LOD	151.61	7848.34	142.54	261.51	52.92	<LOD	55.66	<LOD	36.35	139.51	10.8	<LOD	13.46	<LOD	8.93	<LOD	12.59	28.87	2.16	24.15	2.49	27.53	2.39	<LOD	9.51	<LOD	51.79	<LOD	28.71	<LOD	54.52	73.54	20.42	<LOD	706.06	<LOD	24.41	64.81	6.51	N Prop Line 100 W	Surface Shot	10/1/03					
2-Oct-03	5	23.95	Soil									<LOD	2390.15	<LOD	296.19	338.62	66.31	12828.27	209.59	578.26	74.51	<LOD	71.16	<LOD	43.57	104.81	11.55	<LOD	13.29	<LOD	10.19	<LOD	15.5	55.62	3.01	57.97	3.37	67.91	3.18	<LOD	10.91	<LOD	59.06	<LOD	39.46	<LOD	75.64	<LOD	85.15	<LOD	949.6	<LOD	29.4	20.32	6.32	N Prop Line 200' W	Surface Shot	10/1/03					
2-Oct-03	6	22.59	Soil									<LOD	1842.65	<LOD	248.62	<LOD	138.3	1163.1	71.87	<LOD	99.18	<LOD	61.7	<LOD	38.94	56.11	9.76	<LOD	12.81	<LOD	9.45	<LOD	14.01	13.86	2.17	20.11	2.69	32.53	2.72	15.1	3.72	<LOD	56.37	<LOD	38.98	<LOD	69.12	<LOD	77.41	<LOD	728.12	<LOD	25.65	35.75	6.47	N Prop Line 300' W	Surface Shot	10/2/03					
2-Oct-03	7	32.01	Soil									<LOD	3247.05	<LOD	385.3	449.52	91.43	23073.17	365.13	<LOD	314	<LOD	92.97	<LOD	63.56	449.66	22.26	<LOD	27.43	<LOD	13	<LOD	19.62	61.23	3.84	63.42	4.21	57.72	3.8	21.79	4.73	<LOD	72.55	<LOD	59.29	<LOD	111.56	<LOD	125.86	<LOD	1215.26	<LOD	36.14	282.61	13.67	N Prop Line 500 W	Surface Shot	10/2/03					
2-Oct-03	8	24.75	Soil									<LOD	2531.36	<LOD	305.57	<LOD	208.45	15526	251.88	<LOD	238.88	<LOD	72.94	55.35	17.18	286.45	16.58	<LOD	19.04	<LOD	11.51	<LOD	15.64	52.02	3.18	46.57	3.42	58	3.3	<LOD	11.91	<LOD	63.2	<LOD	44.38	<LOD	84.67	<LOD	95.23	<LOD	969.61	<LOD	29.29	108.3	9.08	N Prop Line 600 W	Surface Shot	10/2/03					
2-Oct-03	9	24.67	Soil									<LOD	2309.44	<LOD	280.17	932.07	79.21	13312.8	217.05	<LOD	208.04	<LOD	70.57	<LOD	46.91	577.68	20.35	<LOD	15.68	<LOD	9.93	16.63	5.05	30.89	2.8	52.17	3.26	40.07	2.91	15.64	3.8	<LOD	57.63	55.09	13.16	<LOD	74	<LOD	83.01	<LOD	903.47	<LOD	27.77	59.99	7.31	N Prop Line 700' W	Surface Shot	10/2/03					
2-Oct-03	10	28.93	Soil									<LOD	1981.69	<LOD	239.74	346.36	56.32	15869.72	198.92	297.71	64.11	<LOD	59.03	49.2	12.78	406.47	14.61	<LOD	13.71	<LOD	8.54	<LOD	12.61	40.78	2.3	50.65	2.71	43.07	2.43	<LOD	9.27	<LOD	48.32	<LOD	32.79	<LOD	62.28	<LOD	70.07	<LOD	791.38	<LOD	23.72	92.36	6.7	N Prop Line 800' W	Surface Shot	10/2/03					
2-Oct-03	11	24.4	Soil									<LOD	2494.47	<LOD	301.43	323.11	67.76	16240.89	241.4	<LOD	225.22	<LOD	70.9	<LOD	44.93	239.47	14.45	<LOD	14.55	<LOD	10.63	<LOD	14.68	39.92	2.73	49.22	3.21	49.34	2.98	<LOD	11.03	<LOD	58.09	63.83	13.07	<LOD	74.14	84.52	27.76	<LOD	980.52	<LOD	27.3	41.18	6.88	N Prop Line 900 W	Surface Shot	10/2/03					
2-Oct-03	12	24.13	Soil									<LOD	2475.76	<LOD	299.65	404.8	72.38	19134.32	273.99	<LOD	251.4	<LOD	75.46	<LOD	45.46	303.54	16.05	<LOD	14.7	<LOD	10.14	<LOD	15.2	43.54	2.86	54.33	3.37	54.75	3.11	<LOD	11.36	<LOD	59.09	69.12	13.41	<LOD	76.04	<LOD	85.26	<LOD	920.09	<LOD	28.83	43.34	7.03	N Prop Line 1000' W	Surface Shot	10/2/03					
2-Oct-03	13	22.97	Soil									3732.02	910.48	<LOD	321.75	454.21	77.55	21543.47	303.65	<LOD	272.49	<LOD	84.72	<LOD	46.36	198.77	14.48	<LOD	16.58	<LOD	10.95	<LOD	15.91	56.47	3.19	63.62	3.64	78.84	3.48	<LOD	11.59	<LOD	62.6	98.29	13.97	<LOD	80.13	<LOD	89.99	<LOD	991.81	<LOD	30.66	70.61	8.02	N Prop Line 1100' W	Surface Shot	10/2/03					
2-Oct-03	14	20.67	Soil									<LOD	2972.4	<LOD	336.7	569.15	84.13	22147.32	321.64	<LOD	285.61	<LOD	88.21	<LOD	51.27	243.44	16.15	<LOD	16.51	<LOD	11.98	<LOD	16.84	65.4	3.5	102.01	4.37	134.35	4.25	<LOD	12.24	<LOD	66.07	<LOD	47.77	<LOD	91.94	<LOD	103.36	<LOD	1144.96	<LOD	32.23	49.96	7.98	N Prop Line 1200' W	Surface Shot	10/2/03					
2-Oct-03	15	24.78	Soil									3286.53	964.98	<LOD	352.49	417.28	80.66	21840.24	318.92	375.63	95.73	<LOD	87.71	<LOD	53.79	151.58	14.15	<LOD	16.35	<LOD	12.36	<LOD	17.33	68.28	3.52	82.67	4.08	120.97	4.07	<LOD	12.24	<LOD	65.92	<LOD	45.78	<LOD	88.38	<LOD	99.97	<LOD	1100.59	<LOD	33.53	59.61	8.22	N Prop Line 1300' W	Surface Shot	10/2/03					
2-Oct-03	16	23.91	Soil									3296.46	972.95	<LOD	341.61	339.37	77.43	20065.21	300.29	<LOD	273.72	<LOD	85.78	<LOD	51.97	161.08	14.73	<LOD	16.61	<LOD	11.6	<LOD	17.37	68.92	3.52	84.56	4.11	105.19	3.92	<LOD	12.22	<LOD	65.57	75.96	15.06	<LOD	88.35	<LOD	97.38	<LOD	1085.03	<LOD	33.99	45.69	7.75	N Prop Line 1400' W	Surface Shot	10/2/03					
2-Oct-03	17	24.04	Soil									2899.72	927.57	<LOD	304.44	511.08	75.64	15398.72	247.24	393.14	80.82	<LOD	76.45	<LOD	48.59	245.39	15.51	<LOD	15.32	<LOD	10.98	<LOD	15.45	44.37	2.99	96.67	4.14	138.19	4.13	<LOD	11.91	<LOD	63.38	47.15	14.47	<LOD	83.43	<LOD	94.1	<LOD	1040.97	<LOD	29.7	34.9	7.17	NW Prop Cor	Surface Shot	10/2/03					
2-Oct-03	18	28.02	Soil									5197.43	1156.14	<LOD	407.9	615.49	96.4	30219.94	420.76	<LOD	346.67	<LOD	96.94	<LOD	60.06	171.1	15.8	<LOD	19.58	<LOD	12.53	<LOD	17.96	76.93	3.92	115.68	4.85	117.44	4.36	<LOD	12.76	<LOD	70.77	<LOD	53.27	<LOD	103.09	<LOD	115.7	<LOD	1271.13	<LOD	34.61	78.8	9.21	E Prop Line 800' N	Surface Shot	10/1/03					
2-Oct-03	19	28.16	Soil									32449.2	1888.7	<LOD	423.71	517.5	97.93	28326.56	406.22	<LOD	341.41	<LOD	102.45	82.01	22.7	332.04	20.51	<LOD	21.57	<LOD	13.73	<LOD	19.11	81.26	4.26	99.61	4.9	133.41	4.8	<LOD	13.93	<LOD	75.69	<LOD	58.51	<LOD	113.75	<LOD	127.76	<LOD	1691.28	<LOD	36.07	99.43	10.45	Boring B-13	0-1 Feet Deep	10/1/03					
2-Oct-03	20	27.47	Soil									<LOD	3091.41	<LOD	365.49	278.62	60.79	23208.72	338.42	490.73	101.64	<LOD	91.64	<LOD	55.97	100.1	13.34	<LOD	15.86	<LOD	12.36	<LOD	17.19	77.04	3.76	90.01	4.29	101.31	3.99	<LOD	12.74	<LOD	67.88	<LOD	50	<LOD	96.43	<LOD	108.71	<LOD	1199.83	<LOD	33.04	<LOD	21.58	Boring B-13	1-2 Deep	10/2/03					
2-Oct-03	21	25.67	Soil									<LOD	3328.58	<LOD	376.04	359.8	88.36	26886.44	391.23	<LOD	329.42	<LOD	94.93	<LOD	57.29	101.18	14.02	<LOD	16.76	<LOD	13.17	<LOD	17.73	75.84	3.92	98.84	4.63	112.28	4.31	<LOD	13.09	<LOD	70.6	<LOD	51.95	<LOD	99.98	<LOD	112.59	<LOD	1272.11	<LOD	34.14	26	7.94	Boring B-13	2-3 Deep	10/2/03					
2-Oct-03	22	24.87	Soil									<LOD	3407.67	<LOD	376.26	335.52	88.89	27233.38	399.05	554.16	115.63	<LOD	96.72	<LOD	60.2	204.46	16.81	<LOD	19.87	<LOD	12.79	<LOD	16.45	72.01	3.9	116.67	4.96	134.52	4.63	<LOD	13.27	<LOD	71.69	<LOD	51.87	<LOD	100.56	<LOD	113.03	<LOD	1288.46	<LOD	36.24	80.23	9.46	Boring B-13	4-5' Deep	10/2/03					
2-Oct-03	23	25.24	Soil									<LOD	3157.2	<LOD	412.1	1322.32	111.39	28598.65	410.54	369.11	115.21	<LOD	100.94	<LOD	58.87	71.41	13.37	<LOD	16.86	<LOD	12.86	<LOD	17.5	69.74	3.83	115.87	4.9	111.35	4.35	<LOD	13.45	<LOD	71.94	63.03	17.34	<LOD	100.11	<LOD	112.66	<LOD	1234.41	<LOD	33.77	<LOD	22.69	Boring B-13	5-6' Deep	10/2/03					
2-Oct-03	24	24.38	Soil									4208.09	1177.08	<LOD	416.36	580.35	101.68	26893.97	423.18	<LOD	360.01	<LOD	99.62	<LOD	61.94	109.97	15.49	<LOD	17.93	<LOD	13.69	<LOD	19.49	78.97	4.32	117.57	5.33	105	4.63	<LOD	14.35	<LOD	77.59	<LOD	56.9	<LOD	109.92	<LOD	122.94	<LOD	1291.08	<LOD	37.36	<LOD	24.56	Boring B-13	6-7' Deep	10/2/03					
2-Oct-03	25	22.32	Soil									<LOD	3170.13	<LOD	390.43	<LOD	253.95	24765.69	371.55	<LOD	321.88	<LOD	93.55	<LOD	55.53	82.32	13.38	<LOD	16.17	<LOD	12.48	<LOD	17.61	74.11	3.89	114.14	4.87	83.13	4.02	<LOD	13.02	<LOD	70.51	<LOD	48.23	<LOD	93.17	<LOD	104.26	<LOD	1197.56	<LOD	34.34	25.6	7.79	Boring B-12	7-8 Deep	10/2/03					
2-Oct-03	26	22.75	Soil									<LOD	3390.27	<LOD	407.8	<LOD	268.9	23277.43	379.12	449.81	113.43	<LOD	96.8	<LOD	60.43	51.45	13.38	<LOD	16.1	<LOD	13.39	<LOD	18.26	61.95	3.89	75.33	4.53	71.36	4.08	<LOD	13.91	<LOD	75.13	53.91	17.93	<LOD	103.83	<LOD	117.04	<LOD	1344.11	<LOD	35.72	<LOD	22.9	Boring B-13	8-9' Deep	10/2/03					
2-Oct-03	27	22.91	Soil									4267.98	1234.84	<LOD	424.65	419.02	98.58	21094.54	379.5	<LOD	342.94	<LOD	105.24	<LOD	67.08	77.42	15.22	<LOD	17.63	<LOD	14.19	<LOD	19.48	63.83	4.2	80.09	4.92	81.03	4.49	<LOD	14.92	<LOD	80.78	<LOD	58.83	<LOD	113.48	<LOD	128.79	<LOD	1355.86	<LOD	37.63	<LOD	24.86	Boring B-13	9-10' Deep	10/2/03					
2-Oct-03	28	20.19	Soil									<LOD	3142.05	<LOD	381.58	369.41	87.37	22594.38	355.19	390.57	106.62	<LOD	95.9	<LOD	55.36	96.04	13.87	<LOD	15.91	<LOD	12.84	<LOD	17.36	59.79	3.68	80.01	4.4	84.6	4.04	<LOD	13.23	<LOD	71.33	88.96	15.81	<LOD	91.27	<LOD	102.64	<LOD	1216.05	<LOD	33.19	<LOD	23	Boring B-13	10-11 Deep	10/2/03					
2-Oct-03	29	23.72	Soil									<LOD	3659.54	<LOD	420.46	337.74	100.08	24192.88	424.34	<LOD	369.55	<LOD	105.81	<LOD	67.8	73.82	15.49	<LOD	18.7	<LOD	14.7	<LOD	20.34	69.13	4.42	88.66	5.19	83.08	4.63	<LOD	15.4	<LOD	82.37	63.27	20.63	<LOD	117.84	<LOD	132.67	<LOD	1390.78	<LOD	38.77	<LOD	26.85	Boring B-3	11-12' Deep	10/2/03					
2-Oct-03	30	20.06	Soil									4609.21	1202.76	<LOD	410.63	326.01	92.04	26298.26	405.12	522.07	118.35	<LOD	107.46	<LOD	60.63	101.98	14.71	<LOD	17.82	<LOD	14.02	<LOD	18.05	77.07	4.14	127.23	5.31	121.92	4.68	<LOD	13.86	<LOD	74.42	52.92	16.53	<LOD	96.08	<LOD	108.06	<LOD	1334	<LOD	35.19	28.77	8.41	Boring B-12	3-4 Deep	10/2/03					
2-Oct-03	31	22.41	Soil									4539.53	1170.5	<LOD	393.01	645.42	96.39	24703.66	379.73	<LOD	325	<LOD	95.95	<LOD	58.67	224.44	17.39	<LOD	18.58	<LOD	12.92	<LOD	18.09	67.02	3.87	108.36	4.9	157.47	4.93	<LOD	13.84	<LOD	72.57	<LOD	50.47	<LOD	97.14	<LOD	100.19	<LOD	1299.81	<LOD	34.67	40.42	8.47	Boring B-14	0-1' Deep	10/2/03					
2-Oct-03	32	29.79	Soil									4595.89	1027.63	<LOD	349.57	781.36	89.4	24939.89	342.87	<LOD	293.29	<LOD	87.88	<LOD	52.37	234.16	15.84	<LOD	15.62	<LOD	12.29	<LOD	16.79	66.54	3.47	105.67	4.37	167.15	4.52	<LOD	12.38	<LOD	65.58	99.9	16.49	<LOD	95.7	<LOD	108.02	<LOD	1128.24	<LOD	32.11	22.19	7.25	Boring B-14	1-2' Deep	10/2/03					
2-Oct-03	33	23.5	Soil									<LOD	4270.11	<LOD	485.41	739.13	123.04	31427.25	534.95	<LOD	429.1	<LOD	124.01	<LOD	74.25	141.89	18.86	<LOD	22.14	<LOD	15.59	<LOD	23.15	74.97	4.83	130.67	6.27	168.37	6.07	<LOD	16.58	<LOD	89.03	67.41	22.45	<LOD	129.46	195.32	48.75	<LOD	1662.36	<LOD	43.94	41.87	10.43	Boring B-14	2-3 Deep	10/2/03					
2-Oct-03	34	25	Soil									7445.8	1461.6	<LOD	459.91	469.85	111.69	28912.32	498.17	<LOD	399.89	<LOD	116.76	<LOD	74.71	104.91	17.43	<LOD	20.02	<LOD	16.48	<LOD	21.82	68.93	4.59	129.83	6.14	168.41	5.97	<LOD	18.4	<LOD	85.92	<LOD	66.87	<LOD	129.59	145.99	48.53	<LOD	1554.88	<LOD	42.22	<LOD	28.63	Boring B-14	4-5' Deep	10/2/03					
2-Oct-03	35	24.18	Soil									<LOD	3266.42	<LOD	374.1	309.2	86.22	25540.57	377.17	353.32	109.08	<LOD	97.02	<LOD	55.45	91.54	13.68	<LOD	16.07	<LOD	13.69	<LOD	18.54	70.83	3.84	124.51	5.01	147.63	4.71	<LOD	13.2	<LOD	71.15	<LOD	50.3	<LOD	97.64	<LOD	109.95	<LOD	1264.35	<LOD	35.3	<LOD	22.79	Boring B-14	3-4' Deep	10/2/03					
2-Oct-03	36	25.51	Soil									<LOD	4005.48	<LOD	476.37	684.86	114.53	28356	474.53	<LOD	396.28	<LOD	110.39	<LOD	73.59	109.63	17.03	<LOD	19.81	<LOD	15.17	<LOD	21.34	76.48	4.61	114.43	5.69	133.12	5.33	<LOD	15.54	<LOD	83.67	<LOD	64.95	<LOD	124.62	<LOD	141.31	<LOD	1542.81	<LOD	40.75	<LOD	27.63	Boring B-13	5-6' Deep	10/2/03					
2-Oct-03	37	26.34	Soil									<LOD	5388.95	<LOD	651.65	462.13	147.98	28402.98	634.96	<LOD	509.15	<LOD	147.69	<LOD	110.45	75.38	22.41	30.66	9.72	<LOD	23.11	<LOD	29.5	71.87	6.03	90.57	7.04	104.42	6.63	<LOD	20.77	<LOD	113.18	<LOD	99.42	<LOD	189.93	<LOD	214.19	<LOD	2101.59	<LOD	55.71	<LOD	38.23	Boring B-14	6-7' Deep	10/2/03					
2-Oct-03	38	33.98	Soil									3481.36	1080.65	<LOD	359.24	368.96	81.38	15894.84	274.77	<LOD	260.89	<LOD	84.6	<LOD	56.57	72.51	13.05	<LOD	16.38	<LOD	13.56	<LOD	18.2	66.54	3.71	169.96	5.57	191.79	5.16	<LOD	13.6	<LOD	71.07	<LOD	57.66	<LOD	111.02	<LOD	124.85	<LOD	1216.17	<LOD	35.23	<LOD	22.56	Boring B-14	8-Jul	10/2/03					
2-Oct-03	39	53.81	Standardization	PASS	0.0006	0.0186	260																																																								
2-Oct-03	40	28.72	Soil									<LOD	3905.46	<LOD	448.72	<LOD	272.47	13620.27	302.16	<LOD	292.08	<LOD	102.02	<LOD	68.04	66.69	15.55	<LOD	18.74	<LOD	14.65	<LOD	20.98	61.7	4.36	176.99	6.82	186.56	6.16	<LOD	16.07	<LOD	85.25	<LOD	67.64	<LOD	129.49	<LOD	146.69	<LOD	1498.66	<LOD	40.84	<LOD	26.92	Boring B-14	8-9' Deep	10/2/03					
2-Oct-03	41	29.35	Soil									4819.25	1389.85	<LOD	501.21	918.08	122.32	27156.53	468.52	<LOD	393.79	<LOD	117.69	<LOD	76.03	100.05	17.22	<LOD	21.25	<LOD	16.85	<LOD	22.8	67.49	4.49	127.93	6.02	129.54	5.4	<LOD	15.89	<LOD	85.46	<LOD	70.95	<LOD	138.81	<LOD	154.58	<LOD	1540.03	<LOD	44.68	40.91	10.31	Boring B-14	9-10' Deep	10/2/03					
2-Oct-03	42	21.94	Soil									<LOD	3775.53	<LOD	460.02	791.1	116.21	26998.67	462.51	<LOD	384	<LOD	111.41	<LOD	62.36	83.04	15.85	<LOD	18.9	<LOD	15	<LOD	21.3	74.79	4.69	106.14	5.58	73.11	4.59	<LOD	15.24	<LOD	83.44	73.81	20.33	<LOD	117.08	<LOD	132.9	<LOD	1438.84	<LOD	41.08	<LOD	26.67	Boring B-14	10-11 Deep	10/2/03					
2-Oct-03	43	19.93	Soil									<LOD	3295.19	<LOD	388.98	<LOD	239.63	16508.19	317.5	424.12	100.67	<LOD	90.53	<LOD	57.44	64.66	13.21	<LOD	16.82	<LOD	13.58	<LOD	18.33	68.21	3.94	128.34	5.26	118.47	4.58	<LOD	13.5	<LOD	73.6	147.53	16.26	<LOD	93.87	<LOD	105.65	<LOD	1246.78	<LOD	34.41	<LOD	23.72	Boring B-14	11-12 Deep	10/2/03					
2-Oct-03	44	21.33	Soil									<LOD	3519.6	<LOD	413.5	528.62	99.58	25420.18	409.78	385.16	116.94	<LOD	101.72	<LOD	62.54	138.46	16.19	<LOD	19.01	<LOD	13.17	<LOD	19.49	60.45	3.95	91.08	4.9	113.92	4.69	<LOD	14.34	<LOD	77.27	<LOD	53.5	<LOD	103.11	<LOD	116.46	<LOD	1340.2	<LOD	37.58	34.41	8.73	Boring B-15	0-1' Deep	10/2/03					
2-Oct-03	45	25.07	Soil									4355.49	1374.14	<LOD	497.03	454.77	108.97	23099.63	425.43	<LOD	360.85	<LOD	102.83	<LOD	75.36	140.19	16.36	<LOD	20.04	<LOD	14.56	<LOD	22.49	61.74	4.42	122.56	6.01	149.6	5.71	<LOD	16.27	<LOD	88.55	<LOD	67.03	<LOD	129.7	<LOD	145.53	<LOD	1520.71	<LOD	43.95	37.27	9.94	Boring B-15	1-2' Deep	10/2/03					
2-Oct-03	46	20.93	Soil									<LOD	3813.32	<LOD	471.65	508.65	107.12	28636.73	464.48	463.92	131.72	<LOD	115.99	<LOD	66.64	78.74	15.39	21.07	6.65	<LOD	14.54	<LOD	20.55	71.53	4.39	126.34	5.73	132.64	5.2	<LOD	15.18	<LOD	81.64	<LOD	56.61	<LOD	109.9	140.49	41.46	<LOD	1436.61	<LOD	39.2	<LOD	26.45	Boring B-15	2-3' Deep	10/2/03					
2-Oct-03	47	21.71	Soil									3917.28	1103.75	<LOD	394.43	424.7	91.38	15651.61	304.44	324.93	99.09	<LOD	99.74	<LOD	61.55	207.68	16.15	<LOD	18.32	<LOD	13.41	<LOD	20.23	61.34	4.03	139.67	5.78	270.9	6.61	<LOD	15.28	<LOD	78.61	81.78	18.39	<LOD	106.15	<LOD	119.68	<LOD	1281.28	<LOD	39.99	<LOD	25.72	Boring B-15	3-4 Deep	10/2/03					
2-Oct-03	48	27.45	Soil									<LOD	3826.31	<LOD	478	670.48	111.47	24435.55	426.83	<LOD	362.5	<LOD	108.85	<LOD	68.25	85.77	16.01	<LOD	18.85	<LOD	15.31	<LOD	20.43	66.51	4.37	122.73	5.78	123.35	5.19	<LOD	15.41	<LOD	82.84	<LOD	66.23	<LOD	127.26	<LOD	142.93	<LOD	1457.69	<LOD	38.97	<LOD	25.9	Boring B-15	4-5' Deep	10/2/03					
2-Oct-03	49	25.14	Soil									<LOD	3789.37	<LOD	435.72	581.39	105.17	23919.29	411.02	<LOD	358.2	<LOD	105.05	<LOD	65.51	108.26	16.26	<LOD	18.63	<LOD	14.7	<LOD	22.04	76.93	4.47	104.29	5.38	121.84	5.03	<LOD	15.13	<LOD	81.4	<LOD	61.99	<LOD	119.93	<LOD	135.37	<LOD	1430.91	<LOD	43.01	<LOD	26.44	Boring B-15	5-6' Deep	10/2/03					
2-Oct-03	50	31.1	Soil									<LOD	4025.82	<LOD	476.14	1124.36	124.17	27940.29	466.78	<LOD	378.75	<LOD	108.47	<LOD	73.34	101.63	16.82	<LOD	19.89	<LOD	15.54	<LOD	21.59	82.38	4.69	108.92	5.56	104.98	4.96	<LOD	15.77	<LOD	84.13	<LOD	70.46	<LOD	135.57	165.24	51.06	<LOD	1511.78	<LOD	41.6	37.1	9.88	Boring B-15	6-7' Deep	10/2/03					
2-Oct-03	51	22.97	Soil									<LOD	3669.01	<LOD	431.35	540.66	103.56	27140.59	437.55	394.64	124.77	<LOD	110.54	<LOD	62.95	76.19	14.86	<LOD	18.16	<LOD	13.86	<LOD	19.72	83.41	4.51	116.35	5.44	123.28	4.95	<LOD	14.69	<LOD	79.62	<LOD	57.41	<LOD	110.06	<LOD	124.68	<LOD	1402.92	<LOD	37.55	<LOD	25.18	Boring B-15	7-8' Deep	10/2/03					
2-Oct-03	52	26.73	Soil									<LOD	4035.46	<LOD	447.53	333.95	100.91	18192.77	365.77	<LOD	341.12	<LOD	102.56	<LOD	70.75	68.61	16.01	<LOD	19.47	<LOD	15.04	<LOD	21.64	64.36	4.46	143.76	6.38	157.41	5.85	<LOD	16.43	<LOD	86.07	<LOD	68.98	<LOD	133.01	200.41	50.03	<LOD	1516.56	<LOD	42.13	<LOD	26.99	Boring B-15	8-9' Deep	10/2/03					
2-Oct-03	53	24.66	Soil									<LOD	3857.47	<LOD	441.68	630.36	108.62	24951.05	429.96	<LOD	369.91	<LOD	107.86	<LOD	68.89	89.82	15.99	<LOD	19.42	<LOD	15.48	<LOD	21.26	65.95	4.35	121.39	5.73	103.21	4.91	<LOD	15.18	<LOD	81.97	<LOD	62.44	<LOD	119.71	<LOD	134.56	<LOD	1460.59	<LOD	39.36	<LOD	27.79	Boring B-15	9-10' Deep	10/2/03					
2-Oct-03	54	26.49	Soil									<LOD	4683.89	<LOD	571.33	<LOD	329.49	15800.45	385.77	<LOD	362.38	<LOD	119.97	<LOD	90.26	69.1	18.96	<LOD	24.49	<LOD	18.27	<LOD	25.14	53.17	4.94	140.54	7.25	129.32	6.34	<LOD	18.8	<LOD	100.06	<LOD	84.6	<LOD	163.01	<LOD	183.91	<LOD	1843.37	<LOD	45.81	<LOD	34.15	Boring B-15	10-11 Deep	10/2/03					
2-Oct-03	55	26.6	Soil									<LOD	4559.43	<LOD	559.54	<LOD	355.93	16550.53	408.16	<LOD	384.77	<LOD	128.88	<LOD	90.81	89.26	20.23	<LOD	24.28	<LOD	19	<LOD	25.34	73.23	5.55	153.08	7.71	148.81	6.83	<LOD	20.05	<LOD	103.72	<LOD	88.14	<LOD	168.51	<LOD	190.15	<LOD	1704.96	<LOD	48.64	<LOD	33.3	Boring B-15	11-12' Deep	10/2/03					
2-Oct-03	56	20.72	Soil									<LOD	3509.08	<LOD	404.72	299.52	89.65	22741.56	370.39	426.26	111.35	<LOD	104.17	<LOD	59.45	154.8	16.15	<LOD	17.8	<LOD	13.78	<LOD	18.33	77.17	4.17	86.39	4.69	101.25	4.42	<LOD	13.91	<LOD	74.42	<LOD	51.06	<LOD	98.24	<LOD	110.76	<LOD	1339.79	<LOD	35.61	37.56	8.68	Boring B-9		10/2/03					
2-Oct-03	57	19.3	Soil									<LOD	3443.02	<LOD	393.99	<LOD	254.3	20730.51	346.33	387.6	106.17	<LOD	98.13	<LOD	57.29	101.16	14.47	<LOD	17	<LOD	13.59	<LOD	18.07	72.27	4.07	126.38	5.3	127.31	4.74	<LOD	13.76	<LOD	73.81	<LOD	48.64	<LOD	93.52	<LOD	105.83	<LOD	1309.07	<LOD	35.92	<LOD	24.58	Boring B-9	1-2' Deep	10/2/03					
2-Oct-03	58	27.05	Soil									<LOD	3116.76	<LOD	358.42	<LOD	229.93	16070.38	285.01	<LOD	270.89	<LOD	83.68	<LOD	55.95	69.51	13.15	<LOD	16.9	<LOD	12.93	<LOD	17.85	66.02	3.8	133.67	5.23	133.26	4.65	<LOD	13.56	<LOD	72.26	<LOD	54.53	<LOD	104.69	<LOD	118.1	<LOD	1163.44	<LOD	34.67	<LOD	23.3	Boring B-9	2-3' Deep	10/2/03					
2-Oct-03	59	21.79	Soil									<LOD	3299.44	<LOD	392.09	<LOD	231.83	12107.45	246.89	<LOD	247.19	<LOD	84.98	<LOD	54.67	48.98	12.6	<LOD	16.29	<LOD	12.7	<LOD	18.3	68.34	3.95	161.85	5.77	186.41	5.37	<LOD	13.94	<LOD	73.94	<LOD	50.91	<LOD	98.21	<LOD	110.77	<LOD	1283.42	<LOD	34.97	<LOD	22.38	Boring B-9	3-4 Deep	10/2/03					
2-Oct-03	60	35.52	Soil									<LOD	0	<LOD	0	<LOD	0	<LOD	0	<LOD	0	<LOD	0	<LOD	0	<LOD	0	<LOD	0	<LOD	0	<LOD	0	<LOD	0	<LOD	0	<LOD	0	<LOD	0	<LOD	0	<LOD	0	<LOD	0	<LOD	0	<LOD	0	<LOD	0	<LOD	0	Boring B-9	Bad Test	10/2/03					
2-Oct-03	61	23.21	Soil									<LOD	3796.74	<LOD	430.75	<LOD	278.75	18769.53	361.12	<LOD	330.58	<LOD	100.99	<LOD	66.36	92.24	16.05	<LOD	17.4	<LOD	14.9	<LOD	21.3	59.69	4.21	100.76	5.45	99.12	4.88	<LOD	15.49	<LOD	83.65	<LOD	62.08	<LOD	119.46	<LOD	135.18	<LOD	1453.16	<LOD	42.27	<LOD	24.59	Boring B-9	4-5' Deep	10/2/03					
2-Oct-03	62	19.82	Soil									<LOD	3330.97	<LOD	402.29	575.58	96.59	24437.74	384.78	528.22	114.79	<LOD	101.16	<LOD	61.43	89.82	14.34	<LOD	17.95	<LOD	13.66	<LOD	18.66	67.71	3.95	119.65	5.19	98.47	4.39	<LOD	13.91	<LOD	74.46	<LOD	49.32	<LOD	95.12	<LOD	107.42	<LOD	1256.59	<LOD	37.09	29.04	8.34	Boring B-9	5-6' Deep	10/2/03					
2-Oct-03	63	21.23	Soil									<LOD	3468.69	<LOD	405.44	1263.18	119.22	29310.07	455.71	<LOD	376.83	<LOD	108.74	<LOD	63.02	79.09	14.75	<LOD	17.8	<LOD	14.16	<LOD	19.4	78.74	4.35	103.05	5.14	97.38	4.56	<LOD	14.43	<LOD	77.42	<LOD	54	<LOD	104.54	<LOD	117.07	<LOD	1366.32	<LOD	37.29	<LOD	25.1	Boring B-9	6-7' Deep	10/2/03					
2-Oct-03	64	23.87	Soil									<LOD	3536.75	<LOD	441.42	491.64	103.57	27231.04	443.55	<LOD	366.96	<LOD	109.68	<LOD	68.35	74.15	15.13	<LOD	17.32	<LOD	13.87	<LOD	20.08	80.3	4.47	96.02	5.15	74.46	4.38	<LOD	14.56	<LOD	79.33	<LOD	59.06	<LOD	113.09	<LOD	127.57	<LOD	1303.61	<LOD	39.76	<LOD	24.89	Boring B-9	7-8' Deep	10/2/03					
2-Oct-03	65	24.6	Soil									<LOD	3104.78	<LOD	349.76	423.14	85.75	27573.41	381.03	588.85	110.43	<LOD	93.15	<LOD	53.54	80.69	12.79	<LOD	15.59	<LOD	12.33	<LOD	16.74	62.72	3.51	86.43	4.23	72.12	3.68	<LOD	12.42	<LOD	67.5	<LOD	47.57	<LOD	91.34	<LOD	102.63	<LOD	1180.39	<LOD	32.26	<LOD	21.63	Boring B-9	8-9' Deep	10/2/03					
2-Oct-03	66	21.16	Soil									<LOD	3380.6	<LOD	393.05	427.3	94.31	24887.51	396.41	385.76	115.77	<LOD	101.88	<LOD	57.35	84.41	14.27	<LOD	17.33	<LOD	12.54	<LOD	18.16	67.67	4.02	75.18	4.52	68.06	4.03	<LOD	13.79	<LOD	75.11	<LOD	51.94	<LOD	100.16	<LOD	113.51	<LOD	1266.34	<LOD	34.46	<LOD	23.9	Boring B-9	9-10 Deep	10/2/03					
2-Oct-03	67	22.86	Soil									<LOD	3631.16	<LOD	436.23	440.55	103.09	27542.13	451.09	<LOD	381.24	<LOD	106.19	<LOD	61.49	86.44	15.36	<LOD	17.24	<LOD	13.9	<LOD	19.51	66.1	4.22	84.38	4.98	70.02	4.33	<LOD	14.58	<LOD	79.32	<LOD	58.32	<LOD	112.45	<LOD	126.95	<LOD	1384.54	<LOD	38.36	<LOD	25.79	Boring B-9	10-11 Deep	10/2/03					
2-Oct-03	68	22.71	Soil									<LOD	3607.16	<LOD	412.93	<LOD	275.79	20487.86	364.55	369.54	111.64	<LOD	100.82	<LOD	62.13	72.58	14.61	<LOD	18.03	<LOD	14.13	<LOD	19.5	59.16	4.01	79.05	4.8	79.45	4.37	<LOD	14.51	<LOD	78.77	<LOD	56.98	<LOD	109.7	161.68	41.13	<LOD	1364.3	<LOD	37.47	<LOD	24.75	Boring B-9	11-12' Deep	10/2/03					
2-Oct-03	69	22.41	Soil									9352.55	1891.27	717.52	189.17	499.04	114.61	27378.42	469.04	<LOD	398.73	297.46	46.28	97.16	27.91	4911.5	69.13	126.13	26.39	<LOD	10.39	<LOD	29.86	13.77	3.77	134.02	6.25	32.88	4.35	22.7	5.41	<LOD	84.13	<LOD	61.53	<LOD	117.65	<LOD	132.96	5772.99	722.23	<LOD	58.14	2144.42	44.54	Boring B-10		10/2/03					
2-Oct-03	70	24.69	Soil									<LOD	4351.24	<LOD	522.69	525.78	119.23	26972.16	498.66	<LOD	406.7	<LOD	119.37	<LOD	76.26	228.73	21.84	<LOD	25.45	<LOD	16.17	<LOD	23.12	67.94	4.79	80.91	5.52	97.4	5.24	<LOD	16.66	<LOD	90.15	<LOD	71.55	<LOD	137.09	188.6	51.59	<LOD	1643.65	<LOD	45.07	93.63	12.38	Boring B-10	1-2' Deep	10/2/03					
2-Oct-03	71	22.4	Soil									<LOD	3793.53	<LOD	445.86	453.51	100.85	21323.54	382.79	<LOD	341.71	<LOD	104.33	<LOD	64.91	66.57	14.88	<LOD	18.71	<LOD	14.9	<LOD	19.65	77.39	4.52	110.1	5.47	124.95	5.1	<LOD	15.02	<LOD	81.67	142.96	19.78	<LOD	114.49	<LOD	128.65	<LOD	1444.33	<LOD	38.84	<LOD	26.24	Boring B-10	2-3 Deep	10/2/03					
2-Oct-03	72	21.69	Soil									<LOD	3469.31	<LOD	399.15	<LOD	244.36	13828.74	279.75	<LOD	265.5	<LOD	92.47	<LOD	61.4	67.93	14.06	<LOD	17.91	<LOD	13.54	<LOD	19.07	72.94	4.23	199.34	6.61	218.83	6.05	<LOD	15.05	<LOD	77.14	<LOD	54.44	<LOD	104.81	<LOD	117.64	<LOD	1295.47	<LOD	37.61	<LOD	25.58	Boring B-10	3-4 Deep	10/2/03					
2-Oct-03	73	22.51	Soil									4277.24	1195.47	<LOD	424.28	291.62	90.43	16139	315.31	<LOD	291.81	<LOD	92.63	<LOD	64.99	99.3	15.52	<LOD	18.49	<LOD	14.31	<LOD	19.64	70.27	4.3	147.82	5.99	167.67	5.56	<LOD	14.95	<LOD	79.99	105.81	19.16	<LOD	110.89	<LOD	124.49	<LOD	1308.35	<LOD	37.31	<LOD	26.6	Boring B-10	4-5' Deep	10/2/03					
2-Oct-03	74	22.27	Soil									<LOD	3694.07	<LOD	423.26	277.34	91.35	17374.16	331.44	<LOD	307.7	<LOD	98.55	<LOD	65.13	71.1	14.77	<LOD	19.28	<LOD	15.31	<LOD	20.24	70.58	4.35	166.43	6.61	180.82	5.79	<LOD	15.46	<LOD	80.72	<LOD	57.62	<LOD	110.75	<LOD	125.41	<LOD	1416.44	<LOD	37.87	<LOD	27.04	Boring B-10	5-6' Deep	10/2/03					
2-Oct-03	75	21.12	Soil									<LOD	3595.25	<LOD	407.49	328.69	94.41	24762.59	404.91	<LOD	341.79	<LOD	103.66	<LOD	60.14	87.49	14.82	<LOD	16.66	<LOD	12.99	<LOD	18.83	70.01	4.17	119.84	5.41	128.55	4.94	<LOD	14.44	<LOD	78.06	<LOD	54.05	<LOD	104.4	<LOD	117.76	<LOD	1375.19	<LOD	38.68	<LOD	25.14	Boring B-10	6-7' Deep	10/2/03					
2-Oct-03	76	22.65	Soil									4784.01	1202.1	<LOD	415.67	<LOD	266.92	14822.79	303.06	<LOD	292.48	<LOD	95.58	<LOD	65.22	84.71	15.24	<LOD	17.63	<LOD	13.98	<LOD	20.05	66.57	4.26	164.79	6.33	150.15	5.44	<LOD	15.16	<LOD	81.16	<LOD	58.65	<LOD	112.6	<LOD	127.24	<LOD	1295.24	<LOD	39.14	<LOD	25.67	Boring B-10	7-8' Deep	10/2/03					
2-Oct-03	77	18.77	Soil									<LOD	3039.37	<LOD	368.38	284.84	84.43	24989.21	371.66	333.82	108.04	128.79	33.75	<LOD	56.6	89.38	13.51	<LOD	15.57	<LOD	12.5	<LOD	17.26	74.39	3.88	89.99	4.47	81.8	3.94	<LOD	12.98	<LOD	69.83	<LOD	44.43	<LOD	85.88	164.03	32.16	<LOD	1135.06	<LOD	33.43	<LOD	22.88	Boring B-10	9-10' Deep	10/2/03					
2-Oct-03	78	22.66	Soil									<LOD	3813.16	<LOD	426.99	368.85	100.57	28274.62	455.22	<LOD	379.47	<LOD	107.19	<LOD	68.03	161.37	17.57	<LOD	21.18	<LOD	14.57	<LOD	19.74	77.56	4.44	109.5	5.38	87.43	4.56	<LOD	14.76	<LOD	79.08	<LOD	57.3	<LOD	110.84	<LOD	125.06	<LOD	1432.41	<LOD	38.02	62.66	10.04	Boring B-10	8-9' Deep	10/2/03					
2-Oct-03	79	19.69	Soil									<LOD	3175.64	<LOD	385.8	487.85	89.17	20643.08	335.86	506.16	104.33	<LOD	95.13	<LOD	57.63	81.64	13.47	<LOD	15.07	<LOD	12.25	<LOD	17.2	74.1	3.94	96.14	4.65	82.26	4.03	<LOD	13.21	<LOD	71.68	<LOD	46.76	<LOD	89.99	<LOD	101.78	<LOD	1185.14	<LOD	33.05	<LOD	22.37	Boring B-10	10-11' Deep	10/2/03					
2-Oct-03	80	20.18	Soil									<LOD	3136.66	<LOD	397.42	300.82	84.3	18180.58	311.57	<LOD	282.59	95.26	31.33	<LOD	56.41	70.15	13.22	<LOD	15.63	<LOD	12.63	<LOD	17.75	67.22	3.87	102.28	4.81	111.29	4.42	<LOD	13.61	<LOD	72.49	<LOD	48.14	<LOD	92.69	<LOD	104.76	<LOD	1231.35	<LOD	33.94	<LOD	22.6	Boring B-10	11-12' Deep	10/2/03					
2-Oct-03	81	22.91	Soil									<LOD	4921.68	<LOD	605.33	780.56	167.51	99071.77	1374.02	<LOD	764.52	<LOD	188.87	<LOD	90.21	1352.67	45.74	<LOD	50.92	<LOD	18.21	<LOD	25.51	41.15	4.45	102.48	6.03	90.12	5.33	<LOD	17.58	<LOD	91.55	<LOD	69.36	<LOD	134.24	<LOD	151.62	<LOD	1860.73	<LOD	48.68	691.33	25.81	Boring B-11		10/2/03					
2-Oct-03	82	22.13	Soil									4161.78	1261.16	<LOD	442.15	807.4	110.43	25519.02	424.17	432.41	123.49	<LOD	106.23	<LOD	63.32	186.62	18.07	<LOD	19.14	<LOD	14.03	<LOD	19.96	63.47	4.16	109.53	5.37	159.01	5.41	<LOD	14.99	<LOD	79.39	<LOD	57.04	<LOD	110.24	<LOD	124.43	<LOD	1403.12	<LOD	38.32	33.86	9.1	Boring B-11	1-2' Deep	10/2/03					
2-Oct-03	83	21.2	Soil									4175.78	1223.74	<LOD	406.51	695.76	101.72	22430.76	376.7	<LOD	330.09	<LOD	102.54	<LOD	60.77	461.76	23.58	<LOD	20.94	<LOD	14.15	<LOD	20.17	64.72	4.05	134.61	5.62	224.79	6	<LOD	14.54	<LOD	77.38	<LOD	53.32	<LOD	102.03	<LOD	115.51	<LOD	1364.88	<LOD	39.62	64.31	9.76	Boring B-11	3-4 Deep	10/2/03					
2-Oct-03	84	21.31	Soil									4485.94	1031.89	<LOD	384.53	436.23	86	16457.98	291.9	377.56	94.58	<LOD	90.28	<LOD	54	71.35	13.15	<LOD	16.08	<LOD	12.02	<LOD	18.44	66.25	3.85	146.82	5.47	168.1	5.06	<LOD	13.8	<LOD	72.28	<LOD	49.02	<LOD	94.67	<LOD	106.75	<LOD	1096.37	<LOD	35.48	24.32	7.85	Boring B-11	4-5 Deep	10/2/03					
2-Oct-03	85	25.35	Soil									3505.11	1128.09	<LOD	405.37	473.68	92.73	23016.01	365.08	<LOD	317.28	<LOD	95.32	<LOD	59.74	69.06	13.64	<LOD	16.49	<LOD	12.75	<LOD	19.88	75.68	4.05	131.39	5.31	144.88	4.87	<LOD	13.7	<LOD	73.43	80.38	18.09	<LOD	104.74	<LOD	117.81	<LOD	1262.91	<LOD	39.05	<LOD	23.14	Boring B-11	5-6' Deep	10/2/03					
2-Oct-03	86	24.62	Soil									<LOD	3709.38	<LOD	436.47	374.61	97.35	19227.36	359.45	<LOD	323.79	<LOD	100.79	<LOD	64.19	90.28	15.61	<LOD	17.99	<LOD	14.95	<LOD	19.14	67.39	4.32	132.24	5.85	130.8	5.21	<LOD	15.37	<LOD	80.96	<LOD	61.69	<LOD	118.27	<LOD	132.78	<LOD	1417.28	<LOD	36.25	<LOD	25.45	Boring B-11	6-7' Deep	10/2/03					
2-Oct-03	87	19.66	Soil									<LOD	3268.27	<LOD	393.92	<LOD	244.99	17035.57	300.9	333.67	96.14	<LOD	86.11	<LOD	53.9	57.31	12.64	<LOD	16.7	<LOD	12.59	<LOD	18.65	63.43	3.83	132.42	5.32	154.47	4.97	<LOD	13.73	<LOD	73.59	147.21	16.19	<LOD	92.07	<LOD	105.14	1666.95	442.47	<LOD	36.27	<LOD	23.8	Boring B-11	7-8' Deep	10/2/03					
2-Oct-03	88	23.99	Soil									<LOD	3832.02	<LOD	444.89	<LOD	284.77	14948.31	322.69	<LOD	313.06	<LOD	101.12	<LOD	69.26	<LOD	42.95	<LOD	20.06	<LOD	14.59	<LOD	21.46	66.79	4.51	148.1	6.42	134.28	5.54	<LOD	16.22	<LOD	85.78	<LOD	65.6	<LOD	126.02	<LOD	141.69	<LOD	1479.24	<LOD	41.8	<LOD	28.28	Boring B-11	8-9' Deep	10/2/03					
2-Oct-03	89	25.78	Soil									<LOD	3125.15	<LOD	369.64	324.64	79.43	11582.89	235.29	<LOD	239.11	<LOD	81.53	<LOD	55.59	46.5	12.36	<LOD	15.51	<LOD	13.2	<LOD	17.08	54.66	3.57	143.11	5.37	154.99	4.89	<LOD	13.63	<LOD	71.63	<LOD	53.19	<LOD	102.31	<LOD	114.13	<LOD	1191.57	<LOD	35.26	<LOD	22.28	Boring B-11	9-10' Deep	10/2/03					
2-Oct-03	90	21.28	Soil									3895.59	1154.64	<LOD	405.46	445.15	97.06	19570.37	359.74	506.53	113.47	<LOD	99.68	<LOD	62.48	43.44	13.88	<LOD	18.27	<LOD	13.24	<LOD	20.69	65.58	4.22	118.17	5.58	111.87	4.91	<LOD	14.76	<LOD	80.57	<LOD	57.04	<LOD	110.07	<LOD	123.41	<LOD	1250.91	<LOD	40.36	<LOD	25.31	Boring B-11	10-11' Deep	10/2/03					
2-Oct-03	91	20.1	Soil									<LOD	3210.95	<LOD	382.47	271.53	87.2	25108.08	385.22	427.16	112.82	<LOD	97.61	<LOD	58.93	67.7	13.36	<LOD	16.56	<LOD	12.79	<LOD	17.36	68.75	3.89	89.01	4.6	89.36	4.16	<LOD	13.54	<LOD	72.59	<LOD	48.21	<LOD	92.6	<LOD	104.41	<LOD	1204.2	<LOD	34.02	<LOD	23.59	Boring B-11	11-12' Deep	10/2/03					
2-Oct-03	92	19.72	Soil									<LOD	3554.4	<LOD	417.41	<LOD	261.68	25980.1	395.5	604.8	116.97	<LOD	100.06	89.62	21.2	189.2	16.83	<LOD	21.97	<LOD	12.78	<LOD	18.64	79.2	4.14	81.43	4.51	100.79	4.31	<LOD	13.62	<LOD	73.34	<LOD	48.1	<LOD	92.7	<LOD	105.16	<LOD	1355.23	<LOD	35.51	104.33	10.22	Boring B-12		10/2/03					
2-Oct-03	93	30.52	Soil									<LOD	3211.27	<LOD	338.87	447.52	85.59	23992.22	351.98	<LOD	300.94	<LOD	87.48	<LOD	55.31	78.61	12.98	17.98	5.64	<LOD	12.56	<LOD	16.98	66.06	3.64	109.34	4.64	113.48	4.21	<LOD	12.7	<LOD	69.4	<LOD	53.99	<LOD	104.07	<LOD	116.72	<LOD	1226.72	<LOD	32.4	<LOD	22.86	Boring B-12	1-2' Deep	10/2/03					
2-Oct-03	94	21.49	Soil									4620.98	1184.86	<LOD	409.36	<LOD	262.27	16832.06	319.12	<LOD	302.63	<LOD	94.67	<LOD	60.72	49.65	13.69	<LOD	17.24	<LOD	14.4	<LOD	19.06	66.4	4.15	163.53	6.16	201.32	5.88	<LOD	15.16	<LOD	78.65	<LOD	55.63	<LOD	106.8	<LOD	120.47	<LOD	1286.09	<LOD	38.89	<LOD	24.85	Boring B-12	2-3' Deep	10/2/03					
2-Oct-03	95	22.99	Soil									<LOD	3525.17	<LOD	422.17	<LOD	251.4	16503.69	310.08	<LOD	296.13	<LOD	92.51	<LOD	61.61	50.29	13.64	<LOD	18.07	<LOD	14.14	<LOD	19.3	78.28	4.34	177.92	6.27	165.64	5.64	<LOD	14.85	<LOD	77.74	99.42	18.55	<LOD	107.21	<LOD	120.08	<LOD	1327.32	<LOD	36.19	<LOD	25.16	Boring B-12	3-4 Deep	10/2/03					
2-Oct-03	96	22.77	Soil									5807.1	1415.63	<LOD	452.68	350.4	106.9	24784.06	454.28	<LOD	391	<LOD	104.85	<LOD	73.95	160.93	19.17	<LOD	21.82	<LOD	15.23	<LOD	21.26	71.61	4.71	82.59	5.36	90.76	4.99	<LOD	16.28	<LOD	88.22	66.45	21.95	<LOD	126.93	<LOD	143.13	<LOD	1531.43	<LOD	40.86	36.25	10.07	Boring B-12	4-5' Deep	10/2/03					
2-Oct-03	97	20.7	Soil									<LOD	3506.4	<LOD	419.13	331.8	97	29773.44	454.21	423.12	126.86	115.59	38.17	<LOD	64.78	63.56	14.83	<LOD	18.55	<LOD	14.57	<LOD	19.86	79.75	4.33	115.3	5.29	104.86	4.61	<LOD	14.26	<LOD	77.34	84.46	17.67	<LOD	102.26	<LOD	115.49	<LOD	1314.17	<LOD	38.26	<LOD	25.66	Boring B-12	5-6' Deep	10/2/03					
2-Oct-03	98	25.57	Soil									<LOD	4728.56	<LOD	546.39	749.71	131.34	24330.37	491.55	<LOD	414.6	<LOD	133.24	<LOD	86.32	55.09	17.91	<LOD	22.98	<LOD	17.56	<LOD	24.53	62.32	4.96	106.01	6.36	91.02	5.53	<LOD	18.06	<LOD	97.98	<LOD	79.43	<LOD	152.82	<LOD	172.2	<LOD	1762.08	<LOD	46.99	36.33	11.32	Boring B-12	8-9 Deep	10/2/03					
2-Oct-03	99	18.85	Soil									<LOD	3101.43	<LOD	363.79	531.76	92.02	27599.04	399.23	<LOD	339.23	<LOD	98.4	<LOD	58.36	70.84	13.07	<LOD	15.85	<LOD	12.52	<LOD	17.63	75.77	3.91	72.59	4.21	76.45	3.87	<LOD	12.74	<LOD	70.53	<LOD	44.79	<LOD	86.4	<LOD	97.5	<LOD	1189.37	<LOD	34.13	<LOD	22.13	Boring B-12	9-10 Deep	10/2/03					
2-Oct-03	100	22.05	Soil									<LOD	3400.74	<LOD	395.28	549.79	100.36	25225.76	412.46	584.18	122.37	<LOD	103.4	<LOD	62.39	98.42	15.28	<LOD	18	<LOD	14.19	<LOD	19.65	64.39	4.06	76.38	4.7	76.14	4.27	<LOD	14.36	<LOD	77.64	<LOD	54.96	<LOD	105.78	<LOD	119.18	<LOD	1325.98	<LOD	39.11	28.26	6.73	Boring B-12	10-11 Deep	10/2/03					
2-Oct-03	101	21.76	Soil									<LOD	3193.84	<LOD	344.57	395.47	85.26	23805.42	356.41	360.04	105.09	<LOD	88.99	<LOD	55.25	75.52	12.98	<LOD	15.58	<LOD	12.57	<LOD	16.98	71.7	3.78	88.48	4.41	69.96	3.77	<LOD	12.67	<LOD	69.91	82.43	15.69	<LOD	90.88	<LOD	102.44	<LOD	1243.26	<LOD	33.27	<LOD	22.04	Boring B-12	11-12' Deep	10/2/03					
2-Oct-03	102	21.2	Soil									<LOD	3591.29	<LOD	409.76	530.85	96.88	20964.95	360.52	<LOD	325.63	110.88	35.32	<LOD	63.29	436.08	23.13	<LOD	29.92	<LOD	14.48	<LOD	20.63	57.19	3.94	143.96	5.78	145.1	5.14	<LOD	14.6	<LOD	77.29	62.99	17.8	<LOD	102.77	<LOD	115.97	<LOD	1353.24	<LOD	40.67	283.34	14.9	Boring B-16		10/2/03					
2-Oct-03	103	25.39	Soil									<LOD	3910.17	<LOD	466.47	772.15	118.23	24693.24	449.34	<LOD	379.34	<LOD	113.16	<LOD	72.62	132.68	18.26	<LOD	21.94	<LOD	15.99	<LOD	23.03	65.62	4.53	111.23	5.87	128.41	5.48	<LOD	16.39	<LOD	86.95	<LOD	68.21	<LOD	131.55	<LOD	146.32	<LOD	1526.3	<LOD	45.41	38.9	10.24	Boring B-16	1-2' Deep	10/2/03					
2-Oct-03	104	22.01	Soil									5535.02	1222.7	<LOD	424.4	336.02	93.17	19459.96	351.49	<LOD	319.27	<LOD	97.77	<LOD	62.57	85.72	14.99	<LOD	19.22	<LOD	14.84	<LOD	19.64	70.22	4.45	148.14	5.96	176.35	5.62	<LOD	15.26	<LOD	79.16	<LOD	56.35	<LOD	108.34	<LOD	122.57	<LOD	1308.59	<LOD	37.78	51.01	9.67	Boring B-16	2-3' Deep	10/2/03					
2-Oct-03	105	21.23	Soil									<LOD	3364.07	<LOD	414.85	371.22	88.03	14686.37	287.53	268.24	94.42	<LOD	94.74	<LOD	60.94	63.83	13.81	<LOD	18.03	<LOD	13.98	<LOD	19.66	67.66	4.1	165.87	6.36	198.87	5.76	<LOD	14.88	<LOD	76.85	<LOD	53.23	<LOD	102.75	<LOD	115.44	<LOD	1292.68	<LOD	37.35	<LOD	25.15	Boring B-16	3-4' Deep	10/2/03					
2-Oct-03	106	22.3	Soil									<LOD	3809.82	<LOD	434.63	395.22	97.42	21574.1	378.63	391.14	114.78	<LOD	103.57	<LOD	63.56	74.69	14.84	<LOD	18.09	<LOD	15.11	<LOD	19.51	77.78	4.44	162.65	6.22	168.13	5.66	<LOD	15.31	<LOD	80.54	<LOD	57.34	<LOD	110.66	<LOD	124.48	<LOD	1451.66	<LOD	37.79	<LOD	26.64	Boring B-16	4-5 Deep	10/2/03					
2-Oct-03	107	22.49	Soil									4629.38	1242.26	<LOD	456.26	403.99	98.2	16017.14	318.62	<LOD	307.37	<LOD	101.38	<LOD	65.99	53.22	14.39	<LOD	19.03	<LOD	15.21	<LOD	21.09	73.64	4.45	167.53	6.41	196.19	6.01	<LOD	15.66	<LOD	82.38	<LOD	59.17	<LOD	113.89	<LOD	128.12	<LOD	1358.6	<LOD	40.07	<LOD	26.66	Boring B-16	5-6' Deep	10/2/03					
2-Oct-03	108	25.9	Soil									<LOD	4649.96	<LOD	536.11	356.05	117.82	21069.71	448.73	<LOD	395.28	<LOD	123.74	<LOD	85.28	69.77	18.39	<LOD	21.19	<LOD	17.64	<LOD	24.23	65	5.04	125.08	6.76	142.28	6.31	<LOD	18.51	<LOD	97.71	<LOD	80.52	<LOD	154.27	<LOD	174.03	<LOD	1800.25	<LOD	46.47	<LOD	31.07	Boring B-16	6-7' Deep	10/2/03					
2-Oct-03	109	23.36	Soil									<LOD	3630.47	<LOD	423.6	540.75	98.41	18312.71	339.34	<LOD	313.9	<LOD	97.4	<LOD	64.97	<LOD	41.01	<LOD	17.46	<LOD	14.8	<LOD	20.36	69.2	4.23	182.42	6.49	158.74	5.47	<LOD	15.02	<LOD	79.05	<LOD	58.11	<LOD	112.41	<LOD	125.88	<LOD	1359.06	<LOD	40.72	<LOD	24.83	Boring B-16	7-8' Deep	10/2/03					
2-Oct-03	110	21.14	Soil									<LOD	3290.58	<LOD	382.1	389.2	83.37	13830.73	262.77	<LOD	256.78	<LOD	89.59	<LOD	56.11	77.27	13.36	<LOD	16.27	<LOD	12.51	<LOD	18.37	63.26	3.82	161.86	5.96	153.68	4.97	<LOD	13.63	<LOD	73.04	<LOD	49.15	<LOD	95.49	<LOD	107.6	<LOD	1272.01	<LOD	33.93	<LOD	22.41	Boring B-16	8-9' Deep	10/2/03					
2-Oct-03	111	22.69	Soil									<LOD	3224.95	<LOD	377.33	238.01	78.98	14836.63	270.92	423.14	90.67	<LOD	87.65	<LOD	58.19	60.44	12.82	<LOD	16.12	<LOD	12.65	<LOD	17.93	63.76	3.74	133.67	5.22	130.34	4.61	<LOD	13.44	<LOD	71.16	52.05	16.6	<LOD	95.62	<LOD	108.16	<LOD	1243.71	<LOD	34.76	<LOD	23.1	Boring B-16	9-10' Deep	10/2/03					
2-Oct-03	112	53.65	Standardization	PASS	0.0001	0.0186	265																																																								
2-Oct-03	113	25.92	Soil									<LOD	5469.33	<LOD	693.63	<LOD	407.76	19650.23	466.36	<LOD	409.02	<LOD	144.34	<LOD	101.27	75.17	21.69	<LOD	27.97	<LOD	21.08	<LOD	30.6	65.4	5.74	138.47	7.98	112.71	6.73	<LOD	21.42	<LOD	112.72	<LOD	96.44	<LOD	188.11	<LOD	209.63	<LOD	2067.97	<LOD	59.73	<LOD	39.79	Boring B-4	7-8' Deep	10/2/03					
2-Oct-03	114	27.19	Soil									<LOD	3380.97	<LOD	405.02	1575.18	115.92	34432.82	456.94	<LOD	360.06	<LOD	98.62	<LOD	58.07	87.47	13.57	<LOD	16.1	<LOD	12.98	<LOD	16.62	83.14	3.97	116.44	4.79	84.29	3.96	<LOD	12.99	<LOD	69.32	<LOD	51.67	<LOD	99.46	<LOD	112.3	<LOD	1285.72	<LOD	32.33	<LOD	21.93	Boring B-4	8-9' Deep	10/2/03					
2-Oct-03	115	21.74	Soil									<LOD	3611.37	<LOD	449.74	<LOD	277.98	25956.06	422.29	365.1	121.62	<LOD	106.3	<LOD	65.11	76.48	14.83	<LOD	16.97	<LOD	14.72	<LOD	19.77	70.23	4.2	96.07	5.08	101.91	4.64	<LOD	14.56	<LOD	78.91	<LOD	55.6	<LOD	106.63	<LOD	120.51	<LOD	1392.03	<LOD	39.69	34.28	9.04	Boring B-6	1-2' Deep	10/2/03					
2-Oct-03	116	22.48	Soil									<LOD	3437.54	<LOD	408.75	<LOD	255.78	23393.55	382.88	<LOD	336.56	<LOD	97.44	<LOD	61.35	95.45	14.86	<LOD	17.88	<LOD	12.98	<LOD	19.91	73.78	4.16	106.54	5.12	121.98	4.76	<LOD	14.22	<LOD	75.79	<LOD	54.2	<LOD	104.53	<LOD	117.74	<LOD	1297.76	<LOD	39.28	<LOD	24.9	Boring B-6	2-3 Deep	10/2/03					
2-Oct-03	117	24.03	Soil									4601.41	1310.21	<LOD	428.61	<LOD	278.65	24198.55	417.45	<LOD	355.62	<LOD	107.39	<LOD	65.18	78.96	15.41	<LOD	18.77	<LOD	15.34	<LOD	19.04	66.47	4.34	107.03	5.43	116.69	5.04	<LOD	15.1	<LOD	82.06	<LOD	61.61	<LOD	118.51	<LOD	133.36	<LOD	1461.65	<LOD	36.37	<LOD	25.22	Boring B-5	2-3 Deep	10/2/03					
2-Oct-03	118	21.23	Soil									<LOD	3781.31	<LOD	456.34	747.03	109.86	30086.11	469.15	<LOD	379.65	<LOD	109.73	<LOD	64.85	263.55	19.64	<LOD	20.56	<LOD	14.13	<LOD	19.63	70.35	4.2	126.32	5.51	116.64	4.82	<LOD	14.68	<LOD	77.68	115.92	18.1	<LOD	104.56	<LOD	117.7	<LOD	1433.93	<LOD	37.68	57.08	9.62	Boring B-5	1-2 Deep	10/2/03					
2-Oct-03	119	22.02	Soil									3770.61	1229.49	<LOD	437.94	364.12	94.46	21313.48	387.37	<LOD	322.36	<LOD	94.31	<LOD	61.06	113.6	15.66	<LOD	20.36	<LOD	14.35	<LOD	19.72	64.9	4.07	108.88	5.24	116.02	4.78	<LOD	14.43	<LOD	77.41	<LOD	54.67	<LOD	105.78	<LOD	119.04	<LOD	1384	<LOD	38.82	60.07	9.7	Boring B-8	1-2 Deep	10/2/03					
2-Oct-03	120	20.65	Soil									16815.68	1704.01	904.51	167.93	692.68	108.17	28590.24	441.28	<LOD	365.76	<LOD	110.36	153.13	24.69	1486.84	40.45	182.52	25.11	<LOD	19.11	<LOD	27.66	80.37	4.7	91.66	5.12	101.2	4.68	88.98	5.69	<LOD	76.42	<LOD	52.3	<LOD	100.81	<LOD	113.79	<LOD	1712.68	82.52	17.72	2239.99	41.95	Boring B-8	0-1' Deep	10/2/03					
2-Oct-03	121	21.74	Soil									<LOD	3796.71	<LOD	447.15	425.07	102.26	21976.49	398.39	<LOD	355.36	<LOD	102.21	<LOD	65.26	137.26	17.32	<LOD	19.67	<LOD	14.86	<LOD	20.51	70.01	4.44	112.46	5.63	128.11	5.24	<LOD	15.37	<LOD	82.81	<LOD	59.84	<LOD	115.05	<LOD	128.74	<LOD	1505.17	<LOD	39.91	33.67	9.47	Boring B-7	1-2' Deep	10/2/03					
2-Oct-03	122	20.76	Soil									3551.98	1151.87	<LOD	385.7	280.91	91.2	27208.09	418.43	565.84	121.5	<LOD	104.36	<LOD	61.34	70.79	13.96	<LOD	17.71	<LOD	13.5	<LOD	19.09	68.22	4.01	95.96	4.87	106.83	4.5	<LOD	13.9	<LOD	75.03	<LOD	51.06	<LOD	98.36	<LOD	111.1	<LOD	1284.92	<LOD	37.23	40.65	8.77	Boring B-7	2-3 Deep	10/2/03					
2-Oct-03	123	22.15	Soil									18064.9	1891.6	950.3	192.42	654.3	129.76	55882.34	764.32	610.21	177.74	323.12	52.96	111.06	29.24	7606.29	117.57	141.28	30.56	<LOD	21.33	<LOD	31.03	20.69	4.09	144.55	6.26	40.44	4.41	<LOD	15.42	<LOD	80.96	142.41	19.43	<LOD	111.67	<LOD	125.6	2412.22	664	<LOD	60.24	3161.22	65.4	Boring B-5	0-1 Deep	10/2/03					
2-Oct-03	124	21.17	Soil									<LOD	3425.2	<LOD	396.57	460.81	89.61	17199.28	305.08	375.06	97.82	<LOD	92.66	<LOD	58.43	63.94	13.34	<LOD	16.62	<LOD	14.12	<LOD	19.56	66.94	4	192.63	6.22	210.54	5.68	<LOD	14.15	<LOD	74.37	<LOD	50.44	<LOD	97.69	<LOD	109.66	<LOD	1302.06	<LOD	36.39	<LOD	24.04	Boring B-6	3-4 Deep	10/2/03					
2-Oct-03	125	21.76	Soil									<LOD	3494.91	<LOD	400.52	<LOD	250.46	15534.67	291.37	<LOD	278.92	<LOD	91.24	<LOD	61.81	44.22	13.05	<LOD	17.73	<LOD	13.94	<LOD	19.31	76.63	4.18	193.98	6.35	199.3	5.66	<LOD	14.4	<LOD	76.11	101.44	17.51	<LOD	101.19	<LOD	114.5	1473.53	468.48	<LOD	37.92	<LOD	24.1	Boring B-6	4-5' Deep	10/2/03					
2-Oct-03	126	20.94	Soil									<LOD	3432.1	<LOD	392.17	396.33	93.85	24145.06	391.54	356.73	114.91	<LOD	101.15	<LOD	59.27	51.34	13.45	<LOD	17.66	<LOD	14.06	<LOD	19.06	65.6	4.01	121.75	5.35	98.42	4.61	<LOD	14.05	<LOD	76.02	<LOD	52.48	<LOD	101.11	<LOD	114.25	<LOD	1331.05	<LOD	36.96	<LOD	25.12	Boring B-5	5-6' Deep	10/2/03					
2-Oct-03	127	23.01	Soil									<LOD	3314.64	<LOD	396.67	<LOD	237.3	11803.52	252.16	<LOD	250.29	<LOD	88.08	<LOD	60.37	<LOD	37.58	<LOD	17.82	<LOD	13.56	<LOD	19.26	59.26	3.87	169.46	6.1	145.13	5.12	<LOD	14.22	<LOD	76.73	<LOD	54.94	<LOD	106.51	<LOD	119.3	<LOD	1271.2	<LOD	38.84	<LOD	24.11	Boring B-5	6-7' Deep	10/2/03					
2-Oct-03	128	19.97	Soil									3881.92	1058.49	<LOD	377.2	864.66	98.05	23260.59	357.07	<LOD	315.88	109.06	33.09	<LOD	55.88	64.72	12.89	<LOD	16.23	<LOD	12.63	<LOD	18.09	73.68	3.91	134.37	5.18	94.46	4.18	<LOD	13.01	<LOD	71.21	62	15.44	<LOD	89.82	<LOD	101.48	<LOD	1161.1	<LOD	34.43	<LOD	22.64	Boring B-5	7-8' Deep	10/2/03					
2-Oct-03	129	19.9	Soil									4753.23	1150.29	<LOD	376.95	647.57	97.37	29575.31	436.33	577.92	123.92	<LOD	104.71	<LOD	60.49	89.65	14.31	<LOD	19.19	<LOD	13.91	<LOD	18.32	79.36	4.17	102.4	4.89	85.72	4.2	<LOD	13.6	<LOD	73.91	<LOD	49.06	<LOD	94.73	<LOD	106.16	<LOD	1261.66	<LOD	35.03	54.62	9.1	Boring B-5	8-9 Deep	10/2/03					
2-Oct-03	130	23.95	Soil									2972.96	934.85	<LOD	316.95	<LOD	207.51	20519.08	287.35	464.84	89.23	<LOD	80.63	<LOD	47.02	77.62	11.46	<LOD	13.81	<LOD	11.06	<LOD	15.59	79.62	3.49	90.03	3.95	89.03	3.64	<LOD	11.33	<LOD	61.69	76.13	13.88	<LOD	80.22	97.05	30.13	<LOD	1056.04	<LOD	30.21	<LOD	19.52	Boring B-5	9-10 Deep	10/2/03					

