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ROY F. WESTON, INC.

CALUMET CONTAINER
LAKE COUNTY
HAMMOND, INDIANA
SITE ASSESSMENT AND
EXTENT OF CONTAMINATION REPORT

WESTON

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LAKE COUNTY
HAMMOND, INDIANA
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EXTENT OF CONTAMINATION REPORT

Revision 1
October 2002

Prepared For:

U.S. Environmental Protection Agency
Emergency and Remedial Response Branch
Region V
77 West Jackson Boulevard
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CALUMET CONTAINER
LAKE COUNTY
HAMMOND, INDIANA
SITE ASSESSMENT AND EXTENT OF CONTAMINATION REPORT

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SECTION 1
INTRODUCTION

From 29 April to 2 May 2002 and 20 and 21 May 2002, United States Environmental Protection Agency (U.S. EPA) On-Scene Coordinator (OSC) Verneta Simon and the Weston Solutions, Inc. (WESTON®) Superfund Technical Assessment and Response Team (START) initiated a site assessment and extent of contamination investigation at the Calumet Container site located in Hammond, Lake County, Indiana. The site assessment activities were conducted under Technical Document Directive (TDD) S05-0202-001. The analysis of the samples collected during the site assessment was under TDD S05-0202-002.

1.1 OBJECTIVES AND SCOPE OF SITE ASSESSMENT

The objective of this site assessment was to gather information to characterize the nature and extent of soil contamination at the Calumet Container site.

To accomplish these objectives, the site assessment activities consisted of screening soil for lead content with x-ray fluorescence (XRF), collecting surface and subsurface soil samples from the site and selectively analyzing the samples for organic and inorganic parameters.

1.2 REPORT ORGANIZATION

This site assessment report is organized into the following sections.

- Introduction – The introduction provides a brief description of the objective and scope of the site assessment activities.
- Site Background – The site background section provides the site description, site history, and a summary of previous investigations.

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- Environmental Investigation Procedures – The environmental investigation procedures section describes the methods and procedures used during the site assessment activities.

- Environmental Investigation Results – The environmental investigation results section describes the results of sample analysis.

- Nature and Extent of Contamination – The nature and extent of contamination describes the estimated areas and volume of contaminated site soils.

- Conclusions – The conclusions summarize the findings of the site assessment activities.

- References – The reference section provides a list of references utilized in compiling the report.

- Tables, Figures, and Appendices – The tables, figures, and appendices will be provided at the end of the report.

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SECTION 2
SITE BACKGROUND

2.1 SITE DESCRIPTION

The Calumet Container site is located 3631 State Line Avenue in Hammond, Lake County, Indiana. The geographic coordinates of the site are 41° 38' 57" north latitude and 87° 31' 25" west longitude at an altitude of 476 feet above sea level. Approximately 90 percent of the 11-acre, triangular-shaped site is located in Lake County, Indiana and the remaining 10 percent is located in Cook County, Illinois (Figure 2-1). The site is bounded to the north by 136th Street, and in all other directions by the active Indiana Harbor Belt Railway. A chain-link and barbed-wire fence surrounds the site. Other key features on site include patches of dense, ground-cover vegetation and mature trees, an old building foundation, three abandoned tanker trucks and drums and overgrown piles of miscellaneous debris.

On 29 April 2002, a fence contractor for West Shore repaired the chain-linked fence along the pipeline right-of-way. Previously, access to the site was unrestricted due to the breaches in the fence. The chain-link and barbed-wire fence that surrounds the site has a locked gate on the north side, accessed by 136th Street. Along 136th Street, a 40-foot section of fence was collapsed by a pile of soil that had apparently been dumped onto it. Evidence of recent trespassing was still evident and included worn footpaths that cross the site, a fire ring surrounded by chairs and a pet grave with flowers and a flag adorning it, all of which was previously observed during the 20 February 2002 site assessment.

Large piles of scrap metal, tires and semi-trailer frames were seen on the site. START estimated the scrap metal from the semi-truck trailers to be approximately 420 cubic yards. The majority of the scrap metal is located on the northwest corner of the site with a few piles along the West Shore pipeline right-of-way in the middle of the site.

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Both industrial- and residential-use land surrounds the site and within 1/4 mile of the site boundary are recreational-use bodies of water. A mobile home park is located directly adjacent to the site to the east and another is across 136th Street to the northwest. A small pond and wetland are situated in the northeast corner of the property. Across 136th Street to the north is Wolf Lake, an interstate fishing and recreational lake (Figure 2-2). Beyond the rail line to the southwest is Powderhorn Lake and the Burnham Woods forest preserve. Lake Michigan is located less than 3 miles to the northeast of the site.

Two studies have been done to evaluate ground- and surface-water flow patterns in the area of the site (Wapora, 1979 and Soil Testing Services, 1980). Both studies concluded that groundwater tends to flow in a northeast direction from the site. Intermittent ponded surface water at the site has been documented in historic site photographs and records. The movement of surface water off the site is not easily characterized; however, there may be a potential for surface water to flow off site towards nearby Wolf Lake, Powderhorn Lake, or a small stream to the northeast of the site that feeds Wolf Lake. In the past, recreational use of Wolf Lake has been impaired by, among other things, direct or indirect industrial discharges to the lake (U.S. EPA, 1981). A third study of site hydrogeology indicated that the water table is 3-4 feet below the ground surface (bgs)(King, 1979).

Soil types vary on site and adjacent properties. The unconsolidated layer of soil above bedrock in the area of the site is 90-100 feet thick and composed of 15-20 feet of beach and shoreline deposits interbedded with fine gravel, silt and clay over silty, sandy, clay till. It has been noted that the accumulation of oil and paint solids on the site may have acted to seal the soil surface in some areas and not allow percolation of surface water into the ground at those locations (King, 1979). A well log for an installation in the Burnham Woods forest preserve adjacent to Powder Horn Lake, southwest of the site, revealed that the upper 44-feet of soil is clay, followed by 118-feet of shale (Pankanin, 1982). The railroad grade along the eastern edge of the site is composed of fill material, slag, cinders, sand and gravel (King, 1979). North of the site, at the southern end of Wolf Lake are small areas of significant wetlands, classified as Type 4 Deep Marsh (U.S. EPA, 1981).