2-Oct-03	131	19.58	Soil				3879.66	1086.62	<LOD	410.06	344.92	87.78	18454.31	322.55	335.49	101.04	<LOD	91.64	<LOD	57.54	65.06	13.38	<LOD	15.71	<LOD	13.04	<LOD	17.68	69.7	4	100.13	4.69	96.81	4.36	<LOD	13.77	<LOD	74.4	<LOD	49.21	<LOD	94.54	<LOD	106.65	<LOD	1188.60	<LOD	34.27	<LOD	23.4	Boring B-5	10-11' Deep	10/2/03
2-Oct-03	132	20.66	Soil				<LOD	3368.82	<LOD	397.92	489.35	93.67	23950.31	378.18	420.46	112.03	<LOD	97.92	<LOD	58.45	61.11	13.3	<LOD	16.22	<LOD	13.37	<LOD	17.58	61.01	3.78	89.94	4.67	84.36	4.16	<LOD	13.7	<LOD	73.66	125.61	16.55	<LOD	95.72	<LOD	107.44	<LOD	1268.45	<LOD	34.51	<LOD	23.09	Boring B-5	11-12 Deep	10/2/03
2-Oct-03	133	21.82	Soil				10716.81	1459.54	<LOD	452.37	402.2	99.6	25160.93	416.42	<LOD	354.67	<LOD	104.75	100.49	23.69	644.73	27.95	<LOD	54.46	<LOD	16.49	<LOD	23.74	63.8	4.34	106.73	5.39	126.62	5.06	40.79	5.42	<LOD	76.51	<LOD	55.67	<LOD	107.24	<LOD	120.57	<LOD	1515.14	<LOD	45.31	1119.98	28.84	Boring B-6		10/2/03
2-Oct-03	134	25.69	Soil				<LOD	4500.74	<LOD	579.54	<LOD	347.77	26238.95	515.82	<LOD	437.74	<LOD	128.34	<LOD	87.61	87.49	19.09	<LOD	24.37	<LOD	18.22	<LOD	26.95	79.45	5.33	91.09	6.08	94.61	5.54	<LOD	18.29	<LOD	96.23	<LOD	79.36	<LOD	151.58	<LOD	170.68	<LOD	1702.11	<LOD	52.35	<LOD	32.63	Boring B-6	3-4 Deep	10/2/03
2-Oct-03	135	24.81	Soil				<LOD	4291.39	<LOD	540.44	<LOD	331.78	19285.08	406.53	<LOD	369.95	<LOD	108.5	<LOD	78.04	67.1	17.37	<LOD	21.05	<LOD	16.41	<LOD	23.75	77.16	5.13	126.38	6.56	123.46	5.83	<LOD	17.56	<LOD	94.5	<LOD	75.47	<LOD	144.74	<LOD	164.3	<LOD	1601.54	<LOD	46.03	<LOD	29.8	Boring B-6	4-5' Deep	10/2/03
2-Oct-03	136	26.93	Soil				5657.85	1734.12	<LOD	600.12	<LOD	369.99	17559.36	435.11	<LOD	391.3	<LOD	122.42	<LOD	93.71	<LOD	58.54	<LOD	25.57	<LOD	20.34	<LOD	27.21	63.4	5.43	122.25	7.31	112.18	6.41	<LOD	19.7	<LOD	106.67	<LOD	92.16	<LOD	177.49	<LOD	199.17	<LOD	1900.29	<LOD	53.14	<LOD	36.56	Boring B-6	5-6' Deep	10/2/03
2-Oct-03	137	20.45	Soil				<LOD	3333.34	<LOD	393.69	300.86	87.34	20498.69	343.74	348.3	105.14	<LOD	94.84	<LOD	59.41	59.11	13.33	<LOD	17.12	<LOD	14.01	<LOD	19.22	72.91	4.07	121.42	5.23	104.47	4.47	<LOD	13.73	<LOD	74.76	74.4	16.73	<LOD	97.14	<LOD	109.19	<LOD	1296.74	<LOD	36.71	<LOD	23.8	Boring B-6	6-7' Deep	10/2/03
2-Oct-03	138	19.51	Soil				<LOD	3222.94	<LOD	375.09	258.41	84.5	22090.92	358.44	613.73	109.81	<LOD	98.74	<LOD	53.61	91.05	13.67	<LOD	16.85	<LOD	12.25	<LOD	17.52	69.01	3.86	89.75	4.56	94.53	4.17	<LOD	13.26	<LOD	71.68	<LOD	46.9	<LOD	90.15	<LOD	101.44	<LOD	1261.02	<LOD	33.26	25.2	7.81	Boring B-6	7-8 Deep	10/2/03
2-Oct-03	139	19.64	Soil				7176.64	1316.76	<LOD	425.94	396.31	95.39	27938.91	422.48	402.86	120.04	<LOD	107.67	89.81	21.99	405.94	22.01	<LOD	39	<LOD	15.15	<LOD	21.74	72.16	4.16	108.16	5.08	97.23	4.42	23.69	4.83	<LOD	75.09	<LOD	49.25	<LOD	95.15	<LOD	107.56	<LOD	1430.01	<LOD	41.88	575.25	19.58	Boring B-6	8-9' Deep	10/2/03
2-Oct-03	140	20.15	Soil				<LOD	3301.92	<LOD	394.41	<LOD	273.6	25775.48	412.76	<LOD	340.93	<LOD	106.36	<LOD	59.55	71.26	14.16	<LOD	16.93	<LOD	13.72	<LOD	18.29	74.03	4.19	82.05	4.73	71.57	4.16	<LOD	14.1	<LOD	76.79	<LOD	51.99	<LOD	99.77	<LOD	113.18	<LOD	1260.75	<LOD	36.5	<LOD	24.63	Boring B-6	9-10' Deep	10/2/03
2-Oct-03	141	27.36	Soil				3196.81	972.62	<LOD	333.92	433.31	81.84	27741.04	363.55	476.55	104.06	<LOD	91.56	<LOD	50.98	76	12.07	<LOD	14.55	<LOD	11.49	<LOD	16.12	61.58	3.3	80.59	3.94	74.66	3.51	<LOD	11.77	<LOD	64.09	<LOD	46.31	<LOD	89.82	<LOD	101.26	<LOD	1088.76	<LOD	31.96	<LOD	20.28	Boring B-6	10-11' Deep	10/2/03
2-Oct-03	142	19.85	Soil				<LOD	3515.12	<LOD	404.83	431.82	97.64	29504.28	446.41	414.93	124.68	<LOD	108.36	<LOD	60.67	68.21	13.99	<LOD	17.3	<LOD	14.16	<LOD	19.17	59.79	3.87	84.63	4.71	84.8	4.26	<LOD	13.62	<LOD	74.86	<LOD	50.24	<LOD	96.82	191.73	38.41	<LOD	1343	<LOD	37.08	<LOD	24.86	Boring B-6	11-12' Deep	10/2/03
2-Oct-03	143	20.48	Soil				187743.8	6553.73	5563.95	427.31	828.2	193.38	38284.5	772.43	<LOD	805.15	221.19	67.85	948.36	63.62	15995.92	279.97	1041.74	100.42	<LOD	52.5	<LOD	81.2	<LOD	25.42	127.22	9.81	<LOD	20.54	714.62	16.55	<LOD	112.51	91.71	28.56	<LOD	165.03	<LOD	164.11	11108.66	1604.93	337.86	50.78	19804.91	316.35	Boring B-4		10/2/03
2-Oct-03	144	29.12	Soil				23284.4	3263.57	<LOD	930.32	635.31	194.83	23712.84	699.09	<LOD	572.39	<LOD	200.96	<LOD	150.13	563.33	48.26	157.9	32.65	<LOD	28.41	<LOD	44.89	44.96	7.06	91.01	8.99	88.59	8.15	<LOD	27.95	<LOD	146.37	<LOD	141.52	<LOD	271.16	<LOD	306.79	<LOD	3286.91	<LOD	82.67	1162.64	50.33	Boring B-4	1-2' Deep	10/2/03
2-Oct-03	145	21.44	Soil				4135.29	1242.7	<LOD	433.18	808.95	107.12	27198.28	424.41	<LOD	358.61	<LOD	108.62	<LOD	64.41	685.17	27.66	100.18	15.01	<LOD	15.93	<LOD	21.19	73.04	4.29	108.41	5.19	117.1	4.75	<LOD	14.09	<LOD	76.47	84.58	17.71	<LOD	103.31	<LOD	116.76	<LOD	1392.79	<LOD	40.26	690.9	21.81	Boring B-4	2-3' Deep	10/2/03
2-Oct-03	146	21.43	Soil				<LOD	3548.16	<LOD	418.54	500.66	94.2	16440.2	311.08	<LOD	298.24	<LOD	97.22	67.66	21.83	115.08	15.67	22.14	6.91	<LOD	15.16	<LOD	20.54	78.15	4.33	146.16	5.84	161.37	5.35	<LOD	14.63	<LOD	77.68	<LOD	54.19	<LOD	104.63	129.11	39.39	<LOD	1354.3	<LOD	40.12	46.01	9.39	Boring B-4	3-4' Deep	10/2/03
2-Oct-03	147	22.88	Soil				<LOD	4097.97	<LOD	468.66	813.53	118.93	32508.41	519.48	<LOD	421.68	<LOD	113	<LOD	68.11	131.78	17.4	<LOD	21.19	<LOD	14.82	<LOD	20.81	79.13	4.65	110.88	5.59	92.57	4.8	<LOD	15.43	<LOD	82.72	<LOD	60.82	<LOD	117.23	<LOD	131.17	<LOD	1549.1	<LOD	39.36	66	10.52	Boring B-4	4-5' Deep	10/2/03
2-Oct-03	148	19.75	Soil				<LOD	3451.37	<LOD	415.95	326.22	92	21227.56	364.21	<LOD	328.54	<LOD	98.63	<LOD	62.5	59.65	13.92	<LOD	18.21	<LOD	13.93	<LOD	19.73	77.35	4.29	157.69	5.09	133.08	5.03	<LOD	14.3	<LOD	78.01	<LOD	52.13	<LOD	100.5	<LOD	113.41	<LOD	1337.35	<LOD	39.33	25.71	8.56	Boring B-4	5-6' Deep	10/2/03
2-Oct-03	149	25.01	Soil				<LOD	3656.72	<LOD	434.22	587.92	96.58	22320.36	388.12	<LOD	324.96	<LOD	99.03	<LOD	61.37	74.97	14.16	<LOD	18.13	<LOD	13.52	<LOD	18.79	78.44	4.26	128.81	5.4	124.62	4.78	<LOD	14.12	<LOD	75.75	<LOD	56.34	<LOD	108.45	<LOD	122.83	<LOD	1381.78	<LOD	34.33	31.01	8.61	Boring B-4	6-7' Deep	10/2/03
2-Oct-03	150	18.5	Soil				<LOD	3221.82	<LOD	374.07	458.27	93.34	31562.41	440.5	602.04	123.23	131.97	38.57	<LOD	56.84	88.19	13.73	<LOD	16.78	<LOD	12.94	<LOD	17.92	69.96	3.84	66.63	4.47	80.46	3.97	<LOD	12.99	<LOD	71.1	<LOD	45.01	<LOD	87.02	<LOD	97.97	<LOD	1245.63	<LOD	34.52	<LOD	22.69	Boring B-4	9-10' Deep	10/2/03
2-Oct-03	151	19.43	Soil				<LOD	3358.94	<LOD	405.34	686.58	102.34	29215.19	437.35	391.89	122.47	<LOD	104.5	<LOD	61.78	62.64	13.66	<LOD	17.36	<LOD	13.58	<LOD	19.42	69.59	4	84.7	4.65	75.29	4.09	<LOD	13.68	<LOD	74.41	<LOD	48.68	<LOD	94.16	110.26	35.08	<LOD	1273.9	<LOD	37.99	<LOD	23.73	Boring B-4	10-11' Deep	10/2/03
2-Oct-03	152	21.82	Soil				<LOD	2989.03	<LOD	343.14	<LOD	229.22	22120.95	332.77	<LOD	296.09	<LOD	84.85	<LOD	49.46	48.4	11.71	<LOD	14.75	<LOD	12.21	<LOD	16.37	56.4	3.41	66.35	3.96	71.06	3.66	<LOD	12.36	<LOD	66.96	83.12	15.12	<LOD	87.43	<LOD	98.42	<LOD	1149.75	<LOD	31.69	<LOD	20.19	Boring B-4	11-12' Deep	10/2/03
2-Oct-03	153	22.41	Soil				19696.78	1598.89	656.78	142.91	430	88.53	22155.24	329.36	486.41	100.74	97.79	31.98	61.54	19.96	1709.89	38.5	156.59	19.85	<LOD	16.68	<LOD	23.08	67.53	3.9	105.41	4.68	77.51	3.89	35.46	4.48	<LOD	67.84	52.46	15.25	<LOD	88.68	<LOD	100.13	3025.78	548.45	46.54	14.57	1729.03	31.85	Boring B-4	12-13' Deep	10/2/03
2-Oct-03	154	19.76	Soil				5869.53	1281.7	<LOD	399.41	<LOD	257.07	23061.07	367.02	426.65	110.1	<LOD	99.49	<LOD	61.4	909.26	30.35	46.65	13.14	<LOD	14.34	<LOD	20.32	59.79	3.86	94.96	4.79	99.57	4.37	<LOD	13.76	<LOD	73.09	<LOD	48.66	<LOD	93.68	<LOD	105.46	<LOD	1392.89	<LOD	38.97	594.11	19.59	Boring B-4	13-14' Deep	10/2/03
2-Oct-03	155	26.05	Soil				<LOD	4385.29	<LOD	569.92	<LOD	346.45	22801.15	470.51	<LOD	409.45	<LOD	123.28	<LOD	80.16	87.76	18.73	<LOD	22.24	<LOD	17.1	<LOD	23.98	56.98	4.81	65.37	5.93	103.59	5.66	<LOD	17.94	<LOD	95.84	125.98	26.35	<LOD	151.37	<LOD	170.13	<LOD	1636.16	<LOD	45.64	<LOD	31.66	Boring B-4	14-15' Deep	10/2/03
2-Oct-03	156	25.56	Soil				<LOD	3043.38	<LOD	383.25	397.97	91.02	30307.56	423.81	<LOD	346.71	<LOD	97.87	<LOD	55.77	53.39	12.64	<LOD	15.4	<LOD	12.4	<LOD	16.53	56.67	3.56	86.7	4.4	98.54	4.13	<LOD	12.92	<LOD	70.76	100.16	17.2	<LOD	99.22	<LOD	112.11	<LOD	1169.8	<LOD	30.99	<LOD	22.34	Boring B-4	15-16' Deep	10/2/03
2-Oct-03	157	18.4	Soil				3411.23	929.1	<LOD	318.22	<LOD	204.44	18378.51	285.09	375.5	69.97	88.17	28.93	<LOD	48.99	106.64	12.82	<LOD	17.67	<LOD	11.63	<LOD	16.22	53.42	3.26	73.07	3.93	82.94	3.67	<LOD	12.04	<LOD	65.05	60.72	13.38	<LOD	76.98	<LOD	86.46	<LOD	1016.06	<LOD	30.79	64.88	8.2	Boring B-4	16-17' Deep	10/2/03
2-Oct-03	158	19.09	Soil				<LOD	3148.38	<LOD	362.61	264.1	84.9	25368.29	379.76	394.77	110.64	<LOD	97.26	<LOD	56.13	75.67	13.25	<LOD	16.78	<LOD	12.63	<LOD	17.45	59.42	3.65	78.48	4.33	94.43	4.11	<LOD	13.3	<LOD	70.69	<LOD	46.71	<LOD	88.28	116.78	33.01	<LOD	1204.19	<LOD	32.99	36.98	8.17	Boring B-4	18-19' Deep	10/2/03
2-Oct-03	159	19.34	Soil				<LOD	3241.06	<LOD	352.17	357.62	85.85	23563.98	361.77	390.8	107.37	<LOD	98.16	<LOD	57.43	52.86	12.61	<LOD	15.77	<LOD	12.67	<LOD	17.5	61.58	3.68	95.71	4.62	127.63	4.51	<LOD	13.25	<LOD	71.03	80.43	15.32	<LOD	88.45	<LOD	99.46	<LOD	1218.44	<LOD	34.07	<LOD	23.13	Boring B-4	19-20 Deep	10/2/03
2-Oct-03	160	53.38	Standardization PASS	-0.002	0.0186	259																																															
2-Oct-03	161	20.38	Soil				3705.73	1173.79	<LOD	407.08	<LOD	243.56	12528.92	263.8	<LOD	261.97	<LOD	89.33	<LOD	57.84	75.04	14.1	<LOD	18.61	<LOD	13.61	<LOD	19.94	62.78	4.03	182.68	6.37	191.67	5.72	<LOD	14.69	<LOD	77.17	<LOD	52.55	<LOD	101.72	129.98	38.13	<LOD	1311.26	<LOD	38.65	34.89	8.85	Boring B-8	2-3' Deep	10/2/03
2-Oct-03	162	22.17	Soil				<LOD	3507.06	<LOD	406.6	<LOD	244.6	13215.35	271.75	350.39	92.46	<LOD	89.37	<LOD	61.18	50.75	13.51	<LOD	17.09	<LOD	14.7	<LOD	20.09	70.26	4.15	173.18	6.22	195.55	5.74	<LOD	14.77	<LOD	77.42	<LOD	54.64	<LOD	105.86	<LOD	119.11	<LOD	1312.74	<LOD	39.78	<LOD	24.01	Boring B-8	3-4' Deep	10/2/03
2-Oct-03	163	26.17	Soil				<LOD	4743.67	<LOD	557.74	<LOD	339.93	18301.66	418.69	<LOD	379.07	<LOD	125.94	<LOD	88.64	74.81	19	<LOD	22.9	<LOD	16.54	<LOD	24.44	64.73	5.14	99.36	6.38	83.36	5.55	<LOD	18.42	<LOD	98.98	<LOD	83.09	<LOD	160.76	<LOD	180.73	<LOD	1821.51	<LOD	46.55	<LOD	33.54	Boring B-8	4-5' Deep	10/2/03
2-Oct-03	164	22.64	Soil				<LOD	3774.93	<LOD	441.18	676.6	108.69	24693.38	423.65	<LOD	365.96	<LOD	106.33	<LOD	69.42	82.33	15.66	<LOD	20.53	<LOD	14.45	<LOD	20.28	76.49	4.51	118.24	5.65	111.37	4.97	<LOD	15.15	<LOD	81.82	88.96	19.91	<LOD	114.74	154.7	43.38	<LOD	1405.71	<LOD	39.54	49.05	9.82	Boring B-8	8-9 Deep	10/2/03
2-Oct-03	165	24.39	Soil				<LOD	3873.25	<LOD	418.91	390.67	97.4	19536.91	363.06	<LOD	335.67	<LOD	102.85	<LOD	66.29	62.32	14.92	<LOD	18.9	<LOD	14.92	<LOD	20.76	73.92	4.45	121.29	5.69	113.76	5	<LOD	15.2	<LOD	81.22	<LOD	61.37	<LOD	118.58	<LOD	133.44	<LOD	1452.27	<LOD	40.05	<LOD	27.43	Boring B-8	9-10' Deep	10/2/03
2-Oct-03	166	18.94	Soil				<LOD	3278.04	<LOD	392.79	428.6	94.36	27373.75	416.62	407.2	118.99	<LOD	102.93	<LOD	59.05	77.16	13.93	<LOD	15.93	<LOD	13.41	<LOD	18.35	69.93	3.98	79.53	4.54	79.64	4.11	<LOD	13.35	<LOD	73.89	<LOD	46.3	<LOD	92.94	<LOD	104.71	<LOD	1241.67	<LOD	36.54	<LOD	24.36	Boring B-8	10-11' Deep	10/2/03
2-Oct-03	167	25.21	Soil				9435.08	1516.05	973.92	182.11	535.04	115.11	35432.91	542.99	<LOD	428.53	<LOD	121.52	79.6	26.06	2915.71	61.69	<LOD	83.98	<LOD	19.52	<LOD	26.73	54.4	4.62	84.46	5.28	68.3	4.57	<LOD	15.66	<LOD	80.94	<LOD	61.98	<LOD	118.43	<LOD	133.91	<LOD	1613.67	<LOD	53.72	2731.21	50.09	Boring B-7		10/2/03
2-Oct-03	168	20.23	Soil				<LOD	3547.8	<LOD	417.88	613.09	103.74	32202.74	473	457.04	129.61	<LOD	110.62	<LOD	64.52	114.62	15.48	<LOD	18.21	<LOD	14.3	<LOD	18.93	67.14	4.4	102.11	4.99	100.91	4.48	<LOD	13.99	<LOD	75.67	<LOD	50.96	<LOD	98.46	<LOD	111.07	<LOD	1339.95	<LOD	36.19	<LOD	25.23	Boring B-7	3-4' Deep	10/2/03
2-Oct-03	169	26.13	Soil				<LOD	3078.14	<LOD	345.62	911.71	96.49	30633.92	404.66	407.24	111.97	<LOD	96.11	<LOD	53.7	68.59	12.45	<LOD	15.64	<LOD	12.46	<LOD	17.07	80.22	3.78	116.24	4.66	85.01	3.83	<LOD	12.57	<LOD	67.73	115.91	16.12	<LOD	92.85	<LOD	104.77	<LOD	1183.07	<LOD	33.52	25.03	7.47	Boring B-7	4-5' Deep	10/2/03
2-Oct-03	170	22.65	Soil				4021.14	1213.82	<LOD	418.8	318.14	90.97	19936.48	347.98	<LOD	314.95	<LOD	95.57	<LOD	64.57	78.62	14.52	<LOD	17.61	<LOD	13.87	<LOD	19.4	76.71	4.27	128.48	5.5	105.72	4.64	<LOD	14.21	<LOD	77.14	<LOD	55.15	<LOD	106.69	<LOD	120.33	<LOD	1356.21	<LOD	37.25	<LOD	25.55	Boring B-7	5-6' Deep	10/2/03
2-Oct-03	171	20.7	Soil				3587.79	1159.49	<LOD	396.02	940.34	102.82	25128.49	382.04	478.97	112.48	<LOD	101.85	<LOD	56.98	78.11	13.57	<LOD	15.79	<LOD	13.28	<LOD	18.91	78.3	4.04	124.02	5.12	100.11	4.3	<LOD	13.41	<LOD	72.2	<LOD	48.23	<LOD	92.65	189.59	35.23	<LOD	1312.33	<LOD	36.83	<LOD	22.38	Boring B-7	6-7' Deep	10/2/03
2-Oct-03	172	21.63	Soil				<LOD	3708.74	<LOD	422.63	479.09	103.72	30145.29	472.39	562.05	132.87	<LOD	115.66	<LOD	61.4	68.81	14.7	<LOD	18.6	<LOD	14.12	<LOD	20.66	72.92	4.3	109.38	5.35	99.03	4.67	<LOD	14.53	<LOD	79.26	77.5	18.75	<LOD	108.03	<LOD	122.23	<LOD	1407.72	<LOD	40.89	31.52	8.98	Boring B-7	7-8' Deep	10/2/03
2-Oct-03	173	25.18	Soil				4303.2	1270.83	<LOD	448.23	388.89	98.65	26629.03	424.07	375.44	121.37	<LOD	104.07	<LOD	64.23	1152.72	35.61	90.49	19.2	<LOD	17.2	<LOD	23.74	58.77	4.16	77.72	4.81	74.49	4.31	<LOD	14.72	<LOD	76.66	<LOD	58.05	<LOD	111.57	158.58	42.25	<LOD	1423.94	<LOD	46.14	1276.8	30.34	Boring B-7	8-9' Deep	10/2/03
2-Oct-03	174	19.72	Soil				4714.61	1061.84	<LOD	356	<LOD	247.55	23707.38	364.01	490.78	109.08	<LOD	96.13	<LOD	56.26	85.79	13.55	<LOD	15.4	<LOD	12.48	<LOD	17.41	66.45	3.79	64.11	4.44	74.31	3.91	<LOD	12.99	<LOD	71	<LOD	46.42	<LOD	90.03	<LOD	101.19	<LOD	1135.94	<LOD	32.99	<LOD	22.75	Boring B-7	9-10 Deep	10/2/03
2-Oct-03	175	21.16	Soil				4932.39	1179.04	<LOD	386.69	411.31	95.76	28870	437.69	548.92	124.71	<LOD	102.09	<LOD	62.31	69.59	14.02	<LOD	16.56	<LOD	13	<LOD	19	60.5	3.86	72.65	4.48	77.8	4.14	<LOD	13.65	<LOD	74.55	78.53	17.22	<LOD	99.3	<LOD	111.12	<LOD	1281.01	<LOD	36.81	<LOD	23.6	Boring B-7	10-11 Deep	10/2/03
2-Oct-03	176	20.71	Soil				<LOD	3348.54	<LOD	386.57	323.26	87.31	22420.6	361.76	326.36	107.81	<LOD	93.11	<LOD	56.18	67.67	13.35	<LOD	16.56	<LOD	13.65	<LOD	17.66	55.78	3.7	87.75	4.63	72.74	4.01	<LOD	13.33	<LOD	72.79	<LOD	49.5	<LOD	95.28	<LOD	107.53	<LOD	1259.08	<LOD	33.57	<LOD	23.79	Boring B-7	11-12' Deep	10/2/03
2-Oct-03	177	24.96	Soil				6971.95	1692.99	<LOD	553.14	684.85	123.68	33485.9	550.37	<LOD	437.7	194.41	46.2	<LOD	81.1	3867.11	77.6	188.95	28.58	<LOD	20.62	<LOD	29.55	29.2	4.27	93.45	5.68	73.67	4.89	<LOD	16.51	<LOD	85.97	87.03	22.3	<LOD	128.77	<LOD	145.11	2112.81	619.77	<LOD	55.59	2397.97	48.6	Boring B-3		10/2/03
2-Oct-03	178	20.76	Soil				3657.13	1165.79	<LOD	402.06	<LOD	260.4	21111.21	354.06	336.59	107.35	<LOD	98.93	<LOD	59.03	76.67	14.03	<LOD	17.07	<LOD	14.17	<LOD	19.69	65.46	3.97	134.97	5.5	145.47	5.01	<LOD	14.31	<LOD	75.3	51.55	17.11	<LOD	99.19	<LOD	111.68	<LOD	1305.45	<LOD	38.04	<LOD	24.68	Boring B-3	1-2' Deep	10/2/03
2-Oct-03	179	20.76	Soil				5157.79	1105.08	<LOD	355.89	429.73	84.03	14365.06	270.43	<LOD	263.65	<LOD	90.13	<LOD	58.51	65.86	13.21	<LOD	17.27	<LOD	13.6	<LOD	18.68	66.32	3.88	197.44	6.22	196.42	5.48	<LOD	13.89	<LOD	73.95	58.98	16.38	<LOD	95.53	<LOD	107.73	<LOD	1184.27	<LOD	36.7	<LOD	23.84	Boring B-3	2-3 Deep	10/2/03
2-Oct-03	180	20.96	Soil				5523.29	1169.46	<LOD	419.28	373.83	90.76	17754.64	323.31	<LOD	303.23	<LOD	98.75	<LOD	61.11	40.79	13.15	<LOD	16.66	<LOD	13.73	<LOD	18.73	72.29	4.17	134.37	5.59	147.67	5.13	<LOD	14.41	<LOD	77.74	<LOD	53.28	<LOD	102.69	<LOD	116.13	<LOD	1243.14	<LOD	36.63	<LOD	23.98	Boring B-3	3-4 Deep	10/2/03
2-Oct-03	181	21.98	Soil				<LOD	3279.31	<LOD	395.79	475.86	91.89	24443.08	374.27	330.44	109.24	<LOD	97.62	<LOD	59.21	62.27	13.17	<LOD	16.79	<LOD	12.61	<LOD	18.31	77.42	4.03	121.23	5.07	115.85	4.47	<LOD	13.29	<LOD	72.38	119.21	16.59	<LOD	96.19	<LOD	108.42	<LOD	1277.23	<LOD	35.27	29.59	8.06	Boring B-3	4-5' Deep	10/2/03
2-Oct-03	182	22.77	Soil				5471	1242.95	<LOD	412.96	643.44	103.93	26200.98	423.1	<LOD	349.46	<LOD	102.11	<LOD	63.15	64.45	14.36	<LOD	18.49	<LOD	15.03	<LOD	19.8	66.75	4.55	137.14	5.72	125.9	4.97	<LOD	14.62	<LOD	78.82	57.99	18.8	<LOD	108.65	<LOD	122.74	<LOD	1342.5	<LOD	37.24	<LOD	25.44	Boring B-3	5-6' Deep	10/2/03
2-Oct-03	183	23.37	Soil				<LOD	3825.41	<LOD	458.69	552.55	105.81	17589.16	354.23	<LOD	319.96	<LOD	99.21	<LOD	69.06	<LOD	43.45	<LOD	19.7	<LOD	15.59	<LOD	21.8	61.86	4.37	137.3	6.2	137.74	5.53	<LOD	15.9	<LOD	85.42	<LOD	64.41	<LOD	124.16	<LOD	139.91	<LOD	1484.9	<LOD	42.36	<LOD	26.35	Boring B-3	6-7' Deep	10/2/03
2-Oct-03	184	21.97	Soil				<LOD	3581.01	<LOD	431.47	<LOD	267.68	20596.35	362.61	334.22	110.56	<LOD	100.66	<LOD	63.71	102.72	15.48	<LOD	19.1	<LOD	14.84	<LOD	20.36	77.11	4.37	120.72	5.49	116.51	4.66	<LOD	14.73	<LOD	76.45	64.14	18.62	<LOD	107.6	<LOD	121.54	<LOD	1346.05	<LOD	39.07	29.72	8.95	Boring B-3	7-8' Deep	10/2/03
2-Oct-03	185	20.92	Soil				<LOD	3459.89	<LOD	403.55	496.1	98.88	29579.1	444.79	533.09	125.67	<LOD	106.22	<LOD	61.67	71.51	14.12	<LOD	17.75	<LOD	13.73	<LOD	19.89	79.7	4.22	74.23	4.53	86.81	4.25	<LOD	13.95	<LOD	75.27	106.86	17.17	<LOD	99	<LOD	111.68	<LOD	1326.6	<LOD	39.66	<LOD	24.82	Boring B-3	9-10 Deep	10/2/03
2-Oct-03	186	20.48	Soil				<LOD	3250.64	<LOD	403.11	<LOD	266.8	25049.42	390.34	361.89	113.57	<LOD	99.9	<LOD	59.44	65.42	13.52	<LOD	16.69	<LOD	12.94	<LOD	18.61	66.88	3.92	90.56	4.7	78.66	4.1	<LOD	13.69	<LOD	73.12	<LOD	49.65	<LOD	95.52	151.78	36.08	<LOD	1217.71	<LOD	36.14	24.47	8.08	Boring B-3	9-10 Deep	10/2/03
2-Oct-03	187	20.42	Soil				<LOD	3197.68	<LOD	395.39	416.49	92.15	31178.01	432.97	680.31	122.22	<LOD	101.06	<LOD	58.15	70.7	13.15	<LOD	16.67	<LOD	12.98	<LOD	17.7	69.16	3.78	74.39	4.22	65.16	3.74	<LOD	12.59	<LOD	69.92	<LOD	46.17	<LOD	89.02	<LOD	100.09	<LOD	1211.38	<LOD	34.01	<LOD	22.96	Boring B-3	10-11' Deep	10/2/03
2-Oct-03	188	17.7	Soil				<LOD	3180.8	<LOD	400.89	301.34	87.06	24832.74	375.75	353.13	109.65	115.32	33.93	<LOD	54.16	72.23	13.1	<LOD	16.42	<LOD	12.93	<LOD	17.33	73.93	3.93	86.91	4.49	82.92	4.01	<LOD	13.29	<LOD	71.42	<LOD	44.32	<LOD	85.31	<LOD	96.35	<LOD	1201.87	<LOD	33.07	26.53	7.88	Boring B-3	11-12' Deep	10/2/03
2-Oct-03	189	17.59	Soil				<LOD	3151.51	<LOD	343	340.72	80.24	21834.79	326.86	338.42	98.39	<LOD	90.77	<LOD	52.92	81.5	12.62	<LOD	16.88	<LOD	12.12	<LOD	17.12	55.27	3.4	79.68	4.14	74.71	3.69	<LOD	12.39	<LOD	66.64	54.21	13.56	<LOD	78.16	<LOD	88.12	<LOD	1208.78	<LOD	32.46	92.15	9.14	Boring B-3	12-13 Deep	10/2/03
2-Oct-03	190	19.27	Soil				3490.75	1049.24	<LOD	349.28	362.09	85.11	23653.67	359.69	<LOD	311.07	<LOD	92.01	<LOD	56.01	59.35	12.6	<LOD	15.4	<LOD	12.58	<LOD	16.46	53.32	3.48	72.26	4.18	66.06	3.97	<LOD	12.99	<LOD	69.87	67.83	15.06	<LOD	86.95	<LOD	97.61	<LOD	1163.16	<LOD	31.65	<LOD	22.71	Boring B-3	14-15' Deep	10/2/03
2-Oct-03	191	23.13	Soil				<LOD	3654.84	<LOD	419.68	343.25	94.94	24574.93	400.36	<LOD	338.97	<LOD	106.53	<LOD	65.68	<LOD	40.57	<LOD	18.19	<LOD	14.37	<LOD	21.15	67.61	4.11	114.01	5.31	150.58	5.16	<LOD	14.45	<LOD	77.56	<LOD	56.1	<LOD	106.55	<LOD	122.56	<LOD	1416.23	<LOD	41.16	34.75	8.07	Boring B-3	15-16 Deep	10/2/03
2-Oct-03	192	17.54	Soil				<LOD	2915.13	<LOD	363.05	255.37	80.57	21260.36	331.52	598.69	103.63	<LOD	89.47	<LOD	54.19	41.48	11.81	<LOD	15.43	<LOD	11.67	<LOD	17.2	58.48	3.53	70.69	4.12	64.64	3.68	<LOD	12.72	<LOD	69.16	99.66	14.17	<LOD	81.74	<LOD	92.25	<LOD	1104.92	<LOD	33.4	<LOD	21	Boring B-3	16-17' Deep	10/2/03
2-Oct-03	193	17.45	Soil				5145.46	976.84	<LOD	333.09	336.41	78.32	19954.41	307.75	288.62	94.07	91.69	29.9	<LOD	52.79	57.8	11.85	<LOD	14.89	<LOD	12.52	<LOD	15.7	58.05	3.41	75.11	4.04	67.62	3.59	<LOD	12.2	<LOD	66.48	63.17	13.45	<LOD	77.61	<LOD	87.51	<LOD	1022.6	<LOD	30	<LOD	21.09	Boring B-3	17-18 Deep	10/2/03
2-Oct-03	194	23.13	Soil				4635.08	992.72	<LOD	359.14	354.76	81.48	22849.4	334.62	363.05	99.74	<LOD	86.64	<LOD	51.67	60.63	12.03	<LOD	15.44	<LOD	11.78	<LOD	16.26	64.34	3.52	90.66	4.28	92.23	3.88	<LOD	12.38	<LOD	67.38	<LOD	46.03	<LOD	88.15	150.65	33.17	<LOD	1062.65	<LOD	31.37	<LOD	21.64	Boring B-3	18-19' Deep	10/2/03
2-Oct-03	195	20.97	Soil				<LOD	3213.62	<LOD	395.32	<LOD	246.44	18789.66	324.9	<LOD	292.61	<LOD	90.49	<LOD	56.38	74.4	13.59	<LOD	16.48	<LOD	13.05	<LOD	16.7	57.09	3.74	75.75	4.45	94.12	4.27	<LOD	13.81	<LOD	73.75	<LOD	50.44	<LOD	97.4	<LOD	109.79	<LOD	1255.4	<LOD	31.55	<LOD	23.85	Boring B-3	19-20' Deep	10/2/03
2-Oct-03	196	18.33	Soil				27602.28	2758.26	3290.57	314.49	970.7	171.62	45592.52	803.85	612.65	201.08	505.02	69.67	1277.54	64.04	16036.59	255.88	751.97	80.48	<LOD	41.84	<LOD	62.93	<LOD	21.28	229.46	10.09	<LOD	17.7	53.57	6.98	<LOD	101.41	<LOD	71.77	<LOD	138.52	<LOD	156.54	4814.54	945.89	<LOD	116.15	14998.8	225.26	Boring B-2		10/2/03
2-Oct-03	197	23.61	Soil				4395.64	1400.24	<LOD	501.46	<LOD	345.77	34936.85	586.46	<LOD	452.74	<LOD	124.72	<LOD	72.88	133.75	18.69	<LOD	28.25	<LOD	15.48	<LOD	21.04	61.67	4.55	89.01	5.52	102.46	5.19	<LOD	18.4	<LOD	88.44	<LOD	67.75	<LOD	131.28	<LOD	148.11	<LOD	1543.24	<LOD	40.77	135.04	13.18	Boring B-2	1-2' Deep	10/2/03
2-Oct-03	198	20.78	Soil				<LOD	3672.92	<LOD	433.4	340.06	95.1	20645.55	368.4	<LOD	335.99	<LOD	100.16	<LOD	63.6	<LOD	40.74	<LOD	17.42	<LOD	14.62	<LOD	19.56	65.82	4.19	134.36	5.76	138.07	5.19	<LOD	15.04	<LOD	79.25	<LOD	55.51	<LOD	106.97	<LOD	120.76	<LOD	1396.53	<LOD	38.01	<LOD	24.66	Boring B-2	2-3' Deep	10/2/03
2-Oct-03	199	20.02	Soil				<LOD	3103.45	<LOD	375.28	266.65	78.31	14593.93	264.23	<LOD	258.49	<LOD	80.88	<LOD	51.82	55.95	12.24	<LOD	16.9	<LOD	12.69	<LOD	17.07	65.62	3.75	171.91	5.68	195.62	5.26	<LOD	13.37	<LOD	70.61	<LOD	45.95	<LOD	89.31	<LOD	100.6	<LOD	1197.53	<LOD	32.11	36.08	8.1	Boring B-2	3-4 Deep	10/2/03
2-Oct-03	200	21.33	Soil				4348.28	1219.42	<LOD	441.12	687.62	105.36	26213.53	420.76	<LOD	359	<LOD	105.55	<LOD	64.22	120.61	15.94	<LOD	22.26	<LOD	14.29	<LOD	20.25	78.49	4.33	109.79	5.26	116.36	4.78	<LOD	14.26	<LOD	77.51	<LOD	54.19	<LOD	104.35	<LOD	117.52	<LOD	1347.46	<LOD	40.02	83.24	10.35	Boring B-2	4-5' Deep	10/2/03
2-Oct-03	201	20.49	Soil				<LOD	3588.76	<LOD	405.68	700.34	104.92	28586.07	441.83	<LOD	364.98	<LOD	104.67	<LOD	64.51	70.75	14.36	<LOD	18.14	<LOD	14.33	<LOD	18.53	71.45	4.18	132.2	5.54	123.43	4.85	<LOD	14.21	<LOD	77.41	53.09	17.53	<LOD	101.46	<LOD	114.45	<LOD	1396.63	<LOD	34.72	<LOD	24.5	Boring B-2	5-6' Deep	10/2/03
2-Oct-03	202	22.4	Soil				<LOD	3885.7	<LOD	440.86	972.55	113.76	29590.7	457.09	<LOD	373.82	<LOD	105.44	<LOD	62.59	82.22	14.83	22.86	6.39	<LOD	14.33	<LOD	19.29	74.97	4.27	124.44	5.47	106.19	4.68	<LOD	14.5	<LOD	77.89	<LOD	55.26	<LOD	106.36	169.15	39.99	<LOD	1404.99	<LOD	37.47	<LOD	25.25	Boring B-2	6-7' Deep	10/2/03
2-Oct-03	203	19.71	Soil				<LOD	3573.91	<LOD	405.85	459.17	97.01	24834.2	402.35	534.15	119.51	<LOD	104.3	<LOD	58.99	60.24	13.79	<LOD	17.82	<LOD	14.3	<LOD	18.08	70.42	4.15	128.14	5.49	111.78	4.71	<LOD	14.26	<LOD	77.05	<LOD	51.5	<LOD	100.03	<LOD	112.67	<LOD	1382.02	<LOD	34.55	<LOD	25.21	Boring B-2	7-8' Deep	10/2/03
2-Oct-03	204	21.61	Soil				4137.8	1172.75	<LOD	427.82	433.44	99.76	28685.01	446.59	<LOD	372.55	<LOD	108.63	<LOD	61.32	53.12	13.81	<LOD	17.77	<LOD	13.09	<LOD	18.72	79.44	4.34	84.18	4.79	70.17	4.17	<LOD	13.99	<LOD	76.99	<LOD	53.93	<LOD	104.42	<LOD	117.29	<LOD	1284.15	<LOD	35.96	<LOD	25.12	Boring B-2	8-9' Deep	10/2/03
2-Oct-03	205	23.17	Soil				<LOD	3365.53	<LOD	396.42	551.62	94.83	25104.82	385.1	562.31	114.26	<LOD	99.57	<LOD	59.6	112.65	14.7	<LOD	16.87	<LOD	12.77	<LOD	17.93	74.9	4.01	80.6	4.47	81.49	4.06	<LOD	13.47	<LOD	72.7	62.03	17.2	<LOD	99.08	<LOD	111.56	<LOD	1264.61	<LOD	34.47	25.14	8.01	Boring B-2	8-9' Deep	10/2/03
2-Oct-03	206	22.3	Soil				3132.61	1002.29	<LOD	331.47	331	80.07	22348.16	331.71	<LOD	295.69	<LOD	86.25	58.66	18.53	41.19	11.65	<LOD	14.88	<LOD	12.33	<LOD	16.88	69.44	3.64	79.75	4.14	68.89	3.63	<LOD	12.41	<LOD	67.06	<LOD	45.5	<LOD	87.43	103.92	33.07	<LOD	1119.83	<LOD	32.13	<LOD	20.8	Boring B-2	10-11' Deep	10/2/03
2-Oct-03	207	19.25	Soil				<LOD	3103.51	<LOD	353.34	336.94	83.93	24834.7	363.43	401.29	106.6	<LOD	93.89	<LOD	54.66	66.75	12.64	<LOD	16.12	<LOD	12.64	<LOD	18.19	67.97	3.69	102.23	4.6	93.09	4.02	<LOD	12.74	<LOD	69.01	68.96	14.67	<LOD	84.99	<LOD	95.6	<LOD	1198.01	<LOD	35.76	30.61	7.78	Boring B-2	11-12 Deep	10/2/03
2-Oct-03	208	18.01	Soil				<LOD	3281.01	<LOD	385.39	283.52	84.84	21981.18	349.16	<LOD	313.71	112.45	33.29	<LOD	54.6	335.73	19.62	<LOD	42.64	<LOD	14.45	<LOD	19.51	56.62	3.78	104.22	4.85	83.72	4.12	<LOD	13.31	<LOD	70.91	<LOD	44.93	<LOD	86.15	<LOD	97.6	<LOD	1274.87	<LOD	36.65	602.07	22.29	Boring B-2	12-13' Deep	10/2/03
2-Oct-03	209	19.13	Soil				<LOD	2889.08	<LOD	360.71	270.01	80.07	22271.34	333.98	586.71	102.98	<LOD	91.19	<LOD	54.19	312.45	18.17	<LOD	31.16	<LOD	13.63	<LOD	17.64	51.96	3.43	76.57	4.15	65.06	3.64	<LOD	12.65	<LOD	67.54	<LOD	42.81	<LOD	82.51	<LOD	92.72	<LOD	1113.73	<LOD	33.29	425.6	15.71	Boring B-2	14-15 Deep	10/2/03
2-Oct-03	210	18.9	Soil				<LOD	3084.62	<LOD	359.97	250.5	81.97	22584.53	348	672.15	107.87	<LOD	92.46	<LOD	56.37	82.09	13.24	<LOD	15.58	<LOD	13.23	<LOD	16.99	69.49	3.8	90.64	4.48	96.7	4.11	<LOD	12.88	<LOD	69.9	<LOD	44.76	<LOD	86.04	<LOD	97.46	<LOD	1158.5	<LOD	32.3	<LOD	21.89	Boring B-2	14-15' Deep	10/2/03
2-Oct-03	211	21.24	Soil				<LOD	2675.68	<LOD	336.42	417.15	75.13	18304.41	271.82	285.16	84.71	<LOD	79.71	<LOD	45.91	78.04	11.49	<LOD	15.72	<LOD	10.82	<LOD	15.38	52.36	3.08	72.44	3.74	61.94	3.49	<LOD	11.48	<LOD	62.08	53.83	13.31	<LOD	76.53	<LOD	86.73	<LOD	1023.83	<LOD	29.68	46.03	7.33	Boring B-2	16-17' Deep	10/2/03
2-Oct-03	212	18.14	Soil				2996.35	982.25	<LOD	332.06	351.01	78.46	18213.46	293.48	<LOD	272.59	<LOD	81.82	<LOD	51.93	79.68	12.54	<LOD	16.87	<LOD	12.07	<LOD	16.11	54.65	3.39	78.67	4.15	67.64	3.66	<LOD	12.66	<LOD	67.58	46.37	13.98	<LOD	80.1	<LOD	90.24	<LOD	1096.52	<LOD	31.23	57.73	8.3	Boring B-2	18-19' Deep	10/2/03
2-Oct-03	213	20	Soil				4031.6	1153.09	<LOD	395.59	328.67	93.72	26425.82	418.14	<LOD	355.95	<LOD	106.13	<LOD	61.94	41.88	13.3	<LOD	17.22	<LOD	14.08	<LOD	19.07	57.36	3.86	93.51	4.91	109.21	4.61	<LOD	14.03	<LOD	76.5	<LOD	51.66	<LOD	99.48	<LOD	112.65	<LOD	1263.41	<LOD	37.05	<LOD	24.79	Boring B-2	19-20' Deep	10/2/03
2-Oct-03	214	27.28	Soil				9989.89	1548.48	957.31	163.3	419.57	97.26	33467.8	450.04	575.95	123.52	468.42	43.86	117.48	24.33	5397.35	79.33	218.6	31.77	<LOD	19.87	<LOD	29.89	<LOD	10.39	108.08	5.04	14.87	3.55	19.26	4.48	<LOD	69.61	72.06	17.26	<LOD	99.5	<LOD	112.11	4756.54	581.96	59.83	18.99	4624.63	62.11	Boring B-1		10/2/03
2-Oct-03	215	22.26	Soil				<LOD	3264.98	<LOD	419.67	424.38	92.67	19716.57	341.88	<LOD	308.69	<LOD	93.51	<LOD	61.75	263.12	19.04	<LOD	21.15	<LOD	13.55	<LOD	18.8	55.76	3.84	128.07	5.43	158.37	5.19	<LOD	14.29	<LOD	75.96	<LOD	53.82	<LOD	103.97	<LOD	116.69	<LOD	1229.22	<LOD	35.67	95.3	10.41	Boring B-1	1-2' Deep	10/2/03
2-Oct-03	216	21.48	Soil				3184.08	1044.71	<LOD	383.89	512.52	87.07	19224.3	311.03	294.37	95.98	<LOD	89.29	<LOD	55.68	59.75	12.54	<LOD	16.78	<LOD	13.25	<LOD	17.52	71.92	3.81	113.23	4.81	133.91	4.52	<LOD	13.16	<LOD	70.02	81.75	15.71	<LOD	90.95	103.89	34.32	<LOD	1170.06	<LOD	34.29	32.2	8	Boring B-1	2-3' Deep	10/2/03
2-Oct-03	217	20.44	Soil				4053.82	1188.7	<LOD	413.9	421.78	92.99	21607.53	360.39	506.32	110.87	<LOD	101.75	63.75	21.22	56.62	13.6	<LOD	17.12	<LOD	14.36	<LOD	19.21	72.74	4.13	125.55	5.36	142.77	4.98	<LOD	14.07	<LOD	75.69	<LOD	51.32	<LOD	99.24	<LOD	111.53	<LOD	1325.66	<LOD	36.39	<LOD	24.51	Boring B-1	3-4 Deep	10/2/03
2-Oct-03	218	24.64	Soil				<LOD	3864.51	<LOD	400.71	350.84	91.03	11473.06	266.07	<LOD	267.86	<LOD	92.9	<LOD	67.25	<LOD	38.64	<LOD	18.02	<LOD	14.97	<LOD	20.19	58.25	4.14	142.45	6.08	144.73	5.44	<LOD	15.63	<LOD	82.57	<LOD	62.75	<LOD	120.17	<LOD	135.63	<LOD	1477.26	<LOD	39.5	<LOD	25.87	Boring B-1	4-5' Deep	10/2/03
2-Oct-03	219	20.97	Soil				<LOD	3580.47	<LOD	412.3	<LOD	280.04	24136.24	406.67	<LOD	349.95	<LOD	103.11	<LOD	63.61	41.67	13.77	<LOD	16.87	<LOD	14.13	<LOD	20.45	72.23	4.29	103.66	5.27	100.06	4.68	<LOD	14.58	<LOD	79.25	<LOD	55.67	<LOD	106.76	<LOD	119.91	<LOD	1414.32	<LOD	40.6	<LOD	25.47	Boring B-1	5-6' Deep	10/2/03
2-Oct-03	220	23.45	Soil				<LOD	3799.98	<LOD	479.77	490.77	106.64	21986.69	404.58	<LOD	358.41	<LOD	113.49	<LOD	71.36	75.71	15.96	<LOD	19.57	<LOD	15.61	<LOD	22.06	71.88	4.54	121.64	5.89	115.87	5.19	<LOD	15.75	<LOD	84.27	83.28	21.2	<LOD	122.68	<LOD	137.32	<LOD	1407.59	<LOD	43.44	<LOD	28.52	Boring B-1	6-7' Deep	10/2/03
2-Oct-03	221	19.67	Soil				<LOD	3145.4	<LOD	387.6	389.92	83.97	17785.79	302.46	446.38	97.12	<LOD	89.1	<LOD	55.77	<LOD	34.74	<LOD	15.96	<LOD	12.67	<LOD	16.92	63.73	3.72	141.43	5.32	118.41	4.48	<LOD	13.39	<LOD	71.56	<LOD	48.26	<LOD	89.47	<LOD	100.02	<LOD	1205.95	<LOD	33.49	<LOD	22.92	Boring B-1	7-8' Deep	10/2/03
2-Oct-03	222	22.69	Soil				3210.35	1068.59	<LOD	363.64	429.21	85.73	16417.7	290.65	283.13	92.69	<LOD	87.5	<LOD	56.53	79.82	13.44	<LOD	16.74	<LOD	13.02	<LOD	17.51	66.98	3.84	125.07	5.12	113.81	4.45	<LOD	13.26	<LOD	72.51	<LOD	50.64	<LOD	97.37	<LOD	109.45	<LOD	1195.63	<LOD	33.45	<LOD	22.74	Boring B-1	8-9' Deep	10/2/03
2-Oct-03	223	24.07	Soil				3193.62	913.4	<LOD	316.44	219.12	67.72	16415.52	248.31	246.91	78.95	<LOD	74.26	<LOD	45.18	47.65	10.48	<LOD	13.04	<LOD	10.6	<LOD	14.97	67.13	3.27	116.87	4.28	123.29	3.88	<LOD	11.52	<LOD	61.49	45.65	13.75	<LOD	79.76	<LOD	89.81	<LOD	1022.97	<LOD	29.1	<LOD	18.61	Boring B-1	9-10 Deep	10/2/03
2-Oct-03	224	21.1	Soil				4023.95	1066.21	<LOD	372.09	509.13	88.6	25019.31	364.61	408.74	106.73	<LOD	93.33	<LOD	54.6	88.18	13.19	<LOD	15.63	<LOD	11.98	<LOD	16.93	78.62	3.87	69.66	4.38	82.43	3.87	<LOD	12.58	<LOD	69.16	<LOD	45.5	<LOD	88.16	<LOD	98.98	<LOD	1160.17	<LOD	32.98	<LOD	21.81	Boring B-1	10-11 Deep	10/2/03
2-Oct-03	225	20	Soil				3731.82	1083.21	<LOD	362.99	956.24	101.72	27809.36	402.12	604.68	116.59	<LOD	98.4	<LOD	54.67	88.61	13.66	<LOD	15.9	<LOD	12.36	<LOD	17.68	55.74	3.56	86.63	4.44	80.04	3.94	<LOD	12.95	<LOD	70.46	89.69	15.43	<LOD	89.42	<LOD	101.15	<LOD	1200.77	<LOD	33.33	23.72	7.69	Boring B-1	11-12' Deep	10/2/03
2-Oct-03	226	18.33	Soil				<LOD	2944.06	<LOD	346.78	415.28	83.38	21016.63	325.95	454.47	100.45	<LOD	93.9	<LOD	51.34	169.31	15.13	<LOD	22.85	<LOD	12.13	<LOD	17.61	55.39	3.47	86.4	4.35	81.52	3.87	<LOD	12.52	<LOD	68.61	74.52	14.26	<LOD	82.49	<LOD	92.7	<LOD	1179.67	<LOD	34.56	166.52	11.03	Boring B-1	12-13' Deep	10/2/03
2-Oct-03	227	21.62	Soil				3377.98	1061.3	<LOD	359.07	475.33	85.1	18944.57	308.28	403.24	96.64	<LOD	88.14	<LOD	52.29	230.47	16.73	<LOD	22.06	<LOD	12.36	<LOD	17.37	62.62	3.64	90.89	4.47	86.7	3.98	<LOD	13.04	<LOD	69.96	<LOD	47.03	<LOD	90.88	<LOD	102.26	<LOD	1189.6	<LOD	34.03	143.65	10.67	Boring B-1	13-14 Deep	10/2/03
2-Oct-03	228	21.46	Soil				<LOD	3011.82	<LOD	385.56	373.47	86.17	19539.88	324.48	<LOD	296.25	<LOD	89.12	<LOD	55.86	156.87	15.64	<LOD	19.11	<LOD	12.73	<LOD	18.02	63.41	3.77	98.07	4.72	114.37	4.43	<LOD	13.2	<LOD	71.83	<LOD	49.12	<LOD	94.48	<LOD	106.77	<LOD	1156.57	<LOD	34.97	70.51	9.22	Boring B-1	14-15' Deep	10/2/03
2-Oct-03	229	19.3	Soil				3682.57	1124.65	<LOD	383.65	315.03	85.21	20615.35	335.58	339.57	102.47	<LOD	98.13	<LOD	56.34	161.63	15.71	<LOD	23.37	<LOD	12.76	<LOD	18.28	63.9	3.6	114.65	4.99	141.69	4.76	<LOD	13.52	<LOD	72.21	<LOD	46.66	<LOD	90.46	<LOD	101.74	<LOD	1260.98	<LOD	35.6	139.42	10.94	Boring B-1	15-16' Deep	10/2/03
2-Oct-03	230	18.75	Soil				<LOD	3145.07	<LOD	355.36	372.21	85.69	23642.67	350	409.65	106.74	<LOD	98.85	<LOD	53.2	88.47	13.4	<LOD	17.5	<LOD	12.7	<LOD	18.17	51.62	3.46	85.35	4.41	81.67	3.94	<LOD	12.76	<LOD	70.33	98.93	14.97	<LOD	86.08	<LOD	96.79	<LOD	1243.69	<LOD	35.2	55.54	8.6	Boring B-1	16-17 Deep	10/2/03
2-Oct-03	231	19.57	Soil				3483.28	1060.69	<LOD	357.99	327.53	86.23	26794.49	389.19	502.37	112.99	<LOD	100.67	66.84	19.8	63.94	12.92	<LOD	15.93	<LOD	12.57	<LOD	16.81	56.14	3.54	90.96	4.48	122.65	4.39	<LOD	12.97	<LOD	70.75	<LOD	45.36	<LOD	88.13	<LOD	99.12	<LOD	1178.15	<LOD	32.24	<LOD	22.53	Boring B-1	17-18 Deep	10/2/03
2-Oct-03	232	18.77	Soil				<LOD	3349.45	<LOD	387.29	<LOD	264.47	25604.53	393.8	366	114.07	<LOD	104.13	<LOD	58.54	71.77	13.57	<LOD	15.93	<LOD	12.69	<LOD	17.67	61.11	3.8	93.37	4.71	112.25	4.47	<LOD	13.45	<LOD	73.07	<LOD	47.22	<LOD	91.02	<LOD	102.69	<LOD	1275	<LOD	33.33	<LOD	22.65	Boring B-1	18-19' Deep	10/2/03
2-Oct-03	233	23.49	Soil				<LOD	3788.76	<LOD	456.87	660.51	107.88	19488.29	370.62	<LOD	334.62	<LOD	99.58	<LOD	66.91	84.62	15.66	<LOD	20.37	<LOD	13.93	<LOD	21.11	57.93	4.17	90.72	5.28	106.65	4.96	<LOD	15.32	<LOD	83	77.14	20.75	<LOD	119.93	<LOD	135.75	<LOD	1433.77	<LOD	42.39	56.56	10.14	Boring B-1	19-20' Deep	10/2/03
2-Oct-03	234	21.61	Soil				5179.74	1248.27	<LOD	401.31	429.55	92.87	22097.34	364.71	365.76	109.69	<LOD	95.43	<LOD	62.52	280.09	19.35	44.33	11.66	<LOD	15.17	<LOD	20.14	70.25	4.14	132.88	5.49	184.31	5.45	<LOD	14.62	<LOD	75.4	56.87	17.43	<LOD	100.35	110.64	37.75	<LOD	1382.07	<LOD	38.44	407.84	16.96	Boring B-17		10/2/03
2-Oct-03	235	21.92	Soil				<LOD	4298.9	<LOD	520.87	819.54	132.28	42810.01	669.26	540.73	168.21	<LOD	130.33	<LOD	78.13	108.95	18.14	<LOD	21.05	<LOD	15.27	<LOD	22.64	94.33	5.22	97.98	5.68	109.7	5.28	<LOD	16.61	<LOD	88.27	<LOD	65.04	<LOD	125.9	<LOD	140.92	<LOD	1614.99	<LOD	43.28	45.57	10.49	Boring B-17	1-2' Deep	10/2/03
2-Oct-03	236	25.4	Soil				5328.34	1542.06	<LOD	523.42	561.13	122.24	23560.03	471.12	<LOD	412.01	<LOD	118.18	<LOD	78.58	60.52	17.41	<LOD	21.24	<LOD	16.69	<LOD	22.54	66.99	4.97	101.46	6.14	104.5	5.58	<LOD	17.46	<LOD	94.31	<LOD	76.46	<LOD	147.35	<LOD	166.02	<LOD	1695.43	<LOD	44.64	<LOD	30.16	Boring B-17	2-3 Deep	10/2/03
2-Oct-03	237	21.71	Soil				<LOD	3761.53	<LOD	423.97	350.3	94.14	19062.79	349.37	445.51	110.17	<LOD	96.98	<LOD	60.97	59.01	14.23	<LOD	19.29	<LOD	14.78	<LOD	20.55	67.62	4.23	149.76	6.03	165.7	5.63	<LOD	15.1	<LOD	80	58.61	16.95	<LOD	109.68	<LOD	123.17	<LOD	1432.73	<LOD	39.96	<LOD	26.36	Boring B-17	3-4' Deep	10/2/03
2-Oct-03	238	53.43	Standardization PASS	0.0028	0.0186	262																																														
2-Oct-03	239	19.68	Soil				4359.31	1209.95	<LOD	403.24	675.07	102.73	26626.31	419.72	389.74	120.51	<LOD	107.4	<LOD	62.93	81.24	14.54	<LOD	18.69	<LOD	14.76	<LOD	18.91	83.6	4.37	77.65	4.63	94.23	4.41	<LOD	13.93	<LOD	76.52	<LOD	51.21	<LOD	98.81	<LOD	111.34	<LOD	1338.65	<LOD	36.58	34.52	8.66	Boring B-18		10/2/03
2-Oct-03	240	30.36	Soil				3162.21	926.25	<LOD	314.35	330.57	73.2	24667.66	314.61	313.06	91.38	<LOD	82.57	<LOD	48.26	91.46	11.63	<LOD	14	<LOD	11.03	<LOD	14.89	67.22	3.2	106.25	4.04	104.56	3.61	<LOD	11.17	<LOD	60.07	90.81	14.64	<LOD	85.56	<LOD	96.42	<LOD	1045.8	<LOD	29.02	24.84	6.66	Boring B-18	1-2' Deep	10/2/03
2-Oct-03	241	20.9	Soil				<LOD	3223.02	<LOD	379.3	<LOD	246.63	21972.97	347.85	<LOD	309.69	<LOD	93.49	72.68	20.19	76.65	13.66	<LOD	16.64	<LOD	12.23	<LOD	17.46	69.1	3.87	117.45	4.99	110.4	4.39	<LOD	13.27	<LOD	71.9	<LOD	48.37	<LOD	93.29	<LOD	105.35	<LOD	1203.34	<LOD	33.43	23.7	7.79	Boring B-18	2-3 Deep	10/2/03
2-Oct-03	242	20.28	Soil				3492.75	1080.56	<LOD	370.66	<LOD	236.31	19984.94	321.71	463.29	100.79	<LOD	86.32	<LOD	55.17	70.29	12.9	<LOD	16.92	<LOD	12.39	<LOD	17.42	85.49	4.09	113.63	4.86	102.69	4.23	<LOD	12.86	<LOD	70.58	<LOD	46.56	<LOD	89.57	<LOD	101.51	<LOD	1210.27	<LOD	33.86	<LOD	22.67	Boring B-18	3-4 Deep	10/2/03
2-Oct-03	243	19.7	Soil				7264.51	1264.4	<LOD	430.9	665.17	107.26	33140.99	491.35	<LOD	396.28	<LOD	105.02	<LOD	61.89	731.46	28.67	<LOD	31.59	<LOD	14.62	<LOD	20.02	78.49	4.36	82.72	4.76	90.27	4.41	<LOD	13.94	<LOD	76.1	<LOD	51.27	<LOD	98.5	<LOD	110.93	<LOD	1324.05	<LOD	36.35	311.54	15.44	Boring B-19		10/2/03
2-Oct-03	244	24.13	Soil				<LOD	3502.63	<LOD	423.2	401.67	96.64	25259	406.6	<LOD	352.75	<LOD	100.45	<LOD	59.67	62.3	14.59	<LOD	18.21	<LOD	13.14	<LOD	19.36	67.72	4.09	94.68	4.95	97.69	4.5	<LOD	14.14	<LOD	76.96	<LOD	56.6	<LOD	109.46	<LOD	123.05	<LOD	1347.73	<LOD	37.23	30.56	8.63	Boring B-19	1-2' Deep	10/2/03
2-Oct-03	245	21.15	Soil				3845.65	1081.75	<LOD	370.39	314.64	87.05	25102.56	380.73	<LOD	330.32	<LOD	94.63	<LOD	56.02	109.52	14.33	<LOD	17.69	<LOD	12.93	<LOD	17.54	74.14	3.96	80.49	4.42	93.75	4.15	<LOD	13.41	<LOD	71.63	56.94	16.12	<LOD	93.35	<LOD	106.23	<LOD	1189.48	<LOD	33.54	43.07	8.46	Boring B-20		10/2/03
2-Oct-03	246	20.09	Soil				<LOD	3284.69	<LOD	395.24	318.42	89.28	24004.14	378.32	<LOD	332.71	<LOD	100.63	<LOD	58.59	100.35	14.49	<LOD	17.32	<LOD	12.94	<LOD	18.66	72.68	4	86.89	4.65	106.69	4.42	<LOD	13.61	<LOD	73.96	52.45	16.4	<LOD	95	<LOD	107.52	<LOD	1240.27	<LOD	37.92	<LOD	24.13	Boring B-20	1-2' Deep	10/2/03
2-Oct-03	247	30.64	Soil				<LOD	4871.54	<LOD	612.57	<LOD	375.11	19644.76	451.4	<LOD	407.8	<LOD	124.62	<LOD	93.76	<LOD	55.27	<LOD	24.76	<LOD	20.07	<LOD	27.34	53.65	4.99	104.63	6.72	134.9	6.6	<LOD	18.87	<LOD	104.29	<LOD	92.86	<LOD	178.41	<LOD	201.02	<LOD	1921.78	<LOD	54.02	<LOD	35.19	Boring B-20	2-3 Deep	10/2/03
2-Oct-03	248	20.46	Soil				4735.77	1094.46	<LOD	375.82	<LOD	229.06	15320.15	284.08	<LOD	272.75	<LOD	88.15	<LOD	56.36	<LOD	36.2	<LOD	16.61	<LOD	13.16	<LOD	16.49	56.41	3.7	133.07	5.36	127.06	4.7	<LOD	13.66	<LOD	73.92	<LOD	49.59	<LOD	96.39	<LOD	108.2	<LOD	1175.49	<LOD	35.94	<LOD	22.95	Boring B-20	3-4 Deep	10/2/03
2-Oct-03	249	19.69	Soil				<LOD	3325.68	<LOD	377.25	439.87	90.22	24506.79	375.41	347.85	109.77	<LOD	98.19	<LOD	57.53	162.11	16.74	<LOD	17.73	<LOD	13.2	<LOD	17.89	77.57	4.04	72.48	4.29	84.57	4.04	<LOD	13.14	<LOD	71.99	<LOD	47.11	<LOD	90.29	<LOD	102.14	<LOD	1273.16	<LOD	33.72	53.8	8.8	Boring B-21		10/2/03
2-Oct-03	250	24.58	Soil				<LOD	3792.22	<LOD	450.25	<LOD	304.69	28035.42	466.97	<LOD	381.66	<LOD	109.22	<LOD	68.1	85.94	15.93	<LOD	18.96	<LOD	15.43	19.75	6.47	77.16	4.69	86.25	5.16	91.06	4.72	<LOD	16.24	<LOD	82.06	<LOD	62.87	<LOD	121.08	168.22	45.47	<LOD	1464.66	<LOD	35.5	<LOD	27.29	Boring B-21	1-2 Deep	10/2/03
2-Oct-03	251	20.66	Soil				<LOD	3488.59	<LOD	432.04	1032.67	110.01	24768.09	395.65	<LOD	342.21	<LOD	105.16	<LOD	59.49	67.5	13.89	<LOD	17.62	<LOD	14.47	<LOD	19.09	71.77	4.12	141.37	5.61	133.62	4.91	<LOD	14.12	<LOD	75.8	115.66	17.31	<LOD	99.84	<LOD	112.9	<LOD	1307.24	<LOD	36.43	<LOD	24.4	Boring B-21	2-3' Deep	10/2/03
2-Oct-03	252	22.91	Soil				5325.67	1350.65	<LOD	472.41	476.5	111.16	26599.04	471.06	<LOD	398.83	<LOD	114.07	<LOD	70.12	99.38	17.06	<LOD	21.06	<LOD	16.35	<LOD	21.69	71.49	4.65	106.19	5.74	84.68	4.89	<LOD	15.68	<LOD	86.45	<LOD	64.98	<LOD	125.56	<LOD	141.29	<LOD	1454.81	<LOD	41.88	<LOD	28.04	Boring B-21	3-4' Deep	10/2/03
2-Oct-03	253	20.03	Soil				4007.28	1129.26	<LOD	384.68	665.03	98.64	27287.36	409.86	473.9	117.95	110.14	35.78	71.72	21.1	307.22	19.65	<LOD	23	<LOD	13.36	<LOD	19.56	79.99	4.15	76.06	4.44	93.28	4.22	<LOD	13.27	<LOD	72.68	126.83	16.18	<LOD	93.03	<LOD	105.41	<LOD	1248.28	<LOD	38.31	157.4	11.55	Boring B-22		10/2/03
2-Oct-03	254	24.71	Soil				<LOD	4092.63	<LOD	464.15	<LOD	281.36	20389.45	384.07	<LOD	340.6	<LOD	106.69	<LOD	66.07	57.64	15.15	<LOD	19.21	<LOD	14.46	<LOD	20.43	74.24	4.61	111.65	5.68	114.21	5.14	<LOD	15.73	<LOD	84.68	<LOD	65.01	<LOD	125.45	169.02	47.16	2015.9	543.97	<LOD	38.4	<LOD	26.9	Boring B-22	1-2 Deep	10/2/03
2-Oct-03	255	21.68	Soil				4517.49	1266.99	<LOD	415.17	<LOD	269.65	22399.21	385.11	<LOD	343.06	<LOD	104.91	<LOD	63.35	48.92	13.94	<LOD	17.74	<LOD	14.15	<LOD	19.96	82.09	4.49	139.49	5.83	149.46	5.3	<LOD	15.09	<LOD	79.38	<LOD	56.23	<LOD	108.39	<LOD	122.26	<LOD	1407.07	<LOD	38.46	<LOD	25.53	Boring B-22	2-3 Deep	10/2/03
2-Oct-03	256	21.78	Soil				<LOD	3905.8	<LOD	431.94	1090.89	120.85	24059.08	426.46	<LOD	366.56	<LOD	108.75	<LOD	69.16	53.65	15.04	<LOD	19.48	<LOD	15.23	<LOD	20.64	72.2	4.5	107.71	5.59	96.57	4.86	<LOD	15.46	<LOD	83.72	<LOD	60.46	<LOD	117.25	150.59	44.08	<LOD	1515.41	<LOD	41.34	<LOD	26.46	Boring B-22	3-4 Deep	10/2/03
2-Oct-03	257	19.16	Soil				<LOD	3034.22	<LOD	342.41	260.92	76.31	20898.14	320.16	344.6	97.5	95.29	30.85	<LOD	52.96	280.33	17.43	<LOD	19.77	<LOD	12.41	<LOD	17.31	73.66	3.78	63.66	3.92	86.16	3.83	<LOD	12.61	<LOD	67.92	<LOD	42.95	<LOD	82.43	146.98	31.11	<LOD	1135.41	<LOD	31.86	90.12	9.21	Boring B-23		10/2/03
2-Oct-03	258	23.3	Soil				3551.19	1071.83	<LOD	380.03	<LOD	248.73	22943.74	350.87	<LOD	304.75	<LOD	90.96	<LOD	55.91	68.77	12.97	<LOD	16	<LOD	12.34	<LOD	18.17	79.56	3.97	99.12	4.63	106.02	4.23	<LOD	13.27	<LOD	70.9	<LOD	49.28	<LOD	95.68	<LOD	107.35	<LOD	1193.88	<LOD	35.38	<LOD	21.85	Boring B 23	1-2 Deep	10/2/03
2-Oct-03	259	20.12	Soil				4241.35	1160	<LOD	406.52	<LOD	258.99	18795.77	336.88	<LOD	311.34	<LOD	94.43	<LOD	62.83	50.86	13.55	<LOD	17.93	<LOD	13.57	<LOD	18.7	66.76	4.1	134.84	5.62	136.6	5.03	<LOD	14.67	<LOD	77.4	109.43	17.49	<LOD	101.03	<LOD	114.16	<LOD	1299.05	<LOD	35.21	<LOD	24.19	Boring B 23	2-3 Deep	10/2/03
2-Oct-03	260	25.07	Soil				4421.91	1084.53	<LOD	378.45	419.42	86.65	20191.98	326.68	<LOD	290.93	<LOD	89.08	<LOD	58.21	72.1	13.25	<LOD	16.42	<LOD	13.37	<LOD	18.4	74.53	3.94	125.54	5.07	106.66	4.32	<LOD	13.32	<LOD	71.25	66.8	17.26	<LOD	99.94	<LOD	113.63	<LOD	1183.02	<LOD	34.94	<LOD	22.95	Boring B-23	3-4 Deep	10/2/03
2-Oct-03	261	23.09	Soil				<LOD	3459.87	<LOD	440.62	455.6	100.4	22117.13	388.65	<LOD	334.57	<LOD	101.92	<LOD	61.65	306.96	21.08	<LOD	24.81	<LOD	15.41	<LOD	20.43	61.57	4.14	56.71	4.47	78.23	4.39	<LOD	14.63	<LOD	79.37	<LOD	58.6	<LOD	112.49	<LOD	126.25	<LOD	1276.07	<LOD	39.64	132.29	12.05	Boring B-24		10/2/03