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Service utilities were noted on the site property (Figure 2-2). An overhead electrical power line enters the property from 136th Street near the gate and terminates on the site at a control box that is mounted on a pole approximately 150 feet south of the gate. There is a buried West Shore petroleum pipeline on the site that runs east to west across the property under a cleared right-of-way. A buried Praxair Nitrogen pipeline also crosses the site. A geophysical report prepared for the Indiana Department of Environmental Management (IDEM) in 1986 indicated the presence of markers or breather pipes for Badger, Marathon, Amoco and Union Carbide pipelines on the site property (Bartlett and Ursic, 1986). According to the U.S. EPA files, there are no drinking water wells in the area that can be threatened by groundwater contamination in the area (Pankanin, 1982).

2.2 SITE HISTORY

The Steel Container Corporation, also known as the Calumet Container Corporation, began operations in the 1960's and was owned and operated by Mr. John Jagiella. Operations at the site included drum and pail reconditioning (5- to 55- gallon) and fiber drum processing. Most of the containers that were serviced were used in the paint and graphic arts industries. In July 1981, Mr. Jagiella filed for bankruptcy in Chapter 11 Federal Bankruptcy Court. The Lake County Commissioners currently own the bulk of the Calumet Container site that is located in Indiana. A small parcel of land in the northwest corner of the site is privately owned by Mr.

During the period that the Calumet Container Corporation facility was in operation, the company was cited with numerous environmental violations regarding air and water contamination and material disposal. In 1980, the Illinois State Attorney General began an investigation to evaluate the movement of groundwater from the site into Illinois (Bitter, 1984). It was determined that groundwater in the area of the site contained elevated levels of organic compounds, including phenolics, toluene, xylene, and PCBs, and heavy metals and that the groundwater had the potential to migrate into Illinois-owned soils and nearby Wolf Lake (Soil Testing Services, 1980). The State of Indiana Stream Pollution Control Board ordered Mr. Jagiella to clean up spilled residues on the

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site and the owner was eventually issued a Final Order by the State of Indiana. Subsequent property inspections following the Final Order yielded violations of that Order and on 16 April 1982, the State of Indiana Attorney General filed an Enforcement Action against Calumet Container Corporation (Bitter, 1984).

Five days after the State of Indiana Enforcement Action was filed, on 21 April 1982, an explosion and fire consumed the main building at the site and the U.S. EPA began a 14-day Immediate Removal Action on 7 May 1982. Thirty cubic yards of sludge and 5,500 gallons of contaminated liquid were removed from the site and disposed of at that time. Analysis of surface water runoff, contents of processing and holding tanks on site and soil at the loading dock area at the time immediately following the fire indicated the presence of lead, chromium, cyanide, arsenic, phenolics, other organics, oil and grease. Following the fire, the U.S. EPA notified Mr. Jagiella and requested that he volunteer to clean up the site. Mr. Jagiella then attempted to organize a group of responsible parties to clean up the site, but failed to do so and as a result, the U.S. EPA initiated a cleanup (Madany and Bowden, 1982).

In accordance with section 104 (a) (1) CERCLA, a Planned Removal Action began at the site on 9 January 1984. U.S. EPA contractor Associated Chemical and Environmental Services of Oregon, Ohio, began a surface cleanup of containerized liquids, solids and sludges that were considered to be hazardous materials. A heavily contaminated area used as a loading dock during facility operation was completely dismantled and removed. Approximately 2-feet of soil was removed from underneath the loading dock and the area was backfilled and capped with 162 tons of clay. Other areas of the site that contained visibly stained soils were also excavated and backfilled with clay (Bitter, 1984).

A site assessment conducted by U.S. EPA and START on 20 February 2002 discovered that the site was littered with several drums, automobile and scrap metal debris, a plating vat, three tanker trucks, an old building foundation and paint chips and residue. A cluster of 14 drums was noted near the

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north gate of the property. Five investigative soil samples and one drum sample were collected and analyzed for a variety of potential contaminants. Sampling results for metals analyses indicated levels of lead, chromium, and PCBs in site soils above U.S. EPA Region IX PRG criteria levels. Based on the results of TCLP analysis of site soils and according to 40 CFR Chapter 1 - 261.24, hazardous waste characteristics of lead and cadmium were detected in site soils. Material sampled from a drum at the site was determined to be hazardous waste based on its flashpoint. The flashpoint of the drummed material was 80 °F which exceeds the criteria for hazardous waste.

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SECTION 3

ENVIRONMENTAL INVESTIGATION PROCEDURES

From 29 April to 2 May 2002 and 20 and 21 May 2002, a site assessment of the Calumet Container property was conducted by U.S. EPA and WESTON START personnel to determine extent of the contamination present in surface and subsurface soils. On-site personnel included OSC Verneta Simon (U.S. EPA) and Don Paxton, Todd Williams, Heather Schichtel, and Greg Gehrig (START). The investigation was conducted in two sampling events. Specific site assessment activities included:

- Site Layout
- XRF Screening
- Geoprobe Investigation and Soil Sampling
- Geoprobe Investigation and Sediment Sampling
- Geotechnical Sampling
- Wetland Delineation

3.1 SAMPLING ACTIVITIES

3.1.1 Site Layout

On 29 April 2002, a sampling grid was layed out to identify locations where Geoprobe core samples would be collected. A GPS was used to navigate from each location to the next, as well as record the GPS location of each point. The grid was created using a 100-foot grid spacing throughout the site. The triangular shape of the site and topographical obstacles such as the pond, trees, and large scrap piles necessitated using offsets from the proposed locations identified on the map used for the grid layout. Trees onsite made GPS reception difficult in some areas, causing some additional skewing of the site grid.

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3.1.2 XRF Screening

A Niton XRF unit was used to screen 143 surface and sub-surface soil and sediment samples from 53 locations on site to determine the location of soil and sediment that contained elevated metal concentrations. Soil and sediment samples were retrieved by Geoprobe coring techniques. XRF screening depths were selected within each soil core to characterize the surface and subsurface soils. Each sample core was typically screened with two to four interval locations ranging from the surface to a 4-foot depth. Plastic zipper-locking bags were filled with sample material and then screened with the XRF unit during the first portion of the assessment, and during the second portion of the assessment the XRF unit was placed directly on the exposed soil in the acetate sleeve that was used to collect the soil core. The primary analyte of interest during the investigation was lead, although 13 other analytes are also detectable by the XRF unit. Screening results were datalogged with the XRF unit. At 13 screening locations, soil samples were collected from the depth interval that was screened and submitted for confirmatory laboratory analysis of lead content. The results of the confirmation sampling are further discussed in Section 4.2.1 of this report.

3.1.3 Surface and Subsurface Soil Sampling

During the 29 April to 2 May 2002 and 20 and 21 May 2002 Site Assessment, 26 investigative surface and subsurface soil samples were collected in order to define the native soil and extent of contamination on site. Samples were collected from selected grid locations and five biased, non-grid locations. Offsets were used in some locations where obstacles were encountered. Sample collection locations are shown in Figure 3-1.

Samples were collected using an ATV-mounted Geoprobe. The ATV-mounted Geoprobe drives a 4-foot long, 2-inch diameter hollow sampling rod into the ground by means of a motor-driven hydraulic hammer. After the rod has been driven into the soil to the desired depth, the motor is reversed to remove the sampling rod. The hollow rods are lined with an acetate insert to collect

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samples and help preserve the cleanliness of the rod interior. After the rod was extracted from the ground, the acetate insert was removed, cut open lengthwise so contents could be observed, geologically logged, and sampled. Geoprobe boring logs are provided in Appendix A.

A total of 26 investigative surface and subsurface soil samples were collected [CC-(0,0) 1'-2', CC-(0,1) 1'-2', CC-(0,2) 1'-2', CC-(0,3) 1'-2', CC-(0,4) 1'-2', CC-(0,10) 3'-4', CC-(0.5, 2.5) 1'-2', CC-(0.5,2.5) 3'-4', CC-(1,2) 2'-3', CC-(1,3) 1'-2', CC-(1,5) 1'-2', CC-(1,7) 1'-2', CC-(1,8) 3'-4', CC-(1,9) 3'-4', CC-(2,3) 1'-2', CC-(2,4) 1'-2', CC-(2,8) 0-6", CC-(2,8) 2'-4', CC-(3,5) 1'-2', CC-(3,7) 1'-2', CC-(3,8) 0-1', CC-(3,10) 0-2', CC-(4,7) 1'-2', CC-(5,6) 0-6", CC-(5,7) 1'-2', and CC(6,7) 3'-4']. Soil samples were collected from the acetate core liners and placed into clear, wide-mouth, glass jars with Teflon-lined lids. Sterile nitrile gloves were donned before the first sample was collected and changed before each subsequent sample. Soil cores were generally collected from 0 to 4 feet below ground surface (ft. bgs) with the exception of one Geoprobe core located at point CC-(0.5, 2.5) which was collected from 0 to 8 ft. bgs. The sample intervals selected for analysis were biased based on Multi-RAE VOC readings, presence of odors, XRF readings, and the presence of paint chips or colored materials (blue, yellow, green, etc.).

Seventeen samples were collected for analysis of selected organic compounds. Once the sampling depth was determined for a soil core, a grab sample was first collected for volatile organic compounds (VOCs) using a disposable EnCore sampler. VOC sampling was followed by the collection of a sample for semi-volatile organic compounds (SVOCs), pesticides and polychlorinated biphenyls (PCBs). Sample aliquots for individual parameters were consistently collected in this order to minimize volatilization of organic compounds prior to sample collection. Ten samples were analyzed for VOCs, SVOCs, pesticides and PCBs [CC-(0,3) 1'-2', CC-(0,4) 1'-2', CC-(1,3) 1'-2', CC-(1,7) 1'-2', CC-(2,4) 1'-2', CC-(2,8) 2'-4', CC-(3,5) 1'-2', CC-(3,10) 0-2', CC-(5,7) 1'-2', and CC-(6,7) 3'-4'], and seven samples were analyzed for VOCs only [(CC-(0,0) 1'-2', CC-(0,1) 1'-2', CC-(0,2) 1'-2', CC-(0.5,2.5) 3'-4', CC-(1,2) 2'-3', CC-(1,5) 1'-2', and CC-(2,3) 1'-2']. During the second sampling event, 20 and 21 May 2002, two soil samples [CC-(1,2) 2'-3' and CC-(0.5,2.5) 1'-2'] were analyzed

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for benzene, toluene, ethylbenzene, and xylene (collectively known as BTEX) compounds instead of for VOCs, SVOCs, PCBs and pesticides because laboratory results from the previous sampling event revealed a predominance of BTEX compounds relative to other organic compounds.

In addition to organic compounds, three soil samples were also sampled for Target Analyte List (TAL) metals [CC-(2,8) 2'-4', CC-(3,10) 0-2', and CC(6,7) 3'-4'] and an additional five investigative soil samples were analyzed for TAL metals only [CC-(1,8) 3'-4', and CC-(1,9) 3'-4', CC-(3,7) 1'-2', CC-(3,8) 0-1', and CC-(4,7) 1'-2']. Five investigative soil samples were collected for lead only, as a supplement to those samples that were analyzed for TAL metals, for the purpose of confirming lead-in-soil contents as determined by XRF screening [CC-(0, 10) 3'-4', CC-(0.5, 2.5) 1'-2', CC-(1, 2) 2'-3', CC-(2, 8) 0-6", and CC-(5, 6) 0-6"].