2-Oct-03	262	22.83	Soil	<LOD	2916.13	<LOD	342.65	263.84	77.42	25333.8	344.09	433.36	100.68	<LOD	88.54	<LOD	49.09	83.67	12.17	<LOD	14.16	<LOD	11.43	<LOD	16.62	73.61	3.65	68.19	3.79	89.78	3.67	<LOD	11.66	<LOD	63.97	65.3	14.35	<LOD	82.78	131.68	31.13	<LOD	1096.42	<LOD	31.94	23.78	7.03	Boring B-24	1-2' Deep	10/2/03
2-Oct-03	263	20.69	Soil	<LOD	3530.7	<LOD	410.29	563.9	99.78	26216.33	413.09	413.54	119.38	<LOD	109.13	<LOD	80.16	73.31	14.18	<LOD	17.53	<LOD	13.77	<LOD	19.01	75.92	4.22	116.97	5.3	101.72	4.54	<LOD	14	<LOD	76.78	55.06	17.36	<LOD	101.13	<LOD	114	<LOD	1366.91	<LOD	36.35	<LOD	24.76	Boring B-24	2-3' Deep	10/2/03
2-Oct-03	264	19.73	Soil	<LOD	3329.44	<LOD	382.88	506.5	95.01	27942.7	415.61	555.1	119.81	<LOD	103.4	<LOD	57.82	65.42	13.39	<LOD	17.15	<LOD	12.7	<LOD	16.68	73.84	4.02	103.97	4.87	104.64	4.38	<LOD	13.45	<LOD	72.93	101.83	16.03	<LOD	93.08	132.51	34.84	<LOD	1240.74	<LOD	35.62	<LOD	23	Boring B-24	3-4 Deep	10/2/03
2-Oct-03	265	22.19	Soil	<LOD	3560.43	<LOD	427.73	1073.77	114.57	32772.76	479.28	409.02	129.92	<LOD	108.47	<LOD	59.18	203.84	17.65	<LOD	20.26	<LOD	13.62	<LOD	19.26	69.43	4.06	83.01	4.67	126.56	4.74	<LOD	14.03	<LOD	75.09	<LOD	52.88	<LOD	102.16	<LOD	115.15	<LOD	1349.27	<LOD	37.05	57.95	9.36	Boring B-25		10/2/03
2-Oct-03	266	22.3	Soil	<LOD	3923.27	<LOD	425.41	1052.08	118.83	29973.34	477.39	<LOD	381.98	<LOD	108.85	<LOD	58.55	302.05	21.24	<LOD	19.44	<LOD	14.54	<LOD	19.74	66.39	4.26	107.66	5.38	165.65	5.63	<LOD	15.22	<LOD	80.2	<LOD	57.64	<LOD	111.51	<LOD	125.01	<LOD	1484.49	<LOD	37.93	39.57	9.42	Boring B-25	1-2' Deep	10/2/03
2-Oct-03	267	22.64	Soil	5008.17	1265.8	<LOD	451.5	287.66	95.87	20335.93	371.66	<LOD	337.42	<LOD	100.83	<LOD	67.81	126.46	16.6	<LOD	19.08	<LOD	14.13	<LOD	21.01	66.54	4.31	158.67	6.3	202.79	6.1	<LOD	15.82	<LOD	62.08	<LOD	59.49	<LOD	114.16	<LOD	128.69	<LOD	1377.3	<LOD	40.19	<LOD	26.33	Boring B-25	2-3 Deep	10/2/03
2-Oct-03	268	27.44	Soil	4838.25	1299.65	<LOD	439.83	531.66	104.73	27434.04	443.83	<LOD	369.56	<LOD	109.63	<LOD	65.74	111.4	16.2	<LOD	20.08	<LOD	14.75	<LOD	20.27	77.73	4.43	127.05	5.65	166.9	5.61	<LOD	15.22	<LOD	60.25	<LOD	62.84	<LOD	120.97	<LOD	136.5	<LOD	1438.31	<LOD	39.59	37.21	9.36	Boring B-25	3-4' Deep	10/2/03

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D Laboratory Testing Results

AOC SITE
LABORATORY TESTING RESULTS - SOIL

BORING	DEPTH	Arsenic (As) mg/Kg-dry	Barium (Ba) mg/Kg-dry	Chromium (Cr) mg/Kg-dry	Lead (Pb) mg/Kg-dry	TCLP Pb mg/L	PCBs ug/Kg-dry	pH standard units
B-01	1-2'	7.33	229	25.5	117	0 036	<46.6	7.93
B-01	2-3'	4.25	227	28 6	17.2	0 007	<48.1	7.68
B-01	3-4'	6 17	239	28 3		<0 002	<49 0	
B-02	1-2'	8 04	268	26.6	44.0	<0 002	<49 9	7 41
B-02	2-3'	8.21	278	26 1	19 9	<0 040	<48 5	7 22
B-02	3-4'		184	22 0				
B-02	5-6'	7.45						
B-02	7-8'	6.06						
B-02	15-16'				16.1	0 016		
B-03	1-2'	3 82	247	22.2	23 0	<0 002	<47 1	7 14
B-03	2-3'	6 66	252	25 0	17.3	<0 040	<47.9	7.00
B-03	3-4'		268	33.2				
B-04	1-2'	7 40	331	35 1	156	0 022	2460	6 57
B-04	2-3'	6.24	214	31 5		0 005	112	
B-04	3-4'						1130	
B-04	4-5'						<47 4	
B-04	5-6'						358	
B-04	6-7'						3370	
B-04	7-8'						3420	
B-04	8-9'						285	
B-04	9-10'	6 11					<58 7	
B-04	10-11'	12.1					<60.8	
B-04	11-12'	8.28	223	27.6	14 4	0 014		8 10
B-04	14-15'	4 37	205		17 0	0 005		
B-05	1-2'	4 38	270	25.7	62 9	0 004	<48.8	6 82
B-05	2-3'	4 51	244	28 7	22 3	<0 040	<48 1	7 39
B-05	3-4'		261	30 3				
B-05	5-6'		241		19.1	<0 002		
B-06	1-2'	3.06	249	28.7	43 1	0 003	<51 9	6 65
B-06	2-3'	4 74	196	28.2	20 1	<0.040	<48.9	7 03
B-06	3-4'	6.61		40 6			<47 8	
B-06	7-8'				34 1	<0 002		
B-06	9-10'				15 4	0 012		
B-07	1-2'	5 85	266	26.7	35 5	<0.002	1570	6 61
B-07	2-3'		218	33.9			791	
B-07	3-4'						2060	
B-07	4-5'						1330	
B-07	5-6'	9 43					4570	
B-07	6-7'	8.27					4570	
B-07	7-8'	6 66					1250	
B-07	8-9'	4 11			110		8220	
B-07	9-10'	8.03			14 4	0 008	<57.4	

AOC SITE
LABORATORY TESTING RESULTS - SOIL

BORING	DEPTH	Arsenic (As) mg/Kg-dry	Barium (Ba) mg/Kg-dry	Chromium (Cr) mg/Kg-dry	Lead (Pb) mg/Kg-dry	TCLP Pb mg/L	PCBs ug/Kg-dry	pH standard units
B-08	1-2'	6 51	257	24 9	36 1	0 006	793	6 40
B-08	2-3'	8 40	247	38 7		<0 002	1780	
B-08	3-4'						729	
B-08	4-5'	8 01					218	
B-08	5-6'	NR					NR	
B-08	6-7'	NR					NR	
B-08	8-9'						224	
B-08	9-10'						261	
B-08	10-11'						69.7	
B-09	1-2'	7 59	263	23 9	27 8	<0 002	<49 5	6 67
B-09	2-3'		266	34 1				
B-10	1-2'	7 89	189	23 3	22 9	<0 002	<50 1	6.74
B-10	2-3'		299	34 3			<46.6	
B-10	3-4'						<44.3	
B-10	4-5'						72 8	
B-10	5-6'						<49 0	
B-10	6-7'						<49.5	
B-10	7-8'						<52 5	
B-10	8-9'						120	
B-10	9-10'						<56 1	
B-10	10-11'						<54 9	
B-11	0-1'	7 45		89.6				8.08
B-11	1-2'	7 80	362	22 3	57 9	<0.002	113	7.04
B-11	2-3'	NR	NR	NR	NR	NR	NR	NR
B-11	3-4'		692	31.8			<46 2	
B-11	4-5'				21 4	0 003	206	
B-11	5-6'						<45.8	
B-11	8-9'		211				<52 2	
B-12	1-2'	18.5	246	28 0	19 8	0.002	<47 5	6.20
B-12	2-3'	13 7	264	23 3	19 0	<0.040	<49 4	7.16
B-12	3-4'	24 7	265	37 6			<45 7	
B-12	4-5'	11 4						
B-13	1-2'	5.72	227	28 9	21 0	0 011	<49 1	5.42
B-13	2-3'	6 76	237	25.2	23.3	<0.002	<48 6	7 07
B-13	3-4'		222	39 2				
B-14	0-1'	8.00	351	24 7	40 3	<0 002	<50.0	7 78
B-14	1-2'	5.70	300	23 5	40.2	<0.002	<46.4	6.74
B-14	2-3'			36.2			<45 4	
B-14	3-4'				18 3	<0.002		
B-14	5-6'	5 19						
B-14	7-8'	5.89						

AOC SITE
LABORATORY TESTING RESULTS - SOIL

BORING	DEPTH	Arsenic (As) mg/Kg-dry	Barium (Ba) mg/Kg-dry	Chromium (Cr) mg/Kg-dry	Lead (Pb) mg/Kg-dry	TCLP Pb mg/L	PCBs ug/Kg-dry	pH standard units
B-15	0-1'			37.2			73 7	7 41
B-15	1-2'	5 97	247	14 6	17 7	<0 002	<44 1	7 08
B-15	2-3'		279		20 7	<0 002		
B-15	3-4'	6.01						
B-16	0-1'	4 62		52 5				7 75
B-16	1-2'	<2 45	152	13 4	12.9	<0 002	<46 5	7 19
B-16	2-3'		189				71 8	
B-16	3-4'				15 6	0 005	<45 0	
B-16	4-5'						<90 0	
B-17	0-1'			82 5			181	7 09
B-17	1-2'	5.10	232	29 8	20.9	0 002	<46 6	6 97
B-17	2-3'		183	25 4	13 5	0 005		
B-18	0-1'	6 47		40.7	34 4	0 011	<54 1	7 10
B-18	1-2'	6 16	283	34 7	20 5	<0 002	<50 6	6 69
B-18	2-3'			36.9			<49 9	
B-19	0-1'	7 23		41 7	84 4	0 012	446	7 1
B-19	1-2'	6 77	279	33.2	22 9	<0 002	<50 7	6 60
B-19	2-3'	NR	NR	NR	NR	NR	NR	NR
B-19	3-4'	NR	NR	NR	NR	NR	NR	NR
B-20	0-1'	8 19		40.9	23 2	0 004	<53 0	7 05
B-20	1-2'	8 79	379	30 6	21 8	<0 002	<98.6	6 38
B-20	2-3'			36.2			<48 2	
B-21	0-1'	7 49		40 6	20.8	0.005	<52.6	6 88
B-21	1-2'	6 10	149	22.3	15 1	<0 002	<50.2	6 33
B-21	2-3'		420	39 6				
B-22	0-1'	7 21		38.6	29.7	0 010	22200	6 73
B-22	1-2'	5.07	150	22.3	14 0	<0 002	<48 0	6 32
B-22	2-3'		223	26 9				8 27
B-23	0-1'	6 20		40 9	51 3	0 003	<54 4	6 88
B-23	1-2'	7.25	257	30.5	22 2	<0 002	<49 8	6 62
B-23	2-3'			32.3			<48 2	
B-24	0-1'	7 17		46 8				7 10
B-24	1-2'	8 65	255	39 8	68 7	0.004	192	6 75
B-24	2-3'			40.0	20 5	0.005	<52.5	
B-25	0-1'	9 97		36.3			<49.9	7 58
B-25	1-2'	7.10	228	27 1	40 0	<0 002	<46 6	7 08
B-25	2-3'		229	26.2	28.5	<0 002		

AOC SITE
LABORATORY TESTING RESULTS - WATER

LOCATION	Filtered Yes/No	Arsenic (As) mg/L	Barium (Ba) mg/L	Chromium (Cr) mg/L	Lead (Pb) mg/L	PCBs ug/L	pH standard units
B-01	No	2.37	35 2	2.28	23.5	<0.50	6.54
B-01	Yes	<0.025	0.605	<0.010	0.016		
B-02	No	1 40	11.4	1 00	4 75	<0.53	6.85
B-02	Yes	<0 025	0 551	<0.010	<0 002		
B-03	No	1.27	7.16	0 753	1 17	<0 50	6.74
B-03	Yes	<0.025	0.55	<0.010	<0 002		
B-04	No	1.54	14 5	1 18	9 57	<0 50	6.74
B-04	Yes	<0.025	0 608	<0 010	<0 002		
Cahokia Canal	Yes	<0 025	0 128	<0.010	<0.002	<0 10	
Marshy Area	No	<0 025	0.259	<0 010	0 076		

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL 618-344-1004
FAX 618-344-1005

October 10, 2003

Bryan Johnsrud
Rapps Engineering & Applied Science
821 S. Durkin Dr.
Springfield, IL 62791-7349
TEL: (217) 787-2118
FAX: (217) 787-6641

ACCREDITED IN ACCORDANCE WITH

NELAP Accredited #100226

RE: SLAS-AOC Site

OrderNo. 0310148

Dear Bryan Johnsrud:

TEKLAB, INC received 5 samples on 10/6/03 2:35:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest that have been tested. IL ELAP and NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP/Part 186 except where noted in the Case Narrative. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Michael L. Austin
Director of Operations

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL 618-344-1004
FAX. 618-344-1005

Client: Rapps Engineering & Applied Science
Project: SLAS-AOC Site
LabOrder: 0310148
Report Date: October 10, 2003

CASE NARRATIVE

Qualifiers

DF - Dilution Factor	**B** - Analyte detected in the associated Method Blank	**E** - Value above quantitation range
RL - Reporting Limit	**J** - Analyte detected below quantitation limits	**H** - Holding time exceeded
ND - Not Detected at the Reporting Limit	**R** - RPD outside accepted recovery limits	**D** - Diluted out of sample
Surr - Surrogate Standard added by lab	**S** - Spike Recovery outside accepted recovery limits	**MI** - Matrix interference
TNTC - Too numerous to count	***** - Value exceeds Maximum Contaminant Level	**DNI** Did Not Ignite
IDPH - Illinois Department of Public Health	**NELAP** - IL ELAP and NELAP Accredited Field of Testing	

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL 618-344-1004
FAX 618-344-1005

Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0310148	**Client Sample ID:**	B-1
Lab ID:	0310148-01	**Collection Date:**	10/2/03 3:40:00 PM
Report Date:	10-Oct-03	**Matrix:**	AQUEOUS

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 3030F, 3120B TOTAL								
Arsenic		0 050		**2.37**	mg/L	2	10/10/03 10.08:38 AM	SAM
Barium		0.010		**35.2**	mg/L	2	10/10/03 10:08:38 AM	SAM
Chromium		0 020		**2.28**	mg/L	2	10/10/03 10:08:38 AM	SAM
Lead		0 080		**23.5**	mg/L	2	10/10/03 10 08:38 AM	SAM
SW-846 3510C, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	1.00		**ND**	µg/L	1	10/8/03 3 13.00 AM	TDN
Aroclor 1221	NELAP	1 00		**ND**	µg/L	1	10/8/03 3:13:00 AM	TDN
Aroclor 1232	NELAP	1 00		**ND**	µg/L	1	10/8/03 3:13.00 AM	TDN
Aroclor 1242	NELAP	1.00		**ND**	µg/L	1	10/8/03 3:13:00 AM	TDN
Aroclor 1248	NELAP	1 00		**ND**	µg/L	1	10/8/03 3:13:00 AM	TDN
Aroclor 1254	NELAP	1.00		**ND**	µg/L	1	10/8/03 3:13.00 AM	TDN
Aroclor 1260	NELAP	1.00		**ND**	µg/L	1	10/8/03 3:13:00 AM	TDN
Surr: Decachlorobiphenyl		22-185		**92.0**	%REC	1	10/8/03 3.13:00 AM	TDN
Surr: Tetrachloro-meta-xylene		10-161		**92.0**	%REC	1	10/8/03 3.13:00 AM	TDN

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL 618-344-1004
FAX. 618-344-1005

Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0310148	**Client Sample ID:**	B-2
Lab ID:	0310148-02	**Collection Date:**	10/2/03 4:00:00 PM
Report Date:	10-Oct-03	**Matrix:**	AQUEOUS

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 3030F, 3120B TOTAL								
Arsenic		0.025		**1.40**	mg/L	1	10/8/03 3:57:38 PM	SAM
Barium		0.005		**11.4**	mg/L	1	10/8/03 3:57:38 PM	SAM
Chromium		0 010		**1.00**	mg/L	1	10/8/03 3:57:38 PM	SAM
Lead		0.040		**4.75**	mg/L	1	10/8/03 3:57:38 PM	SAM
SW-846 3510C, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	1 06		**ND**	µg/L	1	10/8/03 3:32:00 AM	TDN
Aroclor 1221	NELAP	1 06		**ND**	µg/L	1	10/8/03 3:32.00 AM	TDN
Aroclor 1232	NELAP	1.06		**ND**	µg/L	1	10/8/03 3:32:00 AM	TDN
Aroclor 1242	NELAP	1 06		**ND**	µg/L	1	10/8/03 3:32:00 AM	TDN
Aroclor 1248	NELAP	1.06		**ND**	µg/L	1	10/8/03 3:32.00 AM	TDN
Aroclor 1254	NELAP	1 06		**ND**	µg/L	1	10/8/03 3:32:00 AM	TDN
Aroclor 1260	NELAP	1 06		**ND**	µg/L	1	10/8/03 3 32:00 AM	TDN
Surr: Decachlorobiphenyl		22-185		**92.6**	%REC	1	10/8/03 3:32.00 AM	TDN
Surr. Tetrachloro-meta-xylene		10-161		**85.2**	%REC	1	10/8/03 3.32:00 AM	TDN

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL 618-344-1004
FAX 618-344-1005

Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0310148	**Client Sample ID:**	B-3
Lab ID:	0310148-03	**Collection Date:**	10/2/03 4:10:00 PM
Report Date:	10-Oct-03	**Matrix:**	AQUEOUS

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 3030F, 3120B TOTAL								
Arsenic		0.025		**1.27**	mg/L	1	10/8/03 4:03:21 PM	SAM
Barium		0.005		**7.16**	mg/L	1	10/8/03 4:03.21 PM	SAM
Chromium		0.010		**0.753**	mg/L	1	10/8/03 4:03.21 PM	SAM
Lead		0.040		**1.17**	mg/L	1	10/8/03 4:03:21 PM	SAM
SW-846 3510C, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	1.00		**ND**	µg/L	1	10/8/03 3:52:00 AM	TDN
Aroclor 1221	NELAP	1.00		**ND**	µg/L	1	10/8/03 3:52:00 AM	TDN
Aroclor 1232	NELAP	1.00		**ND**	µg/L	1	10/8/03 3:52:00 AM	TDN
Aroclor 1242	NELAP	1.00		**ND**	µg/L	1	10/8/03 3.52.00 AM	TDN
Aroclor 1248	NELAP	1.00		**ND**	µg/L	1	10/8/03 3:52:00 AM	TDN
Aroclor 1254	NELAP	1.00		**ND**	µg/L	1	10/8/03 3:52.00 AM	TDN
Aroclor 1260	NELAP	1.00		**ND**	µg/L	1	10/8/03 3:52:00 AM	TDN
Surr: Decachlorobiphenyl		22-185		**88.0**	%REC	1	10/8/03 3:52:00 AM	TDN
Surr: Tetrachloro-meta-xylene		10-161		**88.0**	%REC	1	10/8/03 3:52:00 AM	TDN

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL 618-344-1004
FAX 618-344-1005

Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0310148	**Client Sample ID:**	B-8
Lab ID:	0310148-05	**Collection Date:**	10/2/03 5:00:00 PM
Report Date:	10-Oct-03	**Matrix:**	AQUEOUS

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 3030F, 3120B TOTAL								
Arsenic		0.050		**1.27**	mg/L	2	10/10/03 10:40:12 AM	SAM
Barium		0.010		**51.3**	mg/L	2	10/10/03 10:40:12 AM	SAM
Chromium		0.020		**5.73**	mg/L	2	10/10/03 10:40:12 AM	SAM
Lead		0 080		**113**	mg/L	2	10/10/03 10:40:12 AM	SAM

CHAIN OF CUSTODY

pg. 1 of 1 Work Order # 10148

TEKLAB, INC. 5445 Horseshoe Lake Road ~ Collinsville, IL 62234 ~ Phone: (618) 344-1004 ~ Fax: (618) 344-1005

Client: St. Louis Auto Shredding
Address: Post office Box 130
City / State / Zip: National Stock Yards, IL 62071
Contact: Bryan Johnsrud Phone: 217-787-2118 ext. 207
E-Mail: bjohnsrud@rapps.net Fax: 217-787-6641

Are the samples chilled? ☐ NO ☒ YES (Ice ~~or Blue Ice~~)
Cooler Temperature: 1.8 °C
Preserved in: ☒ Lab ~~☒ Field~~ EAW 10/6/03 HNO3 added to B1, B2, B3, B4
Comments:

* analysis pH out of hold time but on separate report, per Bryan Johnsrud

Project Name / Number: SLAS-AOC Site
Sample Collector's Name: Bryan Johnsrud
Requested Due Date:
Billing Instructions PO#:

Lab Use Only	Sample Identification	Date/Time Sampled	UNPRES	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	Other	Water	Drinking Water	Soil	Sludge	Sp. Waste	pH *	PCBs	arsenic	barium	chromium	lead
0310148-01	B-1	10/02/03 3:40PM	2	1							X					X	X	X	X	X	X
02	B-2	10/02/03 4:00PM	2	1							X					X	X	X	X	X	X
03	B-3	10/02/03 4:10PM	2	1							X					X	X	X	X	X	X
04	B-4	10/02/03 4:25PM	2	1							X					X	X	X	X	X	X
05	B-8	10/02/03 5:00PM		1							X							X	X	X	X

E-MAILED 10-10-03

Relinquished By	Date / Time	Received By	Date / Time
Bryan C. Johnsrud	10/06/03 11:30AM	John Riley	10/6/03 11.30
John Riley	10/06/03 14:35	Elizabeth A. Weber	10/6/03 1435

TEKLAB, INC

Sample Receipt Checklist

Client Name RAPPS

Date and Time Receive 10/6/03 2:35:00 PM

Work Order Numbe 0310148

Received by: EAW

Checklist completed by Elizabeth A. Weber (Signature) 10/6/03 (Date)

Reviewed by MLA (Initials) 10/7/03 (Date)

Matrix:

Carrier name: John Riley

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Water - VOA vials have zero headspace?	No VOA vials submitted ☑	Yes ☐	No ☐
Water - pH acceptable upon receipt?	Yes ☐	No ☑	

Adjusted? yes Checked by EAW

Any No and/or NA (not applicable) response must be detailed in the Case Narrative or on the Chain of Custody.

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL 618-344-1004
FAX 618-344-1005

October 16, 2003

Bryan Johnsrud
Rapps Engineering & Applied Science
821 S. Durkin Dr.
Springfield, IL 62791-7349
TEL: (217) 787-2118
FAX: (217) 787-6641

ACCREDITED IN ACCORDANCE WITH

NELAP Accredited #100226

RE: SLAS - AOC Site

OrderNo. 0310184

Dear Bryan Johnsrud:

TEKLAB, INC received 59 samples on 10/7/03 1:20:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest that have been tested. IL ELAP and NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP/Part 186 except where noted in the Case Narrative. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Michael L. Austin
Director of Operations

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL: 618-344-1004
FAX: 618-344-1005

Client: Rapps Engineering & Applied Science
Project: SLAS - AOC Site
LabOrder: 0310184
Report Date: October 16, 2003

CASE NARRATIVE

Qualifiers

DF - Dilution Factor	**B** - Analyte detected in the associated Method Blank	**E** - Value above quantitation range
RL - Reporting Limit	**J** - Analyte detected below quantitation limits	**H** - Holding time exceeded
ND - Not Detected at the Reporting Limit	**R** - RPD outside accepted recovery limits	**D** - Diluted out of sample
Surr - Surrogate Standard added by lab	**S** - Spike Recovery outside accepted recovery limits	**MI** - Matrix interference
TNTC - Too numerous to count	***** - Value exceeds Maximum Contaminant Level	**DNI** Did Not Ignite
IDPH - Illinois Department of Public Health	**NELAP** - IL ELAP and NELAP Accredited Field of Testing	

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-12 2'-3'
Lab ID:	0310184-01	**Collection Date:**	10/1/03 10:00:00 AM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0 1		**24.3**	%	1	10/8/03	DLY
Total Solids		0.1		**75.7**	%	1	10/8/03	DLY
SW-846 1311 TCLP / 3010A, ICP METHOD 6010B								
Lead	NELAP	0.040		**< 0.040**	mg/L	1	10/14/03 11 07:57 AM	SAM
SW-846 3050B, ICP METHOD 6010B								
Arsenic	NELAP	2 45		**13.7**	mg/Kg-dry	1	10/14/03 4:08:53 PM	JMW
Barium	NELAP	0.49		**264**	mg/Kg-dry	1	10/14/03 9 13:29 AM	SAM
Chromium	NELAP	0 98		**23.3**	mg/Kg-dry	1	10/14/03 9.13:29 AM	SAM
Lead	NELAP	3 92		**19.0**	mg/Kg-dry	1	10/14/03 9:13.29 AM	SAM
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	49 4		**ND**	µg/Kg-dry	1	10/9/03 2.28:00 AM	TDN
Aroclor 1221	NELAP	49.4		**ND**	µg/Kg-dry	1	10/9/03 2.28.00 AM	TDN
Aroclor 1232	NELAP	49.4		**ND**	µg/Kg-dry	1	10/9/03 2.28 00 AM	TDN
Aroclor 1242	NELAP	49.4		**ND**	µg/Kg-dry	1	10/9/03 2:28:00 AM	TDN
Aroclor 1248	NELAP	49.4		**ND**	µg/Kg-dry	1	10/9/03 2:28:00 AM	TDN
Aroclor 1254	NELAP	49.4		**ND**	µg/Kg-dry	1	10/9/03 2:28:00 AM	TDN
Aroclor 1260	NELAP	49.4		**ND**	µg/Kg-dry	1	10/9/03 2:28:00 AM	TDN
Surr: Decachlorobiphenyl		22-210		**60.6**	%REC	1	10/9/03 2:28:00 AM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**33.9**	%REC	1	10/9/03 2.28.00 AM	TDN
SW-846 METHOD 9045C								
pH (1.1)	NELAP	1 00		**7.16**		1	10/10/03 12:13 00 PM	ALB

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-13 2'-3'
Lab ID:	0310184-02	**Collection Date:**	10/1/03 10:45:00 AM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0.1		**22.7**	%	1	10/8/03	DLY
Total Solids		0 1		**77.3**	%	1	10/8/03	DLY
SW-846 1311 TCLP / 3010A, ICP METHOD 6010B								
Lead	NELAP	0.040		**< 0.040**	mg/L	1	10/14/03 11:18:32 AM	SAM
SW-846 3050B, ICP METHOD 6010B								
Arsenic	NELAP	2 40		**6.76**	mg/Kg-dry	1	10/14/03 4.16.22 PM	JMW
Barium	NELAP	0 48		**237**	mg/Kg-dry	1	10/14/03 9.29:17 AM	SAM
Chromium	NELAP	0 96		**25.2**	mg/Kg-dry	1	10/14/03 9 29.17 AM	SAM
Lead	NELAP	3 85		**23.3**	mg/Kg-dry	1	10/14/03 9:29.17 AM	SAM
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	48.6		**ND**	µg/Kg-dry	1	10/9/03 3.27 00 AM	TDN
Aroclor 1221	NELAP	48 6		**ND**	µg/Kg-dry	1	10/9/03 3.27:00 AM	TDN
Aroclor 1232	NELAP	48.6		**ND**	µg/Kg-dry	1	10/9/03 3:27:00 AM	TDN
Aroclor 1242	NELAP	48 6		**ND**	µg/Kg-dry	1	10/9/03 3.27:00 AM	TDN
Aroclor 1248	NELAP	48.6		**ND**	µg/Kg-dry	1	10/9/03 3:27:00 AM	TDN
Aroclor 1254	NELAP	48.6		**ND**	µg/Kg-dry	1	10/9/03 3:27:00 AM	TDN
Aroclor 1260	NELAP	48 6		**ND**	µg/Kg-dry	1	10/9/03 3:27:00 AM	TDN
Surr: Decachlorobiphenyl		22-210		**64.5**	%REC	1	10/9/03 3:27:00 AM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**37.4**	%REC	1	10/9/03 3.27:00 AM	TDN
SW-846 METHOD 9045C								
pH (1:1)	NELAP	1.00		**7.07**		1	10/10/03 12:16:00 PM	ALB

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-4 2'-3'
Lab ID:	0310184-03	**Collection Date:**	9/30/03 1:30:00 PM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0 1	H	**18.5**	%	1	10/8/03	DLY
Total Solids		0 1	H	**81.5**	%	1	10/8/03	DLY
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	45.8		**ND**	µg/Kg-dry	1	10/9/03 3:47:00 AM	TDN
Aroclor 1221	NELAP	45.8		**ND**	µg/Kg-dry	1	10/9/03 3:47.00 AM	TDN
Aroclor 1232	NELAP	45.8		**ND**	µg/Kg-dry	1	10/9/03 3:47:00 AM	TDN
Aroclor 1242	NELAP	45.8		**ND**	µg/Kg-dry	1	10/9/03 3:47 00 AM	TDN
Aroclor 1248	NELAP	45 8		**112**	µg/Kg-dry	1	10/9/03 3:47:00 AM	TDN
Aroclor 1254	NELAP	45 8		**ND**	µg/Kg-dry	1	10/9/03 3:47:00 AM	TDN
Aroclor 1260	NELAP	45 8		**86.5**	µg/Kg-dry	1	10/9/03 3:47:00 AM	TDN
Surr: Decachlorobiphenyl		22-210		**81.2**	%REC	1	10/9/03 3.47:00 AM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**52.5**	%REC	1	10/9/03 3:47:00 AM	TDN

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-4 3'-4'
Lab ID:	0310184-04	**Collection Date:**	9/30/03 1:30:00 PM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0.1	H	**20.1**	%	1	10/8/03	DLY
Total Solids		0.1	H	**79.9**	%	1	10/8/03	DLY
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	47.5		**ND**	µg/Kg-dry	1	10/9/03 4:07:00 AM	TDN
Aroclor 1221	NELAP	47.5		**ND**	µg/Kg-dry	1	10/9/03 4:07.00 AM	TDN
Aroclor 1232	NELAP	47.5		**ND**	µg/Kg-dry	1	10/9/03 4:07:00 AM	TDN
Aroclor 1242	NELAP	47 5		**ND**	µg/Kg-dry	1	10/9/03 4·07·00 AM	TDN
Aroclor 1248	NELAP	238		**1130**	µg/Kg-dry	5	10/13/03 11·38·00 PM	TDN
Aroclor 1254	NELAP	47.5		**ND**	µg/Kg-dry	1	10/9/03 4:07.00 AM	TDN
Aroclor 1260	NELAP	47 5		**746**	µg/Kg-dry	1	10/9/03 4.07:00 AM	TDN
Surr Decachlorobiphenyl		22-210		**104**	%REC	1	10/9/03 4·07.00 AM	TDN
Surr Tetrachloro-meta-xylene		10-153		**75.2**	%REC	1	10/9/03 4:07:00 AM	TDN

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-4 4'-5'
Lab ID:	0310184-05	**Collection Date:**	9/30/03 1:30:00 PM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0.1	H	**22.5**	%	1	10/8/03	DLY
Total Solids		0 1	H	**77.5**	%	1	10/8/03	DLY
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	47 4		**ND**	µg/Kg-dry	1	10/9/03 4:27:00 AM	TDN
Aroclor 1221	NELAP	47 4		**ND**	µg/Kg-dry	1	10/9/03 4.27:00 AM	TDN
Aroclor 1232	NELAP	47.4		**ND**	µg/Kg-dry	1	10/9/03 4:27:00 AM	TDN
Aroclor 1242	NELAP	47.4		**ND**	µg/Kg-dry	1	10/9/03 4:27:00 AM	TDN
Aroclor 1248	NELAP	47.4	J	**ND**	µg/Kg-dry	1	10/9/03 4.27:00 AM	TDN
Aroclor 1254	NELAP	47 4		**ND**	µg/Kg-dry	1	10/9/03 4:27:00 AM	TDN
Aroclor 1260	NELAP	47.4		**ND**	µg/Kg-dry	1	10/9/03 4:27.00 AM	TDN
Surr: Decachlorobiphenyl		22-210		**79.0**	%REC	1	10/9/03 4:27:00 AM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**58.1**	%REC	1	10/9/03 4:27:00 AM	TDN

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-4 5'-6'
Lab ID:	0310184-06	**Collection Date:**	9/30/03 1:30:00 PM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0.1	H	**21.0**	%	1	10/8/03	DLY
Total Solids		0.1	H	**79.0**	%	1	10/8/03	DLY
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	47.1		**ND**	µg/Kg-dry	1	10/9/03 4:46:00 AM	TDN
Aroclor 1221	NELAP	47.1		**ND**	µg/Kg-dry	1	10/9/03 4:46:00 AM	TDN
Aroclor 1232	NELAP	47.1		**ND**	µg/Kg-dry	1	10/9/03 4:46:00 AM	TDN
Aroclor 1242	NELAP	47.1		**ND**	µg/Kg-dry	1	10/9/03 4 46:00 AM	TDN
Aroclor 1248	NELAP	47.1		**ND**	µg/Kg-dry	1	10/9/03 4:46 00 AM	TDN
Aroclor 1254	NELAP	47.1		**ND**	µg/Kg-dry	1	10/9/03 4:46.00 AM	TDN
Aroclor 1260	NELAP	47 1		**358**	µg/Kg-dry	1	10/9/03 4:46:00 AM	TDN
Surr. Decachlorobiphenyl		22-210		**81.7**	%REC	1	10/9/03 4:46.00 AM	TDN
Surr Tetrachloro-meta-xylene		10-153		**60.6**	%REC	1	10/9/03 4:46:00 AM	TDN

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-4 6'-7'
Lab ID:	0310184-07	**Collection Date:**	9/30/03 1:30:00 PM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0.1	H	**22.2**	%	1	10/8/03	DLY
Total Solids		0 1	H	**77.8**	%	1	10/8/03	DLY
SW-846 3550B. METHOD 8082. POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	47.9		**ND**	µg/Kg-dry	1	10/9/03 5:06:00 AM	TDN
Aroclor 1221	NELAP	47.9		**ND**	µg/Kg-dry	1	10/9/03 5:06:00 AM	TDN
Aroclor 1232	NELAP	47.9		**ND**	µg/Kg-dry	1	10/9/03 5:06:00 AM	TDN
Aroclor 1242	NELAP	47.9		**ND**	µg/Kg-dry	1	10/9/03 5:06.00 AM	TDN
Aroclor 1248	NELAP	47.9		**ND**	µg/Kg-dry	1	10/9/03 5:06:00 AM	TDN
Aroclor 1254	NELAP	47.9		**ND**	µg/Kg-dry	1	10/9/03 5:06:00 AM	TDN
Aroclor 1260	NELAP	479		**3370**	µg/Kg-dry	10	10/13/03 11:58:00 PM	TDN
Surr: Decachlorobiphenyl		22-210		**85.8**	%REC	1	10/9/03 5 06:00 AM	TDN
Surr. Tetrachloro-meta-xylene		10-153		**56.6**	%REC	1	10/9/03 5:06.00 AM	TDN

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-4 7'-8'
Lab ID:	0310184-08	**Collection Date:**	9/30/03 1:30:00 PM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0 1	H	**25.7**	%	1	10/8/03	DLY
Total Solids		0.1	H	**74.3**	%	1	10/8/03	DLY
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	49.7		**ND**	µg/Kg-dry	1	10/9/03 5.26.00 AM	TDN
Aroclor 1221	NELAP	49 7		**ND**	µg/Kg-dry	1	10/9/03 5.26 00 AM	TDN
Aroclor 1232	NELAP	49 7		**ND**	µg/Kg-dry	1	10/9/03 5:26:00 AM	TDN
Aroclor 1242	NELAP	49 7		**ND**	µg/Kg-dry	1	10/9/03 5:26:00 AM	TDN
Aroclor 1248	NELAP	49.7		**ND**	µg/Kg-dry	1	10/9/03 5.26 00 AM	TDN
Aroclor 1254	NELAP	49.7		**ND**	µg/Kg-dry	1	10/9/03 5.26·00 AM	TDN
Aroclor 1260	NELAP	497		**3420**	µg/Kg-dry	10	10/14/03 12·18.00 AM	TDN
Surr. Decachlorobiphenyl		22-210		**80.9**	%REC	1	10/9/03 5:26:00 AM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**55.5**	%REC	1	10/9/03 5.26:00 AM	TDN