All samples were labeled and preserved in coolers with ice immediately after sample collection. At the end of the sampling period, samples were packed, transported, and relinquished under chain of custody to ACE Technologies, Inc. located in The Woodlands, Texas and Accura Analytical Labs, Inc. located in Norcross, Georgia for analysis.

Spent personal protective equipment (PPE) and contaminated debris that was generated during the sampling event were containerized in a 55-gallon drum at the site and labeled "PPE".

3.1.4 Sediment Sampling

Three sediment cores were collected using a Geoprobe along the perimeter of the pond, which is located in the northeast corner of the site, to determine if contaminates have migrated into the pond. Each core was geologically logged. Core SD-01 was collected from the northwest side of the pond, core SD-02 was collected from the west side, and core SD-03 was collected from the southwest side. Sediment cores were screened with an XRF and Multi-RAE and logged in the same manner as the

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soils samples. One sediment sample taken from core SD-02 [CC-(SD-02) 0-1'] was analyzed for lead as confirmatory analysis for comparison to XRF screening results.

3.1.5 Geotechnical Sampling

Geotechnical sampling was conducted to determine the potential for future uses of the site such as the placement of a state road along the western boundary of the site. Five soil samples were collected using a Geoprobe for analysis of geotechnical parameters. Sample collection locations are shown in Figure 3-2. Geotechnical samples were collected in 24-inch-long, 3-inch-diameter Shelby soil collection tubes from grid locations (1, 10), (1, 8), (1, 6), (1, 5), and (1.5, 3.5). The tube was advanced 24-inches or to refusal, starting from where native soil was observed. On the northern portion of the site where samples were collected, native soils were observed at the surface. On the southern portion of the site where fill was present, native soils were observed approximately two feet bgs. Samples were analyzed for grains size, particle distribution, United States Geological Survey (USGS) Soil Conservation Survey soil classification, moisture content, organic content, specific gravity, density, and Atterburg limits. Samples were sent to CGC, Inc. located in Madison, Wisconsin for geotechnical analysis.

3.1.6 Wetland Delineation

On 20 May 2002, a wetland investigation of the approximately 11-acre site was performed. The purpose of this investigation was to identify, delineate, and determine the quality of the wetlands and other waters present onsite. Wetlands and other waters were identified and delineated at the site using a United States Army Corps of Engineers Wetland Delineation Manual (Environmental Laboratory, 1987) defined method and best professional judgment. A GPS unit and a digital camera were used to document wetland features observed onsite.

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SECTION 4
ENVIRONMENTAL INVESTIGATION RESULTS

A Site Assessment was performed to determine the extent of contamination at the Calumet Container site. This section discusses the results of the site assessment activities listed below:

- XRF Screening
- Surface and Subsurface Soil Sampling
- Sediment Sampling
- Geotechnical Sampling
- Wetland Delineation

4.1 XRF SCREENING

XRF screening was conducted on 143 samples, at surface and subsurface intervals, from 53 sample locations. Screening results for lead concentration in soil are presented in Table 4-1. Results indicated that 26 soil samples contained lead concentrations that exceeded 800 ppm. The highest lead concentration detected by XRF (6,848 ppm) was found at location CC-(5,7), approximately 2 feet bgs. Thirteen of the locations that were screened by XRF were selected for lead analysis by wet chemical methods. Results of the confirmation analysis are presented with corresponding field XRF results and determinations of data accuracy and correlation in Table 4-2. A complete listing of XRF field data is presented in Appendix B.

The correlation of the XRF data for lead concentration and the results of the wet chemical analysis technique appear to be within the XRF unit's statistical comparison of precision (± factor) for several samples. For example, at location CC-(3,7), XRF analysis determined that the lead concentration in the soil was 157.8 ± 90.5 parts per million (ppm) or mg/kg, and laboratory analysis on the same sample determined that the lead concentration was 133 mg/kg. The result of the laboratory confirmation falls within the predicted range of precision for the XRF unit. At location CC-(3,8) the XRF result was 752 ± 74.4 mg/kg, and the laboratory result was 805 mg/kg. Again,

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the laboratory confirmation falls within the predicted range of precision for the XRF unit. Other sample results did not correlate well. Relative percent difference (RPD) ranged from 3 percent to 94 percent between XRF and laboratory results. Instances of poor correlation between XRF and laboratory results was likely due to the "nugget effect" whereby the high or low level was encountered from the presence of a piece of the constituent during either the XRF screen or the laboratory analysis. A variance is observed between the results of the two techniques when the "nugget" is only encountered during one of the analyses, either the XRF screen or the laboratory technique.

4.2 SURFACE AND SUBSURFACE SOIL SAMPLING RESULTS

Twenty-six investigative soil samples were collected from 24 locations during this investigation and submitted for laboratory analysis. Analytical parameter selections for each sample are outlined in Section 3.2. Results for these analyses were compared to regulatory criteria levels and presented in Tables 4-3 through 4-6. Three sets of criteria were used for comparison in the data presentation; U.S. EPA Region IX Preliminary Remediation Goals (PRGs), the State of Indiana Risk Integrated System of Closure (RISC) cleanup protocols, and the Illinois Environmental Protection Agency (IEPA) Tiered Approach to Corrective Action Objectives (TACO). Criteria levels for industrial-use land were used to evaluate the data. Figure 4-1 shows sample locations, analytical results, and XRF screening results that exceeded the criteria. Analytical results are presented in Appendix C.