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-4 8'-9'
Lab ID:	0310184-09	**Collection Date:**	9/30/03 1:30:00 PM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0 1	H	**30.8**	%	1	10/8/03	DLY
Total Solids		0.1	H	**69.2**	%	1	10/8/03	DLY
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	53.4		**ND**	µg/Kg-dry	1	10/9/03 5.45:00 AM	TDN
Aroclor 1221	NELAP	53.4		**ND**	µg/Kg-dry	1	10/9/03 5.45:00 AM	TDN
Aroclor 1232	NELAP	53 4		**ND**	µg/Kg-dry	1	10/9/03 5 45:00 AM	TDN
Aroclor 1242	NELAP	53.4		**ND**	µg/Kg-dry	1	10/9/03 5·45 00 AM	TDN
Aroclor 1248	NELAP	53.4		**56.8**	µg/Kg-dry	1	10/9/03 5·45:00 AM	TDN
Aroclor 1254	NELAP	53.4		**ND**	µg/Kg-dry	1	10/9/03 5:45:00 AM	TDN
Aroclor 1260	NELAP	53 4		**285**	µg/Kg-dry	1	10/9/03 5:45:00 AM	TDN
Surr: Decachlorobiphenyl		22-210		**63.6**	%REC	1	10/9/03 5 45:00 AM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**39.8**	%REC	1	10/9/03 5:45:00 AM	TDN

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-7 2'-3'
Lab ID:	0310184-10	**Collection Date:**	9/30/03 5:00:00 PM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0.1	H	**23.7**	%	1	10/8/03	DLY
Total Solids		0.1	H	**76.3**	%	1	10/8/03	DLY
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	49.9		**ND**	µg/Kg-dry	1	10/9/03 6:05:00 AM	TDN
Aroclor 1221	NELAP	49.9		**ND**	µg/Kg-dry	1	10/9/03 6:05.00 AM	TDN
Aroclor 1232	NELAP	49.9		**ND**	µg/Kg-dry	1	10/9/03 6:05.00 AM	TDN
Aroclor 1242	NELAP	49.9		**ND**	µg/Kg-dry	1	10/9/03 6:05:00 AM	TDN
Aroclor 1248	NELAP	49.9		**791**	µg/Kg-dry	1	10/9/03 6:05 00 AM	TDN
Aroclor 1254	NELAP	49.9		**ND**	µg/Kg-dry	1	10/9/03 6.05:00 AM	TDN
Aroclor 1260	NELAP	249		**783**	µg/Kg-dry	5	10/14/03 12:37 00 AM	TDN
Surr: Decachlorobiphenyl		22-210		**103**	%REC	1	10/9/03 6:05:00 AM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**74.5**	%REC	1	10/9/03 6:05:00 AM	TDN

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FAX. 618-344-1005

Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-1 1'-2'
Lab ID:	0310184-11	**Collection Date:**	9/30/03 10:30:00 AM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0 1	H	**21.5**	%	1	10/8/03	DLY
Total Solids		0.1	H	**78.5**	%	1	10/8/03	DLY
SW-846 1311 TCLP / 3010A, ICP METHOD 6010B								
Lead	NELAP	0 040	J	**< 0.040**	mg/L	1	10/14/03 11:29:08 AM	SAM
SW-846 3050B, ICP METHOD 6010B								
Arsenic	NELAP	2.27		**7.33**	mg/Kg-dry	1	10/14/03 4:18.53 PM	JMW
Barium	NELAP	0.45		**229**	mg/Kg-dry	1	10/14/03 9.34:34 AM	SAM
Chromium	NELAP	0.91		**25.5**	mg/Kg-dry	1	10/14/03 9:34.34 AM	SAM
Lead	NELAP	3.64		**117**	mg/Kg-dry	1	10/14/03 9.34:34 AM	SAM
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	46.6		**ND**	µg/Kg-dry	1	10/9/03 7:04.00 AM	TDN
Aroclor 1221	NELAP	46.6		**ND**	µg/Kg-dry	1	10/9/03 7:04:00 AM	TDN
Aroclor 1232	NELAP	46.6		**ND**	µg/Kg-dry	1	10/9/03 7.04.00 AM	TDN
Aroclor 1242	NELAP	46 6		**ND**	µg/Kg-dry	1	10/9/03 7:04:00 AM	TDN
Aroclor 1248	NELAP	46.6		**ND**	µg/Kg-dry	1	10/9/03 7:04:00 AM	TDN
Aroclor 1254	NELAP	46.6		**ND**	µg/Kg-dry	1	10/9/03 7 04:00 AM	TDN
Aroclor 1260	NELAP	46.6		**ND**	µg/Kg-dry	1	10/9/03 7:04:00 AM	TDN
Surr: Decachlorobiphenyl		22-210		**68.0**	%REC	1	10/9/03 7.04:00 AM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**46.6**	%REC	1	10/9/03 7.04:00 AM	TDN
SW-846 METHOD 9045C								
pH (1 1)	NELAP	1.00		**7.93**		1	10/10/03 12:18:00 PM	ALB

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ENVIRONMENTAL TESTING LABORATORY

TEL 618-344-1004
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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-2 1'-2'
Lab ID:	0310184-12	**Collection Date:**	9/30/03 11:30:00 AM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0.1	H	**23.8**	%	1	10/8/03	DLY
Total Solids		0.1	H	**76.2**	%	1	10/8/03	DLY
SW-846 1311 TCLP / 3010A, ICP METHOD 6010B								
Lead	NELAP	0.040		**< 0.040**	mg/L	1	10/14/03 11.39·14 AM	SAM
SW-846 3050B, ICP METHOD 6010B								
Arsenic	NELAP	2.31		**8.04**	mg/Kg-dry	1	10/14/03 4.21.25 PM	JMW
Barium	NELAP	0 46		**268**	mg/Kg-dry	1	10/14/03 9.39:37 AM	SAM
Chromium	NELAP	0 93		**26.6**	mg/Kg-dry	1	10/14/03 9:39 37 AM	SAM
Lead	NELAP	3.70		**44.0**	mg/Kg-dry	1	10/14/03 9 39.37 AM	SAM
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	49.9		**ND**	µg/Kg-dry	1	10/9/03 7.24 00 AM	TDN
Aroclor 1221	NELAP	49.9		**ND**	µg/Kg-dry	1	10/9/03 7.24.00 AM	TDN
Aroclor 1232	NELAP	49.9		**ND**	µg/Kg-dry	1	10/9/03 7:24:00 AM	TDN
Aroclor 1242	NELAP	49 9		**ND**	µg/Kg-dry	1	10/9/03 7.24:00 AM	TDN
Aroclor 1248	NELAP	49.9		**ND**	µg/Kg-dry	1	10/9/03 7.24·00 AM	TDN
Aroclor 1254	NELAP	49.9		**ND**	µg/Kg-dry	1	10/9/03 7:24:00 AM	TDN
Aroclor 1260	NELAP	49.9	J	**ND**	µg/Kg-dry	1	10/9/03 7.24:00 AM	TDN
Surr: Decachlorobiphenyl		22-210		**73.6**	%REC	1	10/9/03 7 24:00 AM	TDN
Surr Tetrachloro-meta-xylene		10-153		**42.7**	%REC	1	10/9/03 7 24·00 AM	TDN
SW-846 METHOD 9045C								
pH (1 1)	NELAP	1 00		**7.41**		1	10/10/03 12:19·00 PM	ALB

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-3 1'-2'
Lab ID:	0310184-13	**Collection Date:**	9/30/03 12:30:00 PM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0 1	H	**21.3**	%	1	10/8/03	DLY
Total Solids		0 1	H	**78.7**	%	1	10/8/03	DLY
SW-846 1311 TCLP / 3010A. ICP METHOD 6010B								
Lead	NELAP	0 040		**< 0.040**	mg/L	1	10/14/03 11:49:50 AM	SAM
SW-846 3050B. ICP METHOD 6010B								
Arsenic	NELAP	2.40		**3.82**	mg/Kg-dry	1	10/15/03 1:55:11 PM	JMW
Barium	NELAP	0 48		**247**	mg/Kg-dry	1	10/14/03 9 44:41 AM	SAM
Chromium	NELAP	0 96		**22.2**	mg/Kg-dry	1	10/14/03 9.44.41 AM	SAM
Lead	NELAP	3 85		**23.0**	mg/Kg-dry	1	10/14/03 9.44:41 AM	SAM
SW-846 3550B. METHOD 8082. POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	47.1		**ND**	µg/Kg-dry	1	10/9/03 7:43:00 AM	TDN
Aroclor 1221	NELAP	47.1		**ND**	µg/Kg-dry	1	10/9/03 7 43·00 AM	TDN
Aroclor 1232	NELAP	47 1		**ND**	µg/Kg-dry	1	10/9/03 7 43:00 AM	TDN
Aroclor 1242	NELAP	47.1		**ND**	µg/Kg-dry	1	10/9/03 7:43 00 AM	TDN
Aroclor 1248	NELAP	47.1		**ND**	µg/Kg-dry	1	10/9/03 7·43:00 AM	TDN
Aroclor 1254	NELAP	47.1		**ND**	µg/Kg-dry	1	10/9/03 7·43:00 AM	TDN
Aroclor 1260	NELAP	47.1		**ND**	µg/Kg-dry	1	10/9/03 7 43:00 AM	TDN
Surr. Decachlorobiphenyl		22-210		**76.9**	%REC	1	10/9/03 7:43.00 AM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**43.3**	%REC	1	10/9/03 7:43:00 AM	TDN
SW-846 METHOD 9045C								
pH (1.1)	NELAP	1 00		**7.14**		1	10/10/03 12:19·00 PM	ALB

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-4 1'-2'
Lab ID:	0310184-14	**Collection Date:**	9/30/03 1:30:00 PM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0.1	H	**21.8**	%	1	10/8/03	DLY
Total Solids		0 1	H	**78.2**	%	1	10/8/03	DLY
SW-846 1311 TCLP / 3010A. ICP METHOD 6010B								
Lead	NELAP	0.040	J	**< 0.040**	mg/L	1	10/14/03 7:43:09 PM	SAM
SW-846 3050B. ICP METHOD 6010B								
Arsenic	NELAP	2.50		**7.40**	mg/Kg-dry	1	10/14/03 4:26:27 PM	JMW
Barium	NELAP	0.50		**331**	mg/Kg-dry	1	10/14/03 9 49 43 AM	SAM
Chromium	NELAP	1.00		**35.1**	mg/Kg-dry	1	10/14/03 9.49 43 AM	SAM
Lead	NELAP	4.00		**156**	mg/Kg-dry	1	10/14/03 9:49·43 AM	SAM
SW-846 3550B. METHOD 8082. POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	47.6		**ND**	µg/Kg-dry	1	10/9/03 8·03.00 AM	TDN
Aroclor 1221	NELAP	47.6		**ND**	µg/Kg-dry	1	10/9/03 8:03:00 AM	TDN
Aroclor 1232	NELAP	47.6		**ND**	µg/Kg-dry	1	10/9/03 8:03 00 AM	TDN
Aroclor 1242	NELAP	47.6		**ND**	µg/Kg-dry	1	10/9/03 8:03.00 AM	TDN
Aroclor 1248	NELAP	238		**2460**	µg/Kg-dry	5	10/14/03 1:37:00 AM	TDN
Aroclor 1254	NELAP	47.6		**ND**	µg/Kg-dry	1	10/9/03 8:03 00 AM	TDN
Aroclor 1260	NELAP	238		**1540**	µg/Kg-dry	5	10/14/03 1:37:00 AM	TDN
Surr. Decachlorobiphenyl		22-210		**113**	%REC	1	10/9/03 8:03·00 AM	TDN
Surr. Tetrachloro-meta-xylene		10-153		**68.6**	%REC	1	10/9/03 8·03.00 AM	TDN
SW-846 METHOD 9045C								
pH (1 1)	NELAP	1.00		**6.57**		1	10/10/03 12:20 00 PM	ALB

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TEL 618-344-1004
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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-5 1'-2'
Lab ID:	0310184-15	**Collection Date:**	9/30/03 3:30:00 PM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0.1	H	**23.8**	%	1	10/8/03	DLY
Total Solids		0 1	H	**76.2**	%	1	10/8/03	DLY
SW-846 1311 TCLP / 3010A, ICP METHOD 6010B								
Lead	NELAP	0 040		**< 0.040**	mg/L	1	10/14/03 7.53·47 PM	SAM
SW-846 3050B, ICP METHOD 6010B								
Arsenic	NELAP	2 40		**4.38**	mg/Kg-dry	1	10/15/03 1.57:41 PM	JMW
Barium	NELAP	0 48		**270**	mg/Kg-dry	1	10/14/03 10·05.14 AM	SAM
Chromium	NELAP	0 96		**25.7**	mg/Kg-dry	1	10/14/03 10:05 14 AM	SAM
Lead	NELAP	3 85		**62.9**	mg/Kg-dry	1	10/14/03 10·05.14 AM	SAM
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	48.8		**ND**	µg/Kg-dry	1	10/9/03 8.23:00 AM	TDN
Aroclor 1221	NELAP	48.8		**ND**	µg/Kg-dry	1	10/9/03 8:23:00 AM	TDN
Aroclor 1232	NELAP	48.8		**ND**	µg/Kg-dry	1	10/9/03 8:23·00 AM	TDN
Aroclor 1242	NELAP	48.8		**ND**	µg/Kg-dry	1	10/9/03 8.23.00 AM	TDN
Aroclor 1248	NELAP	48 8		**ND**	µg/Kg-dry	1	10/9/03 8 23.00 AM	TDN
Aroclor 1254	NELAP	48.8		**ND**	µg/Kg-dry	1	10/9/03 8.23:00 AM	TDN
Aroclor 1260	NELAP	48.8	J	**ND**	µg/Kg-dry	1	10/9/03 8.23:00 AM	TDN
Surr. Decachlorobiphenyl		22-210		**166**	%REC	1	10/9/03 8.23:00 AM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**56.5**	%REC	1	10/9/03 8.23:00 AM	TDN
SW-846 METHOD 9045C								
pH (1 1)	NELAP	1.00		**6.82**		1	10/10/03 12:21:00 PM	ALB

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-6 1'-2'
Lab ID:	0310184-16	**Collection Date:**	9/30/03 4:15:00 PM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0 1	H	**27.4**	%	1	10/8/03	DLY
Total Solids		0.1	H	**72.6**	%	1	10/8/03	DLY
SW-846 1311 TCLP / 3010A, ICP METHOD 6010B								
Lead	NELAP	0 040		**< 0.040**	mg/L	1	10/14/03 8:04:27 PM	SAM
SW-846 3050B, ICP METHOD 6010B								
Arsenic	NELAP	2 40		**3.06**	mg/Kg-dry	1	10/15/03 2:00:12 PM	JMW
Barium	NELAP	0.48		**249**	mg/Kg-dry	1	10/14/03 10:10:30 AM	SAM
Chromium	NELAP	0 96		**28.7**	mg/Kg-dry	1	10/14/03 10 10:30 AM	SAM
Lead	NELAP	3 85		**43.1**	mg/Kg-dry	1	10/14/03 10:10:30 AM	SAM
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	51.9		**ND**	µg/Kg-dry	1	10/9/03 8:43.00 AM	TDN
Aroclor 1221	NELAP	51.9		**ND**	µg/Kg-dry	1	10/9/03 8:43:00 AM	TDN
Aroclor 1232	NELAP	51 9		**ND**	µg/Kg-dry	1	10/9/03 8.43:00 AM	TDN
Aroclor 1242	NELAP	51 9		**ND**	µg/Kg-dry	1	10/9/03 8:43 00 AM	TDN
Aroclor 1248	NELAP	51 9		**ND**	µg/Kg-dry	1	10/9/03 8.43:00 AM	TDN
Aroclor 1254	NELAP	51.9		**ND**	µg/Kg-dry	1	10/9/03 8:43:00 AM	TDN
Aroclor 1260	NELAP	51.9		**ND**	µg/Kg-dry	1	10/9/03 8:43:00 AM	TDN
Surr: Decachlorobiphenyl		22-210		**70.4**	%REC	1	10/9/03 8:43 00 AM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**37.4**	%REC	1	10/9/03 8:43.00 AM	TDN
SW-846 METHOD 9045C								
pH (1:1)	NELAP	1.00		**6.65**		1	10/10/03 12.23 00 PM	ALB

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TEL 618-344-1004
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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-7 1'-2'
Lab ID:	0310184-17	**Collection Date:**	9/30/03 5:00.00 PM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0 1	H	**25.5**	%	1	10/8/03	DLY
Total Solids		0 1	H	**74.5**	%	1	10/8/03	DLY
SW-846 1311 TCLP / 3010A. ICP METHOD 6010B								
Lead	NELAP	0 040		**< 0.040**	mg/L	1	10/14/03 8:15:06 PM	SAM
SW-846 3050B. ICP METHOD 6010B								
Arsenic	NELAP	2 40		**5.85**	mg/Kg-dry	1	10/14/03 4 39:04 PM	JMW
Barium	NELAP	0 48		**266**	mg/Kg-dry	1	10/14/03 10.15:47 AM	SAM
Chromium	NELAP	0 96		**26.7**	mg/Kg-dry	1	10/14/03 10.15:47 AM	SAM
Lead	NELAP	3 85		**35.5**	mg/Kg-dry	1	10/14/03 10:15:47 AM	SAM
SW-846 3550B. METHOD 8082. POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	49.4		**ND**	µg/Kg-dry	1	10/9/03 9.02:00 AM	TDN
Aroclor 1221	NELAP	49 4		**ND**	µg/Kg-dry	1	10/9/03 9:02:00 AM	TDN
Aroclor 1232	NELAP	49.4		**ND**	µg/Kg-dry	1	10/9/03 9.02:00 AM	TDN
Aroclor 1242	NELAP	49 4		**ND**	µg/Kg-dry	1	10/9/03 9:02:00 AM	TDN
Aroclor 1248	NELAP	247		**1570**	µg/Kg-dry	5	10/14/03 1:56:00 AM	TDN
Aroclor 1254	NELAP	49 4		**ND**	µg/Kg-dry	1	10/9/03 9 02:00 AM	TDN
Aroclor 1260	NELAP	49.4		**379**	µg/Kg-dry	1	10/9/03 9:02:00 AM	TDN
Surr: Decachlorobiphenyl		22-210		**92.7**	%REC	1	10/9/03 9:02:00 AM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**61.5**	%REC	1	10/9/03 9:02:00 AM	TDN
SW-846 METHOD 9045C								
pH (1 1)	NELAP	1 00		**6.61**		1	10/10/03 12.24:00 PM	ALB

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ENVIRONMENTAL TESTING LABORATORY

TEL 618-344-1004
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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-8 1'-2'
Lab ID:	0310184-18	**Collection Date:**	9/30/03 5:45:00 PM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0 1	H	**22.7**	%	1	10/8/03	DLY
Total Solids		0 1	H	**77.3**	%	1	10/8/03	DLY
SW-846 1311 TCLP / 3010A, ICP METHOD 6010B								
Lead	NELAP	0 040		**< 0.040**	mg/L	1	10/14/03 8.36:04 PM	SAM
SW-846 3050B, ICP METHOD 6010B								
Arsenic	NELAP	2 19		**6.51**	mg/Kg-dry	1	10/14/03 4:41:34 PM	JMW
Barium	NELAP	0 44		**257**	mg/Kg-dry	1	10/14/03 10:21:03 AM	SAM
Chromium	NELAP	0 88		**24.9**	mg/Kg-dry	1	10/14/03 10:21:03 AM	SAM
Lead	NELAP	3.51		**36.1**	mg/Kg-dry	1	10/14/03 10.21:03 AM	SAM
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	47.8		**ND**	µg/Kg-dry	1	10/9/03 9:22:00 AM	TDN
Aroclor 1221	NELAP	47 8		**ND**	µg/Kg-dry	1	10/9/03 9 22:00 AM	TDN
Aroclor 1232	NELAP	47.8		**ND**	µg/Kg-dry	1	10/9/03 9.22:00 AM	TDN
Aroclor 1242	NELAP	47.8		**ND**	µg/Kg-dry	1	10/9/03 9:22:00 AM	TDN
Aroclor 1248	NELAP	47 8		**196**	µg/Kg-dry	1	10/9/03 9:22:00 AM	TDN
Aroclor 1254	NELAP	47.8		**ND**	µg/Kg-dry	1	10/9/03 9:22:00 AM	TDN
Aroclor 1260	NELAP	47 8		**793**	µg/Kg-dry	1	10/9/03 9:22:00 AM	TDN
Surr: Decachlorobiphenyl		22-210		**93.4**	%REC	1	10/9/03 9:22:00 AM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**59.4**	%REC	1	10/9/03 9.22.00 AM	TDN
SW-846 METHOD 9045C								
pH (1:1)	NELAP	1 00		**6.40**		1	10/10/03 12:25:00 PM	ALB

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ENVIRONMENTAL TESTING LABORATORY

TEL 618-344-1004
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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-9 1'-2'
Lab ID:	0310184-19	**Collection Date:**	9/30/03 6:30:00 PM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0 1	H	**23.4**	%	1	10/8/03	DLY
Total Solids		0 1	H	**76.6**	%	1	10/8/03	DLY
SW-846 1311 TCLP / 3010A, ICP METHOD 6010B								
Lead	NELAP	0 040		**< 0.040**	mg/L	1	10/14/03 8:52:06 PM	SAM
SW-846 3050B, ICP METHOD 6010B								
Arsenic	NELAP	2.45		**7.59**	mg/Kg-dry	1	10/14/03 4 44:06 PM	JMW
Barium	NELAP	0 49		**263**	mg/Kg-dry	1	10/14/03 10.26.20 AM	SAM
Chromium	NELAP	0 98		**23.9**	mg/Kg-dry	1	10/14/03 10:26.20 AM	SAM
Lead	NELAP	3 92		**27.8**	mg/Kg-dry	1	10/14/03 10.26.20 AM	SAM
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	49.5		**ND**	µg/Kg-dry	1	10/9/03 9 42:00 AM	TDN
Aroclor 1221	NELAP	49.5		**ND**	µg/Kg-dry	1	10/9/03 9:42:00 AM	TDN
Aroclor 1232	NELAP	49 5		**ND**	µg/Kg-dry	1	10/9/03 9:42 00 AM	TDN
Aroclor 1242	NELAP	49 5		**ND**	µg/Kg-dry	1	10/9/03 9:42:00 AM	TDN
Aroclor 1248	NELAP	49.5		**ND**	µg/Kg-dry	1	10/9/03 9:42:00 AM	TDN
Aroclor 1254	NELAP	49.5		**ND**	µg/Kg-dry	1	10/9/03 9 42:00 AM	TDN
Aroclor 1260	NELAP	49.5		**ND**	µg/Kg-dry	1	10/9/03 9:42:00 AM	TDN
Surr. Decachlorobiphenyl		22-210		**67.9**	%REC	1	10/9/03 9:42:00 AM	TDN
Surr. Tetrachloro-meta-xylene		10-153		**46.8**	%REC	1	10/9/03 9 42:00 AM	TDN
SW-846 METHOD 9045C								
pH (1 1)	NELAP	1 00		**6.67**		1	10/10/03 12.26:00 PM	ALB

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-10 1'-2'
Lab ID:	0310184-20	**Collection Date:**	10/1/03 8:30:00 AM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0.1		**23.9**	%	1	10/8/03	DLY
Total Solids		0.1		**76.1**	%	1	10/8/03	DLY
SW-846 1311 TCLP / 3010A, ICP METHOD 6010B								
Lead	NELAP	0.040		**< 0.040**	mg/L	1	10/14/03 9:02.44 PM	SAM
SW-846 3050B, ICP METHOD 6010B								
Arsenic	NELAP	2.36		**7.89**	mg/Kg-dry	1	10/14/03 4 46 36 PM	JMW
Barium	NELAP	0.47		**189**	mg/Kg-dry	1	10/14/03 10.31:36 AM	SAM
Chromium	NELAP	0 94		**23.3**	mg/Kg-dry	1	10/14/03 10:31.36 AM	SAM
Lead	NELAP	3 77		**22.9**	mg/Kg-dry	1	10/14/03 10 31 36 AM	SAM
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	50.1		**ND**	µg/Kg-dry	1	10/9/03 10.01:00 AM	TDN
Aroclor 1221	NELAP	50.1		**ND**	µg/Kg-dry	1	10/9/03 10.01:00 AM	TDN
Aroclor 1232	NELAP	50 1		**ND**	µg/Kg-dry	1	10/9/03 10.01.00 AM	TDN
Aroclor 1242	NELAP	50.1		**ND**	µg/Kg-dry	1	10/9/03 10:01:00 AM	TDN
Aroclor 1248	NELAP	50.1		**ND**	µg/Kg-dry	1	10/9/03 10·01 00 AM	TDN
Aroclor 1254	NELAP	50.1		**ND**	µg/Kg-dry	1	10/9/03 10:01:00 AM	TDN
Aroclor 1260	NELAP	50 1		**ND**	µg/Kg-dry	1	10/9/03 10:01:00 AM	TDN
Surr: Decachlorobiphenyl		22-210		**86.5**	%REC	1	10/9/03 10:01.00 AM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**46.8**	%REC	1	10/9/03 10.01:00 AM	TDN
SW-846 METHOD 9045C								
pH (1.1)	NELAP	1.00		**6.74**		1	10/10/03 12 28·00 PM	ALB

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-11 1'-2'
Lab ID:	0310184-21	**Collection Date:**	10/1/03 9:15:00 AM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0 1		**17.7**	%	1	10/8/03	DLY
Total Solids		0.1		**82.3**	%	1	10/8/03	DLY
SW-846 1311 TCLP / 3010A, ICP METHOD 6010B								
Lead	NELAP	0.040		**< 0.040**	mg/L	1	10/14/03 3.29:45 PM	SAM
SW-846 3050B, ICP METHOD 6010B								
Arsenic	NELAP	2 36		**7.80**	mg/Kg-dry	1	10/14/03 4:49.06 PM	JMW
Barium	NELAP	0 47		**362**	mg/Kg-dry	1	10/14/03 10:36:54 AM	SAM
Chromium	NELAP	0.94		**22.3**	mg/Kg-dry	1	10/14/03 10:36:54 AM	SAM
Lead	NELAP	3 77		**57.9**	mg/Kg-dry	1	10/14/03 10:36:54 AM	SAM
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	94.1		**ND**	µg/Kg-dry	1	10/10/03 6.52:00 AM	TDN
Aroclor 1221	NELAP	94 1		**ND**	µg/Kg-dry	1	10/10/03 6:52:00 AM	TDN
Aroclor 1232	NELAP	94.1		**ND**	µg/Kg-dry	1	10/10/03 6:52:00 AM	TDN
Aroclor 1242	NELAP	94 1		**ND**	µg/Kg-dry	1	10/10/03 6:52:00 AM	TDN
Aroclor 1248	NELAP	94.1		**113**	µg/Kg-dry	1	10/10/03 6:52:00 AM	TDN
Aroclor 1254	NELAP	94 1		**ND**	µg/Kg-dry	1	10/10/03 6.52:00 AM	TDN
Aroclor 1260	NELAP	94 1	J	**ND**	µg/Kg-dry	1	10/10/03 6:52:00 AM	TDN
Surr: Decachlorobiphenyl		22-210	S	**243**	%REC	1	10/10/03 6.52:00 AM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**87.0**	%REC	1	10/10/03 6:52.00 AM	TDN
SW-846 METHOD 9045C								
pH (1 1)	NELAP	1.00		**7.04**		1	10/9/03 1:09:00 PM	SAO

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-12 1'-2'
Lab ID:	0310184-22	**Collection Date:**	10/1/03 10:00:00 AM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0 1		**20.8**	%	1	10/8/03	DLY
Total Solids		0 1		**79.2**	%	1	10/8/03	DLY
SW-846 1311 TCLP / 3010A, ICP METHOD 6010B								
Lead	NELAP	0 040		**< 0.040**	mg/L	1	10/14/03 3:40:19 PM	SAM
SW-846 3050B, ICP METHOD 6010B								
Arsenic	NELAP	2 45		**18.5**	mg/Kg-dry	1	10/15/03 4.40:47 PM	JMW
Barium	NELAP	0 49		**246**	mg/Kg-dry	1	10/16/03 9.32:54 AM	SAM
Chromium	NELAP	0.98		**28.1**	mg/Kg-dry	1	10/16/03 9:32:54 AM	SAM
Lead	NELAP	3 92		**19.8**	mg/Kg-dry	1	10/16/03 9:32.54 AM	SAM
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	47.5		**ND**	µg/Kg-dry	1	10/10/03 7:51:00 AM	TDN
Aroclor 1221	NELAP	47.5		**ND**	µg/Kg-dry	1	10/10/03 7:51:00 AM	TDN
Aroclor 1232	NELAP	47 5		**ND**	µg/Kg-dry	1	10/10/03 7:51.00 AM	TDN
Aroclor 1242	NELAP	47.5		**ND**	µg/Kg-dry	1	10/10/03 7 51 00 AM	TDN
Aroclor 1248	NELAP	47.5		**ND**	µg/Kg-dry	1	10/10/03 7:51 00 AM	TDN
Aroclor 1254	NELAP	47.5		**ND**	µg/Kg-dry	1	10/10/03 7:51.00 AM	TDN
Aroclor 1260	NELAP	47.5		**ND**	µg/Kg-dry	1	10/10/03 7.51:00 AM	TDN
Surr Decachlorobiphenyl		22-210		**53.3**	%REC	1	10/10/03 7:51 00 AM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**37.1**	%REC	1	10/10/03 7:51:00 AM	TDN
SW-846 METHOD 9045C								
pH (1 1)	NELAP	1.00		**6.20**		1	10/9/03 1:16:00 PM	SAO

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-13 1'-2'
Lab ID:	0310184-23	**Collection Date:**	10/1/03 10:45:00 AM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0.1		**23.5**	%	1	10/8/03	DLY
Total Solids		0 1		**76.5**	%	1	10/8/03	DLY
SW-846 1311 TCLP / 3010A, ICP METHOD 6010B								
Lead	NELAP	0.040	J	**< 0.040**	mg/L	1	10/14/03 3:50:54 PM	SAM
SW-846 3050B, ICP METHOD 6010B								
Arsenic	NELAP	2 45		**5.72**	mg/Kg-dry	1	10/16/03 11:58.52 AM	JMW
Barium	NELAP	0 49		**227**	mg/Kg-dry	1	10/16/03 9:38:11 AM	SAM
Chromium	NELAP	0.98		**28.9**	mg/Kg-dry	1	10/16/03 9.38:11 AM	SAM
Lead	NELAP	3.92		**21.0**	mg/Kg-dry	1	10/16/03 9:38:11 AM	SAM
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	49 1		**ND**	µg/Kg-dry	1	10/10/03 8:11.00 AM	TDN
Aroclor 1221	NELAP	49 1		**ND**	µg/Kg-dry	1	10/10/03 8 11:00 AM	TDN
Aroclor 1232	NELAP	49.1		**ND**	µg/Kg-dry	1	10/10/03 8.11:00 AM	TDN
Aroclor 1242	NELAP	49 1		**ND**	µg/Kg-dry	1	10/10/03 8 11:00 AM	TDN
Aroclor 1248	NELAP	49.1		**ND**	µg/Kg-dry	1	10/10/03 8.11:00 AM	TDN
Aroclor 1254	NELAP	49.1		**ND**	µg/Kg-dry	1	10/10/03 8·11:00 AM	TDN
Aroclor 1260	NELAP	49 1		**ND**	µg/Kg-dry	1	10/10/03 8:11:00 AM	TDN
Surr: Decachlorobiphenyl		22-210		**50.5**	%REC	1	10/10/03 8.11:00 AM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**29.4**	%REC	1	10/10/03 8:11:00 AM	TDN
SW-846 METHOD 9045C								
pH (1 1)	NELAP	1 00		**5.42**		1	10/9/03 1:18:00 PM	SAO

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-14 1'-2'
Lab ID:	0310184-24	**Collection Date:**	10/1/03 11:30:00 AM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0.1		**20.8**	%	1	10/8/03	DLY
Total Solids		0.1		**79.2**	%	1	10/8/03	DLY
SW-846 1311 TCLP / 3010A, ICP METHOD 6010B								
Lead	NELAP	0.040		**< 0.040**	mg/L	1	10/14/03 4.06:45 PM	SAM
SW-846 3050B, ICP METHOD 6010B								
Arsenic	NELAP	2.40		**5.70**	mg/Kg-dry	1	10/15/03 4:47.53 PM	JMW
Barium	NELAP	0.48		**300**	mg/Kg-dry	1	10/16/03 9:53:37 AM	SAM
Chromium	NELAP	0.96		**23.5**	mg/Kg-dry	1	10/16/03 9 53:37 AM	SAM
Lead	NELAP	3 85		**40.2**	mg/Kg-dry	1	10/16/03 9:53.37 AM	SAM
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	46.4		**ND**	µg/Kg-dry	1	10/10/03 8.30:00 AM	TDN
Aroclor 1221	NELAP	46 4		**ND**	µg/Kg-dry	1	10/10/03 8:30.00 AM	TDN
Aroclor 1232	NELAP	46 4		**ND**	µg/Kg-dry	1	10/10/03 8 30:00 AM	TDN
Aroclor 1242	NELAP	46 4		**ND**	µg/Kg-dry	1	10/10/03 8:30 00 AM	TDN
Aroclor 1248	NELAP	46 4		**ND**	µg/Kg-dry	1	10/10/03 8 30:00 AM	TDN
Aroclor 1254	NELAP	46 4		**ND**	µg/Kg-dry	1	10/10/03 8.30:00 AM	TDN
Aroclor 1260	NELAP	46 4		**ND**	µg/Kg-dry	1	10/10/03 8:30:00 AM	TDN
Surr: Decachlorobiphenyl		22-210		**78.6**	%REC	1	10/10/03 8.30.00 AM	TDN
Surr. Tetrachloro-meta-xylene		10-153		**58.3**	%REC	1	10/10/03 8.30:00 AM	TDN
SW-846 METHOD 9045C								
pH (1:1)	NELAP	1.00		**6.74**		1	10/9/03 1.22:00 PM	SAO

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-15 1'-2'
Lab ID:	0310184-25	**Collection Date:**	10/1/03 12:15:00 PM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0.1		**16.7**	%	1	10/8/03	DLY
Total Solids		0 1		**83.3**	%	1	10/8/03	DLY
SW-846 1311 TCLP / 3010A, ICP METHOD 6010B								
Lead	NELAP	0.040		**< 0.040**	mg/L	1	10/14/03 4 27 31 PM	SAM
SW-846 3050B, ICP METHOD 6010B								
Arsenic	NELAP	2 45		**5.97**	mg/Kg-dry	1	10/16/03 11 36.23 AM	JMW
Barium	NELAP	0.49		**247**	mg/Kg-dry	1	10/16/03 9.58:54 AM	SAM
Chromium	NELAP	0.98		**14.6**	mg/Kg-dry	1	10/16/03 9:58:54 AM	SAM
Lead	NELAP	3 92		**17.7**	mg/Kg-dry	1	10/16/03 9 58.54 AM	SAM
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	44.1		**ND**	µg/Kg-dry	1	10/10/03 8:50·00 AM	TDN
Aroclor 1221	NELAP	44.1		**ND**	µg/Kg-dry	1	10/10/03 8.50:00 AM	TDN
Aroclor 1232	NELAP	44.1		**ND**	µg/Kg-dry	1	10/10/03 8·50·00 AM	TDN
Aroclor 1242	NELAP	44 1		**ND**	µg/Kg-dry	1	10/10/03 8.50.00 AM	TDN
Aroclor 1248	NELAP	44.1		**ND**	µg/Kg-dry	1	10/10/03 8.50:00 AM	TDN
Aroclor 1254	NELAP	44 1		**ND**	µg/Kg-dry	1	10/10/03 8·50·00 AM	TDN
Aroclor 1260	NELAP	44 1		**ND**	µg/Kg-dry	1	10/10/03 8.50:00 AM	TDN
Surr: Decachlorobiphenyl		22-210	S	**264**	%REC	1	10/10/03 8:50.00 AM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**59.2**	%REC	1	10/10/03 8:50:00 AM	TDN
SW-846 METHOD 9045C								
pH (1·1)	NELAP	1 00		**7.08**		1	10/9/03 1:24.00 PM	SAO

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-16 1'-2'
Lab ID:	0310184-26	**Collection Date:**	10/1/03 1:00:00 PM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0.1		**20.3**	%	1	10/8/03	DLY
Total Solids		0 1		**79.7**	%	1	10/8/03	DLY
SW-846 1311 TCLP / 3010A, ICP METHOD 6010B								
Lead	NELAP	0 040		**< 0.040**	mg/L	1	10/14/03 4:38.06 PM	SAM
SW-846 3050B, ICP METHOD 6010B								
Arsenic	NELAP	2 45	J	**< 2.45**	mg/Kg-dry	1	10/15/03 4.54 59 PM	JMW
Barium	NELAP	0 49		**152**	mg/Kg-dry	1	10/16/03 10:04:11 AM	SAM
Chromium	NELAP	0.98		**13.4**	mg/Kg-dry	1	10/16/03 10:04:11 AM	SAM
Lead	NELAP	3.92		**12.9**	mg/Kg-dry	1	10/16/03 10.04:11 AM	SAM
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	46.5		**ND**	µg/Kg-dry	1	10/10/03 9:10:00 AM	TDN
Aroclor 1221	NELAP	46.5		**ND**	µg/Kg-dry	1	10/10/03 9:10 00 AM	TDN
Aroclor 1232	NELAP	46.5		**ND**	µg/Kg-dry	1	10/10/03 9:10:00 AM	TDN
Aroclor 1242	NELAP	46.5		**ND**	µg/Kg-dry	1	10/10/03 9:10:00 AM	TDN
Aroclor 1248	NELAP	46.5		**ND**	µg/Kg-dry	1	10/10/03 9:10.00 AM	TDN
Aroclor 1254	NELAP	46.5		**ND**	µg/Kg-dry	1	10/10/03 9.10:00 AM	TDN
Aroclor 1260	NELAP	46.5	J	**ND**	µg/Kg-dry	1	10/10/03 9:10:00 AM	TDN
Surr. Decachlorobiphenyl		22-210		**94.2**	%REC	1	10/10/03 9.10.00 AM	TDN
Surr Tetrachloro-meta-xylene		10-153		**60.2**	%REC	1	10/10/03 9.10:00 AM	TDN
SW-846 METHOD 9045C								
pH (1:1)	NELAP	1.00		**7.19**		1	10/9/03 1:27:00 PM	SAO

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-17 1'-2'
Lab ID:	0310184-27	**Collection Date:**	10/1/03 2:30:00 PM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0.1		**21.5**	%	1	10/8/03	DLY
Total Solids		0.1		**78.5**	%	1	10/8/03	DLY
SW-846 1311 TCLP / 3010A, ICP METHOD 6010B								
Lead	NELAP	0.040		**< 0.040**	mg/L	1	10/14/03 4 48 40 PM	SAM
SW-846 3050B, ICP METHOD 6010B								
Arsenic	NELAP	2 50		**5.10**	mg/Kg-dry	1	10/15/03 4:58 33 PM	JMW
Barium	NELAP	0.50		**232**	mg/Kg-dry	1	10/16/03 10:09.28 AM	SAM
Chromium	NELAP	1 00		**29.8**	mg/Kg-dry	1	10/16/03 10:09:28 AM	SAM
Lead	NELAP	4.00		**20.9**	mg/Kg-dry	1	10/16/03 10 09.28 AM	SAM
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	46.6		**ND**	µg/Kg-dry	1	10/10/03 9:30:00 AM	TDN
Aroclor 1221	NELAP	46.6		**ND**	µg/Kg-dry	1	10/10/03 9 30 00 AM	TDN
Aroclor 1232	NELAP	46.6		**ND**	µg/Kg-dry	1	10/10/03 9:30.00 AM	TDN
Aroclor 1242	NELAP	46 6		**ND**	µg/Kg-dry	1	10/10/03 9.30 00 AM	TDN
Aroclor 1248	NELAP	46.6		**ND**	µg/Kg-dry	1	10/10/03 9.30.00 AM	TDN
Aroclor 1254	NELAP	46.6		**ND**	µg/Kg-dry	1	10/10/03 9.30:00 AM	TDN
Aroclor 1260	NELAP	46.6		**ND**	µg/Kg-dry	1	10/10/03 9.30:00 AM	TDN
Surr: Decachlorobiphenyl		22-210		**53.4**	%REC	1	10/10/03 9.30:00 AM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**33.0**	%REC	1	10/10/03 9.30:00 AM	TDN
SW-846 METHOD 9045C								
pH (1 1)	NELAP	1.00		**6.97**		1	10/9/03 1:28.00 PM	SAO

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-18 1'-2'
Lab ID:	0310184-28	**Collection Date:**	10/1/03 3:00:00 PM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0.1		**25.7**	%	1	10/8/03	DLY
Total Solids		0 1		**74.3**	%	1	10/8/03	DLY
SW-846 1311 TCLP / 3010A. ICP METHOD 6010B								
Lead	NELAP	0 040		**< 0.040**	mg/L	1	10/14/03 4:59:15 PM	SAM
SW-846 3050B. ICP METHOD 6010B								
Arsenic	NELAP	2.40		**6.16**	mg/Kg-dry	1	10/15/03 5.02:05 PM	JMW
Barium	NELAP	0 48		**283**	mg/Kg-dry	1	10/16/03 10:14.44 AM	SAM
Chromium	NELAP	0.96		**34.7**	mg/Kg-dry	1	10/16/03 10:14:44 AM	SAM
Lead	NELAP	3.85		**20.5**	mg/Kg-dry	1	10/16/03 10:14:44 AM	SAM
SW-846 3550B. METHOD 8082. POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	50.6		**ND**	µg/Kg-dry	1	10/10/03 9 49:00 AM	TDN
Aroclor 1221	NELAP	50.6		**ND**	µg/Kg-dry	1	10/10/03 9:49:00 AM	TDN
Aroclor 1232	NELAP	50.6		**ND**	µg/Kg-dry	1	10/10/03 9 49 00 AM	TDN
Aroclor 1242	NELAP	50 6		**ND**	µg/Kg-dry	1	10/10/03 9 49:00 AM	TDN
Aroclor 1248	NELAP	50.6		**ND**	µg/Kg-dry	1	10/10/03 9:49:00 AM	TDN
Aroclor 1254	NELAP	50.6		**ND**	µg/Kg-dry	1	10/10/03 9 49.00 AM	TDN
Aroclor 1260	NELAP	50.6		**ND**	µg/Kg-dry	1	10/10/03 9:49:00 AM	TDN
Surr: Decachlorobiphenyl		22-210		**47.3**	%REC	1	10/10/03 9.49:00 AM	TDN
Surr Tetrachloro-meta-xylene		10-153		**31.2**	%REC	1	10/10/03 9:49.00 AM	TDN
SW-846 METHOD 9045C								
pH (1.1)	NELAP	1.00		**6.69**		1	10/9/03 1.30.00 PM	SAO

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-19 1'-2'
Lab ID:	0310184-29	**Collection Date:**	10/1/03 3:30:00 PM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0 1		**26.6**	%	1	10/8/03	DLY
Total Solids		0 1		**73.4**	%	1	10/8/03	DLY
SW-846 1311 TCLP / 3010A, ICP METHOD 6010B								
Lead	NELAP	0 040		**< 0.040**	mg/L	1	10/14/03 5 09:51 PM	SAM
SW-846 3050B, ICP METHOD 6010B								
Arsenic	NELAP	2.50		**6.77**	mg/Kg-dry	1	10/16/03 12:01 24 PM	JMW
Barium	NELAP	0 50		**279**	mg/Kg-dry	1	10/16/03 10:20:00 AM	SAM
Chromium	NELAP	1 00		**33.2**	mg/Kg-dry	1	10/16/03 10.20:00 AM	SAM
Lead	NELAP	4 00		**22.9**	mg/Kg-dry	1	10/16/03 10.20:00 AM	SAM
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	50.7		**ND**	µg/Kg-dry	1	10/10/03 10:09 00 AM	TDN
Aroclor 1221	NELAP	50.7		**ND**	µg/Kg-dry	1	10/10/03 10:09:00 AM	TDN
Aroclor 1232	NELAP	50 7		**ND**	µg/Kg-dry	1	10/10/03 10:09 00 AM	TDN
Aroclor 1242	NELAP	50 7		**ND**	µg/Kg-dry	1	10/10/03 10:09 00 AM	TDN
Aroclor 1248	NELAP	50.7		**ND**	µg/Kg-dry	1	10/10/03 10.09:00 AM	TDN
Aroclor 1254	NELAP	50 7		**ND**	µg/Kg-dry	1	10/10/03 10:09:00 AM	TDN
Aroclor 1260	NELAP	50.7		**ND**	µg/Kg-dry	1	10/10/03 10:09.00 AM	TDN
Surr: Decachlorobiphenyl		22-210		**50.0**	%REC	1	10/10/03 10:09.00 AM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**28.6**	%REC	1	10/10/03 10:09.00 AM	TDN
SW-846 METHOD 9045C								
pH (1 1)	NELAP	1.00		**6.60**		1	10/9/03 1.32.00 PM	SAO

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-20 1'-2'
Lab ID:	0310184-30	**Collection Date:**	10/1/03 4:00:00 PM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0.1		**25.2**	%	1	10/8/03	DLY
Total Solids		0.1		**74.8**	%	1	10/8/03	DLY
SW-846 1311 TCLP / 3010A. ICP METHOD 6010B								
Lead	NELAP	0.040		**< 0.040**	mg/L	1	10/14/03 5:30 38 PM	SAM
SW-846 3050B. ICP METHOD 6010B								
Arsenic	NELAP	2 40		**8.79**	mg/Kg-dry	1	10/15/03 5:17 03 PM	JMW
Barium	NELAP	0.48		**379**	mg/Kg-dry	1	10/16/03 10:25:16 AM	SAM
Chromium	NELAP	0.96		**30.6**	mg/Kg-dry	1	10/16/03 10.25.16 AM	SAM
Lead	NELAP	3.85		**21.8**	mg/Kg-dry	1	10/16/03 10:25 16 AM	SAM
SW-846 3550B. METHOD 8082. POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	98.6		**ND**	µg/Kg-dry	1	10/10/03 10:29 00 AM	TDN
Aroclor 1221	NELAP	98.6		**ND**	µg/Kg-dry	1	10/10/03 10.29:00 AM	TDN
Aroclor 1232	NELAP	98.6		**ND**	µg/Kg-dry	1	10/10/03 10:29 00 AM	TDN
Aroclor 1242	NELAP	98.6		**ND**	µg/Kg-dry	1	10/10/03 10:29.00 AM	TDN
Aroclor 1248	NELAP	98 6		**ND**	µg/Kg-dry	1	10/10/03 10.29:00 AM	TDN
Aroclor 1254	NELAP	98.6		**ND**	µg/Kg-dry	1	10/10/03 10:29.00 AM	TDN
Aroclor 1260	NELAP	98 6		**ND**	µg/Kg-dry	1	10/10/03 10.29:00 AM	TDN
Surr: Decachlorobiphenyl		22-210		**60.6**	%REC	1	10/10/03 10:29 00 AM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**28.0**	%REC	1	10/10/03 10.29:00 AM	TDN
SW-846 METHOD 9045C								
pH (1:1)	NELAP	1 00		**6.38**		1	10/9/03 1 34:00 PM	SAO

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-21 1'-2'
Lab ID:	0310184-31	**Collection Date:**	10/2/03 1:00:00 PM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0.1		**26.4**	%	1	10/8/03	DLY
Total Solids		0 1		**73.6**	%	1	10/8/03	DLY
SW-846 1311 TCLP / 3010A, ICP METHOD 6010B								
Lead	NELAP	0 040		**< 0.040**	mg/L	1	10/14/03 5 41 14 PM	SAM
SW-846 3050B, ICP METHOD 6010B								
Arsenic	NELAP	2.45		**6.10**	mg/Kg-dry	1	10/16/03 11:41:25 AM	JMW
Barium	NELAP	0 49		**149**	mg/Kg-dry	1	10/16/03 10:30 31 AM	SAM
Chromium	NELAP	0.98		**22.3**	mg/Kg-dry	1	10/16/03 10.30.31 AM	SAM
Lead	NELAP	3.92		**15.1**	mg/Kg-dry	1	10/16/03 10:30 31 AM	SAM
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	50 2		**ND**	µg/Kg-dry	1	10/10/03 11.28:00 AM	TDN
Aroclor 1221	NELAP	50.2		**ND**	µg/Kg-dry	1	10/10/03 11:28:00 AM	TDN
Aroclor 1232	NELAP	50.2		**ND**	µg/Kg-dry	1	10/10/03 11.28:00 AM	TDN
Aroclor 1242	NELAP	50 2		**ND**	µg/Kg-dry	1	10/10/03 11.28:00 AM	TDN
Aroclor 1248	NELAP	50.2		**ND**	µg/Kg-dry	1	10/10/03 11:28.00 AM	TDN
Aroclor 1254	NELAP	50.2		**ND**	µg/Kg-dry	1	10/10/03 11.28:00 AM	TDN
Aroclor 1260	NELAP	50.2		**ND**	µg/Kg-dry	1	10/10/03 11.28:00 AM	TDN
Surr: Decachlorobiphenyl		22-210		**49.5**	%REC	1	10/10/03 11:28.00 AM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**34.2**	%REC	1	10/10/03 11.28:00 AM	TDN
SW-846 METHOD 9045C								
pH (1.1)	NELAP	1.00		**6.33**		1	10/9/03 1:39:00 PM	SAO

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-22 1'-2'
Lab ID:	0310184-32	**Collection Date:**	10/2/03 1:30:00 PM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0 1		**22.8**	·%	1	10/8/03	DLY
Total Solids		0.1		**77.2**	%	1	10/8/03	DLY
SW-846 1311 TCLP / 3010A. ICP METHOD 6010B								
Lead	NELAP	0.040		**< 0.040**	mg/L	1	10/14/03 5:51.51 PM	SAM
SW-846 3050B. ICP METHOD 6010B								
Arsenic	NELAP	2.50		**5.07**	mg/Kg-dry	1	10/15/03 5:24.09 PM	JMW
Barium	NELAP	0 50		**150**	mg/Kg-dry	1	10/16/03 10 35·47 AM	SAM
Chromium	NELAP	1.00		**22.3**	mg/Kg-dry	1	10/16/03 10:35 47 AM	SAM
Lead	NELAP	4.00		**14.0**	mg/Kg-dry	1	10/16/03 10.35 47 AM	SAM
SW-846 3550B. METHOD 8082. POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	48.0		**ND**	µg/Kg-dry	1	10/10/03 11:47.00 AM	TDN
Aroclor 1221	NELAP	48 0		**ND**	µg/Kg-dry	1	10/10/03 11.47.00 AM	TDN
Aroclor 1232	NELAP	48.0		**ND**	µg/Kg-dry	1	10/10/03 11·47:00 AM	TDN
Aroclor 1242	NELAP	48 0		**ND**	µg/Kg-dry	1	10/10/03 11:47:00 AM	TDN
Aroclor 1248	NELAP	48.0		**ND**	µg/Kg-dry	1	10/10/03 11:47 00 AM	TDN
Aroclor 1254	NELAP	48.0		**ND**	µg/Kg-dry	1	10/10/03 11:47:00 AM	TDN
Aroclor 1260	NELAP	48 0		**ND**	µg/Kg-dry	1	10/10/03 11:47·00 AM	TDN
Surr. Decachlorobiphenyl		22-210		**63.2**	%REC	1	10/10/03 11·47:00 AM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**40.6**	%REC	1	10/10/03 11:47:00 AM	TDN
SW-846 METHOD 9045C								
pH (1·1)	NELAP	1.00		**6.32**		1	10/9/03 1:42.00 PM	SAO

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TEL 618-344-1004
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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-23 1'-2'
Lab ID:	0310184-33	**Collection Date:**	10/2/03 2:00:00 PM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0 1		**24.8**	%	1	10/8/03	DLY
Total Solids		0 1		**75.2**	%	1	10/8/03	DLY
SW-846 1311 TCLP / 3010A, ICP METHOD 6010B								
Lead	NELAP	0 040		**< 0.040**	mg/L	1	10/14/03 6:02 31 PM	SAM
SW-846 3050B, ICP METHOD 6010B								
Arsenic	NELAP	2 50		**7.25**	mg/Kg-dry	1	10/16/03 12:03.55 PM	JMW
Barium	NELAP	0.50		**257**	mg/Kg-dry	1	10/16/03 10:41:03 AM	SAM
Chromium	NELAP	1.00		**30.5**	mg/Kg-dry	1	10/16/03 10:41:03 AM	SAM
Lead	NELAP	4.00		**22.2**	mg/Kg-dry	1	10/16/03 10:41.03 AM	SAM
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	49.8		**ND**	µg/Kg-dry	1	10/10/03 12:07:00 PM	TDN
Aroclor 1221	NELAP	49 8		**ND**	µg/Kg-dry	1	10/10/03 12:07:00 PM	TDN
Aroclor 1232	NELAP	49.8		**ND**	µg/Kg-dry	1	10/10/03 12.07:00 PM	TDN
Aroclor 1242	NELAP	49 8		**ND**	µg/Kg-dry	1	10/10/03 12:07 00 PM	TDN
Aroclor 1248	NELAP	49.8		**ND**	µg/Kg-dry	1	10/10/03 12.07:00 PM	TDN
Aroclor 1254	NELAP	49.8		**ND**	µg/Kg-dry	1	10/10/03 12:07.00 PM	TDN
Aroclor 1260	NELAP	49.8		**ND**	µg/Kg-dry	1	10/10/03 12:07:00 PM	TDN
Surr: Decachlorobiphenyl		22-210		**47.3**	%REC	1	10/10/03 12:07:00 PM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**33.6**	%REC	1	10/10/03 12:07:00 PM	TDN
SW-846 METHOD 9045C								
pH (1:1)	NELAP	1.00		**6.62**		1	10/9/03 1:50:00 PM	SAO

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-24 1'-2'
Lab ID:	0310184-34	**Collection Date:**	10/2/03 2:30:00 PM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0 1		**30.3**	%	1	10/8/03	DLY
Total Solids		0 1		**69.7**	%	1	10/8/03	DLY
SW-846 1311 TCLP / 3010A, ICP METHOD 6010B								
Lead	NELAP	0 040		**< 0.040**	mg/L	1	10/14/03 6:13:11 PM	SAM
SW-846 3050B, ICP METHOD 6010B								
Arsenic	NELAP	2.50		**8.65**	mg/Kg-dry	1	10/16/03 11:46:29 AM	JMW
Barium	NELAP	0.50		**255**	mg/Kg-dry	1	10/16/03 10:56:29 AM	SAM
Chromium	NELAP	1 00		**39.8**	mg/Kg-dry	1	10/16/03 10:56.29 AM	SAM
Lead	NELAP	4.00		**68.7**	mg/Kg-dry	1	10/16/03 10:56.29 AM	SAM
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	52.4		**ND**	µg/Kg-dry	1	10/10/03 12:27:00 PM	TDN
Aroclor 1221	NELAP	52.4		**ND**	µg/Kg-dry	1	10/10/03 12:27:00 PM	TDN
Aroclor 1232	NELAP	52 4		**ND**	µg/Kg-dry	1	10/10/03 12:27:00 PM	TDN
Aroclor 1242	NELAP	52 4		**ND**	µg/Kg-dry	1	10/10/03 12:27:00 PM	TDN
Aroclor 1248	NELAP	52 4		**ND**	µg/Kg-dry	1	10/10/03 12:27:00 PM	TDN
Aroclor 1254	NELAP	52.4		**ND**	µg/Kg-dry	1	10/10/03 12.27:00 PM	TDN
Aroclor 1260	NELAP	52.4		**192**	µg/Kg-dry	1	10/10/03 12:27:00 PM	TDN
Surr: Decachlorobiphenyl		22-210	S	**233**	%REC	1	10/10/03 12.27:00 PM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**50.0**	%REC	1	10/10/03 12.27:00 PM	TDN
SW-846 METHOD 9045C								
pH (1 1)	NELAP	1.00		**6.75**		1	10/9/03 1:53:00 PM	SAO

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-25 1'-2'
Lab ID:	0310184-35	**Collection Date:**	10/2/03 3:00:00 PM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0.1		**18.6**	%	1	10/8/03	DLY
Total Solids		0.1		**81.4**	%	1	10/8/03	DLY
SW-846 1311 TCLP / 3010A, ICP METHOD 6010B								
Lead	NELAP	0.040		**< 0.040**	mg/L	1	10/14/03 6.34:11 PM	SAM
SW-846 3050B, ICP METHOD 6010B								
Arsenic	NELAP	2 50		**7.10**	mg/Kg-dry	1	10/15/03 5:34:47 PM	JMW
Barium	NELAP	0.50		**228**	mg/Kg-dry	1	10/16/03 11:01:44 AM	SAM
Chromium	NELAP	1 00		**27.1**	mg/Kg-dry	1	10/16/03 11.01:44 AM	SAM
Lead	NELAP	4.00		**40.0**	mg/Kg-dry	1	10/16/03 11:01 44 AM	SAM
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	46.6		**ND**	µg/Kg-dry	1	10/10/03 12:47:00 PM	TDN
Aroclor 1221	NELAP	46.6		**ND**	µg/Kg-dry	1	10/10/03 12:47 00 PM	TDN
Aroclor 1232	NELAP	46.6		**ND**	µg/Kg-dry	1	10/10/03 12:47:00 PM	TDN
Aroclor 1242	NELAP	46.6		**ND**	µg/Kg-dry	1	10/10/03 12:47:00 PM	TDN
Aroclor 1248	NELAP	46.6		**ND**	µg/Kg-dry	1	10/10/03 12:47:00 PM	TDN
Aroclor 1254	NELAP	46.6		**ND**	µg/Kg-dry	1	10/10/03 12:47:00 PM	TDN
Aroclor 1260	NELAP	46.6		**ND**	µg/Kg-dry	1	10/10/03 12:47:00 PM	TDN
Surr: Decachlorobiphenyl		22-210		**104**	%REC	1	10/10/03 12:47:00 PM	TDN
Surr. Tetrachloro-meta-xylene		10-153		**72.8**	%REC	1	10/10/03 12:47:00 PM	TDN
SW-846 METHOD 9045C								
pH (1 1)	NELAP	1.00		**7.08**		1	10/9/03 1:57:00 PM	SAO

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TEL 618-344-1004
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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-1 2'-3'
Lab ID:	0310184-36	**Collection Date:**	9/30/03 10:30:00 AM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0.1	H	**21.8**	%	1	10/8/03	DLY
Total Solids		0 1	H	**78.2**	%	1	10/8/03	DLY
SW-846 1311 TCLP / 3010A, ICP METHOD 6010B								
Lead	NELAP	0.040	J	**< 0.040**	mg/L	1	10/14/03 6:44:53 PM	SAM
SW-846 3050B, ICP METHOD 6010B								
Arsenic	NELAP	2.50		**4.25**	mg/Kg-dry	1	10/15/03 5.38:22 PM	JMW
Barium	NELAP	0 50		**227**	mg/Kg-dry	1	10/16/03 11:07.00 AM	SAM
Chromium	NELAP	1.00		**28.6**	mg/Kg-dry	1	10/16/03 11 07:00 AM	SAM
Lead	NELAP	4 00		**17.2**	mg/Kg-dry	1	10/16/03 11:07:00 AM	SAM
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	48.1		**ND**	µg/Kg-dry	1	10/10/03 1:06:00 PM	TDN
Aroclor 1221	NELAP	48 1		**ND**	µg/Kg-dry	1	10/10/03 1.06.00 PM	TDN
Aroclor 1232	NELAP	48.1		**ND**	µg/Kg-dry	1	10/10/03 1:06:00 PM	TDN
Aroclor 1242	NELAP	48.1		**ND**	µg/Kg-dry	1	10/10/03 1.06:00 PM	TDN
Aroclor 1248	NELAP	48.1		**ND**	µg/Kg-dry	1	10/10/03 1:06:00 PM	TDN
Aroclor 1254	NELAP	48.1		**ND**	µg/Kg-dry	1	10/10/03 1:06.00 PM	TDN
Aroclor 1260	NELAP	48.1		**ND**	µg/Kg-dry	1	10/10/03 1.06:00 PM	TDN
Surr: Decachlorobiphenyl		22-210		**60.4**	%REC	1	10/10/03 1:06 00 PM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**42.5**	%REC	1	10/10/03 1.06:00 PM	TDN
SW-846 METHOD 9045C								
pH (1 1)	NELAP	1.00		**7.68**		1	10/9/03 1·59:00 PM	SAO

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-2 2'-3'
Lab ID:	0310184-37	**Collection Date:**	9/30/03 11:30:00 AM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0.1	H	**23.6**	%	1	10/8/03	DLY
Total Solids		0.1	H	**76.4**	%	1	10/8/03	DLY
SW-846 1311 TCLP / 3010A, ICP METHOD 6010B								
Lead	NELAP	0.040		**< 0.040**	mg/L	1	10/14/03 6:55:30 PM	SAM
SW-846 3050B, ICP METHOD 6010B								
Arsenic	NELAP	2.50		**8.21**	mg/Kg-dry	1	10/16/03 11:49 00 AM	JMW
Barium	NELAP	0.50		**278**	mg/Kg-dry	1	10/16/03 11:22:45 AM	SAM
Chromium	NELAP	1 00		**26.1**	mg/Kg-dry	1	10/16/03 11:22 45 AM	SAM
Lead	NELAP	4.00		**19.9**	mg/Kg-dry	1	10/16/03 11:22:45 AM	SAM
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	48.5		**ND**	µg/Kg-dry	1	10/10/03 1.26·00 PM	TDN
Aroclor 1221	NELAP	48 5		**ND**	µg/Kg-dry	1	10/10/03 1:26·00 PM	TDN
Aroclor 1232	NELAP	48.5		**ND**	µg/Kg-dry	1	10/10/03 1.26·00 PM	TDN
Aroclor 1242	NELAP	48.5		**ND**	µg/Kg-dry	1	10/10/03 1:26:00 PM	TDN
Aroclor 1248	NELAP	48.5		**ND**	µg/Kg-dry	1	10/10/03 1.26:00 PM	TDN
Aroclor 1254	NELAP	48.5		**ND**	µg/Kg-dry	1	10/10/03 1.26.00 PM	TDN
Aroclor 1260	NELAP	48.5		**ND**	µg/Kg-dry	1	10/10/03 1:26·00 PM	TDN
Surr: Decachlorobiphenyl		22-210		**48.6**	%REC	1	10/10/03 1:26:00 PM	TDN
Surr. Tetrachloro-meta-xylene		10-153		**43.9**	%REC	1	10/10/03 1:26:00 PM	TDN
SW-846 METHOD 9045C								
pH (1 1)	NELAP	1.00		**7.22**		1	10/9/03 2:02:00 PM	SAO

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-3 2'-3'
Lab ID:	0310184-38	**Collection Date:**	9/30/03 12:30:00 PM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0.1	H	**21.9**	%	1	10/8/03	DLY
Total Solids		0 1	H	**78.1**	%	1	10/8/03	DLY
SW-846 1311 TCLP / 3010A. ICP METHOD 6010B								
Lead	NELAP	0.040		**< 0.040**	mg/L	1	10/14/03 7:11.28 PM	SAM
SW-846 3050B. ICP METHOD 6010B								
Arsenic	NELAP	2 40		**6.66**	mg/Kg-dry	1	10/15/03 5:59 39 PM	JMW
Barium	NELAP	0 48		**252**	mg/Kg-dry	1	10/16/03 11:27 48 AM	SAM
Chromium	NELAP	0.96		**25.0**	mg/Kg-dry	1	10/16/03 11.27 48 AM	SAM
Lead	NELAP	3.85		**17.3**	mg/Kg-dry	1	10/16/03 11.27:48 AM	SAM
SW-846 3550B. METHOD 8082. POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	47.9		**ND**	µg/Kg-dry	1	10/10/03 1:46 00 PM	TDN
Aroclor 1221	NELAP	47.9		**ND**	µg/Kg-dry	1	10/10/03 1:46:00 PM	TDN
Aroclor 1232	NELAP	47.9		**ND**	µg/Kg-dry	1	10/10/03 1:46 00 PM	TDN
Aroclor 1242	NELAP	47.9		**ND**	µg/Kg-dry	1	10/10/03 1:46:00 PM	TDN
Aroclor 1248	NELAP	47.9		**ND**	µg/Kg-dry	1	10/10/03 1:46.00 PM	TDN
Aroclor 1254	NELAP	47 9		**ND**	µg/Kg-dry	1	10/10/03 1:46:00 PM	TDN
Aroclor 1260	NELAP	47.9		**ND**	µg/Kg-dry	1	10/10/03 1.46:00 PM	TDN
Surr: Decachlorobiphenyl		22-210		**67.0**	%REC	1	10/10/03 1.46:00 PM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**45.3**	%REC	1	10/10/03 1.46.00 PM	TDN
SW-846 METHOD 9045C								
pH (1.1)	NELAP	1.00		**7.00**		1	10/9/03 2:04:00 PM	SAO

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-5 2'-3'
Lab ID:	0310184-39	**Collection Date:**	9/30/03 3:30:00 PM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0.1	H	**22.7**	%	1	10/8/03	DLY
Total Solids		0.1	H	**77.3**	%	1	10/8/03	DLY
SW-846 1311 TCLP / 3010A, ICP METHOD 6010B								
Lead	NELAP	0.040		**< 0.040**	mg/L	1	10/14/03 7:32:26 PM	SAM
SW-846 3050B, ICP METHOD 6010B								
Arsenic	NELAP	2.45		**4.51**	mg/Kg-dry	1	10/15/03 6:03:12 PM	JMW
Barium	NELAP	0 49		**244**	mg/Kg-dry	1	10/16/03 11:33:03 AM	SAM
Chromium	NELAP	0.98		**28.7**	mg/Kg-dry	1	10/16/03 11:33:03 AM	SAM
Lead	NELAP	3 92		**22.3**	mg/Kg-dry	1	10/16/03 11:33:03 AM	SAM
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	48.1		**ND**	µg/Kg-dry	1	10/10/03 2.05:00 PM	TDN
Aroclor 1221	NELAP	48 1		**ND**	µg/Kg-dry	1	10/10/03 2:05:00 PM	TDN
Aroclor 1232	NELAP	48.1		**ND**	µg/Kg-dry	1	10/10/03 2:05:00 PM	TDN
Aroclor 1242	NELAP	48 1		**ND**	µg/Kg-dry	1	10/10/03 2:05:00 PM	TDN
Aroclor 1248	NELAP	48.1		**ND**	µg/Kg-dry	1	10/10/03 2:05:00 PM	TDN
Aroclor 1254	NELAP	48.1		**ND**	µg/Kg-dry	1	10/10/03 2:05:00 PM	TDN
Aroclor 1260	NELAP	48 1		**ND**	µg/Kg-dry	1	10/10/03 2.05:00 PM	TDN
Surr: Decachlorobiphenyl		22-210		**58.5**	%REC	1	10/10/03 2:05:00 PM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**46.2**	%REC	1	10/10/03 2.05:00 PM	TDN
SW-846 METHOD 9045C								
pH (1.1)	NELAP	1 00		**7.39**		1	10/9/03 2·11:00 PM	SAO

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-6 2'-3'
Lab ID:	0310184-40	**Collection Date:**	9/30/03 4:15:00 PM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0 1	H	**24.6**	%	1	10/8/03	DLY
Total Solids		0 1	H	**75.4**	%	1	10/8/03	DLY
SW-846 1311 TCLP / 3010A, ICP METHOD 6010B								
Lead	NELAP	0 040		**< 0.040**	mg/L	1	10/15/03 11.03:22 AM	SAM
SW-846 3050B, ICP METHOD 6010B								
Arsenic	NELAP	2 40		**4.40**	mg/Kg-dry	1	10/14/03 2:09:42 PM	JMW
Barium	NELAP	0 48		**196**	mg/Kg-dry	1	10/16/03 1.20:26 PM	SAM
Chromium	NELAP	0.96		**28.2**	mg/Kg-dry	1	10/16/03 1.20.26 PM	SAM
Lead	NELAP	3.85		**20.1**	mg/Kg-dry	1	10/16/03 1.20:26 PM	SAM
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	48.9		**ND**	µg/Kg-dry	1	10/10/03 2:25:00 PM	TDN
Aroclor 1221	NELAP	48.9		**ND**	µg/Kg-dry	1	10/10/03 2:25.00 PM	TDN
Aroclor 1232	NELAP	48.9		**ND**	µg/Kg-dry	1	10/10/03 2.25 00 PM	TDN
Aroclor 1242	NELAP	48.9		**ND**	µg/Kg-dry	1	10/10/03 2.25:00 PM	TDN
Aroclor 1248	NELAP	48.9		**ND**	µg/Kg-dry	1	10/10/03 2.25:00 PM	TDN
Aroclor 1254	NELAP	48.9		**ND**	µg/Kg-dry	1	10/10/03 2.25:00 PM	TDN
Aroclor 1260	NELAP	48 9	J	**ND**	µg/Kg-dry	1	10/10/03 2.25:00 PM	TDN
Surr: Decachlorobiphenyl		22-210		**71.3**	%REC	1	10/10/03 2.25:00 PM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**48.1**	%REC	1	10/10/03 2.25:00 PM	TDN
SW-846 METHOD 9045C								
pH (1 1)	NELAP	1 00		**7.03**		1	10/9/03 2:07:00 PM	SAO

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ENVIRONMENTAL TESTING LABORATORY

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-7 3'-4'
Lab ID:	0310184-41	**Collection Date:**	9/30/03 5:00:00 PM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0.1	H	**24.3**	%	1	10/8/03	DLY
Total Solids		0.1	H	**75.7**	%	1	10/8/03	DLY
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	98.7		**ND**	µg/Kg-dry	1	10/11/03 6:54:00 AM	TDN
Aroclor 1221	NELAP	98.7		**ND**	µg/Kg-dry	1	10/11/03 6:54:00 AM	TDN
Aroclor 1232	NELAP	98.7		**ND**	µg/Kg-dry	1	10/11/03 6:54:00 AM	TDN
Aroclor 1242	NELAP	98 7		**ND**	µg/Kg-dry	1	10/11/03 6:54:00 AM	TDN
Aroclor 1248	NELAP	494		**2060**	µg/Kg-dry	5	10/14/03 2:16:00 AM	TDN
Aroclor 1254	NELAP	98.7		**ND**	µg/Kg-dry	1	10/11/03 6 54 00 AM	TDN
Aroclor 1260	NELAP	494		**1760**	µg/Kg-dry	5	10/14/03 2:16:00 AM	TDN
Surr: Decachlorobiphenyl		22-210		**111**	%REC	1	10/11/03 6.54.00 AM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**81.3**	%REC	1	10/11/03 6:54:00 AM	TDN

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-7 4'-5'
Lab ID:	0310184-42	**Collection Date:**	9/30/03 5:00:00 PM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0.1	H	**28.7**	%	1	10/8/03	DLY
Total Solids		0 1	H	**71.3**	%	1	10/8/03	DLY
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	53.3		**ND**	µg/Kg-dry	1	10/11/03 7:54:00 AM	TDN
Aroclor 1221	NELAP	53.3		**ND**	µg/Kg-dry	1	10/11/03 7:54:00 AM	TDN
Aroclor 1232	NELAP	53.3		**ND**	µg/Kg-dry	1	10/11/03 7:54:00 AM	TDN
Aroclor 1242	NELAP	53.3		**ND**	µg/Kg-dry	1	10/11/03 7:54:00 AM	TDN
Aroclor 1248	NELAP	53.3		**498**	µg/Kg-dry	1	10/11/03 7.54·00 AM	TDN
Aroclor 1254	NELAP	53.3		**ND**	µg/Kg-dry	1	10/11/03 7·54:00 AM	TDN
Aroclor 1260	NELAP	266		**1330**	µg/Kg-dry	5	10/14/03 3:15:00 AM	TDN
Surr: Decachlorobiphenyl		22-210		**105**	%REC	1	10/11/03 7:54:00 AM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**69.5**	%REC	1	10/11/03 7:54.00 AM	TDN

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-8 2'-3'
Lab ID:	0310184-43	**Collection Date:**	9/30/03 5:45:00 PM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0.1	H	**19.4**	%	1	10/8/03	DLY
Total Solids		0.1	H	**80.6**	%	1	10/8/03	DLY
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	46.5		**ND**	µg/Kg-dry	1	10/11/03 8:13:00 AM	TDN
Aroclor 1221	NELAP	46.5		**ND**	µg/Kg-dry	1	10/11/03 8:13:00 AM	TDN
Aroclor 1232	NELAP	46 5		**ND**	µg/Kg-dry	1	10/11/03 8:13.00 AM	TDN
Aroclor 1242	NELAP	46.5		**ND**	µg/Kg-dry	1	10/11/03 8:13:00 AM	TDN
Aroclor 1248	NELAP	46.5		**294**	µg/Kg-dry	1	10/11/03 8:13.00 AM	TDN
Aroclor 1254	NELAP	46.5		**ND**	µg/Kg-dry	1	10/11/03 8:13:00 AM	TDN
Aroclor 1260	NELAP	232		**1780**	µg/Kg-dry	5	10/14/03 3:35:00 AM	TDN
Surr: Decachlorobiphenyl		22-210		**129**	%REC	1	10/11/03 8:13:00 AM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**94.2**	%REC	1	10/11/03 8:13:00 AM	TDN

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ENVIRONMENTAL TESTING LABORATORY

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-8 3'-4'
Lab ID:	0310184-44	**Collection Date:**	9/30/03 5:45:00 PM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0.1	H	**18.5**	%	1	10/8/03	DLY
Total Solids		0.1	H	**81.5**	%	1	10/8/03	DLY
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	46.4		**ND**	µg/Kg-dry	1	10/11/03 8 33:00 AM	TDN
Aroclor 1221	NELAP	46.4		**ND**	µg/Kg-dry	1	10/11/03 8:33:00 AM	TDN
Aroclor 1232	NELAP	46.4		**ND**	µg/Kg-dry	1	10/11/03 8.33:00 AM	TDN
Aroclor 1242	NELAP	46.4		**ND**	µg/Kg-dry	1	10/11/03 8:33:00 AM	TDN
Aroclor 1248	NELAP	46.4		**101**	µg/Kg-dry	1	10/11/03 8:33:00 AM	TDN
Aroclor 1254	NELAP	46.4		**ND**	µg/Kg-dry	1	10/11/03 8.33 00 AM	TDN
Aroclor 1260	NELAP	46 4		**729**	µg/Kg-dry	1	10/11/03 8:33:00 AM	TDN
Surr. Decachlorobiphenyl		22-210		**105**	%REC	1	10/11/03 8:33:00 AM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**73.8**	%REC	1	10/11/03 8.33:00 AM	TDN

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ENVIRONMENTAL TESTING LABORATORY

TEL. 618-344-1004
FAX· 618-344-1005

Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-10 2'-3'
Lab ID:	0310184-45	**Collection Date:**	10/1/03 8:30:00 AM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0 1		**21.1**	%	1	10/8/03	DLY
Total Solids		0.1		**78.9**	%	1	10/8/03	DLY
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	46.6		**ND**	µg/Kg-dry	1	10/11/03 8:52:00 AM	TDN
Aroclor 1221	NELAP	46.6		**ND**	µg/Kg-dry	1	10/11/03 8:52·00 AM	TDN
Aroclor 1232	NELAP	46 6		**ND**	µg/Kg-dry	1	10/11/03 8:52:00 AM	TDN
Aroclor 1242	NELAP	46.6		**ND**	µg/Kg-dry	1	10/11/03 8:52.00 AM	TDN
Aroclor 1248	NELAP	46.6		**ND**	µg/Kg-dry	1	10/11/03 8:52:00 AM	TDN
Aroclor 1254	NELAP	46.6		**ND**	µg/Kg-dry	1	10/11/03 8:52.00 AM	TDN
Aroclor 1260	NELAP	46.6		**ND**	µg/Kg-dry	1	10/11/03 8:52·00 AM	TDN
Surr Decachlorobiphenyl		22-210		**73.8**	%REC	1	10/11/03 8.52:00 AM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**51.5**	%REC	1	10/11/03 8:52:00 AM	TDN

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-10 3'-4'
Lab ID:	0310184-46	**Collection Date:**	10/1/03 8:30:00 AM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0.1		**14.3**	%	1	10/8/03	DLY
Total Solids		0.1		**85.7**	%	1	10/8/03	DLY
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	44.3		**ND**	µg/Kg-dry	1	10/11/03 9:12.00 AM	TDN
Aroclor 1221	NELAP	44 3		**ND**	µg/Kg-dry	1	10/11/03 9:12:00 AM	TDN
Aroclor 1232	NELAP	44.3		**ND**	µg/Kg-dry	1	10/11/03 9:12:00 AM	TDN
Aroclor 1242	NELAP	44.3		**ND**	µg/Kg-dry	1	10/11/03 9:12:00 AM	TDN
Aroclor 1248	NELAP	44 3		**ND**	µg/Kg-dry	1	10/11/03 9:12:00 AM	TDN
Aroclor 1254	NELAP	44.3		**ND**	µg/Kg-dry	1	10/11/03 9 12.00 AM	TDN
Aroclor 1260	NELAP	44.3		**ND**	µg/Kg-dry	1	10/11/03 9.12 00 AM	TDN
Surr: Decachlorobiphenyl		22-210		**86.7**	%REC	1	10/11/03 9:12 00 AM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**57.1**	%REC	1	10/11/03 9:12:00 AM	TDN

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-10 4'-5'
Lab ID:	0310184-47	**Collection Date:**	10/1/03 8:30:00 AM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0.1		**23.8**	%	1	10/8/03	DLY
Total Solids		0.1		**76.2**	%	1	10/8/03	DLY
SW-846 3550B. METHOD 8082. POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	49 7		**ND**	µg/Kg-dry	1	10/11/03 9:32:00 AM	TDN
Aroclor 1221	NELAP	49.7		**ND**	µg/Kg-dry	1	10/11/03 9:32:00 AM	TDN
Aroclor 1232	NELAP	49.7		**ND**	µg/Kg-dry	1	10/11/03 9.32.00 AM	TDN
Aroclor 1242	NELAP	49 7		**ND**	µg/Kg-dry	1	10/11/03 9:32:00 AM	TDN
Aroclor 1248	NELAP	49.7		**ND**	µg/Kg-dry	1	10/11/03 9:32 00 AM	TDN
Aroclor 1254	NELAP	49 7		**ND**	µg/Kg-dry	1	10/11/03 9:32.00 AM	TDN
Aroclor 1260	NELAP	49.7		**72.8**	µg/Kg-dry	1	10/11/03 9.32:00 AM	TDN
Surr: Decachlorobiphenyl		22-210		**85.5**	%REC	1	10/11/03 9.32:00 AM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**62.7**	%REC	1	10/11/03 9.32:00 AM	TDN

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-10 5'-6'
Lab ID:	0310184-48	**Collection Date:**	10/1/03 8:30:00 AM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0 1		**23.2**	%	1	10/8/03	DLY
Total Solids		0 1		**76.8**	%	1	10/8/03	DLY
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	49.0		**ND**	µg/Kg-dry	1	10/11/03 9:52:00 AM	TDN
Aroclor 1221	NELAP	49.0		**ND**	µg/Kg-dry	1	10/11/03 9:52.00 AM	TDN
Aroclor 1232	NELAP	49.0		**ND**	µg/Kg-dry	1	10/11/03 9:52:00 AM	TDN
Aroclor 1242	NELAP	49 0		**ND**	µg/Kg-dry	1	10/11/03 9:52:00 AM	TDN
Aroclor 1248	NELAP	49 0		**ND**	µg/Kg-dry	1	10/11/03 9:52·00 AM	TDN
Aroclor 1254	NELAP	49 0		**ND**	µg/Kg-dry	1	10/11/03 9:52:00 AM	TDN
Aroclor 1260	NELAP	49 0		**ND**	µg/Kg-dry	1	10/11/03 9.52:00 AM	TDN
Surr: Decachlorobiphenyl		22-210		**88.0**	%REC	1	10/11/03 9:52:00 AM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**76.9**	%REC	1	10/11/03 9:52:00 AM	TDN

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-10 6'-7'
Lab ID:	0310184-49	**Collection Date:**	10/1/03 8:30:00 AM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0 1		**26.2**	%	1	10/8/03	DLY
Total Solids		0.1		**73.8**	%	1	10/8/03	DLY
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	49.5		**ND**	µg/Kg-dry	1	10/11/03 10.12:00 AM	TDN
Aroclor 1221	NELAP	49.5		**ND**	µg/Kg-dry	1	10/11/03 10:12:00 AM	TDN
Aroclor 1232	NELAP	49.5		**ND**	µg/Kg-dry	1	10/11/03 10:12:00 AM	TDN
Aroclor 1242	NELAP	49 5		**ND**	µg/Kg-dry	1	10/11/03 10:12·00 AM	TDN
Aroclor 1248	NELAP	49.5		**ND**	µg/Kg-dry	1	10/11/03 10:12:00 AM	TDN
Aroclor 1254	NELAP	49.5		**ND**	µg/Kg-dry	1	10/11/03 10:12.00 AM	TDN
Aroclor 1260	NELAP	49.5		**ND**	µg/Kg-dry	1	10/11/03 10:12:00 AM.	TDN
Surr: Decachlorobiphenyl		22-210		**65.5**	%REC	1	10/11/03 10:12:00 AM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**49.1**	%REC	1	10/11/03 10:12:00 AM	TDN

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-10 7'-8'
Lab ID:	0310184-50	**Collection Date:**	10/1/03 8:30:00 AM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0.1		**27.4**	%	1	10/8/03	DLY
Total Solids		0.1		**72.6**	%	1	10/8/03	DLY
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	52.5		**ND**	µg/Kg-dry	1	10/11/03 10:31:00 AM	TDN
Aroclor 1221	NELAP	52.5		**ND**	µg/Kg-dry	1	10/11/03 10:31:00 AM	TDN
Aroclor 1232	NELAP	52.5		**ND**	µg/Kg-dry	1	10/11/03 10:31:00 AM	TDN
Aroclor 1242	NELAP	52.5		**ND**	µg/Kg-dry	1	10/11/03 10:31:00 AM	TDN
Aroclor 1248	NELAP	52.5		**ND**	µg/Kg-dry	1	10/11/03 10:31:00 AM	TDN
Aroclor 1254	NELAP	52.5		**ND**	µg/Kg-dry	1	10/11/03 10:31:00 AM	TDN
Aroclor 1260	NELAP	52.5		**ND**	µg/Kg-dry	1	10/11/03 10:31:00 AM	TDN
Surr: Decachlorobiphenyl		22-210		**79.3**	%REC	1	10/11/03 10:31:00 AM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**51.7**	%REC	1	10/11/03 10:31:00 AM	TDN

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-10 8'-9'
Lab ID:	0310184-51	**Collection Date:**	10/1/03 8:30:00 AM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0 1		**31.9**	%	1	10/8/03	DLY
Total Solids		0.1		**68.1**	%	1	10/8/03	DLY
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	54.9		**ND**	µg/Kg-dry	1	10/11/03 10:51:00 AM	TDN
Aroclor 1221	NELAP	54.9		**ND**	µg/Kg-dry	1	10/11/03 10:51.00 AM	TDN
Aroclor 1232	NELAP	54 9		**ND**	µg/Kg-dry	1	10/11/03 10:51:00 AM	TDN
Aroclor 1242	NELAP	54.9		**ND**	µg/Kg-dry	1	10/11/03 10:51:00 AM	TDN
Aroclor 1248	NELAP	54.9		**ND**	µg/Kg-dry	1	10/11/03 10:51·00 AM	TDN
Aroclor 1254	NELAP	54.9		**ND**	µg/Kg-dry	1	10/11/03 10:51:00 AM	TDN
Aroclor 1260	NELAP	54.9		**120**	µg/Kg-dry	1	10/11/03 10:51:00 AM	TDN
Surr: Decachlorobiphenyl		22-210		**79.5**	%REC	1	10/11/03 10:51:00 AM	TDN
Surr Tetrachloro-meta-xylene		10-153		**36.1**	%REC	1	10/11/03 10.51:00 AM	TDN

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	*0310184*	***Client Sample ID:***	*B-10 9'-10'*
Lab ID:	0310184-52	**Collection Date:**	10/1/03 8:30:00 AM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0.1		**32.5**	%	1	10/8/03	DLY
Total Solids		0.1		**67.5**	%	1	10/8/03	DLY
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	56.1		**ND**	µg/Kg-dry	1	10/11/03 11:11:00 AM	TDN
Aroclor 1221	NELAP	56 1		**ND**	µg/Kg-dry	1	10/11/03 11:11:00 AM	TDN
Aroclor 1232	NELAP	56.1		**ND**	µg/Kg-dry	1	10/11/03 11 11 00 AM	TDN
Aroclor 1242	NELAP	56.1		**ND**	µg/Kg-dry	1	10/11/03 11:11:00 AM	TDN
Aroclor 1248	NELAP	56 1		**ND**	µg/Kg-dry	1	10/11/03 11:11:00 AM	TDN
Aroclor 1254	NELAP	56.1		**ND**	µg/Kg-dry	1	10/11/03 11:11:00 AM	TDN
Aroclor 1260	NELAP	56.1		**ND**	µg/Kg-dry	1	10/11/03 11:11:00 AM	TDN
Surr. Decachlorobiphenyl		22-210		**63.7**	%REC	1	10/11/03 11:11:00 AM	TDN
Surr. Tetrachloro-meta-xylene		10-153		**26.6**	%REC	1	10/11/03 11:11:00 AM	TDN

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-10 10'-11'
Lab ID:	0310184-53	**Collection Date:**	10/1/03 8:30:00 AM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0 1		**32.8**	%	1	10/8/03	DLY
Total Solids		0.1		**67.2**	%	1	10/8/03	DLY
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	54.9		**ND**	µg/Kg-dry	1	10/11/03 11:30:00 AM	TDN
Aroclor 1221	NELAP	54.9		**ND**	µg/Kg-dry	1	10/11/03 11:30:00 AM	TDN
Aroclor 1232	NELAP	54.9		**ND**	µg/Kg-dry	1	10/11/03 11.30:00 AM	TDN
Aroclor 1242	NELAP	54.9		**ND**	µg/Kg-dry	1	10/11/03 11:30:00 AM	TDN
Aroclor 1248	NELAP	54 9		**ND**	µg/Kg-dry	1	10/11/03 11.30:00 AM	TDN
Aroclor 1254	NELAP	54.9		**ND**	µg/Kg-dry	1	10/11/03 11:30:00 AM	TDN
Aroclor 1260	NELAP	54.9		**ND**	µg/Kg-dry	1	10/11/03 11:30:00 AM	TDN
Surr: Decachlorobiphenyl		22-210		**47.5**	%REC	1	10/11/03 11:30:00 AM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**32.0**	%REC	1	10/11/03 11.30:00 AM	TDN

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-11 5'-6'
Lab ID:	0310184-54	**Collection Date:**	10/1/03 9:15:00 AM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0.1		**20.5**	%	1	10/8/03	DLY
Total Solids		0 1		**79.5**	%	1	10/8/03	DLY
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	45.8		**ND**	µg/Kg-dry	1	10/11/03 11:50:00 AM	TDN
Aroclor 1221	NELAP	45 8		**ND**	µg/Kg-dry	1	10/11/03 11:50:00 AM	TDN
Aroclor 1232	NELAP	45.8		**ND**	µg/Kg-dry	1	10/11/03 11:50:00 AM	TDN
Aroclor 1242	NELAP	45.8		**ND**	µg/Kg-dry	1	10/11/03 11:50.00 AM	TDN
Aroclor 1248	NELAP	45.8		**ND**	µg/Kg-dry	1	10/11/03 11:50:00 AM	TDN
Aroclor 1254	NELAP	45.8		**ND**	µg/Kg-dry	1	10/11/03 11.50:00 AM	TDN
Aroclor 1260	NELAP	45.8		**ND**	µg/Kg-dry	1	10/11/03 11·50:00 AM	TDN
Surr: Decachlorobiphenyl		22-210		**80.2**	%REC	1	10/11/03 11:50:00 AM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**46.5**	%REC	1	10/11/03 11:50·00 AM	TDN

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-11 3'-4'
Lab ID:	0310184-55	**Collection Date:**	10/1/03 9:15:00 AM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0.1		**18.5**	%	1	10/8/03	DLY
Total Solids		0.1		**81.5**	%	1	10/8/03	DLY
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	46.2		**ND**	µg/Kg-dry	1	10/11/03 12:10.00 PM	TDN
Aroclor 1221	NELAP	46.2		**ND**	µg/Kg-dry	1	10/11/03 12:10:00 PM	TDN
Aroclor 1232	NELAP	46.2		**ND**	µg/Kg-dry	1	10/11/03 12:10:00 PM	TDN
Aroclor 1242	NELAP	46.2		**ND**	µg/Kg-dry	1	10/11/03 12:10:00 PM	TDN
Aroclor 1248	NELAP	46.2	J	**ND**	µg/Kg-dry	1	10/11/03 12:10:00 PM	TDN
Aroclor 1254	NELAP	46.2		**ND**	µg/Kg-dry	1	10/11/03 12:10:00 PM	TDN
Aroclor 1260	NELAP	46.2		**ND**	µg/Kg-dry	1	10/11/03 12:10:00 PM	TDN
Surr: Decachlorobiphenyl		22-210		**92.2**	%REC	1	10/11/03 12:10:00 PM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**59.8**	%REC	1	10/11/03 12:10:00 PM	TDN

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ENVIRONMENTAL TESTING LABORATORY

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-11 4'-5'
Lab ID:	0310184-56	**Collection Date:**	10/1/03 9:15:00 AM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0.1		**19.7**	%	1	10/8/03	DLY
Total Solids		0 1		**80.3**	%	1	10/8/03	DLY
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	46.5		**ND**	µg/Kg-dry	1	10/11/03 12:29:00 PM	TDN
Aroclor 1221	NELAP	46 5		**ND**	µg/Kg-dry	1	10/11/03 12:29.00 PM	TDN
Aroclor 1232	NELAP	46.5		**ND**	µg/Kg-dry	1	10/11/03 12:29:00 PM	TDN
Aroclor 1242	NELAP	46 5		**ND**	µg/Kg-dry	1	10/11/03 12.29:00 PM	TDN
Aroclor 1248	NELAP	46.5		**206**	µg/Kg-dry	1	10/11/03 12:29:00 PM	TDN
Aroclor 1254	NELAP	46.5		**ND**	µg/Kg-dry	1	10/11/03 12.29:00 PM	TDN
Aroclor 1260	NELAP	46.5	J	**ND**	µg/Kg-dry	1	10/11/03 12.29:00 PM	TDN
Surr: Decachlorobiphenyl		22-210		**77.7**	%REC	1	10/11/03 12:29:00 PM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**63.1**	%REC	1	10/11/03 12.29:00 PM	TDN

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL 618-344-1004
FAX 618-344-1005

Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-16 2'-3'
Lab ID:	0310184-57	**Collection Date:**	10/1/03 1:00:00 PM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0.1		**13.5**	%	1	10/8/03	DLY
Total Solids		0 1		**86.5**	%	1	10/8/03	DLY
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	42.1		**ND**	µg/Kg-dry	1	10/11/03 12.49·00 PM	TDN
Aroclor 1221	NELAP	42.1		**ND**	µg/Kg-dry	1	10/11/03 12:49:00 PM	TDN
Aroclor 1232	NELAP	42.1		**ND**	µg/Kg-dry	1	10/11/03 12:49:00 PM	TDN
Aroclor 1242	NELAP	42 1		**ND**	µg/Kg-dry	1	10/11/03 12.49.00 PM	TDN
Aroclor 1248	NELAP	42.1		**ND**	µg/Kg-dry	1	10/11/03 12·49:00 PM	TDN
Aroclor 1254	NELAP	42.1		**ND**	µg/Kg-dry	1	10/11/03 12:49:00 PM	TDN
Aroclor 1260	NELAP	42 1		**71.8**	µg/Kg-dry	1	10/11/03 12·49.00 PM	TDN
Surr. Decachlorobiphenyl		22-210		**102**	%REC	1	10/11/03 12·49.00 PM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**81.7**	%REC	1	10/11/03 12·49:00 PM	TDN

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL 618-344-1004
FAX 618-344-1005

Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-16 3'-4'
Lab ID:	0310184-58	**Collection Date:**	10/1/03 1:00:00 PM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0 1		**16.7**	%	1	10/8/03	DLY
Total Solids		0 1		**83.3**	%	1	10/8/03	DLY
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	45.0		**ND**	µg/Kg-dry	1	10/11/03 1:09:00 PM	TDN
Aroclor 1221	NELAP	45.0		**ND**	µg/Kg-dry	1	10/11/03 1.09:00 PM	TDN
Aroclor 1232	NELAP	45.0		**ND**	µg/Kg-dry	1	10/11/03 1:09 00 PM	TDN
Aroclor 1242	NELAP	45.0		**ND**	µg/Kg-dry	1	10/11/03 1.09:00 PM	TDN
Aroclor 1248	NELAP	45.0		**ND**	µg/Kg-dry	1	10/11/03 1:09:00 PM	TDN
Aroclor 1254	NELAP	45.0		**ND**	µg/Kg-dry	1	10/11/03 1:09.00 PM	TDN
Aroclor 1260	NELAP	45.0		**ND**	µg/Kg-dry	1	10/11/03 1:09.00 PM	TDN
Surr: Decachlorobiphenyl		22-210		**84.0**	%REC	1	10/11/03 1:09:00 PM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**67.0**	%REC	1	10/11/03 1:09:00 PM	TDN

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL 618-344-1004
FAX. 618-344-1005

Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS - AOC Site
WorkOrder:	0310184	**Client Sample ID:**	B-16 4'-5'
Lab ID:	0310184-59	**Collection Date:**	10/1/03 1:00:00 PM
Report Date:	16-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0.1		**14.2**	%	1	10/8/03	DLY
Total Solids		0.1		**85.8**	%	1	10/8/03	DLY
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	90 0		**ND**	µg/Kg-dry	1	10/11/03 1:28:00 PM	TDN
Aroclor 1221	NELAP	90.0		**ND**	µg/Kg-dry	1	10/11/03 1:28:00 PM	TDN
Aroclor 1232	NELAP	90.0		**ND**	µg/Kg-dry	1	10/11/03 1:28:00 PM	TDN
Aroclor 1242	NELAP	90.0		**ND**	µg/Kg-dry	1	10/11/03 1:28 00 PM	TDN
Aroclor 1248	NELAP	90 0		**ND**	µg/Kg-dry	1	10/11/03 1:28:00 PM	TDN
Aroclor 1254	NELAP	90.0		**ND**	µg/Kg-dry	1	10/11/03 1:28:00 PM	TDN
Aroclor 1260	NELAP	90.0		**ND**	µg/Kg-dry	1	10/11/03 1:28:00 PM	TDN
Surr: Decachlorobiphenyl		22-210		**102**	%REC	1	10/11/03 1.28:00 PM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**66.8**	%REC	1	10/11/03 1:28.00 PM	TDN

TEKLAB, INC

Sample Receipt Checklist

Client Name RAPPS

Date and Time Received 10/7/03 1:20:00 PM

Work Order Number 0310184

Received by: EAW

Checklist completed by Heather Barnes 10/7/03 (Signature / Date)

Reviewed by MLA 10/7/03 (Initials / Date)

Matrix

Carrier name Shelly Ottensmeier

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Presen ☐
Custody seals intact on shippping container/cooler?	Yes ☐	No ☐	Not Presen ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Presen ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Water - VOA vials have zero headspace?	No VOA vials submitted ☑	Yes ☐	No ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	

Adjusted? _____ Checked by _____

Any No and/or NA (not applicable) response must be detailed in the Case Narrative or on the Chain of Custody.

Client contacted. _____ Date contacted _____ Person contacted _____

Contacted by _____ Regarding _____

Comments. _____

Corrective Action _____

CHAIN OF CUSTODY

pg. 1 of 6 Work Order # 10184

TEKLAB, INC. 5445 Horseshoe Lake Road ~ Collinsville, IL 62234 ~ Phone: (618) 344-1004 ~ Fax: (618) 344-1005

Client: St. Louis Auto Shredding
Address: Post Office Box 130
City / State / Zip: National Stock Yards, IL 62071
Contact: Bryan Johnsrud Phone: 217-787-2118 ext. 207
E-Mail: bjohnsrud@rapps.net Fax: 217-787-6641

Are the samples chilled? ☐ NO ☒ YES (Ice ~~or Blue Ice~~)
Cooler Temperature: 3.4 °C
Preserved in: ☐ Lab ☒ Field

Comments: Retain samples with only PCBs requested for possible further analysis.

Project Name / Number: SLAS - AOC Site
Sample Collector's Name: Bryan Johnsrud
Requested Due Date:
Billing Instructions PO#:

Lab Use Only	Sample Identification	Date/Time Sampled	# and Type of Containers: UNPRES	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	Other	MATRIX: Water	Drinking Water	Soil	Sludge	Sp. Waste	pH	PCBs	arsenic	barium	chromium	lead	TCLP lead
OB10184-01	B-12 2'-3'	10/01/03 10:00AM											↓			X	X	X	X	X	X	X
-02	B-13 2'-3'	10/01/03 10:45AM											↓			X	X	X	X	X	X	X
-03	B-4 2'-3'	09/30/03 1:30PM											↓				X					
-04	B-4 3'-4'	09/30/03 1:30PM											↓				X					
-05	B-4 4'-5'	09/30/03 1:30PM											↓				X					
-06	B-4 5'-6'	09/30/03 1:30PM											↓				X					
-07	B-4 6'-7'	09/30/03 1:30PM											↓				X					
-08	B-4 7'-8*	09/30/03 1:30PM											↓				X					
-09	B-4 8'-9'	09/30/03 1:30PM											↓				X					
-10	B-7 2'-3'	09/30/03 5:00PM											↓				X					

INDICATE ANALYSIS REQUESTED

E-MAILED 10-16-03

Relinquished By	Date / Time	Received By	Date / Time
Bryan C. Johnsrud	10/07/03 11:15AM	Shelly Overmeyer	10/7/03 11:15
Shelly Overmeyer	10/7/03 1320	Elizabeth A. Weber	10/7/03 1320

CHAIN OF CUSTODY

pg. 2 of 6 Work Order # 10184

TEKLAB, INC. 5445 Horseshoe Lake Road ~ Collinsville, IL 62234 ~ Phone: (618) 344-1004 ~ Fax: (618) 344-1005

Client: St. Louis Auto Shredding
Address: Post office Box 130
City / State / Zip: National Stock Yards, IL 62071
Contact: Bryan Johnsrud Phone: 217-787-2118 ext. 207
E-Mail: bjohnsrud@rapps.net Fax: 217-787-6641

Are the samples chilled? ☐ NO ☒ YES (Ice ~~or Blue Ice~~)
Cooler Temperature: 3.4 °C
Preserved in: ☐ Lab ☒ Field
Comments:

Project Name / Number: SLAS - AOC Site
Sample Collector's Name: Bryan Johnsrud
Requested Due Date:
Billing Instructions PO#:

Lab Use Only	Sample Identification	Date/Time Sampled	UNPRES	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	Other	Water	Drinking Water	Soil	Sludge	Sp. Waste	pH	PCBs	arsenic	barium	chromium	lead	TCLP Lead
-11	B-1 1'-2' *	09/30/03 10:30AM	X										X			↓	↓	↓	↓	↓	↓	↓
-12	B-2 1'-2' *	09/30/03 11:30AM	X										X			↓	↓	↓	↓	↓	↓	↓
-13	B-3 1'-2'	09/30/03 12:30 ~~AM~~ PM	X										X			↓	↓	↓	↓	↓	↓	↓
-14	B-4 1'-2'	09/30/03 1:30PM	X										X			↓	↓	↓	↓	↓	↓	↓
-15	B-5 1'-2'	09/30/03 3:30PM	X										X			↓	↓	↓	↓	↓	↓	↓
-16	B-6 1'-2'	09/30/03 4:15PM	X										X			↓	↓	↓	↓	↓	↓	↓
-17	B-7 1'-2'	09/30/03 5:00PM	X										X			↓	↓	↓	↓	↓	↓	↓
-18	B-8 1'-2'	09/30/03 5:45PM	X										X			↓	↓	↓	↓	↓	↓	↓
-19	B-9 1'-2'	09/30/03 6:30PM	X										X			↓	↓	↓	↓	↓	↓	↓
-20	B-10 1'-2'	10/01/03 8:30AM	X										X			↓	↓	↓	↓	↓	↓	↓

Relinquished By	Date / Time	Received By	Date / Time
Bryan C. Johnsrud	10/07/03 11:15AM	Shelly Overmeier	10/7/03 1115
Shelly Overmeier	10/7/03 1340	Elizabeth A. Weber	10/7/03 1340

CHAIN OF CUSTODY

pg. 3 of 6 Work Order # _____

TEKLAB, INC. 5445 Horseshoe Lake Road ~ Collinsville, IL 62234 ~ Phone: (618) 344-1004 ~ Fax: (618) 344-1005

Client: St. Louis Auto Shredding
Address: Post Office Box 130
City / State / Zip: National Stock Yards IL 62071
Contact: Bryan Johnsrud Phone: 217-787-2118 ext. 207
E-Mail: bjohnsrud@rapps.net Fax: 217-787-6641

Are the samples chilled? ☐ NO ☒ YES (Ice ~~or Blue Ice~~)
Cooler Temperature: 3.4 °C
Preserved in: ☐ Lab ☒ Field
Comments:

Project Name / Number: SLAS - AOC Site
Sample Collector's Name: Bryan Johnsrud
Requested Due Date:
Billing Instructions PO#:

Lab Use Only	Sample Identification	Date/Time Sampled	# and Type of Containers: UNPRES	HNO_3	NaOH	H_2SO_4	HCL	MeOH	$NaHSO_4$	Other	MATRIX: Water	Drinking Water	Soil	Sludge	Sp. Waste	INDICATE ANALYSIS REQUESTED: pH	PCBs	arsenic	barium	chromium	lead	TCLP lead
-21	B-11 1'-2'	10/01/03 9:15AM	↓										↓			↓	↓	↓	↓	↓	↓	↓
-22	B-12 1'-2'	10/01/03 10:00AM	↓										↓			↓	↓	↓	↓	↓	↓	↓
-23	B-13 1'-2'	10/01/03 10:45AM	↓										↓			↓	↓	↓	↓	↓	↓	↓
-24	B-14 1'-2'	10/01/03 11:20AM	↓										↓			↓	↓	↓	↓	↓	↓	↓
-25	B-15 1'-2'	10/01/03 12:15 ~~AM~~ PM	↓	HNO3									↓			↓	↓	↓	↓	↓	↓	↓
-26	B-16 1'-2'	10/01/03 1:00PM	↓										↓			↓	↓	↓	↓	↓	↓	↓
-27	B-17 1'-2'	10/01/03 2:30PM	↓										↓			↓	↓	↓	↓	↓	↓	↓
-28	B-18 1'-2'	10/01/03 3:00PM	↓										↓			↓	↓	↓	↓	↓	↓	↓
-29	B-19 1'-2'	10/01/03 3:30PM	↓										↓			↓	↓	↓	↓	↓	↓	↓
-30	B-20 1'-2'	10/01/03 4:00PM	↓										↓			↓	↓	↓	↓	↓	↓	↓

Relinquished By	Date / Time	Received By	Date / Time
Bryan C. Johnsrud	10/07/03 11:15AM	Shelly Quensmeier	10/7/03 1115
Shelly Quensmeier	10/7/03 1340	Elizabeth A. Weber	10/7/03 1340

CHAIN OF CUSTODY

pg. 4 of 6 Work Order # _____

TEKLAB, INC. 5445 Horseshoe Lake Road ~ Collinsville, IL 62234 ~ Phone: (618) 344-1004 ~ Fax: (618) 344-1005

Client: St. Louis Auto Shredding
Address: Post Office Box 130
City / State / Zip: National Stock Yards, IL 62071
Contact: Bryan Johnsrud Phone: 217-787-2118 ext. 207
E-Mail: bjohnsrud@rapps.net Fax: 217-787-6641

Are the samples chilled? ☐ NO ☒ YES (Ice ~~or Blue Ice~~)
Cooler Temperature: 3.4 °C
Preserved in: ☐ Lab ☒ Field
Comments:

Project Name / Number: SLAS - AOC Site
Sample Collector's Name: Bryan Johnsrud
Requested Due Date:
Billing Instructions PO#:

Lab Use Only	Sample Identification		Date/Time Sampled	# and Type of Containers: UNPRES	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	Other	MATRIX: Water	Drinking Water	Soil	Sludge	Sp. Waste	pH	PCBs	arsenic	barium	chromium	lead	TCLP lead
-31	B-21	1'-2'	10/02/03 1:00 PM	✓										✓			✓	✓	✓	✓	✓	✓	✓
32	B-22	1'-2'	10/02/03 1:30 PM	✓										✓			✓	✓	✓	✓	✓	✓	✓
-33	B-23	1'-2'	10/02/03 2:00 PM	✓										✓			✓	✓	✓	✓	✓	✓	✓
-34	B-24	1'-2'	10/02/03 2:30 PM	✓										✓			✓	✓	✓	✓	✓	✓	✓
-35	B-25	1'-2'	10/02/03 3:00 PM	✓										✓			✓	✓	✓	✓	✓	✓	✓
-36	B-1	2'-3''	09/30/03 10:30 AM	✓										✓			✓	✓	✓	✓	✓	✓	✓
-37	B-2	2'-3'	09/30/03 11:30 AM	✓										✓			✓	✓	✓	✓	✓	✓	✓
-38	B-3	2'-3'	09/30/03 12:30 ~~AM~~ PM	✓	HAS									✓			✓	✓	✓	✓	✓	✓	✓
-39	B-5	2'-3'	09/30/03 3:30 PM	✓										✓			✓	✓	✓	✓	✓	✓	✓
-40	B-6	2'-3'	09/30/03 4:15 PM	✓										✓			✓	✓	✓	✓	✓	✓	✓

Relinquished By	Date / Time	Received By	Date / Time
Bryan C. Johnsrud	10/07/03 11:15 AM	Shelly Ottensmeier	10/7/03 1115
Shelly Ottensmeier	10/7/03 1340	Elizabeth A. Weber	10/7/03 1340

CHAIN OF CUSTODY

pg. 5 of 6 Work Order # _____

TEKLAB, INC. 5445 Horseshoe Lake Road ~ Collinsville, IL 62234 ~ Phone: (618) 344-1004 ~ Fax: (618) 344-1005

Client: St. Louis Auto Shredding
Address: Post Office Box 130
City / State / Zip: National Stock Yards, IL 62071
Contact: Bryan Johnsrud Phone: 217-787-2118 ext. 20
E-Mail: bjohnsrud@rapps.net Fax: 217-787-6641

Are the samples chilled? ☐ NO ☒ YES (Ice ~~or Blue Ice~~)
Cooler Temperature: 3.4 °C
Preserved in: ☐ Lab ☒ Field

Comments: Retain samples with only PCBs requested for possible further analysis.

Project Name / Number: SLAS-AOC Site
Sample Collector's Name: Bryan Johnsrud
Requested Due Date:
Billing Instructions PO#:

Lab Use Only	Sample Identification	Date/Time Sampled	# and Type of Containers: UNPRES	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	Other	MATRIX: Water	Drinking Water	Soil	Sludge	Sp. Waste	INDICATE ANALYSIS REQUESTED: pH	PCBs	arsenic	barium	chromium	lead	TCLP lead
-41	B-7 3'-4'	09/30/03 5:00PM	X										X				X					
-42	B-7 4'-5'	09/30/03 5:00PM																				
-43	B-8 2'-3'	09/30/03 5:45PM																				
-44	B-8 3'-4'	09/30/03 5:45PM																				
-45	B-10 2'-3'	10/01/03 8:30AM																				
-46	B-10 3'-4'	10/01/03 8:30AM																				
-47	B-10 4'-5'	10/01/03 8:30AM																				
-48	B-10 5'-6'	10/01/03 8:30AM																				
-49	B-10 6'-7'	10/01/03 8:30AM																				
-50	B-10 7'-8'	10/01/03 8:30AM																				

Relinquished By	Date / Time	Received By	Date / Time
Bryan C. Johnsrud	10/07/03 11:15 AM	Shelly Buermeier	10/7/03 1115
Shelly Buermeier	10/7/03 1340	Elizabeth A. Weber	10/7/03 1340

CHAIN OF CUSTODY

pg. 6 of 6 Work Order # _____

TEKLAB, INC. 5445 Horseshoe Lake Road ~ Collinsville, IL 62234 ~ Phone: (618) 344-1004 ~ Fax: (618) 344-1005

Client: St. Louis Auto Shredding
Address: Post office Box 130
City / State / Zip: National Stock Yards, IL 62071
Contact: Bryan Johnsrud Phone: 217-787-2118 ext 207
E-Mail: bjohnsrud@rapps.net Fax: 217-787-6641

Are the samples chilled? ☐ NO ☒ YES (Ice or Blue Ice)
Cooler Temperature: 3.4 °C
Preserved in: ☐ Lab ☒ Field

Comments: Retain samples with only PCBs requested for possible further analysis.

Project Name / Number: SLAS-AOC Site
Sample Collector's Name: Bryan Johnsrud
Requested Due Date:
Billing Instructions PO#:

Lab Use Only	Sample Identification	Date/Time Sampled	# and Type of Containers: UNPRES	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	Other	MATRIX: Water	Drinking Water	Soil	Sludge	Sp. Waste	INDICATE ANALYSIS REQUESTED: pH	PCBs	arsenic	barium	chromium	lead	TCLP lead
-51	B-10 8'-9'	10/01/03 8:30AM	X										X				X					
-52	B-10 9'-10'	10/01/03 8:30AM																				
-53	B-10 10'-11'	10/01/03 8:30AM																				
-54	B-11 5'-6'	10/01/03 9:15AM																				
-55	B-11 3'-4'	10/01/03 9:15AM																				
-56	B-11 4'-5'	10/01/03 9:15AM																				
-57	B-16 2'-3'	10/01/03 1:00PM																				
-58	B-16 3'-4'	10/01/03 1:00PM																				
-59	B-16 4'-5'	10/01/03 1:00PM																				

Relinquished By	Date / Time	Received By	Date / Time
Bryan C. Johnsrud	10/07/03 11:15AM	Shelly Duensmeier	10/7/03 1115
Shelly Duensmeier	10/7/03 1340	Elizabeth A. Weber	10/7/03 1340

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL 618-344-1004
FAX 618-344-1005

October 24, 2003

Bryan Johnsrud
Rapps Engineering & Applied Science
821 S. Durkin Dr.
Springfield, IL 62791-7349
TEL: (217) 787-2118
FAX: (217) 787-6641

ACCREDITED IN ACCORDANCE WITH
NELAP Accredited #100226

RE: SLAS-AOC Site

OrderNo. 0310148

Dear Bryan Johnsrud:

TEKLAB, INC received 5 samples on 10/6/03 2:35:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest that have been tested. IL ELAP and NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP/Part 186 except where noted in the Case Narrative. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Michael L. Austin
Director of Operations

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL. 618-344-1004
FAX 618-344-1005

Client: Rapps Engineering & Applied Science
Project: SLAS-AOC Site
LabOrder: 0310148
Report Date: October 24, 2003

CASE NARRATIVE

This is a revised report to change the RL from 1.0 to 0.5 fro PCB. Please replace your original report for this work order with this revised report.

Qualifiers

DF - Dilution Factor	**B** - Analyte detected in the associated Method Blank	**E** - Value above quantitation range
RL - Reporting Limit	**J** - Analyte detected below quantitation limits	**H** - Holding time exceeded
ND - Not Detected at the Reporting Limit	**R** - RPD outside accepted recovery limits	**D** - Diluted out of sample
Surr - Surrogate Standard added by lab	**S** - Spike Recovery outside accepted recovery limits	**MI** - Matrix interference
TNTC - Too numerous to count	***** - Value exceeds Maximum Contaminant Level	**DNI** Did Not Ignite
IDPH - Illinois Department of Public Health	**NELAP** - IL ELAP and NELAP Accredited Field of Testing	

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ENVIRONMENTAL TESTING LABORATORY

TEL 618-344-1004
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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0310148	**Client Sample ID:**	B-1
Lab ID:	0310148-01	**Collection Date:**	10/2/03 3:40:00 PM
Report Date:	24-Oct-03	**Matrix:**	AQUEOUS

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 3030F, 3120B TOTAL								
Arsenic		0 050		**2.37**	mg/L	2	10/10/03 10:08.38 AM	SAM
Barium		0.010		**35.2**	mg/L	2	10/10/03 10:08 38 AM	SAM
Chromium		0.020		**2.28**	mg/L	2	10/10/03 10 08 38 AM	SAM
Lead		0 080		**23.5**	mg/L	2	10/10/03 10:08 38 AM	SAM
SW-846 3510C, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	0.50		**ND**	µg/L	1	10/8/03 3:13:00 AM	TDN
Aroclor 1221	NELAP	0.50		**ND**	µg/L	1	10/8/03 3 13 00 AM	TDN
Aroclor 1232	NELAP	0.50		**ND**	µg/L	1	10/8/03 3:13 00 AM	TDN
Aroclor 1242	NELAP	0.50		**ND**	µg/L	1	10/8/03 3.13.00 AM	TDN
Aroclor 1248	NELAP	0 50		**ND**	µg/L	1	10/8/03 3 13 00 AM	TDN
Aroclor 1254	NELAP	0.50		**ND**	µg/L	1	10/8/03 3:13:00 AM	TDN
Aroclor 1260	NELAP	0.50		**ND**	µg/L	1	10/8/03 3:13:00 AM	TDN
Surr: Decachlorobiphenyl		22-185		**92.0**	%REC	1	10/8/03 3:13.00 AM	TDN
Surr: Tetrachloro-meta-xylene		10-161		**92.0**	%REC	1	10/8/03 3:13 00 AM	TDN

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ENVIRONMENTAL TESTING LABORATORY

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0310148	**Client Sample ID:**	B-2
Lab ID:	0310148-02	**Collection Date:**	10/2/03 4:00:00 PM
Report Date:	24-Oct-03	**Matrix:**	AQUEOUS

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 3030F, 3120B TOTAL								
Arsenic		0 025		**1.40**	mg/L	1	10/8/03 3.57 38 PM	SAM
Barium		0.005		**11.4**	mg/L	1	10/8/03 3 57.38 PM	SAM
Chromium		0 010		**1.00**	mg/L	1	10/8/03 3·57 38 PM	SAM
Lead		0.040		**4.75**	mg/L	1	10/8/03 3·57 38 PM	SAM
SW-846 3510C, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	0 53		**ND**	µg/L	1	10/8/03 3.32:00 AM	TDN
Aroclor 1221	NELAP	0.53		**ND**	µg/L	1	10/8/03 3 32 00 AM	TDN
Aroclor 1232	NELAP	0.53		**ND**	µg/L	1	10/8/03 3 32 00 AM	TDN
Aroclor 1242	NELAP	0 53		**ND**	µg/L	1	10/8/03 3.32 00 AM	TDN
Aroclor 1248	NELAP	0 53		**ND**	µg/L	1	10/8/03 3 32:00 AM	TDN
Aroclor 1254	NELAP	0 53		**ND**	µg/L	1	10/8/03 3·32 00 AM	TDN
Aroclor 1260	NELAP	0 53		**ND**	µg/L	1	10/8/03 3.32·00 AM	TDN
Surr: Decachlorobiphenyl		22-185		**92.6**	%REC	1	10/8/03 3 32.00 AM	TDN
Surr: Tetrachloro-meta-xylene		10-161		**85.2**	%REC	1	10/8/03 3.32 00 AM	TDN

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ENVIRONMENTAL TESTING LABORATORY

TEL· 618-344-1004
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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0310148	**Client Sample ID:**	B-3
Lab ID:	0310148-03	**Collection Date:**	10/2/03 4:10:00 PM
Report Date:	24-Oct-03	**Matrix:**	AQUEOUS

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 3030F, 3120B TOTAL								
Arsenic		0 025		**1.27**	mg/L	1	10/8/03 4:03.21 PM	SAM
Barium		0.005		**7.16**	mg/L	1	10/8/03 4:03 21 PM	SAM
Chromium		0 010		**0.753**	mg/L	1	10/8/03 4.03.21 PM	SAM
Lead		0 040		**1.17**	mg/L	1	10/8/03 4:03:21 PM	SAM
SW-846 3510C, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	0.50		**ND**	µg/L	1	10/8/03 3 52·00 AM	TDN
Aroclor 1221	NELAP	0.50		**ND**	µg/L	1	10/8/03 3·52:00 AM	TDN
Aroclor 1232	NELAP	0.50		**ND**	µg/L	1	10/8/03 3.52 00 AM	TDN
Aroclor 1242	NELAP	0 50		**ND**	µg/L	1	10/8/03 3:52·00 AM	TDN
Aroclor 1248	NELAP	0.50		**ND**	µg/L	1	10/8/03 3·52·00 AM	TDN
Aroclor 1254	NELAP	0.50		**ND**	µg/L	1	10/8/03 3:52.00 AM	TDN
Aroclor 1260	NELAP	0.50		**ND**	µg/L	1	10/8/03 3 52:00 AM	TDN
Surr: Decachlorobiphenyl		22-185		**88.0**	%REC	1	10/8/03 3:52·00 AM	TDN
Surr: Tetrachloro-meta-xylene		10-161		**88.0**	%REC	1	10/8/03 3:52:00 AM	TDN

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0310148	**Client Sample ID:**	B-4
Lab ID:	0310148-04	**Collection Date:**	10/2/03 4:25:00 PM
Report Date:	24-Oct-03	**Matrix:**	AQUEOUS

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 3030F, 3120B TOTAL								
Arsenic		0 025		**1.54**	mg/L	1	10/8/03 4:09 04 PM	SAM
Barium		0 005		**14.5**	mg/L	1	10/8/03 4.09:04 PM	SAM
Chromium		0 010		**1.18**	mg/L	1	10/8/03 4 09:04 PM	SAM
Lead		0 040		**9.57**	mg/L	1	10/8/03 4:09:04 PM	SAM
SW-846 3510C, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	0 50		**ND**	µg/L	1	10/8/03 4:12 00 AM	TDN
Aroclor 1221	NELAP	0 50		**ND**	µg/L	1	10/8/03 4 12 00 AM	TDN
Aroclor 1232	NELAP	0 50		**ND**	µg/L	1	10/8/03 4 12 00 AM	TDN
Aroclor 1242	NELAP	0.50		**ND**	µg/L	1	10/8/03 4 12.00 AM	TDN
Aroclor 1248	NELAP	0.50		**ND**	µg/L	1	10/8/03 4 12.00 AM	TDN
Aroclor 1254	NELAP	0 50		**ND**	µg/L	1	10/8/03 4:12 00 AM	TDN
Aroclor 1260	NELAP	0.50		**ND**	µg/L	1	10/8/03 4:12 00 AM	TDN
Surr: Decachlorobiphenyl		22-185		**96.0**	%REC	1	10/8/03 4 12:00 AM	TDN
Surr: Tetrachloro-meta-xylene		10-161		**92.0**	%REC	1	10/8/03 4 12:00 AM	TDN

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0310148	**Client Sample ID:**	B-8
Lab ID:	0310148-05	**Collection Date:**	10/2/03 5:00:00 PM
Report Date:	24-Oct-03	**Matrix:**	AQUEOUS

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 3030F, 3120B TOTAL								
Arsenic		0.050		**1.27**	mg/L	2	10/10/03 10:40:12 AM	SAM
Barium		0.010		**51.3**	mg/L	2	10/10/03 10:40:12 AM	SAM
Chromium		0.020		**5.73**	mg/L	2	10/10/03 10 40:12 AM	SAM
Lead		0.080		**113**	mg/L	2	10/10/03 10.40:12 AM	SAM

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ENVIRONMENTAL TESTING LABORATORY

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Client: Rapps Engineering & Applied Science
Project: SLAS-AOC Site
LabOrder: 0310543
Report Date: October 30, 2003

CASE NARRATIVE

Samples received did not meet hold time requirements for total solids and PCB analysis.
Prep Comments for SV_3550_PCB, Sample 0310543-01A: The prep HoldTime was exceeded by 7.90 days.
Prep Comments for SV_3550_PCB, Sample 0310543-02A, 03A: The prep HoldTime was exceeded by 7.77 days.
Prep Comments for SV_3550_PCB, Sample 0310543-04A: The prep HoldTime was exceeded by 7.66 days.
Prep Comments for SV_3550_PCB, Sample 0310543-05A, 06A, 07A, 08A: The prep HoldTime was exceeded by 7.63 days.
Prep Comments for SV_3550_PCB, Sample 0310543-09A, 10A, 11A: The prep HoldTime was exceeded by 7.60 days.
Prep Comments for SV_3550_PCB, Sample 0310543-12A: The prep HoldTime was exceeded by 6.92 days.
Prep Comments for SV_3550_PCB, Sample 0310543-13A: The prep HoldTime was exceeded by 6.86 days.
Prep Comments for SV_3550_PCB, Sample 0310543-14A: The prep HoldTime was exceeded by 6.71 days.
Prep Comments for SV_3550_PCB, Sample 0310543-15A: The prep HoldTime was exceeded by 6.67 days.
Prep Comments for SV_3550_PCB, Sample 0310543-16A: The prep HoldTime was exceeded by 5.75 days.
Prep Comments for SV_3550_PCB, Sample 0310543-17A: The prep HoldTime was exceeded by 5.73 days.
Analytical Comments for METHOD SV_8082S_S, SAMPLE 0310543-10AMS, 10AMSD: Matrix spike did not recover because of sample composition.