4.2.1 Metals in Soil

Surface and subsurface soils were sampled at eight locations and submitted for TAL metals analysis [CC-(1,8) 3'-4', and CC-(1,9) 3'-4', CC-(2,8) 2'-4', CC-(3,7) 1'-2', CC-(3,8) 0-1', CC-(3,10) 0-2', CC-(4,7) 1'-2', and CC-(6,7) 3'-4']. Five out of nine samples had concentrations of metals that were above industrial criteria levels (Table 4-3). The U.S. EPA Region V PRG for lead concentration

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in industrial soil (800 mg/kg) was used to evaluate the lead data. For other metals, the Region IX PRG, TACO, or RISC value, whichever was most conservative, was used to evaluate the data.

Lead concentrations in the samples ranged from 2.8 mg/kg to 13,000 mg/kg. Lead concentrations exceeded the criteria level (800 mg/kg) at eight sampling locations [CC-(0.5,2.5) 1'-2', CC-(1,2) 2'-3', CC-(1,8) 3'-4', CC-(1,9) 3'-4', CC-(2,8) 2'-4', CC-(3,8) 0-1', CC-(3,10) 0-2', and CC-(6,7) 3'-4']. The highest concentrations of lead were detected at the following sampling locations:

- CC-(1,9) 3'-4'(13,000 mg/kg); and
- CC-(0.5,2.5) 1'-2' (6,520 mg/kg).

Concentrations of cadmium in soils ranged from undetectable to 27,000 mg/kg. Cadmium concentrations exceeded the criteria level (780 mg/kg) in soils at four sampling locations [CC-(3, 10) 0-2', CC-(1, 9) 3'-4', CC-(1,8) 3'-4' and CC-(2,8) 2'-4']. The highest concentrations of cadmium were detected at the following sampling locations:

- CC-(3, 10) 0-2' (27,000 mg/kg); and
- CC-(1, 9) 3'-4' (21,000 mg/kg).

Concentrations of arsenic in soils ranged from undetectable to 280 mg/kg. Arsenic concentrations exceeded the criteria level (20 mg/kg) in soils at three sampling locations:

- CC-(3,10) 0-2' (280 mg/kg);
- CC-(3,7) 1'-2' (64.9 mg/kg); and
- CC-(2,8) 2'-4' (45 mg/kg).

Chromium and iron criteria were also exceeded at two soil sampling locations. Concentrations of chromium ranged from 1.0 mg/kg to 780 mg/kg and exceeded the criteria level (448 mg/kg) at sampling location CC-(3,7) 1'-2' (780 mg/kg). Iron concentrations in soil ranged from 3.36 mg/kg to 120,000 mg/kg, exceeding the criteria level (100,000 mg/kg) only at sampling location CC-(3,7) 1'-2' (120,000 mg/kg).

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4.2.2 VOCs and BTEX in Soil

Seventeen surface and subsurface soil samples were analyzed for VOCs or BTEX. The results from these analyses in site soils are presented in Table 4-4 and Figure 4-1. Results indicate that VOCs or BTEX were detected at concentrations that exceeded the criteria levels at six sampling locations [CC-(0,0) 1'-2', CC-(0,1) 1'-2', CC-(0,2) 1'-2', CC-(0,3) 1'-2', CC-(1,5) 1'-2', and CC-(2,4) 1'-2']. Individual VOCs that exceeded criteria levels on site were: ethylbenzene, total xylenes, toluene and 1,2-dichloropropane. Ethylbenzene concentrations in soil samples ranged from undetectable to 970,000 ug/kg. Those concentrations of ethylbenzene that exceeded the criteria level (230,000 ug/kg) were the following:

- CC-(1,5)1'-2' (970,000 ug/kg);
- CC-(0,1) 1'-2' (750,000 ug/kg);
- CC-(0,2) 1'-2' (620,000 ug/kg); and
- CC-(0,3) 1'-2' (390,000 ug/kg).

Total xylenes concentrations in soil samples ranged from undetectable to 4,200,000 ug/kg. At the following five sampling locations, concentrations of total xylenes were detected at levels greater than the criteria level (210,000 ug/kg):

- CC-(0,1) 1'-2' (4,200,000 ug/kg);
- CC-(1,5)1'-2' (3,200,000 ug/kg);
- CC-(0,2) 1'-2' (2,300,000 ug/kg);
- CC-(0,3) 1'-2' (1,700,000 ug/kg); and
- CC-(0,0) 1'-2' (240,000 ug/kg).

Toluene concentrations in site soils ranged from undetectable to 8,400,000 ug/kg. Concentrations of toluene exceeded the criteria level (520,000 ug/kg) at the following three sampling locations:

- CC-(0,1) 1'-2' (8,400,000 ug/kg);
- CC-(0,2) 1'-2' (3,600,000 ug/kg); and
- CC-(1,5) 1'-2' (1,200,000 ug/kg).

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Concentrations of 1,2-dichloropropane in site soils ranged from undetectable to 2,600 ug/kg. One sample, at location CC-(2,4) 1'-2' depth (2,600 ug/kg), exceeded the criteria level for 1,2-dichloropropane (800 ug/kg).

4.2.3 SVOCs in Soil

Ten surface and subsurface soil samples were analyzed for SVOCs. The results are presented in Table 4-5 and Appendix C. Criteria levels were not exceeded by any SVOCs in these samples. Three SVOCs were detected above method limits: 2-methylnaphthalene, bis(2-ethylhexyl)phthalate and naphthalene. The greatest concentrations of these SVOCs were detected in the following samples: CC-(1,7) 1'-2', (4,700 ug/kg of 2-methylnaphthalene), CC-(0,3) 1'-2' (14,000 ug/kg of bis(2-ethylhexyl)phthalate), and CC-(1,7) 1'-2' (8,300 ug/kg of naphthalene).

4.2.4 PCBs and Pesticides in Soil

Ten surface and subsurface soil samples were analyzed for PCBs and pesticides. PCB analytical results are displayed in Appendix C. No PCB compounds were detected in any of the samples. Pesticide results are displayed in Table 4-6. No pesticide compounds were detected above criteria levels in these samples. The pesticides at greatest concentrations in soil were found at the following site locations: CC-(0, 4) (220 ug/kg of 4,4-DDT), CC-(3, 5)(94 ug/kg of Chlordane), and CC-(2-9) 2'-4' (50 ug/kg of 4,4'-DDE).