Qualifiers

DF - Dilution Factor	**B** - Analyte detected in the associated Method Blank	**E** - Value above quantitation range
RL - Reporting Limit	**J** - Analyte detected below quantitation limits	**H** - Holding time exceeded
ND - Not Detected at the Reporting Limit	**R** - RPD outside accepted recovery limits	**D** - Diluted out of sample
Surr - Surrogate Standard added by lab	**S** - Spike Recovery outside accepted recovery limits	**MI** - Matrix interference
TNTC - Too numerous to count	***** - Value exceeds Maximum Contaminant Level	**DNI** Did Not Ignite
IDPH - Illinois Department of Public Health	**NELAP** - IL ELAP and NELAP Accredited Field of Testing	

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ENVIRONMENTAL TESTING LABORATORY

TEL. 618-344-1004
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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0310543	**Client Sample ID:**	B-01 3-4'
Lab ID:	0310543-01	**Collection Date:**	9/30/03 10:30:00 AM
Report Date:	30-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0.1	H	**23.1**	%	1	10/22/03	DLY
Total Solids		0.1	H	**76.9**	%	1	10/22/03	DLY
SW-846 1311 TCLP / 3020A GFAA								
Lead, TCLP by GFAA 7421	NELAP	0 002	J	**< 0.002**	mg/L	1	10/29/03	JMF
SW-846 3050B. ICP METHOD 6010B								
Arsenic	NELAP	2.50		**6.17**	mg/Kg-dry	1	10/27/03 4.34.30 PM	JMW
SW-846 3550B. METHOD 8082. POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	49.0		**ND**	µg/Kg-dry	1	10/22/03 4.38.00 PM	TDN
Aroclor 1221	NELAP	49.0		**ND**	µg/Kg-dry	1	10/22/03 4.38.00 PM	TDN
Aroclor 1232	NELAP	49.0		**ND**	µg/Kg-dry	1	10/22/03 4.38·00 PM	TDN
Aroclor 1242	NELAP	49.0		**ND**	µg/Kg-dry	1	10/22/03 4:38:00 PM	TDN
Aroclor 1248	NELAP	49.0		**ND**	µg/Kg-dry	1	10/22/03 4.38:00 PM	TDN
Aroclor 1254	NELAP	49 0		**ND**	µg/Kg-dry	1	10/22/03 4.38:00 PM	TDN
Aroclor 1260	NELAP	49 0		**ND**	µg/Kg-dry	1	10/22/03 4 38:00 PM	TDN
Surr: Decachlorobiphenyl		22-210		**43.5**	%REC	1	10/22/03 4.38:00 PM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**30.6**	%REC	1	10/22/03 4.38:00 PM	TDN

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TEL 618-344-1004
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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0310543	**Client Sample ID:**	B-04 9-10'
Lab ID:	0310543-02	**Collection Date:**	9/30/03 1:30:00 PM
Report Date:	30-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0 1	H	**35.2**	%	1	10/22/03	DLY
Total Solids		0 1	H	**64.8**	%	1	10/22/03	DLY
SW-846 3050B, ICP METHOD 6010B								
Arsenic	NELAP	2 45		**6.11**	mg/Kg-dry	1	10/28/03 11.52.29 AM	JMW
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	58 7		**ND**	µg/Kg-dry	1	10/22/03 5:37:00 PM	TDN
Aroclor 1221	NELAP	58 7		**ND**	µg/Kg-dry	1	10/22/03 5.37:00 PM	TDN
Aroclor 1232	NELAP	58.7		**ND**	µg/Kg-dry	1	10/22/03 5:37 00 PM	TDN
Aroclor 1242	NELAP	58 7		**ND**	µg/Kg-dry	1	10/22/03 5 37.00 PM	TDN
Aroclor 1248	NELAP	58 7		**ND**	µg/Kg-dry	1	10/22/03 5:37:00 PM	TDN
Aroclor 1254	NELAP	58 7		**ND**	µg/Kg-dry	1	10/22/03 5:37 00 PM	TDN
Aroclor 1260	NELAP	58.7		**ND**	µg/Kg-dry	1	10/22/03 5.37.00 PM	TDN
Surr Decachlorobiphenyl		22-210		**33.1**	%REC	1	10/22/03 5:37.00 PM	TDN
Surr Tetrachloro-meta-xylene		10-153		**22.3**	%REC	1	10/22/03 5:37:00 PM	TDN

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TEL. 618-344-1004
FAX 618-344-1005

Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0310543	**Client Sample ID:**	B-04 10-11'
Lab ID:	0310543-03	**Collection Date:**	9/30/03 1:30:00 PM
Report Date:	30-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0 1	H	**38.1**	%	1	10/22/03	DLY
Total Solids		0.1	H	**61.9**	%	1	10/22/03	DLY
SW-846 3050B, ICP METHOD 6010B								
Arsenic	NELAP	2.45		**12.1**	mg/Kg-dry	1	10/27/03 4:49.25 PM	JMW
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	60.8		**ND**	µg/Kg-dry	1	10/22/03 5:57:00 PM	TDN
Aroclor 1221	NELAP	60.8		**ND**	µg/Kg-dry	1	10/22/03 5:57.00 PM	TDN
Aroclor 1232	NELAP	60.8		**ND**	µg/Kg-dry	1	10/22/03 5·57 00 PM	TDN
Aroclor 1242	NELAP	60.8		**ND**	µg/Kg-dry	1	10/22/03 5·57:00 PM	TDN
Aroclor 1248	NELAP	60.8		**ND**	µg/Kg-dry	1	10/22/03 5:57:00 PM	TDN
Aroclor 1254	NELAP	60.8		**ND**	µg/Kg-dry	1	10/22/03 5.57:00 PM	TDN
Aroclor 1260	NELAP	60 8		**ND**	µg/Kg-dry	1	10/22/03 5:57.00 PM	TDN
Surr: Decachlorobiphenyl		22-210		**43.7**	%REC	1	10/22/03 5:57.00 PM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**22.2**	%REC	1	10/22/03 5:57·00 PM	TDN

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ENVIRONMENTAL TESTING LABORATORY

TEL 618-344-1004
FAX: 618-344-1005

Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0310543	**Client Sample ID:**	B-06 3-4'
Lab ID:	0310543-04	**Collection Date:**	9/30/03 4:15:00 PM
Report Date:	30-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0.1	H	**22.7**	%	1	10/22/03	DLY
Total Solids		0.1	H	**77.3**	%	1	10/22/03	DLY
SW-846 3050B, ICP METHOD 6010B								
Arsenic	NELAP	2 36		**6.61**	mg/Kg-dry	1	10/27/03 4.52·58 PM	JMW
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	47 8		**ND**	µg/Kg-dry	1	10/22/03 6 17 00 PM	TDN
Aroclor 1221	NELAP	47.8		**ND**	µg/Kg-dry	1	10/22/03 6.17·00 PM	TDN
Aroclor 1232	NELAP	47.8		**ND**	µg/Kg-dry	1	10/22/03 6.17 00 PM	TDN
Aroclor 1242	NELAP	47 8		**ND**	µg/Kg-dry	1	10/22/03 6.17 00 PM	TDN
Aroclor 1248	NELAP	47 8		**ND**	µg/Kg-dry	1	10/22/03 6.17:00 PM	TDN
Aroclor 1254	NELAP	47 8		**ND**	µg/Kg-dry	1	10/22/03 6.17·00 PM	TDN
Aroclor 1260	NELAP	47 8		**ND**	µg/Kg-dry	1	10/22/03 6 17:00 PM	TDN
Surr: Decachlorobiphenyl		22-210		**48.1**	%REC	1	10/22/03 6 17:00 PM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**39.6**	%REC	1	10/22/03 6.17:00 PM	TDN

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL 618-344-1004
FAX: 618-344-1005

Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0310543	**Client Sample ID:**	B-07 5-6'
Lab ID:	0310543-05	**Collection Date:**	9/30/03 5:00:00 PM
Report Date:	30-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0 1	H	**24.6**	%	1	10/22/03	DLY
Total Solids		0 1	H	**75.4**	%	1	10/22/03	DLY
SW-846 3050B, ICP METHOD 6010B								
Arsenic	NELAP	2.40		**9.43**	mg/Kg-dry	1	10/27/03 4:56.32 PM	JMW
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	49.7		**ND**	µg/Kg-dry	1	10/22/03 6.37 00 PM	TDN
Aroclor 1221	NELAP	49.7		**ND**	µg/Kg-dry	1	10/22/03 6:37:00 PM	TDN
Aroclor 1232	NELAP	49.7		**ND**	µg/Kg-dry	1	10/22/03 6.37:00 PM	TDN
Aroclor 1242	NELAP	49.7		**ND**	µg/Kg-dry	1	10/22/03 6.37:00 PM	TDN
Aroclor 1248	NELAP	49.7		**125**	µg/Kg-dry	1	10/22/03 6.37.00 PM	TDN
Aroclor 1254	NELAP	49.7		**ND**	µg/Kg-dry	1	10/22/03 6:37 00 PM	TDN
Aroclor 1260	NELAP	497		**4570**	µg/Kg-dry	10	10/23/03 2:37:00 PM	TDN
Surr: Decachlorobiphenyl		22-210		**69.1**	%REC	1	10/22/03 6 37:00 PM	TDN
Surr Tetrachloro-meta-xylene		10-153		**52.7**	%REC	1	10/22/03 6.37:00 PM	TDN

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0310543	**Client Sample ID:**	B-07 6-7'
Lab ID:	0310543-06	**Collection Date:**	9/30/03 5:00:00 PM
Report Date:	30-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0.1	H	**27.0**	%	1	10/22/03	DLY
Total Solids		0 1	H	**73.0**	%	1	10/22/03	DLY
SW-846 3050B, ICP METHOD 6010B								
Arsenic	NELAP	2.50		**8.27**	mg/Kg-dry	1	10/27/03 5:07:10 PM	JMW
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	51.6		**ND**	µg/Kg-dry	1	10/22/03 6:56:00 PM	TDN
Aroclor 1221	NELAP	51.6		**ND**	µg/Kg-dry	1	10/22/03 6:56.00 PM	TDN
Aroclor 1232	NELAP	51 6		**ND**	µg/Kg-dry	1	10/22/03 6 56.00 PM	TDN
Aroclor 1242	NELAP	51 6		**ND**	µg/Kg-dry	1	10/22/03 6 56.00 PM	TDN
Aroclor 1248	NELAP	51.6		**877**	µg/Kg-dry	1	10/22/03 6.56 00 PM	TDN
Aroclor 1254	NELAP	51 6		**ND**	µg/Kg-dry	1	10/22/03 6:56 00 PM	TDN
Aroclor 1260	NELAP	516		**4570**	µg/Kg-dry	10	10/23/03 2:57 00 PM	TDN
Surr: Decachlorobiphenyl		22-210		**97.4**	%REC	1	10/22/03 6 56:00 PM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**71.1**	%REC	1	10/22/03 6:56.00 PM	TDN

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0310543	**Client Sample ID:**	B-07 7-8'
Lab ID:	0310543-07	**Collection Date:**	9/30/03 5:00:00 PM
Report Date:	30-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0.1	H	**29.5**	%	1	10/22/03	DLY
Total Solids		0 1	H	**70.5**	%	1	10/22/03	DLY
SW-846 3050B, ICP METHOD 6010B								
Arsenic	NELAP	2 36		**6.66**	mg/Kg-dry	1	10/27/03 5:10.42 PM	JMW
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	54.1		**ND**	µg/Kg-dry	1	10/22/03 7:16:00 PM	TDN
Aroclor 1221	NELAP	54 1		**ND**	µg/Kg-dry	1	10/22/03 7:16:00 PM	TDN
Aroclor 1232	NELAP	54 1		**ND**	µg/Kg-dry	1	10/22/03 7:16:00 PM	TDN
Aroclor 1242	NELAP	54 1		**ND**	µg/Kg-dry	1	10/22/03 7:16:00 PM	TDN
Aroclor 1248	NELAP	54 1		**209**	µg/Kg-dry	1	10/22/03 7.16.00 PM	TDN
Aroclor 1254	NELAP	54 1		**ND**	µg/Kg-dry	1	10/22/03 7:16:00 PM	TDN
Aroclor 1260	NELAP	108		**1250**	µg/Kg-dry	2	10/23/03 3.17 00 PM	TDN
Surr: Decachlorobiphenyl		22-210		**80.0**	%REC	1	10/22/03 7.16:00 PM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**61.7**	%REC	1	10/22/03 7.16:00 PM	TDN

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0310543	**Client Sample ID:**	B-07 8-9'
Lab ID:	0310543-08	**Collection Date:**	9/30/03 5:00:00 PM
Report Date:	30-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0 1	H	**32.1**	%	1	10/22/03	DLY
Total Solids		0 1	H	**67.9**	%	1	10/22/03	DLY
SW-846 3050B. ICP METHOD 6010B								
Arsenic	NELAP	2 45		**4.11**	mg/Kg-dry	1	10/27/03 5.14 14 PM	JMW
Lead	NELAP	3.92		**110**	mg/Kg-dry	1	10/27/03 5 14 14 PM	JMW
SW-846 3550B. METHOD 8082. POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	55.0		**ND**	µg/Kg-dry	1	10/22/03 7.36:00 PM	TDN
Aroclor 1221	NELAP	55 0		**ND**	µg/Kg-dry	1	10/22/03 7.36 00 PM	TDN
Aroclor 1232	NELAP	55 0		**ND**	µg/Kg-dry	1	10/22/03 7.36:00 PM	TDN
Aroclor 1242	NELAP	55.0		**ND**	µg/Kg-dry	1	10/22/03 7 36 00 PM	TDN
Aroclor 1248	NELAP	1380		**8220**	µg/Kg-dry	25	10/23/03 3.37:00 PM	TDN
Aroclor 1254	NELAP	55 0		**ND**	µg/Kg-dry	1	10/22/03 7.36:00 PM	TDN
Aroclor 1260	NELAP	55 0		**473**	µg/Kg-dry	1	10/22/03 7.36:00 PM	TDN
Surr: Decachlorobiphenyl		22-210		**64.8**	%REC	1	10/22/03 7.36:00 PM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**41.0**	%REC	1	10/22/03 7.36:00 PM	TDN

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0310543	**Client Sample ID:**	B-08 4-5'
Lab ID:	0310543-09	**Collection Date:**	9/30/03 5:45:00 PM
Report Date:	30-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0 1	H	**25.1**	%	1	10/22/03	DLY
Total Solids		0.1	H	**74.9**	%	1	10/22/03	DLY
SW-846 3050B, ICP METHOD 6010B								
Arsenic	NELAP	2 50		**8.01**	mg/Kg-dry	1	10/27/03 5:17 48 PM	JMW
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	49 1		**ND**	µg/Kg-dry	1	10/22/03 7:55 00 PM	TDN
Aroclor 1221	NELAP	49.1		**ND**	µg/Kg-dry	1	10/22/03 7:55 00 PM	TDN
Aroclor 1232	NELAP	49 1		**ND**	µg/Kg-dry	1	10/22/03 7:55:00 PM	TDN
Aroclor 1242	NELAP	49 1		**ND**	µg/Kg-dry	1	10/22/03 7:55.00 PM	TDN
Aroclor 1248	NELAP	49 1		**84.7**	µg/Kg-dry	1	10/22/03 7:55:00 PM	TDN
Aroclor 1254	NELAP	49.1		**ND**	µg/Kg-dry	1	10/22/03 7 55.00 PM	TDN
Aroclor 1260	NELAP	49 1		**218**	µg/Kg-dry	1	10/22/03 7:55.00 PM	TDN
Surr: Decachlorobiphenyl		22-210		**69.7**	%REC	1	10/22/03 7 55:00 PM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**57.8**	%REC	1	10/22/03 7:55 00 PM	TDN

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0310543	**Client Sample ID:**	B-08 8-9'
Lab ID:	0310543-10	**Collection Date:**	9/30/03 5:45:00 PM
Report Date:	30-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0 1	H	**25.9**	%	1	10/22/03	DLY
Total Solids		0 1	H	**74.1**	%	1	10/22/03	DLY
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	50.8		**ND**	µg/Kg-dry	1	10/22/03 8:15.00 PM	TDN
Aroclor 1221	NELAP	50.8		**ND**	µg/Kg-dry	1	10/22/03 8:15.00 PM	TDN
Aroclor 1232	NELAP	50.8		**ND**	µg/Kg-dry	1	10/22/03 8:15.00 PM	TDN
Aroclor 1242	NELAP	50.8		**ND**	µg/Kg-dry	1	10/22/03 8 15.00 PM	TDN
Aroclor 1248	NELAP	50 8		**148**	µg/Kg-dry	1	10/22/03 8.15.00 PM	TDN
Aroclor 1254	NELAP	50.8		**ND**	µg/Kg-dry	1	10/22/03 8 15 00 PM	TDN
Aroclor 1260	NELAP	50.8		**224**	µg/Kg-dry	1	10/22/03 8 15.00 PM	TDN
Surr: Decachlorobiphenyl		22-210		**64.3**	%REC	1	10/22/03 8:15 00 PM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**52.7**	%REC	1	10/22/03 8:15.00 PM	TDN

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0310543	**Client Sample ID:**	B-08 9-10'
Lab ID:	0310543-11	**Collection Date:**	9/30/03 5:45:00 PM
Report Date:	30-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0.1	H	**30.9**	%	1	10/22/03	DLY
Total Solids		0 1	H	**69.1**	%	1	10/22/03	DLY
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	55 1		**ND**	µg/Kg-dry	1	10/22/03 9 14:00 PM	TDN
Aroclor 1221	NELAP	55 1		**ND**	µg/Kg-dry	1	10/22/03 9·14.00 PM	TDN
Aroclor 1232	NELAP	55 1		**ND**	µg/Kg-dry	1	10/22/03 9 14.00 PM	TDN
Aroclor 1242	NELAP	55.1		**ND**	µg/Kg-dry	1	10/22/03 9 14:00 PM	TDN
Aroclor 1248	NELAP	55 1		**116**	µg/Kg-dry	1	10/22/03 9:14 00 PM	TDN
Aroclor 1254	NELAP	55.1		**ND**	µg/Kg-dry	1	10/22/03 9·14.00 PM	TDN
Aroclor 1260	NELAP	55.1		**261**	µg/Kg-dry	1	10/22/03 9 14·00 PM	TDN
Surr Decachlorobiphenyl		22-210		**59.8**	%REC	1	10/22/03 9·14 00 PM	TDN
Surr· Tetrachloro-meta-xylene		10-153		**40.2**	%REC	1	10/22/03 9.14 00 PM	TDN

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0310543	**Client Sample ID:**	B-12 3-4'
Lab ID:	0310543-12	**Collection Date:**	10/1/03 10:00:00 AM
Report Date:	30-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0 1	H	**17.1**	%	1	10/22/03	DLY
Total Solids		0.1	H	**82.9**	%	1	10/22/03	DLY
SW-846 3050B, ICP METHOD 6010B								
Arsenic	NELAP	2 45		**24.7**	mg/Kg-dry	1	10/28/03 3:12:18 PM	JMW
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	45 7		**ND**	µg/Kg-dry	1	10/22/03 9:34.00 PM	TDN
Aroclor 1221	NELAP	45 7		**ND**	µg/Kg-dry	1	10/22/03 9:34:00 PM	TDN
Aroclor 1232	NELAP	45 7		**ND**	µg/Kg-dry	1	10/22/03 9 34.00 PM	TDN
Aroclor 1242	NELAP	45 7		**ND**	µg/Kg-dry	1	10/22/03 9.34:00 PM	TDN
Aroclor 1248	NELAP	45.7		**ND**	µg/Kg-dry	1	10/22/03 9:34.00 PM	TDN
Aroclor 1254	NELAP	45.7		**ND**	µg/Kg-dry	1	10/22/03 9.34:00 PM	TDN
Aroclor 1260	NELAP	45.7		**ND**	µg/Kg-dry	1	10/22/03 9 34:00 PM	TDN
Surr: Decachlorobiphenyl		22-210		**71.3**	%REC	1	10/22/03 9 34:00 PM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**55.4**	%REC	1	10/22/03 9.34:00 PM	TDN

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0310543	**Client Sample ID:**	B-14 2-3'
Lab ID:	0310543-13	**Collection Date:**	10/1/03 11:30:00 AM
Report Date:	30-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0 1	H	**17.4**	%	1	10/22/03	DLY
Total Solids		0 1	H	**82.6**	%	1	10/22/03	DLY
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	45 4		**ND**	µg/Kg-dry	1	10/22/03 9:53 00 PM	TDN
Aroclor 1221	NELAP	45.4		**ND**	µg/Kg-dry	1	10/22/03 9:53:00 PM	TDN
Aroclor 1232	NELAP	45.4		**ND**	µg/Kg-dry	1	10/22/03 9:53:00 PM	TDN
Aroclor 1242	NELAP	45.4		**ND**	µg/Kg-dry	1	10/22/03 9:53.00 PM	TDN
Aroclor 1248	NELAP	45 4		**ND**	µg/Kg-dry	1	10/22/03 9.53 00 PM	TDN
Aroclor 1254	NELAP	45.4		**ND**	µg/Kg-dry	1	10/22/03 9.53.00 PM	TDN
Aroclor 1260	NELAP	45.4		**ND**	µg/Kg-dry	1	10/22/03 9·53·00 PM	TDN
Surr· Decachlorobiphenyl		22-210		**60.4**	%REC	1	10/22/03 9 53·00 PM	TDN
Surr Tetrachloro-meta-xylene		10-153		**37.6**	%REC	1	10/22/03 9:53:00 PM	TDN

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0310543	**Client Sample ID:**	B-18 2-3'
Lab ID:	0310543-14	**Collection Date:**	10/1/03 3:00:00 PM
Report Date:	30-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0 1	H	**25.2**	%	1	10/22/03	DLY
Total Solids		0 1	H	**74.8**	%	1	10/22/03	DLY
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	49.9		**ND**	µg/Kg-dry	1	10/22/03 10:13 00 PM	TDN
Aroclor 1221	NELAP	49.9		**ND**	µg/Kg-dry	1	10/22/03 10.13.00 PM	TDN
Aroclor 1232	NELAP	49 9		**ND**	µg/Kg-dry	1	10/22/03 10 13:00 PM	TDN
Aroclor 1242	NELAP	49 9		**ND**	µg/Kg-dry	1	10/22/03 10:13:00 PM	TDN
Aroclor 1248	NELAP	49.9		**ND**	µg/Kg-dry	1	10/22/03 10 13:00 PM	TDN
Aroclor 1254	NELAP	49.9		**ND**	µg/Kg-dry	1	10/22/03 10:13:00 PM	TDN
Aroclor 1260	NELAP	49.9		**ND**	µg/Kg-dry	1	10/22/03 10:13:00 PM	TDN
Surr. Decachlorobiphenyl		22-210		**50.5**	%REC	1	10/22/03 10:13:00 PM	TDN
Surr. Tetrachloro-meta-xylene		10-153		**34.2**	%REC	1	10/22/03 10:13.00 PM	TDN

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0310543	**Client Sample ID:**	B-20 2-3'
Lab ID:	0310543-15	**Collection Date:**	10/1/03 4:00:00 PM
Report Date:	30-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0.1	H	**23.9**	%	1	10/22/03	DLY
Total Solids		0.1	H	**76.1**	%	1	10/22/03	DLY
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	48.2		**ND**	µg/Kg-dry	1	10/22/03 10.33:00 PM	TDN
Aroclor 1221	NELAP	48.2		**ND**	µg/Kg-dry	1	10/22/03 10:33:00 PM	TDN
Aroclor 1232	NELAP	48 2		**ND**	µg/Kg-dry	1	10/22/03 10·33.00 PM	TDN
Aroclor 1242	NELAP	48.2		**ND**	µg/Kg-dry	1	10/22/03 10 33:00 PM	TDN
Aroclor 1248	NELAP	48.2		**ND**	µg/Kg-dry	1	10/22/03 10.33:00 PM	TDN
Aroclor 1254	NELAP	48.2		**ND**	µg/Kg-dry	1	10/22/03 10:33:00 PM	TDN
Aroclor 1260	NELAP	48.2		**ND**	µg/Kg-dry	1	10/22/03 10:33·00 PM	TDN
Surr: Decachlorobiphenyl		22-210		**53.3**	%REC	1	10/22/03 10:33:00 PM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**40.2**	%REC	1	10/22/03 10.33:00 PM	TDN

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0310543	**Client Sample ID:**	B-23 2-3'
Lab ID:	0310543-16	**Collection Date:**	10/2/03 2:00:00 PM
Report Date:	30-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0 1	H	**22.9**	%	1	10/22/03	DLY
Total Solids		0 1	H	**77.1**	%	1	10/22/03	DLY
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	48 2		**ND**	µg/Kg-dry	1	10/22/03 10:53:00 PM	TDN
Aroclor 1221	NELAP	48 2		**ND**	µg/Kg-dry	1	10/22/03 10:53:00 PM	TDN
Aroclor 1232	NELAP	48.2		**ND**	µg/Kg-dry	1	10/22/03 10:53:00 PM	TDN
Aroclor 1242	NELAP	48.2		**ND**	µg/Kg-dry	1	10/22/03 10.53.00 PM	TDN
Aroclor 1248	NELAP	48 2		**ND**	µg/Kg-dry	1	10/22/03 10:53:00 PM	TDN
Aroclor 1254	NELAP	48.2		**ND**	µg/Kg-dry	1	10/22/03 10:53:00 PM	TDN
Aroclor 1260	NELAP	48.2		**ND**	µg/Kg-dry	1	10/22/03 10:53:00 PM	TDN
Surr: Decachlorobiphenyl		22-210		**44.9**	%REC	1	10/22/03 10.53.00 PM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**39.3**	%REC	1	10/22/03 10 53 00 PM	TDN

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL 618-344-1004
FAX 618-344-1005

Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0310543	**Client Sample ID:**	B-24 2-3'
Lab ID:	0310543-17	**Collection Date:**	10/2/03 2:30:00 PM
Report Date:	30-Oct-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0.1	H	**28.2**	%	1	10/22/03	DLY
Total Solids		0 1	H	**71.8**	%	1	10/22/03	DLY
SW-846 3550B. METHOD 8082. POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	52 5		**ND**	µg/Kg-dry	1	10/22/03 11:12 00 PM	TDN
Aroclor 1221	NELAP	52.5		**ND**	µg/Kg-dry	1	10/22/03 11:12:00 PM	TDN
Aroclor 1232	NELAP	52.5		**ND**	µg/Kg-dry	1	10/22/03 11:12.00 PM	TDN
Aroclor 1242	NELAP	52.5		**ND**	µg/Kg-dry	1	10/22/03 11:12.00 PM	TDN
Aroclor 1248	NELAP	52.5		**ND**	µg/Kg-dry	1	10/22/03 11.12:00 PM	TDN
Aroclor 1254	NELAP	52.5		**ND**	µg/Kg-dry	1	10/22/03 11.12 00 PM	TDN
Aroclor 1260	NELAP	52.5		**ND**	µg/Kg-dry	1	10/22/03 11:12:00 PM	TDN
Surr: Decachlorobiphenyl		22-210		**49.1**	%REC	1	10/22/03 11 12.00 PM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**30.2**	%REC	1	10/22/03 11:12 00 PM	TDN

From: "Bryan Johnsrud" <bjohnsrud@rapps.net>
To: "Mike Austin" <MAustin@TeklabInc.com>
Date: 10/24/03 3:57PM
Subject: SLAS - AOC Site

Sorry for all the changes but I'm tasked with using almost 250 soil samples to characterize the site as well as keeping the costs as low as possible.

For the 17 soil samples delivered October 21st, I now need the following changes (reductions)
TCLP Lead only for B-01 3'-4'.
PCBs only for B-04 9'-10', B-04 10'-11', B-07 5'-6', B-07 6'-7', B-07 7'-8', B-07 8'-9', B-08 4'-5', B-08 8'-9', and B-08 9'-10'
Arsenic only for B-12 3'-4'.
Nothing for B-06 3'-4', B-14 2'-3', B-18 2'-3', B-20 2'-3', B-23 2'-3', and B-24 2'-3'

I will have additional samples for delivery next week as well as a revised list of parameters Please contact me if you have any questions. Thanks

Per Bryan, report the analyses that is already complete, and cancel remaining per the above instructions.

TEKLAB, INC

Sample Receipt Checklist

Client Name RAPPS

Date and Time Receive 10/21/03 3:25:00 PM

Work Order Numbe 0310543

Received by: SAO

Checklist completed by Heather Barnes 10/21/03 (Signature / Date)

Reviewed by KAK 10/22/03 (Initials / Date)

Matrix:

Carrier name: Bryan Johnsrud

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☐	No ☑	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Water - VOA vials have zero headspace?	No VOA vials submitted ☑	Yes ☐	No ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	

Adjusted? _____ Checked by _____

Any No and/or NA (not applicable) response must be detailed in the Case Narrative or on the Chain of Custody

Client contacted _____ Date contacted _____ Person contacted _____

Contacted by _____ Regarding. _____

Comments _____

Corrective Action _____

From: "Bryan Johnsrud" <bjohnsrud@rapps.net>
To: "Mike Austin" <MAustin@TeklabInc.com>
Date: 10/24/03 11:34AM
Subject: Re: SLAS - AOC Site

Yes, please perform the additional preparation and analyses necessary to obtain the desired reporting limits.

This should be applied to the following samples:

TCLP Lead (29 soil samples): B-01 1'-2', B-01 2'-3', B-01 3'-4', B-02 1'-2', B-03 1'-2', B-04 1'-2', B-04 2'-3', B-05 1'-2', B-06 1'-2', B-07 1'-2', B-08 1'-2', B-09 1'-2', B-10 1'-2', B-11 1'-2', B-12 1'-2', B-13 1'-2', B-13 2'-3', B-14 1'-2', B-15 1'-2', B-16 1'-2', B-17 1'-2', B-18 1'-2', B-19 1'-2', B-20 1'-2', B-21 1'-2', B-22 1'-2', B-23 1'-2', B-24 1'-2', and B-25 1'-2'.

PCBs (4 water samples): B-1, B-2, B-3, and B-4.

Please contact me if you have any questions. Thanks.

0310543
0310184

----- Original Message -----
From: "Mike Austin" <MAustin@TeklabInc.com>
To: <bjohnsrud@rapps.net>
Sent: Friday, October 24, 2003 11:06 AM
Subject: Re: SLAS - AOC Site

> The lead reporting limit can be achieved by analyzing by GFAA. The PCB
> can be achieved at 0.5.
>
> The current samples can be adjusted for the PCB, but the lead would
> need to be prepped and analyzed by GFAA. Please let me know about the
> lead.
>
> Thanks Mike
>
> >>> "Bryan Johnsrud" <bjohnsrud@rapps.net> 10/24/03 10:41AM >>>
> I (now) want a Reporting Limit (RL) of 0.0075 mg/L (or less) for TCLP
> Lead (soil samples) and a RL of 0.5 ug/L (or less) for PCBs (water
> samples).
>
> Can this be achieved for samples you currently have?
>

CHAIN OF CUSTODY

pg. 1 of 2 Work Order # 10543

TEKLAB, INC. 5445 Horseshoe Lake Road ~ Collinsville, IL 62234 ~ Phone: (618) 344-1004 ~ Fax: (618) 344-1005

Client: St. Louis Auto Shredding
Address: Post Office Box 130
City / State / Zip: National Stock Yards, IL 62071
Contact: Bryan Johnsrud Phone: 217-787-2118 ext 207
E-Mail: bjohnsrud@rapps.net Fax: 217-787-6641

Are the samples chilled? ☐ NO ☒ YES (Ice) ~~or Blue Ice~~
Cooler Temperature: 4.0 °C
Preserved in: ☐ Lab ☒ Field

Comments:
Retain all samples for possible further analysis.
One container only for each sample.

Project Name / Number: SLAS-AOC Site
Sample Collector's Name: Bryan Johnsrud
Requested Due Date:
Billing Instructions PO#:

Lab Use Only	Sample Identification	Date/Time Sampled	UNPRES	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	Other	Water	Drinking Water	Soil	Sludge	Sp. Waste	pH	arsenic	barium	chromium	lead	TCLP lead	PCBs	
0310543-01	B-01 3-4'	09/30/03 10:30AM	X										X			~~X~~	X	~~X~~	~~X~~	~~X~~	X	X	arsenic, ~~PCBs~~, and TCLP lead only.
-02	B-04 9-10'	09/30/03 1:30PM	X										X			~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	X	PCBs ~~[illegible]~~ and arsenic only.
-03	B-04 10-11'	09/30/03 1:30PM	X										X				X					X	
-04	B-06 3-4'	09/30/03 4:15PM	X										X				X					X	
-05	B-07 5-6'	09/30/03 5:00PM	X										X				X					X	See attached
-06	B-07 6-7'	09/30/03 5:00PM	X										X				X					X	email. KAK
-07	B-07 7-8'	09/30/03 5:00PM	X										X				X					X	10/27/03
-08	B-07 8-9'	09/30/03 5:00PM	X										X				X			X*		X	
-09	B-08 4-5'	09/30/03 5:45PM	X										X				X					X	
-10	B-08 8-9'	09/30/03 5:45PM	X										X				X					X	

Relinquished By	Date / Time	Received By	Date / Time
Bryan C. Johnsrud	10/21/03 3:25 PM	Shelly Ottensmeier	10/21/03 1525

E-MAILED 10-30-03

CHAIN OF CUSTODY

pg. 2 of 2 Work Order # 10543

TEKLAB, INC. 5445 Horseshoe Lake Road ~ Collinsville, IL 62234 ~ Phone: (618) 344-1004 ~ Fax: (618) 344-1005

Client: St. Louis Auto Shredding
Address: Post office Box 130
City / State / Zip: National Stock Yards, IL 62071
Contact: Bryan Johnsrud Phone: 217-787-2118 ext. 207
E-Mail: bjohnsrud@rapps.net Fax: 217-787-6641

Are the samples chilled? ☐ NO ☒ YES (Ice ~~or Blue Ice~~)
Cooler Temperature: 4.0 °C
Preserved in: ☐ Lab ☒ Field

Comments: Retain all samples for possible further analysis. One container only for each sample

Project Name / Number: SLAS-AOC Site
Sample Collector's Name: Bryan Johnsrud
Requested Due Date:
Billing Instructions PO#:

Lab Use Only	Sample Identification	Date/Time Sampled	UNPRES	HNO_3	NaOH	H_2SO_4	HCL	MeOH	$NaHSO_4$	Other	Water	Drinking Water	Soil	Sludge	Sp. Waste	pH	arsenic	barium	chromium	lead	TCLP lead	PCBs	
-11	B-08 9-10'	09/30/03 5:45 PM	X										X				X					X	
-12	B-12 3-4'	10/01/03 10:00 AM	X										X				X					X	arsenic and PCBs only.
-13	B-14 2-3'	10/01/03 11:30 AM	X										X				X	X				X	arsenic, barium, and PCBs only.
-14	B-18 2-3'	10/01/03 3:00 PM	X										X				X		X			X	
	~~B-19 2-3'~~	~~10/01/03 3:30 PM~~	~~X~~										~~X~~				~~X~~		~~X~~			~~X~~	(no sample)
-15	B-20 2-3'	10/01/03 4:00 PM	X										X				X	X	X			X	
-16	B-23 2-3'	10/02/03 2:00 PM	X										X				X		X			X	
-17	B-24 2-3'	10/02/03 2:30 PM	X										X				X		X	X		X	
	[redacted]																						(no sample)
	[redacted]	[redacted]	~~X~~										~~X~~			~~X~~							(no sample)

Relinquished By	Date / Time	Received By	Date / Time
Bryan C. Johnsrud	10/21/03 3:25 PM	Shelly Ottensmeier	10/21/03 1525

M11/04/03

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL 618-344-1004
FAX 618-344-1005

October 31, 2003

Bryan Johnsrud
Rapps Engineering & Applied Science
821 S. Durkin Dr.
Springfield, IL 62791-7349
TEL: (217) 787-2118
FAX: (217) 787-6641

ACCREDITED IN ACCORDANCE WITH nelap
NELAP Accredited #100226

RE: AOC Site St. Clair County

OrderNo. 0310656

Dear Bryan Johnsrud:

TEKLAB, INC received 28 samples on 10/7/03 1:20:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest that have been tested. IL ELAP and NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP/Part 186 except where noted in the Case Narrative. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Mary Alpin
for

Michael L. Austin
Director of Operations

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL: 618-344-1004
FAX: 618-344-1005

Client: Rapps Engineering & Applied Science
Project: AOC Site St. Clair County
LabOrder: 0310656
Report Date: October 31, 2003

CASE NARRATIVE

Qualifiers

DF - Dilution Factor	**B** - Analyte detected in the associated Method Blank	**E** - Value above quantitation range
RL - Reporting Limit	**J** - Analyte detected below quantitation limits	**H** - Holding time exceeded
ND - Not Detected at the Reporting Limit	**R** - RPD outside accepted recovery limits	**D** - Diluted out of sample
Surr - Surrogate Standard added by lab	**S** - Spike Recovery outside accepted recovery limits	**MI** - Matrix interference
TNTC - Too numerous to count	***** - Value exceeds Maximum Contaminant Level	**DNI** Did Not Ignite
IDPH - Illinois Department of Public Health	**NELAP** - IL ELAP and NELAP Accredited Field of Testing	

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL: 618-344-1004
FAX 618-344-1005

Laboratory Results

CLIENT: Rapps Engineering & Applied Science
Work Order: 0310656
Report Date: 31-Oct-03
Client Project: AOC Site St. Clair County
Collection Date: 9/30/03 10:30:00 AM
Matrix: SOLID

Sample ID	Client Sample ID	Certification	Qual	RL	Result	Units	DF	Date Analyzed	Analyst
SW-846 1311 TCLP / 3020A GFAA									
Lead, TCLP by GFAA 7421									
0310656-01	B-01 1'-2'	NELAP		0 008	**0.036**	mg/L	4	10/30/03	JMF
0310656-02	B-01 2'-3'	NELAP		0 002	**0.007**	mg/L	1	10/29/03	JMF
0310656-03	B-02 1'-2'	NELAP	J	0 002	**< 0.002**	mg/L	1	10/29/03	JMF
0310656-04	B-03 1'-2'	NELAP		0 002	**< 0.002**	mg/L	1	10/29/03	JMF
0310656-05	B-04 1'-2'	NELAP		0 004	**0.022**	mg/L	2	10/30/03	JMF
0310656-06	B-04 2'-3'	NELAP		0 002	**0.005**	mg/L	1	10/29/03	JMF
0310656-07	B-05 1'-2'	NELAP		0 002	**0.004**	mg/L	1	10/29/03	JMF
0310656-08	B-06 1'-2'	NELAP		0 002	**0.003**	mg/L	1	10/29/03	JMF
0310656-09	B-07 1'-2'	NELAP	J	0 002	**< 0.002**	mg/L	1	10/30/03	JMF
0310656-10	B-08 1'-2'	NELAP		0 002	**0.006**	mg/L	1	10/29/03	JMF
0310656-11	B-09 1'-2'	NELAP	J	0 002	**< 0.002**	mg/L	1	10/29/03	JMF
0310656-12	B-10 1'-2'	NELAP	J	0 002	**< 0.002**	mg/L	1	10/29/03	JMF
0310656-13	B-11 1'-2'	NELAP		0 002	**< 0.002**	mg/L	1	10/29/03	JMF
0310656-14	B-12 1'-2'	NELAP		0.002	**0.002**	mg/L	1	10/29/03	JMF
0310656-15	B-13 1'-2'	NELAP		0.002	**0.011**	mg/L	1	10/29/03	JMF
0310656-16	B-13 2'-3'	NELAP	J	0 002	**< 0.002**	mg/L	1	10/29/03	JMF
0310656-17	B-14 1'-2'	NELAP		0 002	**< 0.002**	mg/L	1	10/30/03	JMF
0310656-18	B-15 1'-2'	NELAP		0 002	**< 0.002**	mg/L	1	10/30/03	JMF
0310656-19	B-16 1'-2'	NELAP		0 002	**< 0.002**	mg/L	1	10/31/03	JMF
0310656-20	B-17 1'-2'	NELAP		0 002	**0.002**	mg/L	1	10/30/03	JMF
0310656-21	B-18 1'-2'	NELAP		0 002	**< 0.002**	mg/L	1	10/30/03	JMF
0310656-22	B-19 1'-2'	NELAP		0.002	**< 0.002**	mg/L	1	10/30/03	JMF
0310656-23	B-20 1'-2'	NELAP		0.002	**< 0.002**	mg/L	1	10/31/03	JMF
0310656-24	B-21 1'-2'	NELAP		0.002	**< 0.002**	mg/L	1	10/30/03	JMF
0310656-25	B-22 1'-2'	NELAP		0.002	**< 0.002**	mg/L	1	10/30/03	JMF
0310656-26	B-23 1'-2'	NELAP		0 002	**< 0.002**	mg/L	1	10/30/03	JMF
0310656-27	B-24 1'-2'	NELAP		0 002	**0.004**	mg/L	1	10/30/03	JMF
0310656-28	B-25 1'-2'	NELAP		0 002	**< 0.002**	mg/L	1	10/30/03	JMF

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL 618-344-1004
FAX 618-344-1005

WORK ORDER SAMPLE SUMMARY

Client: Rapps Engineering & Applied Science
Project: AOC Site St. Clair County
Lab Order: 0310656
Date Received: 10/7/03

Date: *31-Oct-03*

Lab Sample ID	Client Sample ID	Tag Number	Collection Date
0310656-01A	B-01 1'-2'		9/30/03 10:30.00 AM
0310656-02A	B-01 2'-3'		9/30/03 10.30:00 AM
0310656-03A	B-02 1'-2'		9/30/03 11:30:00 AM
0310656-04A	B-03 1'-2'		9/30/03 12.30.00 PM
0310656-05A	B-04 1'-2'		9/30/03 1:30.00 PM
0310656-06A	B-04 2'-3'		9/30/03 1.30:00 PM
0310656-07A	B-05 1'-2'		9/30/03 3.39:00 PM
0310656-08A	B-06 1'-2'		9/30/03 4:15.00 PM
0310656-09A	B-07 1'-2'		9/30/03 5.00.00 PM
0310656-10A	B-08 1'-2'		9/30/03 5.45:00 PM
0310656-11A	B-09 1'-2'		9/30/03 6 30:00 PM
0310656-12A	B-10 1'-2'		10/1/03 8 30:00 AM
0310656-13A	B-11 1'-2'		10/1/03 9 15:00 AM
0310656-14A	B-12 1'-2'		10/1/03 10:00:00 AM
0310656-15A	B-13 1'-2'		10/1/03 10 45:00 AM
0310656-16A	B-13 2'-3'		10/1/03 10 45.00 AM
0310656-17A	B-14 1'-2'		10/1/03 11:30:00 AM
0310656-18A	B-15 1'-2'		10/1/03 12:15:00 PM
0310656-19A	B-16 1'-2'		10/1/03 1.00:00 PM
0310656-20A	B-17 1'-2'		10/1/03 2.30:00 PM
0310656-21A	B-18 1'-2'		10/1/03 3:00 00 PM
0310656-22A	B-19 1'-2'		10/1/03 3:30:00 PM
0310656-23A	B-20 1'-2'		10/1/03 4:00 00 PM
0310656-24A	B-21 1'-2'		10/2/03 1:00:00 PM
0310656-25A	B-22 1'-2'		10/2/03 1 30:00 PM
0310656-26A	B-23 1'-2'		10/2/03 2:00.00 PM
0310656-27A	B-24 1'-2'		10/2/03 2 30.00 PM
0310656-28A	B-25 1'-2'		10/2/03 3.00:00 PM

106656

TEKLAB, INC
5445 Horseshoe Lake Road
Collinsville, IL 62234-
(618) 344-1004

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0310656

Client:
Rapps Engineering & Applied Science
821 S. Durkin Dr
Springfield, IL 62791-7349

TEL:
FAX
ProjectNo AOC Site St Clai
PO:

E-MAILED
10-31-03

24-Oct-03

Sample ID	ClientSampID	Matrix	Collection Date	Bottle	Requested Tests						
					M_TCLP_GF						
0310656-01	B-01 1'-2'	Solid	9/30/03 10 30 00 AM		A						
0310656-02	B-01 2'-3'	Solid	9/30/03 10 30 00 AM		A						
0310656-03	B-02 1'-2'	Solid	9/30/03 11 30.00 AM		A						
0310656-04	B-03 1'-2'	Solid	9/30/03 12 30:00 PM		A						
0310656-05	B-04 1'-2'	Solid	9/30/03 1 30.00 PM		A						
0310656-06	B-04 2'-3'	Solid	9/30/03 1:30:00 PM		A						
0310656-07	B-05 1'-2'	Solid	9/30/03 3.39.00 PM		A						
0310656-08	B-06 1'-2'	Solid	9/30/03 4:15 00 PM		A						
0310656-09	B-07 1'-2'	Solid	9/30/03 5 00.00 PM		A						
0310656-10	B-08 1'-2'	Solid	9/30/03 5 45:00 PM		A						
0310656-11	B-09 1'-2'	Solid	9/30/03 6 30:00 PM		A						
0310656-12	B-10 1'-2'	Solid	10/1/03 8.30:00 AM		A						
0310656-13	B-11 1'-2'	Solid	10/1/03 9:15:00 AM		A						
0310656-14	B-12 1'-2'	Solid	10/1/03 10 00:00 AM		A						
0310656-15	B-13 1'-2'	Solid	10/1/03 10:45:00 AM		A						
0310656-16	B-13 2'-3'	Solid	10/1/03 10:45.00 AM		A						

Comments: Additional analysis to WO #0310184 requested by Bryan Johnsurd 10/24/03. MLA

	Date/Time		Date/Time
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	

NOTE Samples are discarded 60 days after results are reported unless other arrangements are made Hazardous samples will be returned to client or disposed of at client expense

Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

TEKLAB, INC
5445 Horseshoe Lake Road
Collinsville, IL 62234-
(618) 344-1004

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0310656

Client:
Rapps Engineering & Applied Science
821 S Durkin Dr.
Springfield, IL 62791-7349

TEL
FAX.
ProjectNo· AOC Site St Clai
PO.

24-Oct-03

Sample ID	ClientSampID	Matrix	Collection Date	Bottle	Requested Tests M_TCLP_GF						
0310656-17	B-14 1'-2'	Solid	10/1/03 11 30 00 AM		A						
0310656-18	B-15 1'-2'	Solid	10/1/03 12 15 00 PM		A						
0310656-19	B-16 1'-2'	Solid	10/1/03 1 00.00 PM		A						
0310656-20	B-17 1'-2'	Solid	10/1/03 2 30.00 PM		A						
0310656-21	B-18 1'-2'	Solid	10/1/03 3 00:00 PM		A						
0310656-22	B-19 1'-2'	Solid	10/1/03 3·30 00 PM		A						
0310656-23	B-20 1'-2'	Solid	10/1/03 4·00 00 PM		A						
0310656-24	B-21 1'-2'	Solid	10/2/03 1 00·00 PM		A						
0310656-25	B-22 1'-2'	Solid	10/2/03 1 30 00 PM		A						
0310656-26	B-23 1'-2'	Solid	10/2/03 2 00 00 PM		A						
0310656-27	B-24 1'-2'	Solid	10/2/03 2 30 00 PM		A						
0310656-28	B-25 1'-2'	Solid	10/2/03 3 00:00 PM		A						

Comments: Additional analysis to WO #0310184 requested by Bryan Johnsurd 10/24/03. MLA

	Date/Time		Date/Time
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	

NOTE Samples are discarded 60 days after results are reported unless other arrangements are made Hazardous samples will be returned to client or disposed of at client expense.

Bottle Type L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

From: "Bryan Johnsrud" <bjohnsrud@rapps.net>
To: "Mike Austin" <MAustin@TeklabInc.com>
Date: 10/24/03 11:34AM
Subject: Re: SLAS - AOC Site

Yes, please perform the additional preparation and analyses necessary to obtain the desired reporting limits.

This should be applied to the following samples:

TCLP Lead (29 soil samples): B-01 1'-2', B-01 2'-3', B-01 3'-4', B-02 1'-2', B-03 1'-2', B-04 1'-2', B-04 2'-3', B-05 1'-2', B-06 1'-2', B-07 1'-2', B-08 1'-2', B-09 1'-2', B-10 1'-2', B-11 1'-2', B-12 1'-2', B-13 1'-2', B-13 2'-3', B-14 1'-2', B-15 1'-2', B-16 1'-2', B-17 1'-2', B-18 1'-2', B-19 1'-2', B-20 1'-2', B-21 1'-2', B-22 1'-2', B-23 1'-2', B-24 1'-2', and B-25 1'-2'.

PCBs (4 water samples): B-1, B-2, B-3, and B-4.

Please contact me if you have any questions. Thanks.

0310543

0310184

Relog workorder # 0310184 for TCLP (GFAA Pb) DUE 10/31/03

----- Original Message -----
From: "Mike Austin" <MAustin@TeklabInc.com>
To: <bjohnsrud@rapps.net>
Sent: Friday, October 24, 2003 11:06 AM
Subject: Re: SLAS - AOC Site

> The lead reporting limit can be achieved by analyzing by GFAA. The PCB
> can be achieved at 0.5.
>
> The current samples can be adjusted for the PCB, but the lead would
> need to be prepped and analyzed by GFAA. Please let me know about the
> lead.
>
> Thanks Mike
>
> >>> "Bryan Johnsrud" <bjohnsrud@rapps.net> 10/24/03 10:41AM >>>
> I (now) want a Reporting Limit (RL) of 0.0075 mg/L (or less) for TCLP
> Lead (soil samples) and a RL of 0.5 ug/L (or less) for PCBs (water
> samples).
>
> Can this be achieved for samples you currently have?
>

TEKLAB, INC
5445 Horseshoe Lake Road
Collinsville, IL 62234-
(618) 344-1004

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0310184

Client
Rapps Engineering & Applied Science
821 S Durkin Dr.
Springfield, IL 62791-7349

TEL
FAX
ProjectNo. SLAS - AOC Site
PO

24-Oct-03

Sample ID	ClientSampID	Matrix	Collection Date	Bottle	Requested Tests					
					I_TS_M_MT	L_PH_S_M	M_SOLIDS_ICP	M_TCLP_ICP	PMOIST	SV_8082S_S
0310184-01	B-12 2'-3'	Solid	10/1/03 10 00 00 AM		A	A	A	A	A	A
0310184-02	B-13 2'-3'	Solid	10/1/03 10:45 00 AM		A	A	A	A	A	A
0310184-03	B-4 2'-3'	Solid	9/30/03 1 30 00 PM		A				A	A
0310184-04	B-4 3'-4'	Solid	9/30/03 1 30.00 PM		A				A	A
0310184-05	B-4 4'-5'	Solid	9/30/03 1 30 00 PM		A				A	A
0310184-06	B-4 5'-6'	Solid	9/30/03 1 30 00 PM		A				A	A
0310184-07	B-4 6'-7'	Solid	9/30/03 1 30 00 PM		A				A	A
0310184-08	B-4 7'-8'	Solid	9/30/03 1 30 00 PM		A				A	A
0310184-09	B-4 8'-9'	Solid	9/30/03 1 30 00 PM		A				A	A
0310184-10	B-7 2'-3'	Solid	9/30/03 5 00 00 PM		A				A	A
0310184-11	B-1 1'-2'	Solid	9/30/03 10 30 00 AM		A	A	A	A	A	A
0310184-12	B-2 1'-2'	Solid	9/30/03 11:30 00 AM		A	A	A	A	A	A
0310184-13	B-3 1'-2'	Solid	9/30/03 12.30 00 PM		A	A	A	A	A	A
0310184-14	B-4 1'-2'	Solid	9/30/03 1:30:00 PM		A	A	A	A	A	A
0310184-15	B-5 1'-2'	Solid	9/30/03 3 30 00 PM		A	A	A	A	A	A
0310184-16	B-6 1'-2'	Solid	9/30/03 4.15 00 PM		A	A	A	A	A	A

Comments:

	Date/Time		Date/Time
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	

NOTE. Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense

Bottle Type L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

TEKLAB, INC
5445 Horseshoe Lake Road
Collinsville, IL 62234-
(618) 344-1004

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0310184

Client:
Rapps Engineering & Applied Science
821 S. Durkin Dr
Springfield, IL 62791-7349

TEL
FAX
ProjectNo. SLAS - AOC Site
PO

24-Oct-03

Sample ID	ClientSampID	Matrix	Collection Date	Bottle	Requested Tests					
					I_TS_M_MT	L_PH_S_M	M_SOLIDS_ICP	M_TCLP_ICP	PMOIST	SV_8082S_S
0310184-17	B-7 1'-2'	Solid	9/30/03 5:00 00 PM		A	A	A	A	A	A
0310184-18	B-8 1'-2'	Solid	9/30/03 5 45.00 PM		A	A	A	A	A	A
0310184-19	B-9 1'-2'	Solid	9/30/03 6 30 00 PM		A	A	A	A	A	A
0310184-20	B-10 1'-2'	Solid	10/1/03 8:30 00 AM		A	A	A	A	A	A
0310184-21	B-11 1'-2'	Solid	10/1/03 9:15 00 AM		A	A	A	A	A	A
0310184-22	B-12 1'-2'	Solid	10/1/03 10:00 00 AM		A	A	A	A	A	A
0310184-23	B-13 1'-2'	Solid	10/1/03 10:45 00 AM		A	A	A	A	A	A
0310184-24	B-14 1'-2'	Solid	10/1/03 11 30 00 AM		A	A	A	A	A	A
0310184-25	B-15 1'-2'	Solid	10/1/03 12 15 00 PM		A	A	A	A	A	A
0310184-26	B-16 1'-2'	Solid	10/1/03 1:00 00 PM		A	A	A	A	A	A
0310184-27	B-17 1'-2'	Solid	10/1/03 2.30 00 PM		A	A	A	A	A	A
0310184-28	B-18 1'-2'	Solid	10/1/03 3:00:00 PM		A	A	A	A	A	A
0310184-29	B-19 1'-2'	Solid	10/1/03 3:30:00 PM		A	A	A	A	A	A
0310184-30	B-20 1'-2'	Solid	10/1/03 4:00 00 PM		A	A	A	A	A	A
0310184-31	B-21 1'-2'	Solid	10/2/03 1 00.00 PM		A	A	A	A	A	A
0310184-32	B-22 1'-2'	Solid	10/2/03 1 30.00 PM		A	A	A	A	A	A

Comments:

	Date/Time		Date/Time
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made Hazardous samples will be returned to client or disposed of at client expense

Bottle Type. L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

TEKLAB, INC
5445 Horseshoe Lake Road
Collinsville, IL 62234-
(618) 344-1004

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0310184

Client:
Rapps Engineering & Applied Science
821 S. Durkin Dr.
Springfield, IL 62791-7349

TEL
FAX
ProjectNo SLAS - AOC Site
PO:

24-Oct-03

Sample ID	ClientSamplD	Matrix	Collection Date	Bottle	Requested Tests					
					I_TS_M_MT	L_PH_S_M	M_SOLIDS_ICP	M_TCLP_ICP	PMOIST	SV_8082S_S
0310184-33	B-23 1'-2'	Solid	10/2/03 2 00.00 PM		A	A	A	A	A	A
0310184-34	B-24 1'-2'	Solid	10/2/03 2 30.00 PM		A	A	A	A	A	A
0310184-35	B-25 1'-2'	Solid	10/2/03 3.00.00 PM		A	A	A	A	A	A
0310184-36	B-1 2'-3'	Solid	9/30/03 10.30.00 AM		A	A	A	A	A	A
0310184-37	B-2 2'-3'	Solid	9/30/03 11 30 00 AM		A	A	A	A	A	A
0310184-38	B-3 2'-3'	Solid	9/30/03 12 30 00 PM		A	A	A	A	A	A
0310184-39	B-5 2'-3'	Solid	9/30/03 3 30 00 PM		A	A	A	A	A	A
0310184-40	B-6 2'-3'	Solid	9/30/03 4 15·00 PM		A	A	A	A	A	A
0310184-41	B-7 3'-4'	Solid	9/30/03 5·00 00 PM		A				A	A
0310184-42	B-7 4'-5'	Solid	9/30/03 5 00.00 PM		A				A	A
0310184-43	B-8 2'-3'	Solid	9/30/03 5 45 00 PM		A				A	A
0310184-44	B-8 3'-4'	Solid	9/30/03 5.45·00 PM		A				A	A
0310184-45	B-10 2'-3'	Solid	10/1/03 8 30.00 AM		A				A	A
0310184-46	B-10 3'-4'	Solid	10/1/03 8 30 00 AM		A				A	A
0310184-47	B-10 4'-5'	Solid	10/1/03 8 30 00 AM		A				A	A
0310184-48	B-10 5'-6'	Solid	10/1/03 8 30 00 AM		A				A	A

Comments:

	Date/Time		Date/Time
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	

NOTE Samples are discarded 60 days after results are reported unless other arrangements are made Hazardous samples will be returned to client or disposed of at client expense

Bottle Type· L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

TEKLAB, INC
5445 Horseshoe Lake Road
Collinsville, IL 62234-
(618) 344-1004

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0310184

Client:
Rapps Engineering & Applied Science
821 S Durkin Dr.
Springfield, IL 62791-7349

TEL.
FAX
ProjectNo. SLAS - AOC Site
PO

24-Oct-03

Sample ID	ClientSampID	Matrix	Collection Date	Bottle	Requested Tests					
					I_TS_M_MT	L_PH_S_M	M_SOLIDS_ICP	M_TCLP_ICP	PMOIST	SV_8082S_S
0310184-49	B-10 6'-7'	Solid	10/1/03 8 30:00 AM		A				A	A
0310184-50	B-10 7'-8'	Solid	10/1/03 8 30 00 AM		A				A	A
0310184-51	B-10 8'-9'	Solid	10/1/03 8 30.00 AM		A				A	A
0310184-52	B-10 9'-10'	Solid	10/1/03 8 30 00 AM		A				A	A
0310184-53	B-10 10'-11'	Solid	10/1/03 8 30 00 AM		A				A	A
0310184-54	B-11 5'-6'	Solid	10/1/03 9 15 00 AM		A				A	A
0310184-55	B-11 3'-4'	Solid	10/1/03 9 15 00 AM		A				A	A
0310184-56	B-11 4'-5'	Solid	10/1/03 9 15.00 AM		A				A	A
0310184-57	B-16 2'-3'	Solid	10/1/03 1 00 00 PM		A				A	A
0310184-58	B-16 3'-4'	Solid	10/1/03 1 00 00 PM		A				A	A
0310184-59	B-16 4'-5'	Solid	10/1/03 1 00.00 PM		A				A	A

Comments:

	Date/Time		Date/Time
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made Hazardous samples will be returned to client or disposed of at client expense

Bottle Type L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL 618-344-1004
FAX 618-344-1005

November 07, 2003

Bryan Johnsrud
Rapps Engineering & Applied Science
821 S. Durkin Dr.
Springfield, IL 62791-7349
TEL: (217) 787-2118
FAX: (217) 787-6641

ACCREDITED IN ACCORDANCE WITH nelac

NELAP Accredited #100226

RE: SLAS-AOC Site

OrderNo. 0310824

Dear Bryan Johnsrud:

TEKLAB, INC received 6 samples on 10/30/03 4:41:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest that have been tested. IL ELAP and NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP/Part 186 except where noted in the Case Narrative. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Michael L. Austin
Director of Operations

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL. 618-344-1004
FAX: 618-344-1005

Client: Rapps Engineering & Applied Science
Project: SLAS-AOC Site
LabOrder: 0310824
Report Date: November 07, 2003

CASE NARRATIVE

Additional preservative (nitric acid) needed upon arrival at the laboratory for samples B-1, B-2 and B-3.