4.3 SADA SOFTWARE USE FOR VISUALIZATION OF ON-SITE EXTENT OF CONTAMINATION AND HUMAN HEALTH RISK

Spatial Analysis and Decision Assistance (SADA) software was used to further illustrate the extent of contamination as shown in Figure 4-1 and visually assess the risk to human health. The color-scaled, two-dimensional diagrams produced by the SADA software makes visualizing contamination

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easier and is a useful tool for communicating analytical results to interested parties. Each SADA plot presented in Appendices E and F represents the area of the site with overlays of the concentration of specific parameters (Appendix E) and an estimate of the human health risk that is based on contaminant concentrations (Appendix F). Concentrations of contaminants in surface soil or sediment were used to generate each plot, except in the cases where a subsurface sample had a greater concentration of contaminant than the surface soil at the same location. In these cases, the highest concentration of the contaminant at depth was used. For samples that had concentrations below the method limits of detection, one half of the detection limit was used to represent the sample concentration, with the exception of benzene. Undetectable levels of benzene was assumed to have a concentration of zero.

Extent of contamination figures generated by SADA software are presented in Appendix E for ethylbenzene, m-p xyelene, o-xylene, benzene, toluene and lead. It should be noted that the color scale for each figure denotes relative concentration of the contaminant and does not necessarily reflect the concentration of the contaminant relative to criteria levels or remediation goals. Ethylbenzene, m-p xylene, benzene, toluene and lead concentrations are clearly shown in the SADA plots to be greater in the southwest corner of the site than other areas of the site. Likewise, o-xylene is shown to be relatively high in the east corner of the site and areas of relatively high lead concentrations are evident in the northwest and east corners of the site. Similar patterns are found in Figure 4-1 where analytical data is plotted directly onto site maps.

The risk to human health due to the presence of ethylbenzene, m-xylene, o-xylene, benzene, and toluene on site can be visualized with the assistance of the SADA plots in Appendix F. The plots assume future unrestricted industrial land use, and that the contaminants pose an ingestion hazard. Note that the color scale refers to an index number that corresponds to the amount of risk present at locations around the site. Generally, for compounds which are potential carcinogens, a risk is present if the index is greater than $1x10^{-6}$; an acceptable risk is described with an index between $1x10^{-6}$ and $1x10^{-4}$; and a high level risk is described with an index greater than $1x10^{-4}$. Benzene is

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a potential carcinogen. The other contaminants under investigation, ethylbenzene, m-xylene, o-xylene, and toluene are non-carcinogenic and are therefore only considered a health risk if the risk index is greater than one.

The figures in Appendix F display the same trends as the figures in Appendix E that present the concentration of contaminants on site. That is, where the concentration of each contaminant is greater, the index of risk is greater. The risk to human health associated with ethylbenzene, m-p xylenes, and toluene on site is concentrated in the southwest corner where the risk indices that range from 1.9 to 9.5 for ethylbenzene, from 0.41 to 2.1 for m-p xylenes, and from 8.0 to 41 for toluene indicate that there is a risk to human health based on the concentration of these compounds on site. The risk indices for o-xylene that are present in the east corner of the site fall below the level that is considered to be a risk to human health, 1.765×10^{-3} to 8.81×10^{-3}. SADA interpretation of benzene concentrations on site pose no apparent risk to human health as no benzene index is greater than 1×10^{-6} site-wide.

4.4 GEOTECHNICAL SAMPLING

A total of five individual 3-inch diameter Shelby Tube (ST) soil samples were collected at the site. The ST soil samples were collected from 0 to 4 feet total depth. The ST soil samples were analyzed for percent moisture, percent organic content (%), and percentage of grain size distribution. The Atterburg limits analysis was not performed by the laboratory due to the soil type. The analytical results of the five individual ST soil samples were analyzed by CGC, Inc. of Madison, Wisconsin.

The analytical results indicated soils composed primarily of brown, fine-grained sands. The sand content of the soil samples ranged from 80 to 95.9% in four of the five ST soil samples collected. The ST soil sample collected at sampling location CC-(1, 6) contained a higher percentage of silt at 50.4% total silt. The moisture content of the sand was between 19.1 and 25.2%. The total organic content was between 1.2 and 3.9 %.