Qualifiers

DF - Dilution Factor	**B** - Analyte detected in the associated Method Blank	**E** - Value above quantitation range
RL - Reporting Limit	**J** - Analyte detected below quantitation limits	**H** - Holding time exceeded
ND - Not Detected at the Reporting Limit	**R** - RPD outside accepted recovery limits	**D** - Diluted out of sample
Surr - Surrogate Standard added by lab	**S** - Spike Recovery outside accepted recovery limits	**MI** - Matrix interference
TNTC - Too numerous to count	***** - Value exceeds Maximum Contaminant Level	**DNI** Did Not Ignite
IDPH - Illinois Department of Public Health	**NELAP** - IL ELAP and NELAP Accredited Field of Testing	

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL 618-344-1004
FAX 618-344-1005

Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0310824	**Client Sample ID:**	B-1
Lab ID:	0310824-01	**Collection Date:**	10/30/03 3:05:00 PM
Report Date:	07-Nov-03	**Matrix:**	AQUEOUS

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 3030E, 3113B								
Lead	NELAP	0.002		**0.016**	mg/L	1	11/6/03	JMF
STANDARD METHODS 18TH ED. 3030F, 3120B TOTAL								
Arsenic		0.025		**< 0.025**	mg/L	1	11/4/03 6:22:41 PM	SAM
Barium		0 005		**0.605**	mg/L	1	11/4/03 6:22:41 PM	SAM
Chromium		0.010		**< 0.010**	mg/L	1	11/4/03 6.22:41 PM	SAM

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL. 618-344-1004
FAX 618-344-1005

Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0310824	**Client Sample ID:**	B-2
Lab ID:	0310824-02	**Collection Date:**	10/30/03 3:10:00 PM
Report Date:	07-Nov-03	**Matrix:**	AQUEOUS

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 3030E, 3113B								
Lead	NELAP	0.002		**< 0.002**	mg/L	1	11/6/03	JMF
STANDARD METHODS 18TH ED. 3030F, 3120B TOTAL								
Arsenic		0.025		**< 0.025**	mg/L	1	11/4/03 6:28:01 PM	SAM
Barium		0 005		**0.551**	mg/L	1	11/4/03 6:28:01 PM	SAM
Chromium		0 010		**< 0.010**	mg/L	1	11/4/03 6.28:01 PM	SAM

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL 618-344-1004
FAX 618-344-1005

Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0310824	**Client Sample ID:**	B-3
Lab ID:	0310824-03	**Collection Date:**	10/30/03 2:50:00 PM
Report Date:	07-Nov-03	**Matrix:**	AQUEOUS

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 3030E, 3113B								
Lead	NELAP	0 002	J	< 0.002	mg/L	1	11/6/03	JMF
STANDARD METHODS 18TH ED. 3030F, 3120B TOTAL								
Arsenic		0.025		< 0.025	mg/L	1	11/4/03 6:33:21 PM	SAM
Barium		0 005		0.550	mg/L	1	11/4/03 6:33:21 PM	SAM
Chromium		0 010		< 0.010	mg/L	1	11/4/03 6:33:21 PM	SAM

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL 618-344-1004
FAX 618-344-1005

Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0310824	**Client Sample ID:**	B-4
Lab ID:	0310824-04	**Collection Date:**	10/30/03 2:55:00 PM
Report Date:	07-Nov-03	**Matrix:**	AQUEOUS

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 3030E, 3113B								
Lead	NELAP	0.002		**< 0.002**	mg/L	1	11/6/03	JMF
STANDARD METHODS 18TH ED. 3030F, 3120B TOTAL								
Arsenic		0.025		**< 0.025**	mg/L	1	11/4/03 6:59:24 PM	SAM
Barium		0.005		**0.608**	mg/L	1	11/4/03 6:59:24 PM	SAM
Chromium		0 010		**< 0.010**	mg/L	1	11/4/03 6:59:24 PM	SAM

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL. 618-344-1004
FAX 618-344-1005

Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0310824	**Client Sample ID:**	Wetlands
Lab ID:	0310824-05	**Collection Date:**	10/30/03 3:30:00 PM
Report Date:	07-Nov-03	**Matrix:**	AQUEOUS

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 3030E, 3113B								
Lead	NELAP	0.008		**0.076**	mg/L	4	11/7/03	JMF
STANDARD METHODS 18TH ED. 3030F, 3120B TOTAL								
Arsenic		0.025		**< 0.025**	mg/L	1	11/4/03 6:38:42 PM	SAM
Barium		0.005		**0.259**	mg/L	1	11/4/03 6:38:42 PM	SAM
Chromium		0.010		**< 0.010**	mg/L	1	11/4/03 6:38:42 PM	SAM

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL 618-344-1004
FAX 618-344-1005

Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0310824	**Client Sample ID:**	Canal
Lab ID:	0310824-06	**Collection Date:**	10/30/03 3:50:00 PM
Report Date:	07-Nov-03	**Matrix:**	AQUEOUS

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 3030E, 3113B								
Lead	NELAP	0 002		< 0.002	mg/L	1	11/7/03	JMF
STANDARD METHODS 18TH ED. 3030F, 3120B TOTAL								
Arsenic		0 025		< 0.025	mg/L	1	11/4/03 6 43:47 PM	SAM
Barium		0 005		0.128	mg/L	1	11/4/03 6 43 47 PM	SAM
Chromium		0 010		< 0.010	mg/L	1	11/4/03 6.43:47 PM	SAM
SW-846 3510C, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	0 10		ND	µg/L	1	11/4/03 7.31.00 PM	TDN
Aroclor 1221	NELAP	0 10		ND	µg/L	1	11/4/03 7.31.00 PM	TDN
Aroclor 1232	NELAP	0.10		ND	µg/L	1	11/4/03 7:31.00 PM	TDN
Aroclor 1242	NELAP	0 10		ND	µg/L	1	11/4/03 7:31:00 PM	TDN
Aroclor 1248	NELAP	0 10		ND	µg/L	1	11/4/03 7.31:00 PM	TDN
Aroclor 1254	NELAP	0.10		ND	µg/L	1	11/4/03 7:31:00 PM	TDN
Aroclor 1260	NELAP	0.10		ND	µg/L	1	11/4/03 7:31:00 PM	TDN
Surr: Decachlorobiphenyl		22-185		64.0	%REC	10	11/4/03 7:12:00 PM	TDN
Surr: Tetrachloro-meta-xylene		10-161		68.0	%REC	10	11/4/03 7:12:00 PM	TDN

CHAIN OF CUSTODY

pg. 1 of 1 Work Order # 10824

TEKLAB, INC. 5445 Horseshoe Lake Road ~ Collinsville, IL 62234 ~ Phone: (618) 344-1004 ~ Fax: (618) 344-1005

Client: St. Louis Auto Shredding
Address: Post Office Box 130
City / State / Zip: National Stock Yards IL 62071
Contact: Bryan Johnsrud Phone: 217-787-2111 ext. 25
E-Mail: bjohnsrude rapps.net Fax: 217-787-6641

Are the samples chilled? ☐ NO ☒ YES (Ice ~~or Blue Ice~~)
Cooler Temperature: 1.4 °C
Preserved in: ☒ Lab ☐ Field HNO_3 added (01, 02, 03) EAW 10/30/03
Comments: 0.5 ppb DL for PCBs
*Report B-10, B-06, & B-09 separately in one report from others.

Project Name / Number: SLAS-AOC Site
Sample Collector's Name: Bryan Johnsrud
Requested Due Date:
Billing Instructions PO#:

Lab Use Only	Sample Identification	Date/Time Sampled	UNPRES	HNO_3	NaOH	H_2SO_4	HCL	MeOH	$NaHSO_4$	Other	Water	Drinking Water	Soil	Sludge	Sp. Waste	PCBs	arsenic	barium	chromium	lead								
0310824-01	B-1	10/30/03 1505		1							X						X	X	X	X								
02	B-2	10/30/03 1510		1							X						X	X	X	X								
03	B-3	10/30/03 1450		1							X						X	X	X	X								
04	B-4	10/30/03 1455		1							X						X	X	X	X								
*	B-10	10/30/03 1345		1							X						X	X	X	X				partial sample				
*	B-06	10/30/03 1420		1							X						X	X	X	X				partial sample				
*	B-09	10/30/03 1440		1							X						X	X	X	X								
05	Wetlands	10/30/03 1530		1							X						X	X	X	X				partial sample				
06	Canal	10/30/03 1550	1	1							X					X	X	X	X	X								

Relinquished By	Date / Time	Received By	Date / Time
Bryan C. Johnsrud	10/30/03 1641	Elizabeth R. Weber	10/30/03 1641

TEKLAB, INC

Sample Receipt Checklist

Client Name RAPPS

Date and Time Receive 10/30/03 4:41:00 PM

Work Order Numbe 0310824

Received by. EAW

Checklist completed by Elizabeth A. Weber 10/30/03 (Signature / Date)

Reviewed by KAK 10/31/03 (Initials / Date)

Matrix:

Carrier name: Bryan Johnsrud

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Water - VOA vials have zero headspace?	No VOA vials submitted ☑	Yes ☐	No ☐
Water - pH acceptable upon receipt?	Yes ☐	No ☑	

Adjusted? yes Checked by EAW

Any No and/or NA (not applicable) response must be detailed in the Case Narrative or on the Chain of Custody

Client contacted _____ Date contacted _____ Person contacted _____

Contacted by _____ Regarding _____

Comments _____

Corrective Action _____

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL 618-344-1004
FAX 618-344-1005

November 12, 2003

Bryan Johnsrud
Rapps Engineering & Applied Science
821 S. Durkin Dr.
Springfield, IL 62791-7349
TEL: (217) 787-2118
FAX: (217) 787-6641

ACCREDITED IN ACCORDANCE WITH

NELAP Accredited #100226

RE: SLAS-AOC Site

OrderNo. 0310807

Dear Bryan Johnsrud:

TEKLAB, INC received 20 samples on 10/30/03 1:05:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest that have been tested. IL ELAP and NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP/Part 186 except where noted in the Case Narrative. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Michael L. Austin
Director of Operations

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL. 618-344-1004
FAX: 618-344-1005

Client: Rapps Engineering & Applied Science
Project: SLAS-AOC Site
LabOrder: 0310807
Report Date: November 12, 2003

CASE NARRATIVE

Samples received did not meet hold time requirements for pH, total solids, and PCBs. Analyze out of hold time, per Bryan Johnsrud.

Prep Comments for SV_3550_PCB, Sample 0310807-08A: The prep HoldTime was exceeded by 18.9 days.
Prep Comments for SV_3550_PCB, Sample 0310807-16A: The prep HoldTime was exceeded by 19.0 days.
Prep Comments for SV_3550_PCB, Sample 0310807-07A: The prep HoldTime was exceeded by 22.8 days.
Analytical Comments for METHOD M_TCLP_GF, SAMPLE 0310807-05AMS: Recovered above control limits but sample was a non-detect.

Qualifiers

DF - Dilution Factor	**B** - Analyte detected in the associated Method Blank	**E** - Value above quantitation range
RL - Reporting Limit	**J** - Analyte detected below quantitation limits	**H** - Holding time exceeded
ND - Not Detected at the Reporting Limit	**R** - RPD outside accepted recovery limits	**D** - Diluted out of sample
Surr - Surrogate Standard added by lab	**S** - Spike Recovery outside accepted recovery limits	**MI** - Matrix interference
TNTC - Too numerous to count	***** - Value exceeds Maximum Contaminant Level	**DNI** Did Not Ignite
IDPH - Illinois Department of Public Health	**NELAP** - IL ELAP and NELAP Accredited Field of Testing	

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TEL. 618-344-1004
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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0310807	**Client Sample ID:**	B-02 5-6'
Lab ID:	0310807-01	**Collection Date:**	9/30/03 11:30:00 AM
Report Date:	12-Nov-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
SW-846 3050B, ICP METHOD 6010B								
Arsenic	NELAP	2.36		**7.45**	mg/Kg-dry	1	11/5/03 3:05:27 PM	JMW

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0310807	**Client Sample ID:**	B-02 15-16'
Lab ID:	0310807-02	**Collection Date:**	9/30/03 11:30:00 AM
Report Date:	12-Nov-03	**Matrix:**	SOLID

Analyses		Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
SW-846 1311 TCLP / 3020A GFAA									
Lead, TCLP by GFAA	7421	NELAP	0.004		**0.016**	mg/L	2	11/11/03	JMF
SW-846 3050B, ICP METHOD 6010B									
Lead		NELAP	4 00		**16.1**	mg/Kg-dry	1	11/5/03 3:16:04 PM	JMW

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0310807	**Client Sample ID:**	B-04 11-12'
Lab ID:	0310807-03	**Collection Date:**	9/30/03 1:30:00 PM
Report Date:	12-Nov-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
SW-846 1311 TCLP / 3020A GFAA								
Lead, TCLP by GFAA 7421	NELAP	0 004		**0.014**	mg/L	2	11/7/03	JMF
SW-846 3050B, ICP METHOD 6010B								
Arsenic	NELAP	2.36		**8.28**	mg/Kg-dry	1	11/5/03 4:18:29 PM	JMW
Barium	NELAP	0.47		**223**	mg/Kg-dry	1	11/6/03 6:09:30 PM	SAM
Chromium	NELAP	0.94		**27.6**	mg/Kg-dry	1	11/5/03 3:19:37 PM	JMW
Lead	NELAP	3 77		**14.4**	mg/Kg-dry	1	11/5/03 3:19.37 PM	JMW
SW-846 METHOD 9045C								
pH (1:1)	NELAP	1.00	H	**8.10**		1	10/30/03 3:44:00 PM	ALB

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TEL: 618-344-1004
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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0310807	**Client Sample ID:**	B-06 7-8'
Lab ID:	0310807-05	**Collection Date:**	9/30/03 4:15:00 PM
Report Date:	12-Nov-03	**Matrix:**	SOLID

Analyses		Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
SW-846 1311 TCLP / 3020A GFAA									
Lead, TCLP by GFAA	7421	NELAP	0.002		**< 0.002**	mg/L	1	11/11/03	JMF
SW-846 3050B, ICP METHOD 6010B									
Lead		NELAP	3.85		**34.1**	mg/Kg-dry	1	11/5/03 3:26:43 PM	JMW

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0310807	**Client Sample ID:**	B-06 9-10'
Lab ID:	0310807-06	**Collection Date:**	9/30/03 4:15:00 PM
Report Date:	12-Nov-03	**Matrix:**	SOLID

Analyses		Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
SW-846 1311 TCLP / 3020A GFAA									
Lead, TCLP by GFAA	7421	NELAP	0.004		**0.012**	mg/L	2	11/7/03	JMF
SW-846 3050B, ICP METHOD 6010B									
Lead		NELAP	3.77		**15.4**	mg/Kg-dry	1	11/5/03 3:30:16 PM	JMW

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0310807	**Client Sample ID:**	B-07 9-10'
Lab ID:	0310807-07	**Collection Date:**	9/30/03 5:00:00 PM
Report Date:	12-Nov-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0.1	H	**34.6**	%	1	11/7/03	DLY
Total Solids		0 1	H	**65.4**	%	1	11/7/03	DLY
SW-846 1311 TCLP / 3020A GFAA								
Lead, TCLP by GFAA 7421	NELAP	0.004		**0.008**	mg/L	2	11/7/03	JMF
SW-846 3050B, ICP METHOD 6010B								
Arsenic	NELAP	2.27		**8.03**	mg/Kg-dry	1	11/5/03 4.23:34 PM	JMW
Lead	NELAP	3.64		**14.4**	mg/Kg-dry	1	11/5/03 3 33 50 PM	JMW
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	57.4		**ND**	µg/Kg-dry	1	11/7/03 1:09:00 PM	TDN
Aroclor 1221	NELAP	57.4		**ND**	µg/Kg-dry	1	11/7/03 1.09.00 PM	TDN
Aroclor 1232	NELAP	57.4		**ND**	µg/Kg-dry	1	11/7/03 1 09:00 PM	TDN
Aroclor 1242	NELAP	57.4		**ND**	µg/Kg-dry	1	11/7/03 1:09.00 PM	TDN
Aroclor 1248	NELAP	57.4		**ND**	µg/Kg-dry	1	11/7/03 1:09.00 PM	TDN
Aroclor 1254	NELAP	57 4		**ND**	µg/Kg-dry	1	11/7/03 1:09.00 PM	TDN
Aroclor 1260	NELAP	57.4		**ND**	µg/Kg-dry	1	11/7/03 1:09:00 PM	TDN
Surr: Decachlorobiphenyl		22-210		**88.2**	%REC	1	11/7/03 1.09.00 PM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**53.5**	%REC	1	11/7/03 1:09.00 PM	TDN

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0310807	**Client Sample ID:**	B-14 0-1'
Lab ID:	0310807-08	**Collection Date:**	10/1/03 11:30:00 AM
Report Date:	12-Nov-03	**Matrix:**	SOLID

Analyses		Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G									
Percent Moisture			0.1	H	**23.4**	%	1	11/7/03	DLY
Total Solids			0.1	H	**76.6**	%	1	11/7/03	DLY
SW-846 1311 TCLP / 3020A GFAA									
Lead, TCLP by GFAA	7421	NELAP	0.002	J	**< 0.002**	mg/L	1	11/6/03	JMF
SW-846 3050B. ICP METHOD 6010B									
Arsenic		NELAP	2.50		**8.00**	mg/Kg-dry	1	11/5/03 4:26:06 PM	JMW
Barium		NELAP	0.50		**351**	mg/Kg-dry	1	11/6/03 6.30.22 PM	SAM
Chromium		NELAP	1 00		**24.7**	mg/Kg-dry	1	11/5/03 3.37.24 PM	JMW
Lead		NELAP	4.00		**40.3**	mg/Kg-dry	1	11/5/03 3.37:24 PM	JMW
SW-846 3550B. METHOD 8082. POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD									
Aroclor 1016		NELAP	93.8		**ND**	µg/Kg-dry	1	11/4/03 8.30:00 PM	TDN
Aroclor 1221		NELAP	93.8		**ND**	µg/Kg-dry	1	11/4/03 8.30·00 PM	TDN
Aroclor 1232		NELAP	93.8		**ND**	µg/Kg-dry	1	11/4/03 8:30:00 PM	TDN
Aroclor 1242		NELAP	93.8		**ND**	µg/Kg-dry	1	11/4/03 8.30:00 PM	TDN
Aroclor 1248		NELAP	93.8		**ND**	µg/Kg-dry	1	11/4/03 8:30:00 PM	TDN
Aroclor 1254		NELAP	93.8		**ND**	µg/Kg-dry	1	11/4/03 8.30.00 PM	TDN
Aroclor 1260		NELAP	93.8		**ND**	µg/Kg-dry	1	11/4/03 8:30:00 PM	TDN
Surr: Decachlorobiphenyl			22-210		**93.3**	%REC	1	11/4/03 8:30.00 PM	TDN
Surr: Tetrachloro-meta-xylene			10-153		**47.1**	%REC	1	11/4/03 8.30:00 PM	TDN
SW-846 METHOD 9045C									
pH (1:1)		NELAP	1 00	H	**7.78**		1	10/30/03 3:46:00 PM	ALB

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ENVIRONMENTAL TESTING LABORATORY

TEL 618-344-1004
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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0310807	**Client Sample ID:**	B-14 5-6'
Lab ID:	0310807-09	**Collection Date:**	10/1/03 11:30:00 AM
Report Date:	12-Nov-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
SW-846 3050B, ICP METHOD 6010B								
Arsenic	NELAP	2 40		**5.19**	mg/Kg-dry	1	11/5/03 4.28:37 PM	JMW

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0310807	**Client Sample ID:**	B-14 7-8'
Lab ID:	0310807-10	**Collection Date:**	10/1/03 11:30:00 AM
Report Date:	12-Nov-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
SW-846 3050B, ICP METHOD 6010B								
Arsenic	NELAP	2.31		**5.89**	mg/Kg-dry	1	11/5/03 4:31.08 PM	JMW

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0310807	**Client Sample ID:**	B-22 2-3'
Lab ID:	0310807-11	**Collection Date:**	10/2/03 1:30:00 PM
Report Date:	12-Nov-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
SW-846 3050B, ICP METHOD 6010B								
Barium	NELAP	0.48		**223**	mg/Kg-dry	1	11/6/03 6:35:41 PM	SAM
Chromium	NELAP	0.96		**26.9**	mg/Kg-dry	1	11/6/03 6:35:41 PM	SAM
SW-846 METHOD 9045C								
pH (1:1)	NELAP	1.00	H	**8.27**		1	10/30/03 3:47:00 PM	ALB

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TEL. 618-344-1004
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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0310807	**Client Sample ID:**	B-02 7-8'
Lab ID:	0310807-12	**Collection Date:**	9/30/03 11:30:00 AM
Report Date:	12-Nov-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
SW-846 3050B, ICP METHOD 6010B								
Arsenic	NELAP	2 40		**6.06**	mg/Kg-dry	1	11/5/03 4.03:07 PM	JMW

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0310807	**Client Sample ID:**	B-17 2-3'
Lab ID:	0310807-13	**Collection Date:**	10/1/03 2:30:00 PM
Report Date:	12-Nov-03	**Matrix:**	SOLID

Analyses		Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
SW-846 1311 TCLP / 3020A GFAA									
Lead, TCLP by GFAA	7421	NELAP	0.004		**0.005**	mg/L	2	11/7/03	JMF
SW-846 3050B, ICP METHOD 6010B									
Barium		NELAP	0.50		**183**	mg/Kg-dry	1	11/6/03 6:51:32 PM	SAM
Chromium		NELAP	1.00		**25.4**	mg/Kg-dry	1	11/5/03 4:06:40 PM	JMW
Lead		NELAP	4.00		**13.5**	mg/Kg-dry	1	11/5/03 4:06:40 PM	JMW

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0310807	**Client Sample ID:**	B-21 2-3'
Lab ID:	0310807-14	**Collection Date:**	10/2/03 1:00:00 PM
Report Date:	12-Nov-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
SW-846 3050B, ICP METHOD 6010B								
Barium	NELAP	0.50		**420**	mg/Kg-dry	1	11/6/03 4:51:24 PM	SAM
Chromium	NELAP	1.00		**39.6**	mg/Kg-dry	1	11/6/03 4:51.24 PM	SAM

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0310807	**Client Sample ID:**	B-25 2-3'
Lab ID:	0310807-15	**Collection Date:**	10/2/03 3:00:00 PM
Report Date:	12-Nov-03	**Matrix:**	SOLID

Analyses		Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
SW-846 1311 TCLP / 3020A GFAA									
Lead, TCLP by GFAA	7421	NELAP	0.002	J	**< 0.002**	mg/L	1	11/6/03	JMF
SW-846 3050B, ICP METHOD 6010B									
Barium		NELAP	0.47		**229**	mg/Kg-dry	1	11/6/03 4:56:42 PM	SAM
Chromium		NELAP	0.94		**26.2**	mg/Kg-dry	1	11/6/03 4:56:42 PM	SAM
Lead		NELAP	3.77		**28.5**	mg/Kg-dry	1	11/6/03 4:56:42 PM	SAM

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0310807	**Client Sample ID:**	B-11 8-9'
Lab ID:	0310807-16	**Collection Date:**	10/1/03 9:15:00 AM
Report Date:	12-Nov-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0 1	H	**28.1**	%	1	11/7/03	DLY
Total Solids		0 1	H	**71.9**	%	1	11/7/03	DLY
SW-846 3050B, ICP METHOD 6010B								
Barium	NELAP	0.46		**211**	mg/Kg-dry	1	11/6/03 5:02:00 PM	SAM
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	52.2		**ND**	µg/Kg-dry	1	11/4/03 9:30.00 PM	TDN
Aroclor 1221	NELAP	52 2		**ND**	µg/Kg-dry	1	11/4/03 9.30 00 PM	TDN
Aroclor 1232	NELAP	52.2		**ND**	µg/Kg-dry	1	11/4/03 9 30.00 PM	TDN
Aroclor 1242	NELAP	52.2		**ND**	µg/Kg-dry	1	11/4/03 9:30:00 PM	TDN
Aroclor 1248	NELAP	52.2		**ND**	µg/Kg-dry	1	11/4/03 9:30:00 PM	TDN
Aroclor 1254	NELAP	52.2		**ND**	µg/Kg-dry	1	11/4/03 9:30:00 PM	TDN
Aroclor 1260	NELAP	52.2		**ND**	µg/Kg-dry	1	11/4/03 9:30:00 PM	TDN
Surr: Decachlorobiphenyl		22-210		**55.2**	%REC	1	11/4/03 9:30.00 PM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**45.7**	%REC	1	11/4/03 9:30.00 PM	TDN

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL 618-344-1004
FAX. 618-344-1005

Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0310807	**Client Sample ID:**	B-05 5-6'
Lab ID:	0310807-17	**Collection Date:**	9/30/03 3:30:00 PM
Report Date:	12-Nov-03	**Matrix:**	SOLID

Analyses		Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
SW-846 1311 TCLP / 3020A GFAA									
Lead, TCLP by GFAA	7421	NELAP	0.002	J	**< 0.002**	mg/L	1	11/7/03	JMF
SW-846 3050B, ICP METHOD 6010B									
Barium		NELAP	0.49		**241**	mg/Kg-dry	1	11/6/03 5:07:18 PM	SAM
Lead		NELAP	3.92		**19.1**	mg/Kg-dry	1	11/6/03 5:07:18 PM	SAM

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COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL 618-344-1004
FAX. 618-344-1005

Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0310807	**Client Sample ID:**	B-05 3-4'
Lab ID:	0310807-18	**Collection Date:**	9/30/03 3:30:00 PM
Report Date:	12-Nov-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
SW-846 3050B, ICP METHOD 6010B								
Barium	NELAP	0.48		**261**	mg/Kg-dry	1	11/6/03 5:28:07 PM	SAM
Chromium	NELAP	0 96		**30.3**	mg/Kg-dry	1	11/6/03 5:28:07 PM	SAM

CHAIN OF CUSTODY

pg. 1 of 2 Work Order # 10867

TEKLAB, INC. 5445 Horseshoe Lake Road ~ Collinsville, IL 62234 ~ Phone: (618) 344-1004 ~ Fax: (618) 344-1005

Client: St. Louis Auto Shredding
Address: Post Office Box 130
City / State / Zip: National Stock Yards IL 62071
Contact: Bryan Johnsrud Phone: 217-787-2118 ext. 207
E-Mail: bjohnsrude rapps.net Fax: 217-787-6641

Are the samples chilled? ☐ NO ☒ YES (Ice or Blue Ice)
Cooler Temperature: 4.8 °C
Preserved in: ☐ Lab ☐ Field

Comments: Analyze even if holding time exceeded. Retain all samples for possible further analysis.

Project Name / Number: SLAS-AOC Site
Sample Collector's Name: Bryan Johnsrud
Requested Due Date:
Billing Instructions PO#:

Lab Use Only	Sample Identification	Date/Time Sampled	# and Type of Containers: UNPRES	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	Other	MATRIX: Water	Drinking Water	Soil	Sludge	Sp. Waste	pH	PCBs	arsenic *	barium	chromium	lead	TCLP lead						
0310807-01	~~B-02~~ 5-6'	09/30/03 11:30AM	1										X					X					No sample *					
02	B-02 15-16'	09/30/03 11:30AM	1										X								X	X						
03	B-04 11-12'	09/30/03 1:30PM	1										X			X		X	X	X	X	X						
04	B-04 14-15'	09/30/03 1:30PM	1										X					X	X*		X	X			*See attached			
05	B-06 7-8'	09/30/03 4:15PM	1										X								X	X			email for			
06	B-06 9-10'	09/30/03 4:15PM	1										X								X	X			additional			
07	B-07 9-10'	09/30/03 5:00PM	1										X				X*	X			X	X			analysis. KAC			
08	B-14 0-1'	10/01/03 11:30AM	1										X			X	X	X	X	X	X	X			11/5/03			
09	B-14 5-6'	10/01/03 11:30AM	1										X					X										
10	B-14 7-8'	10/01/03 11:30AM	1										X					X										

Relinquished By	Date / Time	Received By	Date / Time
Bryan C. Johnsrud	10/30/03 1:05 PM	Shelly Overmeier	10/30/03 1305

E-MAILED 11-3-03

Bryan Johnsrud

CHAIN OF CUSTODY

pg. 2 of 2 Work Order # 10807

TEKLAB, INC. 5445 Horseshoe Lake Road ~ Collinsville, IL 62234 ~ Phone: (618) 344-1004 ~ Fax: (618) 344-1005

Client: St. Louis Auto Shredding
Address: Post Office Box 130
City / State / Zip: National Stock Yards IL 62071
Contact: Bryan Johnsrud Phone: 217-787-2118 ext. 207
E-Mail: bjohnsrud@rapps.net Fax: 217-787-6641

Are the samples chilled? ☐ NO ☒ YES. (Ice ~~or Blue Ice~~)
Cooler Temperature: 4.8 °C
Preserved in: ☐ Lab ☐ Field

Comments: Analyze even if holding time exceeded. Retain all samples for possible further analysis.

Project Name / Number: SLAC-AOC Site
Sample Collector's Name: Bryan Johnsrud
Requested Due Date:
Billing Instructions PO#:

Lab Use Only	Sample Identification	Date/Time Sampled	UNPRES	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	Other	Water	Drinking Water	Soil	Sludge	Sp. Waste	pH	PCBs	arsenic	barium	chromium	lead	TCLP/Rad
0310807-11	B-22 2-3'	10/02/03 1:30PM	1										X			X			X	X		
12	B-02 2-8'	09/30/03 11:30AM	1										X					X				
13	B-17 2-3'	10/01/03 2:30PM	1										X						X	X	X	X
14	B-21 2-3'	10/02/03 1:00PM	1										X						X	X		
15	B-25 2-3'	10/02/03 3:00PM	1										X						X	X	X	X
16	B-11 8-9'	10/01/03 9:15AM	1										X				X		X			
17	B-05 5-6'	09/30/03 3:30PM	1										X						X		X	X
18	B-05 3-4'	09/30/03 3:30PM	1										X						X*	X		
19	B-15 3-4'	10/01/03 12:15PM	1										X					X				
20	B-15 2-3'	10/01/03 12:15PM	1										X						X		X	X

Relinquished By	Date / Time	Received By	Date / Time
Bryan C. Johnsrud	10/30/03 1:05 PM	Kelly Overmeier	10/30/03 1305

From: "Bryan Johnsrud" <bjohnsrud@rapps net>
To: "Kelly Klostermann" <KKlostermann@TeklabInc.com>
Date: 11/3/03 6.02PM
Subject: SLAS - AOC Site

I (will) have 20 additional soil samples ready for pickup Let me know if a Teklab representative can pick these up or if I should arrange for shipping.

I need the following additions for soil samples that you already have Analyze even if holding time has been exceeded.
PCBs B-07 9-10'
Arsenic B-04 2-3'
Barium. B-01 3-4', B-04 2-3', B-04 14-15', B-05 3-4', B-07 2-3', B-08 2-3', B-10 2-3', B-11 3-4', B-12 3-4', and B-16 2-3'
Chromium B-01 3-4', B-04 2-3', B-05 3-4', B-06 3-4', B-07 2-3', B-08 2-3', B-10 2-3', B-11 3-4', B-12 3-4', B-14 2-3', B-18 2-3', B-20 2-3', B-23 2-3', B-24 2-3', and B-25 2-3'
Lead and TCLP Lead (DL < 0.0075 mg/L). B-08 2-3', B-11 4-5', B-16 3-4', and B-24 2-3'
A "not detected" at a reporting limit of 0.53 ug/L was shown for PCBs on the aqueous B-2 sample (Lab ID 0310148-02). I have a groundwater remediation objective of 0.50 ug/L Can the reporting limit be further reduced for that sample? Alternatively, could a lower reporting limit be obtained if another sample was collected from the same location?

What does the acronym "ECD" represent (to an ignorant engineer)?

The case narrative for Work Order 0310543 indicated that the matrix spike did not recover for Method 8082 Does that comment need to be further represented by a qualifier on the results pages? What is acceptable recovery? I would like a brief explanation that I can include in my report for the U S. EPA

In addition, I would like a short discussion on the implications of exceeding the holding times for total solids (percent moisture), PCBs analysis, and PCBs preparation. I acknowledge that Teklab was not responsible for any exceedences of holding time.

TEKLAB, INC

Sample Receipt Checklist

Client Name RAPPS

Date and Time Receive 10/30/03 1:05:00 PM

Work Order Numbe 0310807

Received by SAO

Checklist completed by Elizabeth A. Weber (Signature) 10/30/03 (Date)

Reviewed by KAK (Initials) 10/31/03 (Date)

Matrix

Carrier name Bryan C. Johnsrud

	Yes	No	Not Present
Shipping container/cooler in good condition?	☑	☐	☐
Custody seals intact on shippping container/cooler?	☐	☐	☑
Custody seals intact on sample bottles?	☐	☐	☑
Chain of custody present?	☑	☐	
Chain of custody signed when relinquished and received?	☑	☐	
Chain of custody agrees with sample labels?	☑	☐	
Samples in proper container/bottle?	☑	☐	
Sample containers intact?	☑	☐	
Sufficient sample volume for indicated test?	☑	☐	
All samples received within holding time?	☐	☑	
Container/Temp Blank temperature in compliance?	☑	☐	
Water - VOA vials have zero headspace?	No VOA vials submitted ☑	Yes ☐	No ☐
Water - pH acceptable upon receipt?	☑	☐	

Adjusted? _____ Checked by _____

Any No and/or NA (not applicable) response must be detailed in the Case Narrative or on the Chain of Custody.

Client contacted _____ Date contacted _____ Person contacted _____

Contacted by. _____ Regarding _____

Comments _____

Corrective Action _____

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL 618-344-1004
FAX 618-344-1005

November 13, 2003

Bryan Johnsrud
Rapps Engineering & Applied Science
821 S. Durkin Dr.
Springfield, IL 62791-7349
TEL: (217) 787-2118
FAX: (217) 787-6641

ACCREDITED IN ACCORDANCE WITH

NELAP Accredited #100226

RE: SLAS-AOC Site

OrderNo. 0311100

Dear Bryan Johnsrud:

TEKLAB, INC received 20 samples on 11/5/03 4:20:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest that have been tested. IL ELAP and NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP/Part 186 except where noted in the Case Narrative. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Michael L. Austin
Director of Operations

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL 618-344-1004
FAX 618-344-1005

Client: Rapps Engineering & Applied Science
Project: SLAS-AOC Site
LabOrder: 0311100
Report Date: November 13, 2003

CASE NARRATIVE

Prep Comments for SV_3550_PCB, Sample 0311100-03A: The prep HoldTime was exceeded by 22.8 days.
Prep Comments for SV_3550_PCB, Sample 0311100-08A, 10A: The prep HoldTime was exceeded by 22.0 days.
Prep Comments for SV_3550_PCB, Sample 0311100-12A, 13A: The prep HoldTime was exceeded by 21.9 days.
Prep Comments for SV_3550_PCB, Sample 0311100-14A, 15A: The prep HoldTime was exceeded by 21.8 days.
Prep Comments for SV_3550_PCB, Sample 0311100-16A, 17A, 18A, 20A: The prep HoldTime was exceeded by 20.9 days.
Prep Comments for L_TCLP_MET, Sample 0311100-09A: The prep HoldTime was exceeded by 11.2 days.
Prep Comments for L_TCLP_MET, Sample 0311100-13A, 14A, 15A: The prep HoldTime was exceeded by 11.0 days.
Prep Comments for L_TCLP_MET, Sample 0311100-16A, 17A, 18A: The prep HoldTime was exceeded by 10.1 days.
Analytical Comments for METHOD SV_8082S_S, SAMPLE 0311100-12A, 20A, 20AMS: Matrix interference present in sample.
Analytical Comments for METHOD SV_8082S_S, SAMPLE 0311100-20AMSD: RPD for spikes was not within acceptable limits because of sample composition.

Qualifiers

DF - Dilution Factor	**B** - Analyte detected in the associated Method Blank	**E** - Value above quantitation range
RL - Reporting Limit	**J** - Analyte detected below quantitation limits	**H** - Holding time exceeded
ND - Not Detected at the Reporting Limit	**R** - RPD outside accepted recovery limits	**D** - Diluted out of sample
Surr - Surrogate Standard added by lab	**S** - Spike Recovery outside accepted recovery limits	**MI** - Matrix interference
TNTC - Too numerous to count	***** - Value exceeds Maximum Contaminant Level	**DNI** Did Not Ignite
IDPH - Illinois Department of Public Health	**NELAP** - IL ELAP and NELAP Accredited Field of Testing	

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL 618-344-1004
FAX: 618-344-1005

Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0311100	**Client Sample ID:**	B-02 3'-4'
Lab ID:	0311100-01	**Collection Date:**	9/30/03 11:30:00 AM
Report Date:	13-Nov-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
SW-846 3050B, ICP METHOD 6010B								
Barium	NELAP	0.47		**184**	mg/Kg-dry	1	11/11/03 6:26:48 PM	JMW
Chromium	NELAP	0.94		**22.0**	mg/Kg-dry	1	11/11/03 6:26:48 PM	JMW

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL· 618-344-1004
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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0311100	**Client Sample ID:**	B-03 3'-4'
Lab ID:	0311100-02	**Collection Date:**	9/30/03 12:30:00 PM
Report Date:	13-Nov-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
SW-846 3050B, ICP METHOD 6010B								
Barium	NELAP	0.48		**268**	mg/Kg-dry	1	11/11/03 6:32:05 PM	JMW
Chromium	NELAP	0.96		**33.2**	mg/Kg-dry	1	11/11/03 6:32:05 PM	JMW

TEKLAB, INC.

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COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL. 618-344-1004
FAX· 618-344-1005

Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0311100	**Client Sample ID:**	B-08 10'-11'
Lab ID:	0311100-03	**Collection Date:**	9/30/03 5:45:00 PM
Report Date:	13-Nov-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0 1	H	**33.9**	%	1	11/7/03	DLY
Total Solids		0.1	H	**66.1**	%	1	11/7/03	DLY
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	56.3		**ND**	µg/Kg-dry	1	11/7/03 1:48·00 PM	TDN
Aroclor 1221	NELAP	56.3		**ND**	µg/Kg-dry	1	11/7/03 1 48.00 PM	TDN
Aroclor 1232	NELAP	56.3		**ND**	µg/Kg-dry	1	11/7/03 1 48:00 PM	TDN
Aroclor 1242	NELAP	56.3		**ND**	µg/Kg-dry	1	11/7/03 1·48.00 PM	TDN
Aroclor 1248	NELAP	56.3		**57.0**	µg/Kg-dry	1	11/11/03 9:07.00 PM	TDN
Aroclor 1254	NELAP	56.3		**ND**	µg/Kg-dry	1	11/7/03 1:48·00 PM	TDN
Aroclor 1260	NELAP	56.3		**69.7**	µg/Kg-dry	1	11/7/03 1:48·00 PM	TDN
Surr: Decachlorobiphenyl		22-210		**68.0**	%REC	1	11/7/03 1.48:00 PM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**56.0**	%REC	1	11/7/03 1·48.00 PM	TDN

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ENVIRONMENTAL TESTING LABORATORY

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0311100	**Client Sample ID:**	B-09 2'-3'
Lab ID:	0311100-04	**Collection Date:**	9/30/03 6:30:00 PM
Report Date:	13-Nov-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
SW-846 3050B, ICP METHOD 6010B								
Barium	NELAP	0.48		**266**	mg/Kg-dry	1	11/11/03 6.37 22 PM	JMW
Chromium	NELAP	0.96		**34.1**	mg/Kg-dry	1	11/11/03 6:37.22 PM	JMW

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL 618-344-1004
FAX 618-344-1005

Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0311100	**Client Sample ID:**	B-11 0'-1'
Lab ID:	0311100-05	**Collection Date:**	10/1/03 9:15:00 AM
Report Date:	13-Nov-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
SW-846 3050B, ICP METHOD 6010B								
Arsenic	NELAP	2.40		**7.45**	mg/Kg-dry	1	11/12/03 11:30:10 AM	JMW
Chromium	NELAP	0.96		**89.6**	mg/Kg-dry	1	11/11/03 6:52:54 PM	JMW
SW-846 METHOD 9045C								
pH (1:1)	NELAP	1.00	H	**8.08**		1	11/6/03 11:04:00 AM	ALB

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ENVIRONMENTAL TESTING LABORATORY

TEL 618-344-1004
FAX. 618-344-1005

Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0311100	**Client Sample ID:**	B-12 4'-5'
Lab ID:	0311100-06	**Collection Date:**	10/1/03 10:00:00 AM
Report Date:	13-Nov-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
SW-846 3050B, ICP METHOD 6010B								
Arsenic	NELAP	2.36		**11.4**	mg/Kg-dry	1	11/12/03 11:32:43 AM	JMW

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL: 618-344-1004
FAX 618-344-1005

Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0311100	**Client Sample ID:**	B-13 3'-4'
Lab ID:	0311100-07	**Collection Date:**	10/1/03 10:45:00 AM
Report Date:	13-Nov-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
SW-846 3050B, ICP METHOD 6010B								
Barium	NELAP	0.49		**222**	mg/Kg-dry	1	11/11/03 6:58:10 PM	JMW
Chromium	NELAP	0.98		**39.2**	mg/Kg-dry	1	11/11/03 6:58:10 PM	JMW

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL 618-344-1004
FAX 618-344-1005

Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0311100	**Client Sample ID:**	B-14 0'-1'
Lab ID:	0311100-08	**Collection Date:**	10/1/03 11:30:00 AM
Report Date:	13-Nov-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0.1	H	**24.0**	%	1	11/7/03	DLY
Total Solids		0.1	H	**76.0**	%	1	11/7/03	DLY
SW-846 3050B, ICP METHOD 6010B								
Chromium	NELAP	1.00		**32.3**	mg/Kg-dry	1	11/11/03 7:24:13 PM	JMW
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	50 0		**ND**	µg/Kg-dry	1	11/7/03 2 47:00 PM	TDN
Aroclor 1221	NELAP	50 0		**ND**	µg/Kg-dry	1	11/7/03 2:47:00 PM	TDN
Aroclor 1232	NELAP	50 0		**ND**	µg/Kg-dry	1	11/7/03 2:47:00 PM	TDN
Aroclor 1242	NELAP	50.0		**ND**	µg/Kg-dry	1	11/7/03 2 47.00 PM	TDN
Aroclor 1248	NELAP	50.0		**ND**	µg/Kg-dry	1	11/7/03 2 47:00 PM	TDN
Aroclor 1254	NELAP	50.0		**ND**	µg/Kg-dry	1	11/7/03 2:47.00 PM	TDN
Aroclor 1260	NELAP	50.0		**ND**	µg/Kg-dry	1	11/7/03 2:47:00 PM	TDN
Surr: Decachlorobiphenyl		22-210		**92.8**	%REC	1	11/7/03 2:47 00 PM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**54.1**	%REC	1	11/7/03 2 47:00 PM	TDN
SW-846 METHOD 9045C								
pH (1 1)	NELAP	1.00	H	**7.83**		1	11/7/03 10:00.00 AM	ALB

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5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL. 618-344-1004
FAX 618-344-1005

Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0311100	**Client Sample ID:**	B-14 3'-4'
Lab ID:	0311100-09	**Collection Date:**	10/1/03 11:30:00 AM
Report Date:	13-Nov-03	**Matrix:**	SOLID

Analyses		Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
SW-846 1311 TCLP / 3020A GFAA									
Lead, TCLP by GFAA	7421	NELAP	0.002		**< 0.002**	mg/L	1	11/12/03	JMF
SW-846 3050B, ICP METHOD 6010B									
Lead		NELAP	3.70		**18.3**	mg/Kg-dry	1	11/11/03 7:29:31 PM	JMW

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0311100	**Client Sample ID:**	B-15 0'-1'
Lab ID:	0311100-10	**Collection Date:**	10/1/03 12:15:00 PM
Report Date:	13-Nov-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0.1	H	**25.1**	%	1	11/7/03	DLY
Total Solids		0 1	H	**74.9**	%	1	11/7/03	DLY
SW-846 3050B. ICP METHOD 6010B								
Chromium	NELAP	1 00		**37.2**	mg/Kg-dry	1	11/11/03 7:34:48 PM	JMW
SW-846 3550B. METHOD 8082. POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	49.9		**ND**	µg/Kg-dry	1	11/7/03 3.07:00 PM	TDN
Aroclor 1221	NELAP	49.9		**ND**	µg/Kg-dry	1	11/7/03 3.07.00 PM	TDN
Aroclor 1232	NELAP	49.9		**ND**	µg/Kg-dry	1	11/7/03 3:07.00 PM	TDN
Aroclor 1242	NELAP	49.9		**ND**	µg/Kg-dry	1	11/7/03 3.07:00 PM	TDN
Aroclor 1248	NELAP	49.9		**ND**	µg/Kg-dry	1	11/7/03 3:07.00 PM	TDN
Aroclor 1254	NELAP	49.9		**73.7**	µg/Kg-dry	1	11/7/03 3:07 00 PM	TDN
Aroclor 1260	NELAP	49.9		**54.1**	µg/Kg-dry	1	11/7/03 3:07:00 PM	TDN
Surr. Decachlorobiphenyl		22-210		**73.6**	%REC	1	11/7/03 3:07:00 PM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**50.0**	%REC	1	11/7/03 3:07:00 PM	TDN
SW-846 METHOD 9045C								
pH (1.1)	NELAP	1 00	H	**7.41**		1	11/7/03 10:01:00 AM	ALB

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0311100	**Client Sample ID:**	B-16 0'-1'
Lab ID:	0311100-11	**Collection Date:**	10/1/03 1:00:00 PM
Report Date:	13-Nov-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
SW-846 3050B, ICP METHOD 6010B								
Arsenic	NELAP	2.45		**4.62**	mg/Kg-dry	1	11/12/03 11:35:16 AM	JMW
Chromium	NELAP	0.98		**52.5**	mg/Kg-dry	1	11/11/03 7:40:05 PM	JMW
SW-846 METHOD 9045C								
pH (1:1)	NELAP	1.00	H	**7.75**		1	11/6/03 11:08:00 AM	ALB

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0311100	**Client Sample ID:**	B-17 0'-1'
Lab ID:	0311100-12	**Collection Date:**	10/1/03 2:30:00 PM
Report Date:	13-Nov-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0 1	H	**21.3**	%	1	11/7/03	DLY
Total Solids		0.1	H	**78.7**	%	1	11/7/03	DLY
SW-846 3050B. ICP METHOD 6010B								
Chromium	NELAP	1 00		**82.5**	mg/Kg-dry	1	11/11/03 7 45.22 PM	JMW
SW-846 3550B. METHOD 8082. POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	47 8		**ND**	µg/Kg-dry	1	11/7/03 3.26:00 PM	TDN
Aroclor 1221	NELAP	47.8		**ND**	µg/Kg-dry	1	11/7/03 3:26:00 PM	TDN
Aroclor 1232	NELAP	47 8		**ND**	µg/Kg-dry	1	11/7/03 3.26:00 PM	TDN
Aroclor 1242	NELAP	47.8		**ND**	µg/Kg-dry	1	11/7/03 3.26:00 PM	TDN
Aroclor 1248	NELAP	47.8		**ND**	µg/Kg-dry	1	11/7/03 3:26:00 PM	TDN
Aroclor 1254	NELAP	47.8		**181**	µg/Kg-dry	1	11/7/03 3 26:00 PM	TDN
Aroclor 1260	NELAP	47.8		**101**	µg/Kg-dry	1	11/7/03 3.26:00 PM	TDN
Surr: Decachlorobiphenyl		22-210	S	**234**	%REC	1	11/7/03 3.26:00 PM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**56.6**	%REC	1	11/7/03 3.26:00 PM	TDN
SW-846 METHOD 9045C								
pH (1 1)	NELAP	1 00	H	**7.09**		1	11/7/03 10:02:00 AM	ALB

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0311100	**Client Sample ID:**	B-18 0'-1'
Lab ID:	0311100-13	**Collection Date:**	10/1/03 3:00:00 PM
Report Date:	13-Nov-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0.1	H	**29.6**	%	1	11/7/03	DLY
Total Solids		0 1	H	**70.4**	%	1	11/7/03	DLY
SW-846 1311 TCLP / 3020A GFAA								
Lead, TCLP by GFAA 7421	NELAP	0.004		**0.011**	mg/L	2	11/12/03	JMF
SW-846 3050B, ICP METHOD 6010B								
Arsenic	NELAP	2.50		**6.47**	mg/Kg-dry	1	11/12/03 11 38.32 AM	JMW
Chromium	NELAP	1.00		**40.7**	mg/Kg-dry	1	11/11/03 7:50:39 PM	JMW
Lead	NELAP	4.00		**34.4**	mg/Kg-dry	1	11/11/03 7:50:39 PM	JMW
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	54 1		**ND**	µg/Kg-dry	1	11/7/03 3 46:00 PM	TDN
Aroclor 1221	NELAP	54 1		**ND**	µg/Kg-dry	1	11/7/03 3:46:00 PM	TDN
Aroclor 1232	NELAP	54 1		**ND**	µg/Kg-dry	1	11/7/03 3 46 00 PM	TDN
Aroclor 1242	NELAP	54.1		**ND**	µg/Kg-dry	1	11/7/03 3:46:00 PM	TDN
Aroclor 1248	NELAP	54.1		**ND**	µg/Kg-dry	1	11/7/03 3 46.00 PM	TDN
Aroclor 1254	NELAP	54.1		**ND**	µg/Kg-dry	1	11/7/03 3:46:00 PM	TDN
Aroclor 1260	NELAP	54 1		**ND**	µg/Kg-dry	1	11/7/03 3.46 00 PM	TDN
Surr: Decachlorobiphenyl		22-210		**50.8**	%REC	1	11/7/03 3:46.00 PM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**40.8**	%REC	1	11/7/03 3:46:00 PM	TDN
SW-846 METHOD 9045C								
pH (1:1)	NELAP	1.00	H	**7.10**		1	11/7/03 10:03:00 AM	ALB

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0311100	**Client Sample ID:**	B-19 0'-1'
Lab ID:	0311100-14	**Collection Date:**	10/1/03 3:30:00 PM
Report Date:	13-Nov-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G								
Percent Moisture		0.1	H	**28.5**	%	1	11/7/03	DLY
Total Solids		0 1	H	**71.5**	%	1	11/7/03	DLY
SW-846 1311 TCLP / 3020A GFAA								
Lead, TCLP by GFAA 7421	NELAP	0.004		**0.012**	mg/L	2	11/12/03	JMF
SW-846 3050B, ICP METHOD 6010B								
Arsenic	NELAP	2 50		**7.23**	mg/Kg-dry	1	11/12/03 11.41:05 AM	JMW
Chromium	NELAP	1.00		**41.7**	mg/Kg-dry	1	11/11/03 7:55:57 PM	JMW
Lead	NELAP	4.00		**84.4**	mg/Kg-dry	1	11/11/03 7 55:57 PM	JMW
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	51 6		**ND**	µg/Kg-dry	1	11/7/03 4:06 00 PM	TDN
Aroclor 1221	NELAP	51 6		**ND**	µg/Kg-dry	1	11/7/03 4:06.00 PM	TDN
Aroclor 1232	NELAP	51.6		**ND**	µg/Kg-dry	1	11/7/03 4:06:00 PM	TDN
Aroclor 1242	NELAP	51 6		**ND**	µg/Kg-dry	1	11/7/03 4:06:00 PM	TDN
Aroclor 1248	NELAP	51.6		**ND**	µg/Kg-dry	1	11/7/03 4:06 00 PM	TDN
Aroclor 1254	NELAP	51 6		**446**	µg/Kg-dry	1	11/7/03 4:06:00 PM	TDN
Aroclor 1260	NELAP	51.6		**ND**	µg/Kg-dry	1	11/7/03 4:06.00 PM	TDN
Surr: Decachlorobiphenyl		22-210		**137**	%REC	1	11/7/03 4:06:00 PM	TDN
Surr: Tetrachloro-meta-xylene		10-153		**58.8**	%REC	1	11/7/03 4:06:00 PM	TDN
SW-846 METHOD 9045C								
pH (1 1)	NELAP	1.00	H	**7.10**		1	11/7/03 10:05.00 AM	ALB

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0311100	**Client Sample ID:**	B-20 0'-1'
Lab ID:	0311100-15	**Collection Date:**	10/1/03 4:00:00 PM
Report Date:	13-Nov-03	**Matrix:**	SOLID

Analyses		Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G									
Percent Moisture			0.1	H	**28.4**	%	1	11/7/03	DLY
Total Solids			0 1	H	**71.6**	%	1	11/7/03	DLY
SW-846 1311 TCLP / 3020A GFAA									
Lead, TCLP by GFAA	7421	NELAP	0 004		**0.004**	mg/L	2	11/12/03	JMF
SW-846 3050B, ICP METHOD 6010B									
Arsenic		NELAP	2 31		**8.19**	mg/Kg-dry	1	11/12/03 1.37:59 PM	JMW
Chromium		NELAP	0.93		**40.9**	mg/Kg-dry	1	11/11/03 8 01:14 PM	JMW
Lead		NELAP	3 70		**23.2**	mg/Kg-dry	1	11/11/03 8:01 14 PM	JMW
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD									
Aroclor 1016		NELAP	53 0		**ND**	µg/Kg-dry	1	11/7/03 4.25.00 PM	TDN
Aroclor 1221		NELAP	53.0		**ND**	µg/Kg-dry	1	11/7/03 4:25.00 PM	TDN
Aroclor 1232		NELAP	53.0		**ND**	µg/Kg-dry	1	11/7/03 4.25:00 PM	TDN
Aroclor 1242		NELAP	53 0		**ND**	µg/Kg-dry	1	11/7/03 4.25.00 PM	TDN
Aroclor 1248		NELAP	53.0		**ND**	µg/Kg-dry	1	11/7/03 4:25:00 PM	TDN
Aroclor 1254		NELAP	53.0		**ND**	µg/Kg-dry	1	11/7/03 4.25:00 PM	TDN
Aroclor 1260		NELAP	53.0		**ND**	µg/Kg-dry	1	11/7/03 4.25.00 PM	TDN
Surr: Decachlorobiphenyl			22-210		**65.0**	%REC	1	11/7/03 4:25:00 PM	TDN
Surr. Tetrachloro-meta-xylene			10-153		**46.2**	%REC	1	11/7/03 4:25:00 PM	TDN
SW-846 METHOD 9045C									
pH (1 1)		NELAP	1 00	H	**7.05**		1	11/7/03 10:05.00 AM	ALB

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ENVIRONMENTAL TESTING LABORATORY

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0311100	**Client Sample ID:**	B-21 0'-1'
Lab ID:	0311100-16	**Collection Date:**	10/2/03 1:00:00 PM
Report Date:	13-Nov-03	**Matrix:**	SOLID

Analyses		Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G									
Percent Moisture			0.1	H	**30.7**	%	1	11/7/03	DLY
Total Solids			0 1	H	**69.3**	%	1	11/7/03	DLY
SW-846 1311 TCLP / 3020A GFAA									
Lead, TCLP by GFAA	7421	NELAP	0.002		**0.005**	mg/L	1	11/12/03	JMF
SW-846 3050B, ICP METHOD 6010B									
Arsenic		NELAP	2.45		**7.49**	mg/Kg-dry	1	11/12/03 1:41:13 PM	JMW
Chromium		NELAP	0.98		**40.6**	mg/Kg-dry	1	11/11/03 8:16:50 PM	JMW
Lead		NELAP	3.92		**20.8**	mg/Kg-dry	1	11/11/03 8:16 50 PM	JMW
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD									
Aroclor 1016		NELAP	52.6		**ND**	µg/Kg-dry	1	11/7/03 4:45.00 PM	TDN
Aroclor 1221		NELAP	52.6		**ND**	µg/Kg-dry	1	11/7/03 4.45.00 PM	TDN
Aroclor 1232		NELAP	52.6		**ND**	µg/Kg-dry	1	11/7/03 4:45:00 PM	TDN
Aroclor 1242		NELAP	52.6		**ND**	µg/Kg-dry	1	11/7/03 4:45.00 PM	TDN
Aroclor 1248		NELAP	52 6		**ND**	µg/Kg-dry	1	11/7/03 4 45.00 PM	TDN
Aroclor 1254		NELAP	52 6		**ND**	µg/Kg-dry	1	11/7/03 4:45:00 PM	TDN
Aroclor 1260		NELAP	52.6		**ND**	µg/Kg-dry	1	11/7/03 4:45:00 PM	TDN
Surr: Decachlorobiphenyl			22-210		**43.1**	%REC	1	11/7/03 4:45:00 PM	TDN
Surr: Tetrachloro-meta-xylene			10-153		**31.9**	%REC	1	11/7/03 4:45:00 PM	TDN
SW-846 METHOD 9045C									
pH (1:1)		NELAP	1 00	H	**6.88**		1	11/7/03 10:06:00 AM	ALB

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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0311100	**Client Sample ID:**	B-22 0'-1'
Lab ID:	0311100-17	**Collection Date:**	10/2/03 1:30:00 PM
Report Date:	13-Nov-03	**Matrix:**	SOLID

Analyses		Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G									
Percent Moisture			0 1	H	**29.0**	%	1	11/7/03	DLY
Total Solids			0 1	H	**71.0**	%	1	11/7/03	DLY
SW-846 1311 TCLP / 3020A GFAA									
Lead, TCLP by GFAA	7421	NELAP	0.002		**0.010**	mg/L	1	11/12/03	JMF
SW-846 3050B, ICP METHOD 6010B									
Arsenic		NELAP	2 50		**7.21**	mg/Kg-dry	1	11/12/03 11 54.27 AM	JMW
Chromium		NELAP	1 00		**38.6**	mg/Kg-dry	1	11/11/03 8:22 09 PM	JMW
Lead		NELAP	4.00		**29.7**	mg/Kg-dry	1	11/11/03 8 22:09 PM	JMW
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD									
Aroclor 1016		NELAP	52 6		**ND**	µg/Kg-dry	1	11/7/03 5 05:00 PM	TDN
Aroclor 1221		NELAP	52.6		**ND**	µg/Kg-dry	1	11/7/03 5:05.00 PM	TDN
Aroclor 1232		NELAP	52.6		**ND**	µg/Kg-dry	1	11/7/03 5 05.00 PM	TDN
Aroclor 1242		NELAP	52.6		**ND**	µg/Kg-dry	1	11/7/03 5.05.00 PM	TDN
Aroclor 1248		NELAP	52.6		**ND**	µg/Kg-dry	1	11/7/03 5.05:00 PM	TDN
Aroclor 1254		NELAP	52 6		**ND**	µg/Kg-dry	1	11/7/03 5 05:00 PM	TDN
Aroclor 1260		NELAP	1320		**22200**	µg/Kg-dry	25	11/10/03 9.54 00 PM	TDN
Surr: Decachlorobiphenyl			22-210		**148**	%REC	1	11/7/03 5.05.00 PM	TDN
Surr: Tetrachloro-meta-xylene			10-153		**46.2**	%REC	1	11/7/03 5:05:00 PM	TDN
SW-846 METHOD 9045C									
pH (1 1)		NELAP	1 00	H	**6.73**		1	11/7/03 10 07 00 AM	ALB

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TEL: 618-344-1004
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Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS-AOC Site
WorkOrder:	0311100	**Client Sample ID:**	B-23 0'-1'
Lab ID:	0311100-18	**Collection Date:**	10/2/03 2:00:00 PM
Report Date:	13-Nov-03	**Matrix:**	SOLID

Analyses		Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED. 2540G									
Percent Moisture			0 1	H	**29.6**	%	1	11/7/03	DLY
Total Solids			0.1	H	**70.4**	%	1	11/7/03	DLY
SW-846 1311 TCLP / 3020A GFAA									
Lead, TCLP by GFAA	7421	NELAP	0 002		**0.003**	mg/L	1	11/12/03	JMF
SW-846 3050B, ICP METHOD 6010B									
Arsenic		NELAP	2.40		**6.20**	mg/Kg-dry	1	11/12/03 11:57:00 AM	JMW
Chromium		NELAP	0.96		**40.9**	mg/Kg-dry	1	11/11/03 8.27:29 PM	JMW
Lead		NELAP	3.85		**51.3**	mg/Kg-dry	1	11/11/03 8:27.29 PM	JMW
SW-846 3550B, METHOD 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD									
Aroclor 1016		NELAP	54 5		**ND**	µg/Kg-dry	1	11/7/03 5:25.00 PM	TDN
Aroclor 1221		NELAP	54.5		**ND**	µg/Kg-dry	1	11/7/03 5.25:00 PM	TDN
Aroclor 1232		NELAP	54 5		**ND**	µg/Kg-dry	1	11/7/03 5.25:00 PM	TDN
Aroclor 1242		NELAP	54.5		**ND**	µg/Kg-dry	1	11/7/03 5:25 00 PM	TDN
Aroclor 1248		NELAP	54.5		**ND**	µg/Kg-dry	1	11/7/03 5.25.00 PM	TDN
Aroclor 1254		NELAP	54.5		**ND**	µg/Kg-dry	1	11/7/03 5.25:00 PM	TDN
Aroclor 1260		NELAP	54.5		**ND**	µg/Kg-dry	1	11/7/03 5:25:00 PM	TDN
Surr. Decachlorobiphenyl			22-210		**61.2**	%REC	1	11/7/03 5:25:00 PM	TDN
Surr: Tetrachloro-meta-xylene			10-153		**38.8**	%REC	1	11/7/03 5:25 00 PM	TDN
SW-846 METHOD 9045C									
pH (1:1)		NELAP	1.00	H	**6.88**		1	11/7/03 10:08 00 AM	ALB

CHAIN OF CUSTODY

pg. 1 of 2 Work Order # 11100

TEKLAB, INC. 5445 Horseshoe Lake Road ~ Collinsville, IL 62234 ~ Phone: (618) 344-1004 ~ Fax: (618) 344-1005

Client: St. Louis Auto Shredding
Address: Post Office Box 130
City / State / Zip: National Stock Yards IL 62071
Contact: Bryan Johnsrud Phone: 217-787-2118 ext. 207
E-Mail: bjohnsrud@rapps.net Fax: 217-787-6641

Are the samples chilled? ☐ NO ☒ YES (Ice ~~or Blue Ice~~)
Cooler Temperature: 2.6 °C
Preserved in: ☐ Lab ☐ Field

Comments: Analyze even if holding times are exceeded.
Retain all samples for possible further analysis.