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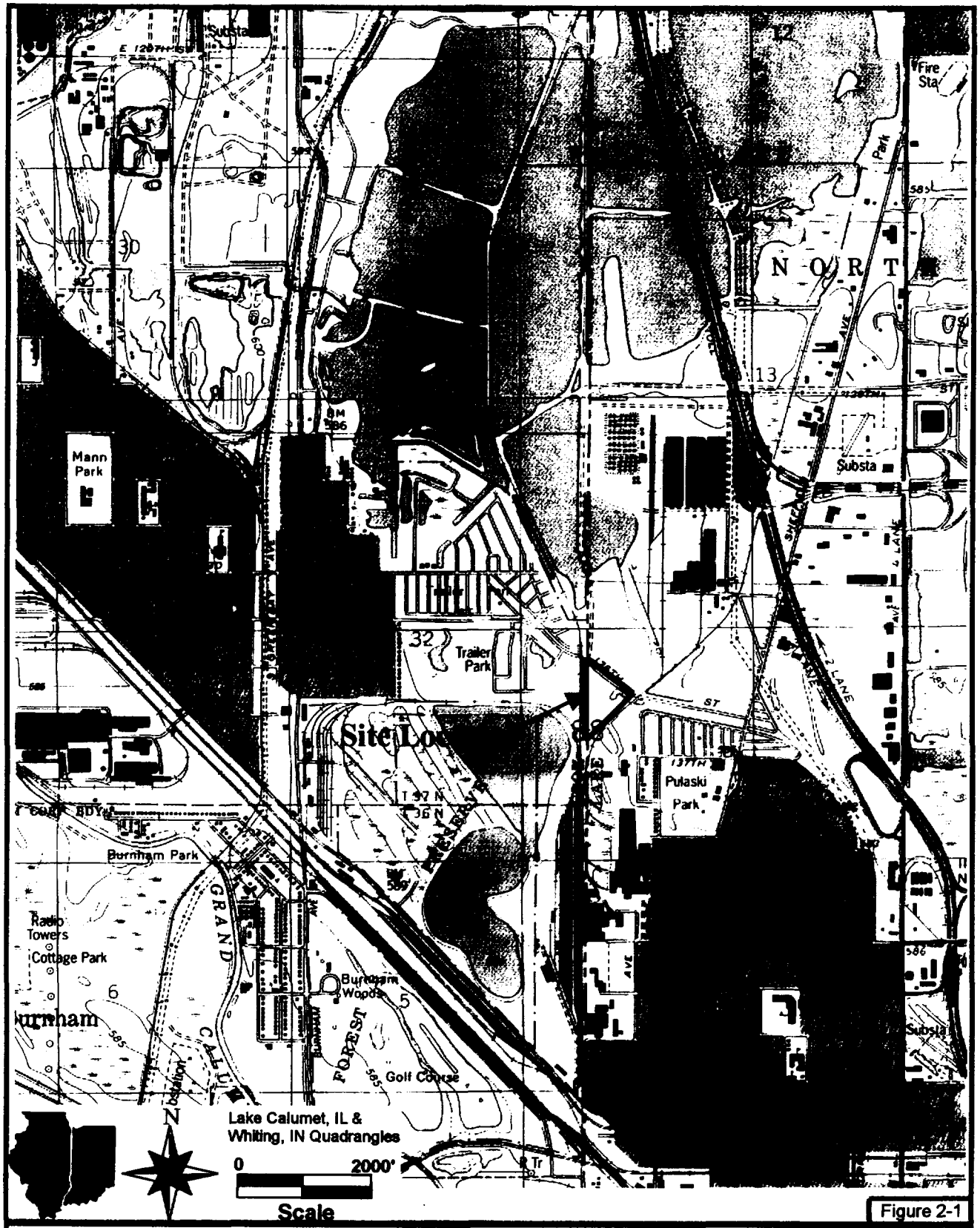

Figure 2-1

WESTON
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750 E. Bunker Ct.
Suite 500
Vernon Hills, Illinois
60061

TOPOGRAPHICAL SITE LOCATION MAP

CALUMET CONTAINER SITE

Hammond, Lake County, Indiana and Cook County, Illinois

FIGURE 2-2

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60061

SITE MAP
CALUMET CONTAINER SITE
U.S. EPA
Chicago, Illinois

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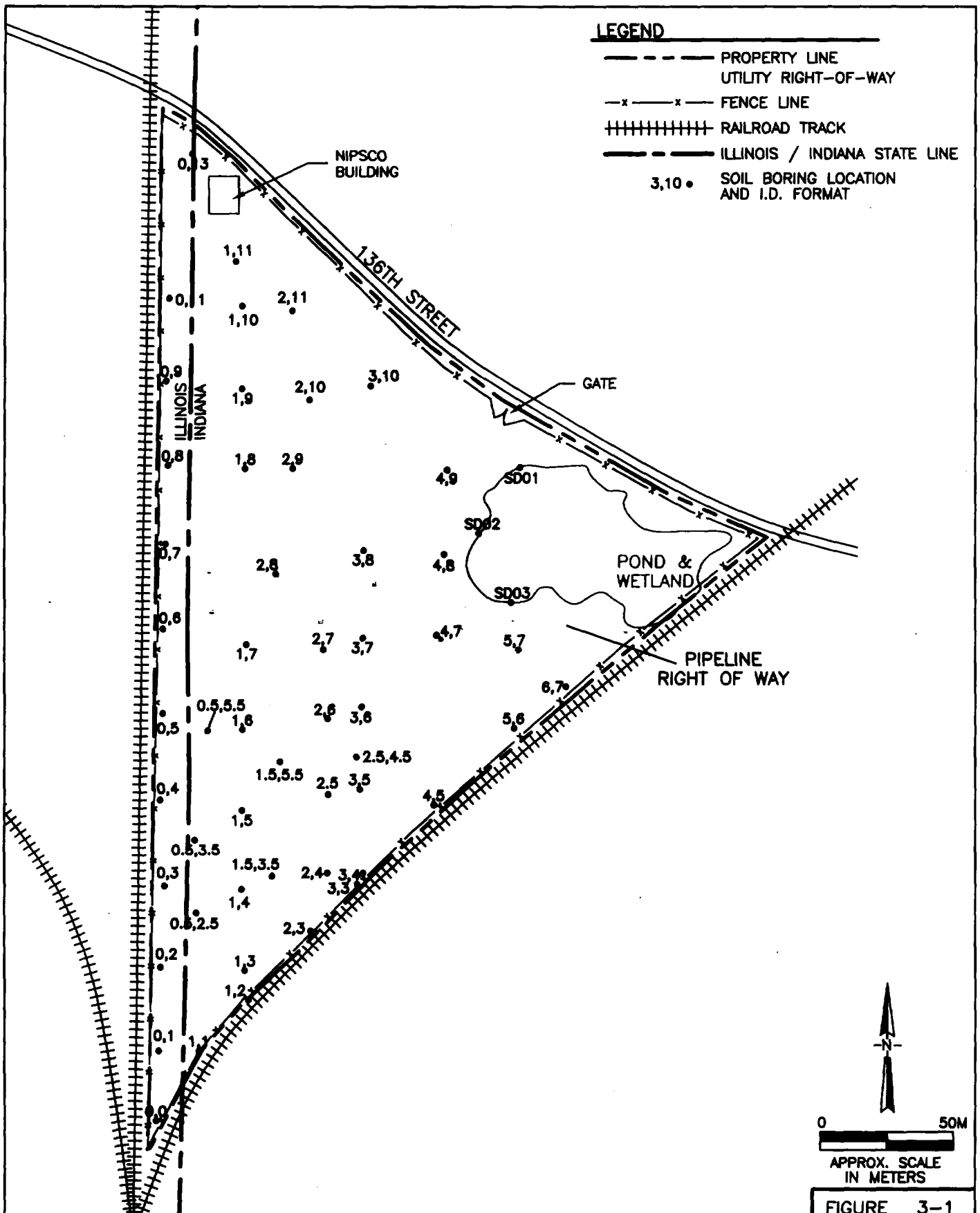