Project Name / Number: SLAS-AOC Site
Sample Collector's Name: Bryan Johnsrud
Requested Due Date:
Billing Instructions PO#:

Lab Use Only	Sample Identification	Date/Time Sampled	# and Type of Containers: UNPRES	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	Other	MATRIX: Water	Drinking Water	Soil	Sludge	Sp. Waste	pH	PCBs	arsenic	barium	chromium	lead	TCLP lead
0311100-01	B-02 3'-4'	09/30/03 11:30AM	1										X						X	X		
-02	B-03 3'-4'	09/30/03 12:30PM	1										X						X	X		
-03	B-08 10'-11'	09/30/03 5:45PM	1										X				X					
-04	B-09 2'-3'	09/30/03 6:30PM	1										X						X	X		
-05	B-11 0'-1'	10/01/03 9:15AM	1										X			X		X		X		
-06	B-12 4'-5'	10/01/03 10:00AM	1										X					X				
-07	B-13 3'-4'	10/01/03 10:45AM	1										X						X	X		
-08	B-14 0'-1'	10/01/03 11:30AM	1										X			X	X			X		
-09	B-14 3'-4'	10/01/03 11:30AM	1										X								X	X
-10	B-15 0'-1'	10/01/03 12:15PM	1										X			X	X			X		

E-MAILED 11-13-03

Relinquished By	Date / Time	Received By	Date / Time
Bryan C. Johnsrud	11/5/03 13:55	John Kelly	11/5/03 13:55
John Kelly	11/5/03 16:20	Heather Barnes	11/5/03 1620

CHAIN OF CUSTODY

pg. 2 of 2 Work Order # 11100

TEKLAB, INC. 5445 Horseshoe Lake Road ~ Collinsville, IL 62234 ~ Phone: (618) 344-1004 ~ Fax: (618) 344-1005

Client: St. Louis Auto Shredding
Address: Post Office Box 130
City / State / Zip: National Stock Yards IL 62071
Contact: Bryan Johnsrud Phone: 217-787-2118 ext. 207
E-Mail: bjohnsrud@rapps.net Fax: 217-787-6641

Are the samples chilled? ☐ NO ☒ YES (Ice or Blue Ice)
Cooler Temperature: _____ °C
Preserved in: ☐ Lab ☐ Field

Comments: Analyze even if holding times are exceeded. Retain all samples for possible further analysis

Project Name / Number: SLAS-AOC Site
Sample Collector's Name: Bryan Johnsrud
Requested Due Date:
Billing Instructions PO#:

Lab Use Only	Sample Identification		Date/Time Sampled	# and Type of Containers: UNPRES	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	Other	MATRIX: Water	Drinking Water	Soil	Sludge	Sp. Waste	INDICATE ANALYSIS REQUESTED: pH	PCBs	arsenic	barium	chromium	lead	TCLP lead
-11	B-16	0'-1'	10/01/03 1:00PM	1										X			X		X		X		
-12	B-17	0'-1'	10/01/03 2:30 PM	1										X			X	X			X		
-13	B-18	0'-1'	10/01/03 3:00PM	1										X			X	X	X		X	X	X
-14	B-19	0'-1'	10/01/03 3:30 PM	1										X			X	X	X		X	X	X
-15	B-20	0'-1'	10/01/03 4:00PM	1										X			X	X	X		X	X	X
-16	B-21	0'-1'	10/02/03 1:00PM	1										X			X	X	X		X	X	X
-17	B-22	0'-1'	10/02/03 1:30PM	1										X			X	X	X		X	X	X
-18	B-23	0'-1'	10/02/03 2:00PM	1										X			X	X	X		X	X	X
-19	B-24	0'-1'	10/02/03 2:30 PM	1										X			X		X		X		
-20	B-25	0'-1'	10/02/03 3:00PM	1										X			X	X	X		X		

Relinquished By	Date / Time	Received By	Date / Time
Bryan G. Johnsrud	11/5/03 13:55	John Kelly	11/5/03 13:55
John Kelly	11/5/03 16:20	Heather Barnes	11/5/03 1620

TEKLAB, INC

Sample Receipt Checklist

Client Name RAPPS

Date and Time Receive 11/5/03 4:20:00 PM

Work Order Numbe 0311100

Received by HAB

Checklist completed by Heather Barnes 11/5/03 (Signature / Date)

Reviewed by KAK 11/6/03 (Initials / Date)

Matrix

Carrier name John Riley

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Water - VOA vials have zero headspace?	No VOA vials submitted ☑	Yes ☐	No ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	

Adjusted? _____ Checked by _____

Any No and/or NA (not applicable) response must be detailed in the Case Narrative or on the Chain of Custody

Client contacted _____ Date contacted _____ Person contacted _____

Contacted by _____ Regarding _____

Comments: _____

Corrective Action _____

M11/18/03

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL· 618-344-1004
FAX 618-344-1005

November 13, 2003

Bryan Johnsrud
Rapps Engineering & Applied Science
821 S. Durkin Dr.
Springfield, IL 62791-7349
TEL: (217) 787-2118
FAX: (217) 787-6641

ACCREDITED IN ACCORDANCE WITH

NELAP Accredited #100226

RE: SLAS AOC Site

OrderNo. 0311125

Dear Bryan Johnsrud:

TEKLAB, INC received 17 samples on 10/7/03 for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest that have been tested. IL ELAP and NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP/Part 186 except where noted in the Case Narrative. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Michael L. Austin
Director of Operations

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL: 618-344-1004
FAX 618-344-1005

Client: Rapps Engineering & Applied Science
Project: SLAS AOC Site
LabOrder: 0311125
Report Date: November 13, 2003

CASE NARRATIVE

Prep Comments for L_TCLP_MET, Sample 0311125-04A: The prep HoldTime was exceeded by 8.82 days.
Prep Comments for L_TCLP_MET, Sample 0311125-07A: The prep HoldTime was exceeded by 8.17 days.
Prep Comments for L_TCLP_MET, Sample 0311125-09A: The prep HoldTime was exceeded by 8.02 days.
Prep Comments for L_TCLP_MET, Sample 0311125-17A: The prep HoldTime was exceeded by 6.95 days.

Qualifiers

DF - Dilution Factor	**B** - Analyte detected in the associated Method Blank	**E** - Value above quantitation range
RL - Reporting Limit	**J** - Analyte detected below quantitation limits	**H** - Holding time exceeded
ND - Not Detected at the Reporting Limit	**R** - RPD outside accepted recovery limits	**D** - Diluted out of sample
Surr - Surrogate Standard added by lab	**S** - Spike Recovery outside accepted recovery limits	**MI** - Matrix interference
TNTC - Too numerous to count	***** - Value exceeds Maximum Contaminant Level	**DNI** Did Not Ignite
IDPH - Illinois Department of Public Health	**NELAP** - IL ELAP and NELAP Accredited Field of Testing	

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL 618-344-1004
FAX 618-344-1005

Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS AOC Site
WorkOrder:	0311125	**Client Sample ID:**	B-4 2'-3'
Lab ID:	0311125-01	**Collection Date:**	9/30/03 1:30:00 PM
Report Date:	13-Nov-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
SW-846 3050B, ICP METHOD 6010B								
Arsenic	NELAP	2.45		**6.24**	mg/Kg-dry	1	11/12/03 12:04:38 PM	JMW
Barium	NELAP	0.49		**214**	mg/Kg-dry	1	11/11/03 8:43:27 PM	JMW
Chromium	NELAP	0.98		**31.5**	mg/Kg-dry	1	11/11/03 8:43 27 PM	JMW

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL 618-344-1004
FAX. 618-344-1005

Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS AOC Site
WorkOrder:	0311125	**Client Sample ID:**	B-7 2'-3'
Lab ID:	0311125-02	**Collection Date:**	9/30/03 5:00:00 PM
Report Date:	13-Nov-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
SW-846 3050B, ICP METHOD 6010B								
Barium	NELAP	0.47		**218**	mg/Kg-dry	1	11/12/03 11:47:19 AM	SAM
Chromium	NELAP	0 94		**33.9**	mg/Kg-dry	1	11/12/03 11:47:19 AM	SAM

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL: 618-344-1004
FAX: 618-344-1005

Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS AOC Site
WorkOrder:	0311125	**Client Sample ID:**	B-2 1'-2'
Lab ID:	0311125-03	**Collection Date:**	9/30/03 11:30:00 PM
Report Date:	13-Nov-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
SW-846 3050B, ICP METHOD 6010B								
Barium	NELAP	0.50		**258**	mg/Kg-dry	1	11/12/03 12:13:25 PM	SAM

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL 618-344-1004
FAX 618-344-1005

Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS AOC Site
WorkOrder:	0311125	**Client Sample ID:**	B-8 2'-3'
Lab ID:	0311125-04	**Collection Date:**	9/30/03 5:45:00 PM
Report Date:	13-Nov-03	**Matrix:**	SOLID

Analyses		Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
SW-846 1311 TCLP / 3020A GFAA									
Lead, TCLP by GFAA	7421	NELAP	0.002	J	**< 0.002**	mg/L	1	11/12/03	JMF
SW-846 3050B, ICP METHOD 6010B									
Arsenic		NELAP	2.50		**8.40**	mg/Kg-dry	1	11/12/03 2:03:54 PM	JMW
Barium		NELAP	0 50		**247**	mg/Kg-dry	1	11/12/03 11:52:38 AM	SAM
Chromium		NELAP	1 00		**38.7**	mg/Kg-dry	1	11/12/03 11.52:38 AM	SAM

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL· 618-344-1004
FAX 618-344-1005

Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS AOC Site
WorkOrder:	0311125	**Client Sample ID:**	B-10 2'-3'
Lab ID:	0311125-05	**Collection Date:**	10/1/03 8:30:00 AM
Report Date:	13-Nov-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
SW-846 3050B, ICP METHOD 6010B								
Barium	NELAP	0.47		**299**	mg/Kg-dry	1	11/12/03 11:57:55 AM	SAM
Chromium	NELAP	0.94		**34.3**	mg/Kg-dry	1	11/12/03 11:57:55 AM	SAM

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL: 618-344-1004
FAX: 618-344-1005

Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS AOC Site
WorkOrder:	0311125	**Client Sample ID:**	B-11 3'-4'
Lab ID:	0311125-06	**Collection Date:**	10/1/03 9:15:00 AM
Report Date:	13-Nov-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
SW-846 3050B, ICP METHOD 6010B								
Barium	NELAP	0.50		**692**	mg/Kg-dry	1	11/12/03 12:29.11 PM	SAM
Chromium	NELAP	1.00		**31.8**	mg/Kg-dry	1	11/12/03 12:29:11 PM	SAM

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL: 618-344-1004
FAX: 618-344-1005

Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS AOC Site
WorkOrder:	0311125	**Client Sample ID:**	B-11 4'-5'
Lab ID:	0311125-07	**Collection Date:**	10/1/03 9:15:00 AM
Report Date:	13-Nov-03	**Matrix:**	SOLID

Analyses		Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
SW-846 1311 TCLP / 3020A GFAA									
Lead, TCLP by GFAA	7421	NELAP	0.002		**0.003**	mg/L	1	11/12/03	JMF
SW-846 3050B, ICP METHOD 6010B									
Lead		NELAP	3.64		**21.4**	mg/Kg-dry	1	11/12/03 12:34:29 PM	SAM

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL 618-344-1004
FAX. 618-344-1005

Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS AOC Site
WorkOrder:	0311125	**Client Sample ID:**	B-16 2'-3'
Lab ID:	0311125-08	**Collection Date:**	10/1/03 1:00:00 PM
Report Date:	13-Nov-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
SW-846 3050B, ICP METHOD 6010B								
Banum	NELAP	0.46		**189**	mg/Kg-dry	1	11/12/03 12:39:46 PM	SAM

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL. 618-344-1004
FAX 618-344-1005

Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS AOC Site
WorkOrder:	0311125	**Client Sample ID:**	B-16 3'-4'
Lab ID:	0311125-09	**Collection Date:**	10/1/03 1:00:00 PM
Report Date:	13-Nov-03	**Matrix:**	SOLID

Analyses		Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
SW-846 1311 TCLP / 3020A GFAA									
Lead, TCLP by GFAA	7421	NELAP	0.002		**0.005**	mg/L	1	11/12/03	JMF
SW-846 3050B, ICP METHOD 6010B									
Lead		NELAP	3.85		**15.6**	mg/Kg-dry	1	11/12/03 12:45:03 PM	SAM

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL. 618-344-1004
FAX 618-344-1005

Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS AOC Site
WorkOrder:	0311125	**Client Sample ID:**	B-01 3'-4'
Lab ID:	0311125-10	**Collection Date:**	9/30/03 10:30:00 AM
Report Date:	13-Nov-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
SW-846 3050B, ICP METHOD 6010B								
Barium	NELAP	0.50		**239**	mg/Kg-dry	1	11/12/03 1.00:53 PM	SAM
Chromium	NELAP	1.00		**28.3**	mg/Kg-dry	1	11/12/03 1:00.53 PM	SAM

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5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL 618-344-1004
FAX 618-344-1005

Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS AOC Site
WorkOrder:	0311125	**Client Sample ID:**	B-06 3'-4'
Lab ID:	0311125-11	**Collection Date:**	9/30/03 4:15:00 PM
Report Date:	13-Nov-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
SW-846 3050B, ICP METHOD 6010B								
Chromium	NELAP	0.91		**40.6**	mg/Kg-dry	1	11/12/03 10:29.15 AM	SAM

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL: 618-344-1004
FAX. 618-344-1005

Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS AOC Site
WorkOrder:	0311125	**Client Sample ID:**	B-12 3'-4'
Lab ID:	0311125-12	**Collection Date:**	10/1/03 10:00:00 AM
Report Date:	13-Nov-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
SW-846 3050B, ICP METHOD 6010B								
Barium	NELAP	0.47		**265**	mg/Kg-dry	1	11/12/03 10.44:58 AM	SAM
Chromium	NELAP	0.94		**37.6**	mg/Kg-dry	1	11/12/03 10.44:58 AM	SAM

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL 618-344-1004
FAX: 618-344-1005

Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS AOC Site
WorkOrder:	0311125	**Client Sample ID:**	B-14 2'-3'
Lab ID:	0311125-13	**Collection Date:**	10/1/03 11:30:00 AM
Report Date:	13-Nov-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
SW-846 3050B, ICP METHOD 6010B								
Chromium	NELAP	1.00		**36.2**	mg/Kg-dry	1	11/12/03 11:10:38 AM	SAM

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL 618-344-1004
FAX 618-344-1005

Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS AOC Site
WorkOrder:	0311125	**Client Sample ID:**	B-18 2-3'
Lab ID:	0311125-14	**Collection Date:**	10/1/03 3:00:00 PM
Report Date:	13-Nov-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
SW-846 3050B, ICP METHOD 6010B								
Chromium	NELAP	0.96		**36.9**	mg/Kg-dry	1	11/12/03 11:15:53 AM	SAM

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL: 618-344-1004
FAX: 618-344-1005

Laboratory Results

CLIENT:	Rapps Engineerng & Applied Science	**Client Project:**	SLAS AOC Site
WorkOrder:	0311125	**Client Sample ID:**	B-20 2-3'
Lab ID:	0311125-15	**Collection Date:**	10/1/03 4:00:00 PM
Report Date:	13-Nov-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
SW-846 3050B, ICP METHOD 6010B								
Chromium	NELAP	0.96		**36.2**	mg/Kg-dry	1	11/12/03 11.21:12 AM	SAM

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL: 618-344-1004
FAX. 618-344-1005

Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS AOC Site
WorkOrder:	0311125	**Client Sample ID:**	B-23 2-3'
Lab ID:	0311125-16	**Collection Date:**	10/2/03 2:00:00 PM
Report Date:	13-Nov-03	**Matrix:**	SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
SW-846 3050B, ICP METHOD 6010B								
Chromium	NELAP	0.94		**32.2**	mg/Kg-dry	1	11/12/03 11:26.28 AM	SAM

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD
COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL. 618-344-1004
FAX. 618-344-1005

Laboratory Results

CLIENT:	Rapps Engineering & Applied Science	**Client Project:**	SLAS AOC Site
WorkOrder:	0311125	**Client Sample ID:**	B-24 2-3'
Lab ID:	0311125-17	**Collection Date:**	10/2/03 2:30:00 PM
Report Date:	13-Nov-03	**Matrix:**	SOLID

Analyses		Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
SW-846 1311 TCLP / 3020A GFAA									
Lead, TCLP by GFAA	7421	NELAP	0 002		**0.005**	mg/L	1	11/12/03	JMF
SW-846 3050B, ICP METHOD 6010B									
Chromium		NELAP	0.94		**40.0**	mg/Kg-dry	1	11/12/03 11:31.46 AM	SAM
Lead		NELAP	3.77		**20.5**	mg/Kg-dry	1	11/12/03 11:31:46 AM	SAM

TEKLAB, INC
5445 Horseshoe Lake Road
Collinsville, IL 62234-
(618) 344-1004

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0311125

Client:
Rapps Engineering & Applied Science
821 S. Durkin Dr.
Springfield, IL 62791-7349

TEL:
FAX.
ProjectNo SLAS AOC Site
PO

E-MAILED
11-13-03

06-Nov-03

Sample ID	ClientSampID	Matrix	Collection Date	Bottle	Requested Tests						
					M_SOLIDS_ICP	M_TCLP_GF		As	Ba	Cr	Pb
0311125-01	B-4 2'-3'	Solid	9/30/03 1 30.00 PM		A			X	X	X	
0311125-02	B-7 2'-3'	Solid	9/30/03 5 00 00 PM		A				X	X	
0311125-03	B-2 1'-2'	Solid	9/30/03 11:30 00 PM		A				X		
0311125-04	B-8 2'-3'	Solid	9/30/03 5 45:00 PM		A	A		X	X	X	X TCLP
0311125-05	B-10 2'-3'	Solid	10/1/03 8 30:00 AM		A				X	X	
0311125-06	B-11 3'-4'	Solid	10/1/03 9.15.00 AM		A				X	X	
0311125-07	B-11 4'-5'	Solid	10/1/03 9:15:00 AM		A	A					XT & ATCLP
0311125-08	B-16 2'-3'	Solid	10/1/03 1 00:00 PM		A				X		
0311125-09	B-16 3'-4'	Solid	10/1/03 1 00 00 PM		A	A					X T & X TCLP
0311125-10	B-01 3'-4'	Solid	9/30/03 10.30:00 AM		A				X	X	
0311125-11	B-06 3'-4'	Solid	9/30/03 4 15 00 PM		A					X	
0311125-12	B-12 3'-4'	Solid	10/1/03 10:00:00 AM		A				X	X	
0311125-13	B-14 2'-3'	Solid	10/1/03 11:30:00 AM		A					X	
0311125-14	B-18 2-3'	Solid	10/1/03 3:00 00 PM		A					X	
0311125-15	B-20 2-3'	Solid	10/1/03 4 00 00 PM		A					X	
0311125-16	B-23 2-3'	Solid	10/2/03 2:00:00 PM		A					X	

Comments: Additional analysis to WO #0310184 and 0310543 requested by Bryan Johnsrud 11/5/03 KAK

	Date/Time		Date/Time
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	

NOTE Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense

Bottle Type. L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

11125

TEKLAB, INC
5445 Horseshoe Lake Road
Collinsville, IL 62234-
(618) 344-1004

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0311125

Client:
Rapps Engineering & Applied Science
821 S. Durkin Dr.
Springfield, IL 62791-7349

TEL:
FAX
ProjectNo. SLAS AOC Site
PO

06-Nov-03

Sample ID	ClientSampID	Matrix	Collection Date	Bottle	Requested Tests						
					M_SOLIDS_ICP	M_TCLP_GF		As	Ba	Cr	Pb
0311125-17	B-24 2-3'	Solid	10/2/03 2:30.00 PM		A	A				X	TX + TCLPr

Comments: Additional analysis to WO #0310184 and 0310543 requested by Bryan Johnsrud 11/5/03 KAK

		Date/Time			Date/Time
Relinquished by:			**Received by:**		
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Bottle Type L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

TEKLAB, INC
5445 Horseshoe Lake Road
Collinsville, IL 62234-
(618) 344-1004

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0310184

Client:
Rapps Engineering & Applied Science
821 S Durkin Dr
Springfield, IL 62791-7349

TEL
FAX
ProjectNo SLAS - AOC Site
PO 1017

05-Nov-03

Sample ID	ClientSamplD	Matrix	Collection Date	Bottle	I_TS_M_MT	L_PH_S_M	_SOLIDS_IC	M_TCLP_ICP	PMOIST	SV_8082S_S	Pb	Cr	As	Ba
					Requested Tests									
0310184-01	B-12 2'-3'	Solid	10/1/03 10 00 00 AM		A	A	A	A	A	A				
0310184-02	B-13 2'-3'	Solid	10/1/03 10 45 00 AM		A	A	A	A	A	A				
0310184-03	B-4 2'-3'	Solid	9/30/03 1 30 00 PM		A				A	A		X	X	X
0310184-04	B-4 3'-4'	Solid	9/30/03 1 30 00 PM		A				A	A				
0310184-05	B-4 4'-5'	Solid	9/30/03 1 30 00 PM		A				A	A				
0310184-06	B-4 5'-6'	Solid	9/30/03 1 30 00 PM		A				A	A				
0310184-07	B-4 6'-7'	Solid	9/30/03 1 30 00 PM		A				A	A				
0310184-08	B-4 7'-8'	Solid	9/30/03 1 30 00 PM		A				A	A				
0310184-09	B-4 8'-9'	Solid	9/30/03 1 30 00 PM		A				A	A				
0310184-10	B-7 2'-3'	Solid	9/30/03 5 00 00 PM		A				A	A		X		X
0310184-11	B-1 1'-2'	Solid	9/30/03 10.30 00 AM		A	A	A	A	A	A				
0310184-12	B-2 1'-2'	Solid	9/30/03 11 30 00 AM		A	A	A	A	A	A				X
0310184-13	B-3 1'-2'	Solid	9/30/03 12 30 00 PM		A	A	A	A	A	A				
0310184-14	B-4 1'-2'	Solid	9/30/03 1 30 00 PM		A	A	A	A	A	A				
0310184-15	B-5 1'-2'	Solid	9/30/03 3 30 00 PM		A	A	A	A	A	A				
0310184-16	B-6 1'-2'	Solid	9/30/03 4 15 00 PM		A	A	A	A	A	A				

Comments:

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Bottle Type L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

TEKLAB, INC
5445 Horseshoe Lake Road
Collinsville, IL 62234-
(618) 344-1004

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0310184

Client:

Rapps Engineering & Applied Science
821 S Durkin Dr
Springfield, IL 62791-7349

TEL
FAX
ProjectNo SLAS - AOC Site
PO

05-Nov-03

Sample ID	ClientSampID	Matrix	Collection Date	Bottle	Requested Tests					
					I_TS_M_MT	L_PH_S_M	_SOLIDS_IC	M_TCLP_ICP	PMOIST	SV_8082S_S
0310184-17	B-7 1'-2'	Solid	9/30/03 5 00 00 PM		A	A	A	A	A	A
0310184-18	B-8 1'-2'	Solid	9/30/03 5 45 00 PM		A	A	A	A	A	A
0310184-19	B-9 1'-2'	Solid	9/30/03 6 30 00 PM		A	A	A	A	A	A
0310184-20	B-10 1'-2'	Solid	10/1/03 8 30 00 AM		A	A	A	A	A	A
0310184-21	B-11 1'-2'	Solid	10/1/03 9 15 00 AM		A	A	A	A	A	A
0310184-22	B-12 1'-2'	Solid	10/1/03 10 00 00 AM		A	A	A	A	A	A
0310184-23	B-13 1'-2'	Solid	10/1/03 10 45 00 AM		A	A	A	A	A	A
0310184-24	B-14 1'-2'	Solid	10/1/03 11 30 00 AM		A	A	A	A	A	A
0310184-25	B-15 1'-2'	Solid	10/1/03 12 15 00 PM		A	A	A	A	A	A
0310184-26	B-16 1'-2'	Solid	10/1/03 1 00 00 PM		A	A	A	A	A	A
0310184-27	B-17 1'-2'	Solid	10/1/03 2 30 00 PM		A	A	A	A	A	A
0310184-28	B-18 1'-2'	Solid	10/1/03 3 00 00 PM		A	A	A	A	A	A
0310184-29	B-19 1'-2'	Solid	10/1/03 3 30 00 PM		A	A	A	A	A	A
0310184-30	B-20 1'-2'	Solid	10/1/03 4 00 00 PM		A	A	A	A	A	A
0310184-31	B-21 1'-2'	Solid	10/2/03 1 00 00 PM		A	A	A	A	A	A
0310184-32	B-22 1'-2'	Solid	10/2/03 1 30 00 PM		A	A	A	A	A	A

Comments:

	Date/Time		Date/Time
Relinquished by:		Received by:	
Relinquished by:		Received by:	
Relinquished by:		Received by:	

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Bottle Type L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

TEKLAB, INC
5445 Horseshoe Lake Road
Collinsville, IL 62234-
(618) 344-1004

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0310184

Client:
Rapps Engineering & Applied Science
821 S Durkin Dr
Springfield, IL 62791-7349

TEL
FAX
ProjectNo SLAS - AOC Site
PO

05-Nov-03

Sample ID	ClientSamplD	Matrix	Collection Date	Bottle	I_TS_M_MT	L_PH_S_M	_SOLIDS_IC	M_TCLP_ICP	PMOIST	SV_8082S_S	Pb	As	Cd	Cr	TCLP(Pb)
					Requested Tests										
0310184-33	B-23 1'-2'	Solid	10/2/03 2 00 00 PM		A	A	A	A	A	A					
0310184-34	B-24 1'-2'	Solid	10/2/03 2 30 00 PM		A	A	A	A	A	A					
0310184-35	B-25 1'-2'	Solid	10/2/03 3 00 00 PM		A	A	A	A	A	A					
0310184-36	B-1 2'-3'	Solid	9/30/03 10 30 00 AM		A	A	A	A	A	A					
0310184-37	B-2 2'-3'	Solid	9/30/03 11 30 00 AM		A	A	A	A	A	A					
0310184-38	B-3 2'-3'	Solid	9/30/03 12 30 00 PM		A	A	A	A	A	A					
0310184-39	B-5 2'-3'	Solid	9/30/03 3 30 00 PM		A	A	A	A	A	A					
0310184-40	B-6 2'-3'	Solid	9/30/03 4 15 00 PM		A	A	A	A	A	A					
0310184-41	B-7 3'-4'	Solid	9/30/03 5 00 00 PM		A				A	A					
0310184-42	B-7 4'-5'	Solid	9/30/03 5 00 00 PM		A				A	A					
0310184-43	B-8 2'-3'	Solid	9/30/03 5 45 00 PM		A				A	A	X		X	X	X
0310184-44	B-8 3'-4'	Solid	9/30/03 5 45 00 PM		A				A	A					
0310184-45	B-10 2'-3'	Solid	10/1/03 8 30 00 AM		A				A	A			X	X	
0310184-46	B-10 3'-4'	Solid	10/1/03 8 30 00 AM		A				A	A					
0310184-47	B-10 4'-5'	Solid	10/1/03 8 30 00 AM		A				A	A					
0310184-48	B-10 5'-6'	Solid	10/1/03 8 30 00 AM		A				A	A					

Comments:

	Date/Time		Date/Time
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	

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Bottle Type L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

TEKLAB, INC
5445 Horseshoe Lake Road
Collinsville, IL 62234-
(618) 344-1004

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0310184

Client:
Rapps Engineering & Applied Science
821 S Durkin Dr.
Springfield, IL 62791-7349

TEL
FAX
ProjectNo SLAS - AOC Site
PO

05-Nov-03

Sample ID	ClientSampID	Matrix	Collection Date	Bottle	Requested Tests: I_TS_M_MT	L_PH_S_M	_SOLIDS_IC	M_TCLP_ICP	PMOIST	SV_8082S_S	Bx	Cr	Pb	TCLP(Pb)
0310184-49	B-10 6'-7'	Solid	10/1/03 8 30 00 AM		A				A	A				
0310184-50	B-10 7'-8'	Solid	10/1/03 8 30 00 AM		A				A	A				
0310184-51	B-10 8'-9'	Solid	10/1/03 8 30 00 AM		A				A	A				
0310184-52	B-10 9'-10'	Solid	10/1/03 8 30 00 AM		A				A	A				
0310184-53	B-10 10'-11'	Solid	10/1/03 8 30 00 AM		A				A	A				
0310184-54	B-11 5'-6'	Solid	10/1/03 9 15 00 AM		A				A	A				
0310184-55	B-11 3'-4'	Solid	10/1/03 9 15 00 AM		A				A	A	X	X		
0310184-56	B-11 4'-5'	Solid	10/1/03 9 15.00 AM		A				A	A			X	X
0310184-57	B-16 2'-3'	Solid	10/1/03 1 00 00 PM		A				A	A	X			
0310184-58	B-16 3'-4'	Solid	10/1/03 1 00 00 PM		A				A	A			X	X
0310184-59	B-16 4'-5'	Solid	10/1/03 1 00 00 PM		A				A	A				

Comments:

	Date/Time		Date/Time
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	

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Bottle Type L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

From: "Bryan Johnsrud" <bjohnsrud@rapps.net>
To: "Kelly Klostermann" <KKlostermann@TeklabInc com>
Date: 11/3/03 6:02PM
Subject: SLAS - AOC Site

I (will) have 20 additional soil samples ready for pickup Let me know if a Teklab representative can pick these up or if I should arrange for shipping.

I need the following additions for soil samples that you already have Analyze even if holding time has been exceeded
PCBs B-07 9-10'
Arsenic B-04 2-3'
Barium B-01 3-4', B-04 2-3', B-04 14-15', B-05 3-4', B-07 2-3', B-08 2-3', B-10 2-3', B-11 3-4', B-12 3-4', and B-16 2-3'
Chromium B-01 3-4', B-04 2-3', B-05 3-4', B-06 3-4', B-07 2-3', B-08 2-3', B-10 2-3', B-11 3-4', B-12 3-4', B-14 2-3', B-18 2-3', B-20 2-3', B-23 2-3', B-24 2-3', and B-25 2-3'
Lead and TCLP Lead (DL < 0.0075 mg/L) B-08 2-3', B-11 4-5', B-16 3-4', and B-24 2-3'
A "not detected" at a reporting limit of 0 53 ug/L was shown for PCBs on the aqueous B-2 sample (Lab ID 0310148-02) I have a groundwater remediation objective of 0.50 ug/L Can the reporting limit be further reduced for that sample? Alternatively, could a lower reporting limit be obtained if another sample was collected from the same location?

What does the acronym "ECD" represent (to an ignorant engineer)?

The case narrative for Work Order 0310543 indicated that the matrix spike did not recover for Method 8082 Does that comment need to be further represented by a qualifier on the results pages? What is acceptable recovery? I would like a brief explanation that I can include in my report for the U.S EPA

In addition, I would like a short discussion on the implications of exceeding the holding times for total solids (percent moisture), PCBs analysis, and PCBs preparation I acknowledge that Teklab was not responsible for any exceedences of holding time.

TEKLAB, INC
5445 Horseshoe Lake Road
Collinsville, IL 62234-
(618) 344-1004

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0310543

Client:
Rapps Engineering & Applied Science
821 S Durkin Dr
Springfield, IL 62791-7349

TEL
FAX
ProjectNo SLAS-AOC Site
PO 1010

05-Nov-03

Sample ID	ClientSampID	Matrix	Collection Date	Bottle	I_TS_M_MT	_SOLIDS_IC	M_TCLP_GF	PMOIST	SV_8082S_S				
					Requested Tests								
0310543-01	B-01 3-4'	Solid	9/30/03 10 30 00 AM		A	A	A	A	A	X	X		
0310543-02	B-04 9-10'	Solid	9/30/03 1 30 00 PM		A	A		A	A				
0310543-03	B-04 10-11'	Solid	9/30/03 1 30 00 PM		A	A		A	A				
0310543-04	B-06 3-4'	Solid	9/30/03 4 15 00 PM		A	A		A	A		X		
0310543-05	B-07 5-6'	Solid	9/30/03 5 00 00 PM		A	A		A	A				
0310543-06	B-07 6-7'	Solid	9/30/03 5 00 00 PM		A	A		A	A				
0310543-07	B-07 7-8'	Solid	9/30/03 5 00 00 PM		A	A		A	A				
0310543-08	B-07 8-9'	Solid	9/30/03 5 00 00 PM		A	A		A	A				
0310543-09	B-08 4-5'	Solid	9/30/03 5 45 00 PM		A	A		A	A				
0310543-10	B-08 8-9'	Solid	9/30/03 5 45 00 PM		A			A	A				
0310543-11	B-08 9-10'	Solid	9/30/03 5 45 00 PM		A			A	A				
0310543-12	B-12 3-4'	Solid	10/1/03 10 00 00 AM		A	A		A	A	X	X		
0310543-13	B-14 2-3'	Solid	10/1/03 11 30 00 AM		A			A	A		X		
0310543-14	B-18 2-3'	Solid	10/1/03 3 00 00 PM		A			A	A		X		
0310543-15	B-20 2-3'	Solid	10/1/03 4 00 00 PM		A			A	A		X		
0310543-16	B-23 2-3'	Solid	10/2/03 2 00 00 PM		A			A	A		X		

Comments: Additional analysis request via email from Bryan Johnson. KAG 11/6/03

	Date/Time		Date/Time
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	

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Bottle Type L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

TEKLAB, INC
5445 Horseshoe Lake Road
Collinsville, IL 62234-
(618) 344-1004

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0310543

Client:
Rapps Engineering & Applied Science
821 S Durkin Dr
Springfield, IL 62791-7349

TEL
FAX
ProjectNo SLAS-AOC Site
PO

05-Nov-03

Sample ID	ClientSampID	Matrix	Collection Date	Bottle	Requested Tests: I_TS_M_MT	_SOLIDS_IC	M_TCLP_GF	PMOIST	SV_8082S_S	Ba	Cr	Pb	TCLP
0310543-17	B-24 2-3'	Solid	10/2/03 2 30 00 PM		A			A	A		X	X	X

Comments:

	Date/Time		Date/Time
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	

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Bottle Type L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

From: "Bryan Johnsrud" <bjohnsrud@rapps.net>
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Date: 11/3/03 6:02PM
Subject: SLAS - AOC Site

I (will) have 20 additional soil samples ready for pickup. Let me know if a Teklab representative can pick these up or if I should arrange for shipping

I need the following additions for soil samples that you already have Analyze even if holding time has been exceeded
PCBs B-07 9-10'
Arsenic. B-04 2-3'
Barium B-01 3-4', B-04 2-3', B-04 14-15', B-05 3-4', B-07 2-3', B-08 2-3', B-10 2-3', B-11 3-4', B-12 3-4', and B-16 2-3'
Chromium B-01 3-4', B-04 2-3', B-05 3-4', B-06 3-4', B-07 2-3', B-08 2-3', B-10 2-3', B-11 3-4', B-12 3-4', B-14 2-3', B-18 2-3', B-20 2-3', B-23 2-3', B-24 2-3', and B-25 2-3'
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In addition, I would like a short discussion on the implications of exceeding the holding times for total solids (percent moisture), PCBs analysis, and PCBs preparation. I acknowledge that Teklab was not responsible for any exceedences of holding time.

E

RAPPS
ENGINEERING & APPLIED SCIENCE

Bryan Johnsrud, P.E. - Project Coordinator
RAPPS Engineering & Applied Science
821 S. Durkin Dr.
Springfield, IL 62704
Tel: (217) 787-2118 ext. 207
Fax: (217) 787-6641

E Relocated Interstate 70 Fact Sheet & IDOT Preliminary Plans Cross Sections

New MISSISSIPPI RIVER BRIDGE PROJECT

Connecting Missouri & Illinois in Downtown St. Louis.

Relocated Interstate 70 Fact Sheet

Owner

Illinois Department of Transportation

Overview

The project to relocate Interstate 70 begins just east of Illinois Route 203 along Interstate 55/70. It is a new four-lane interstate highway that runs north of Gateway International Raceway and provides access to relocated Illinois Route 3 and the New Mississippi River Bridge (MRB).

Why relocate Interstate 70?

Interstate 70 is being relocated in order to relieve the already overburdened Poplar Street Bridge. Currently, Interstates 70, 55 and 64 all travel across the Poplar Street Bridge -- the only core-area interstate crossing of the Mississippi River. This bridge's capacity is inadequate to meet the needs of through and local motorists traveling in and out of downtown St. Louis as well as those traveling on and between Interstates 55,44,64 and 70.

In 1992, a study was conducted to determine the need for a new Mississippi River crossing. This study found a substantial need for a new river crossing and identified four possible corridors. After a series of public meetings and technical reviews, the most feasible alternative was selected. This alternative called for a new bridge to be located north of downtown St. Louis and that Interstate 70 traffic in Illinois be relocated to connect with the new bridge.

Illinois

Relocating Interstate 70 to the north removes traffic from the most congested part of the region's interstate network. It simplifies and enhances the existing I-55/70/64 interchange. It improves travel efficiency and provides better interstate traffic distribution throughout the MetroEast Motorists will have the choice to remain on I-55 and use the Poplar Street bridge to cross the river or use relocated Interstate 70 to access the new bridge.

Additionally, relocating Interstate 70 provides new interstate access for several small communities located in northern part of St. Clair County. It also encourages various redevelopment opportunities along the corridor

Missouri

On the Missouri side, relocating Interstate 70 north of downtown St. Louis will significantly improve travel efficiency in the region's core. Motorists traveling through the core of the region will have a better and more direct linkage to existing Interstate 70 in Missouri. It also allows traffic destined for downtown St Louis to be distributed to the northwest quadrant of downtown, where access is provided by major arterials like Tucker and 14th streets. An estimated 25 percent of all morning peak period westbound regional traffic crossing the Mississippi River is destined for downtown St. Louis. Fifty-five percent is destined for areas within the city limits of St Louis and almost 90 percent for the area within the I-270 corridor.

What is the construction cost?

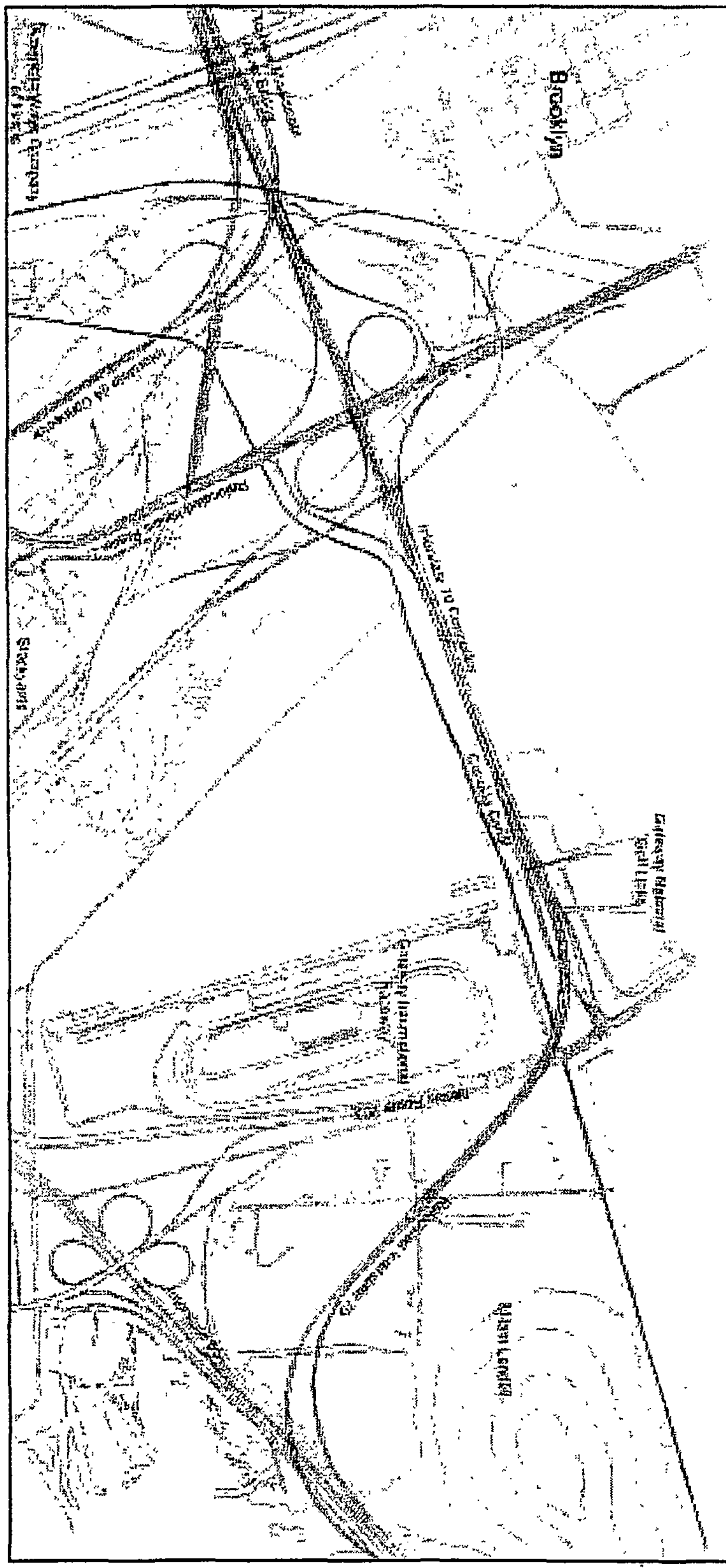
This project is estimated to cost approximately $250 million (includes contingencies and inflation) and has yet to be funded. The Illinois Department of Transportation is currently seeking federal dollars in the next transportation bill to pay for this project.

Project Map
Construction Begin Date
More Information

See Back

When will construction activities begin?

Because this project is currently not funded, it is unknown when one can expect construction activities to begin. However, design plans for all parts of the Interstate 70 Relocation project will be finalized in 2003 If funding becomes available, construction could begin following funding allocation



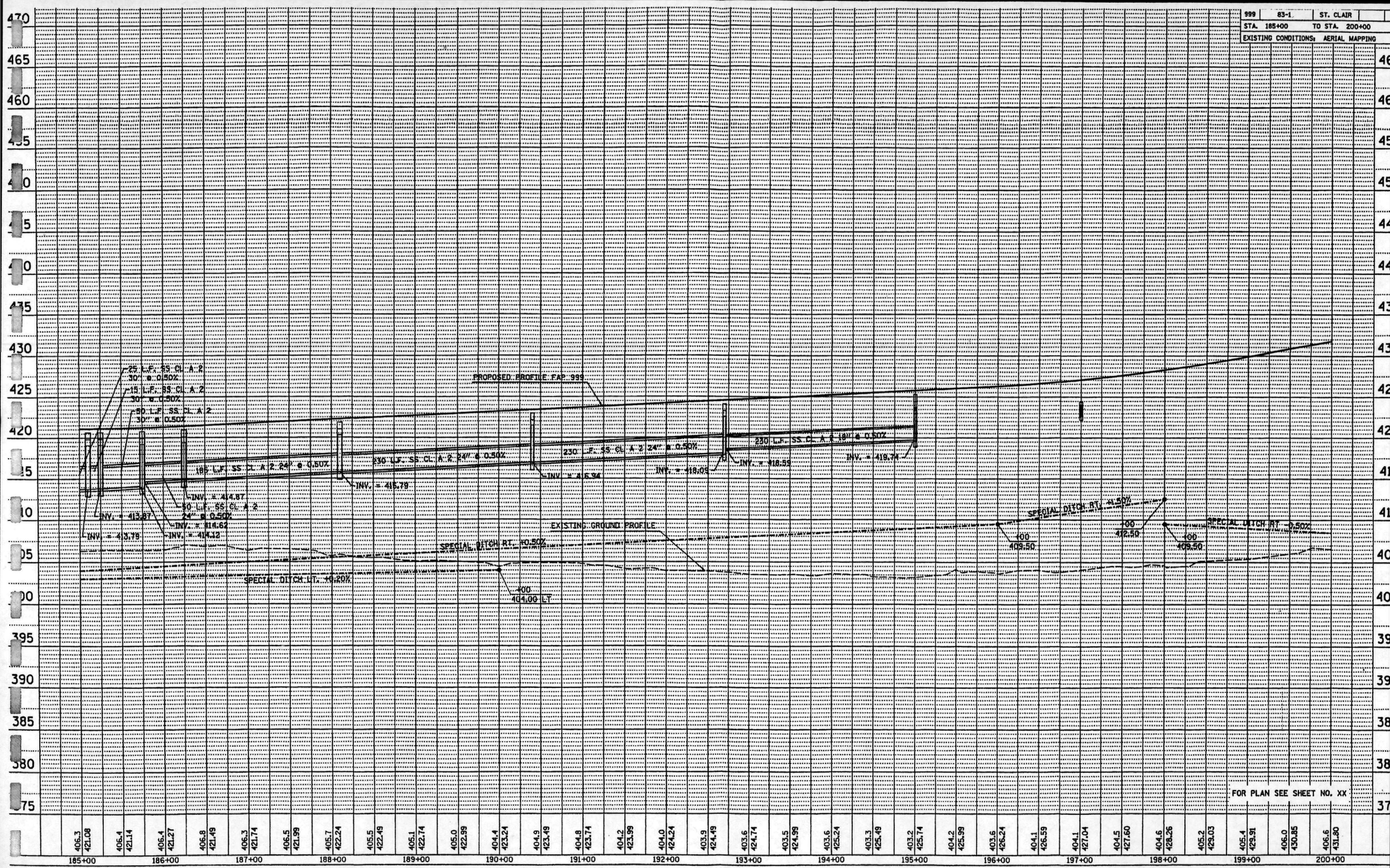
For more information

For more project information, see the web site at www.newriverbridge.org. Fact sheets like this one are available for the other improvements included in the New Mississippi River Bridge Project. Fact sheets and other written materials are free of charge and can be requested by calling either of the telephone numbers below.

If you have specific questions or concerns about this or other elements of the project, contact MaryAnn Taylor Crate at 314-242-2262 You may also contact the New Mississippi River Bridge Project Office at:

10 South Broadway, Suite 400
St. Louis, MO 63102
Toll free telephone: 1-866-927-4343
Electronic mail:
newriverbridge@hntb.org

Last revised:
July 2003

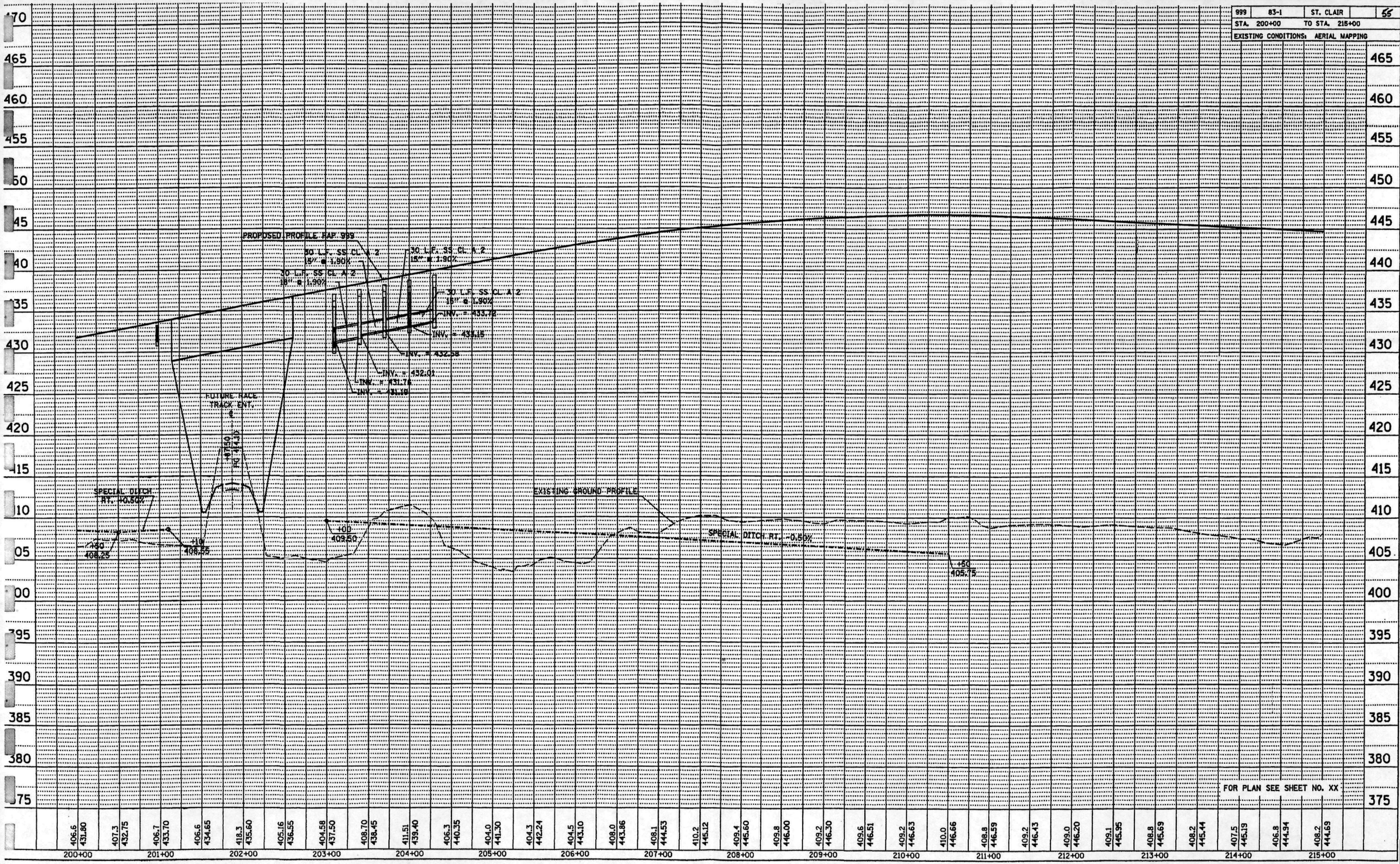


DRAINAGE PROFILE - RELOCATED I-

STA. 185+00 TO STA. 200+

2 01:18:18 PM

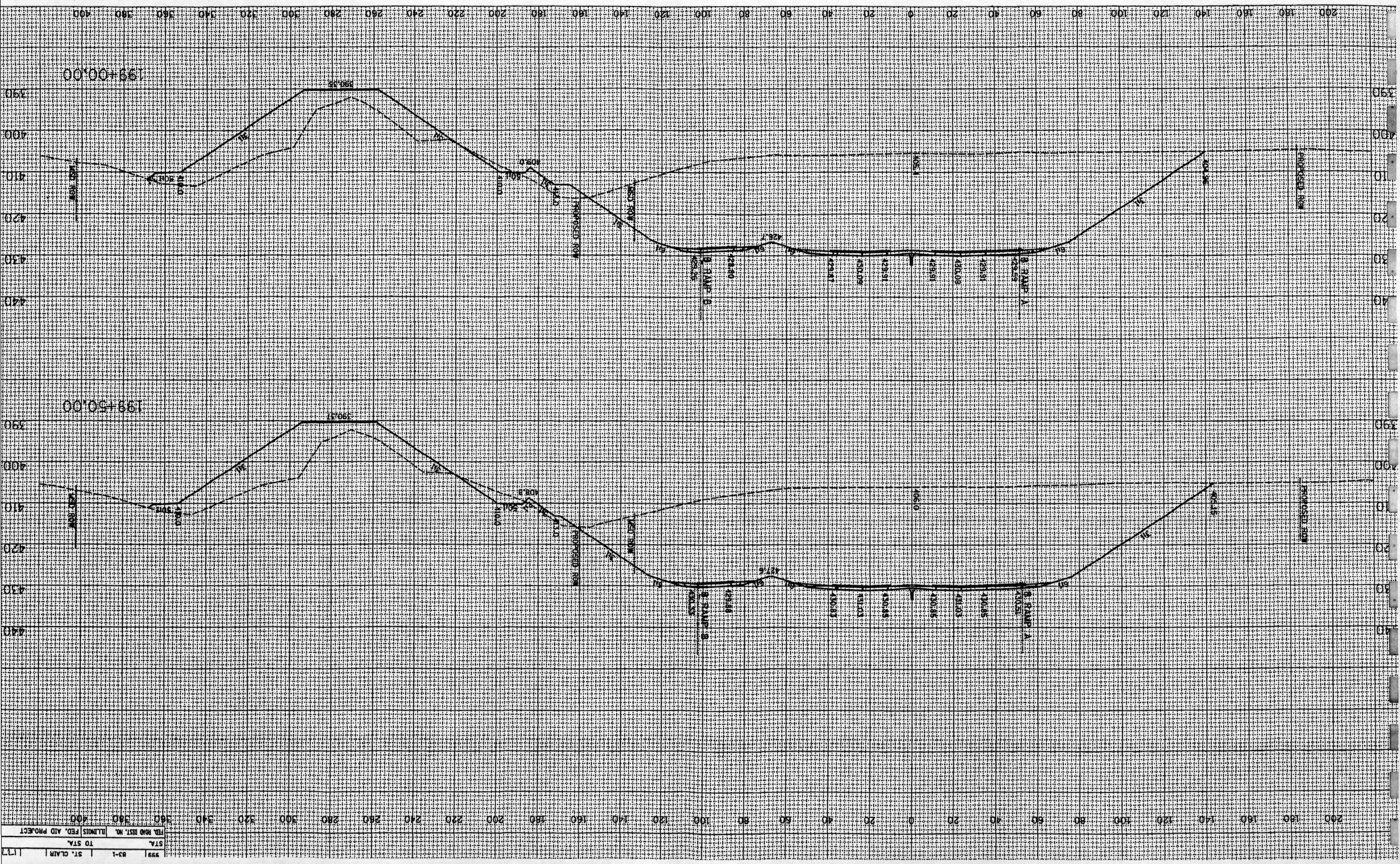
999	83-1	ST. CLAIR	55
STA. 200+00	TO STA. 215+00		
EXISTING CONDITIONS: AERIAL MAPPING			



DRAINAGE PROFILE - RELOCATED I-70

STA. 200+00 TO STA. 215+00

02 01:18:28 PM



FAP ROUTE 999