FIGURE 3-1

WESTON SOLUTIONS

750 E. Bunker Ct.
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60061

SOIL BORING LOCATION MAP
CALUMET CONTAINER SITE
U.S. EPA
Chicago, Illinois

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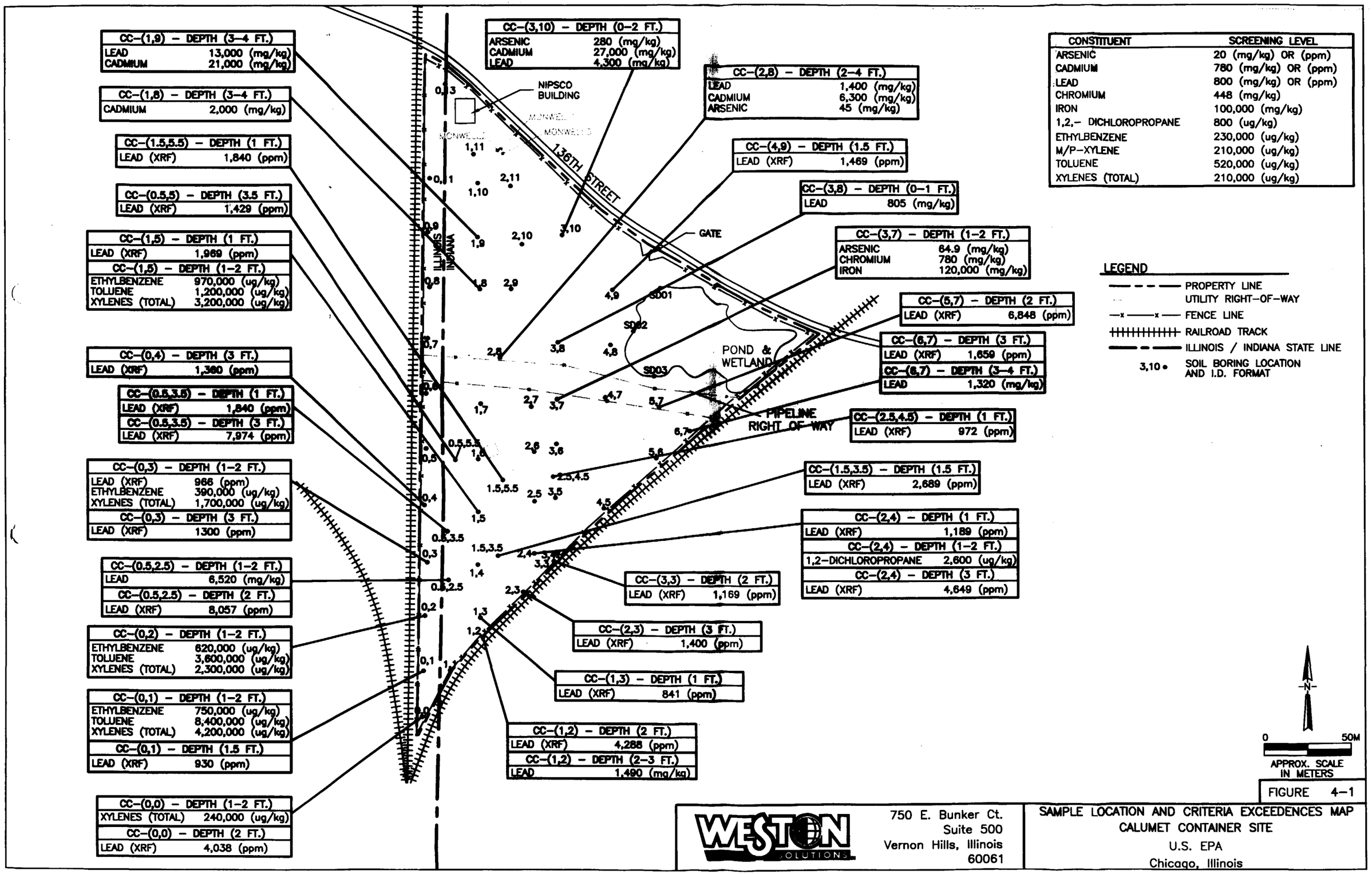

CONSTITUENT	SCREENING LEVEL
ARSENIC	20 (mg/kg) OR (ppm)
CADMIUM	780 (mg/kg) OR (ppm)
LEAD	800 (mg/kg) OR (ppm)
CHROMIUM	448 (mg/kg)
IRON	100,000 (mg/kg)
1,2,- DICHLOROPROPANE	800 (ug/kg)
ETHYLBENZENE	230,000 (ug/kg)
M/P-XYLENE	210,000 (ug/kg)
TOLUENE	520,000 (ug/kg)
XYLENES (TOTAL)	210,000 (ug/kg)

FIGURE 4-1

WESTON SOLUTIONS

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60061

SAMPLE LOCATION AND CRITERIA EXCEEDENCES MAP
CALUMET CONTAINER SITE
U.S. EPA
Chicago, Illinois

FIGURE 4-2

WESTON
MANAGERS DESIGNERS/CONSULTANTS

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Vernon Hills, Illinois
60061

WETLAND DELINEATION MAP
CALUMET CONTAINER SITE
U.S. EPA
Chicago, Illinois

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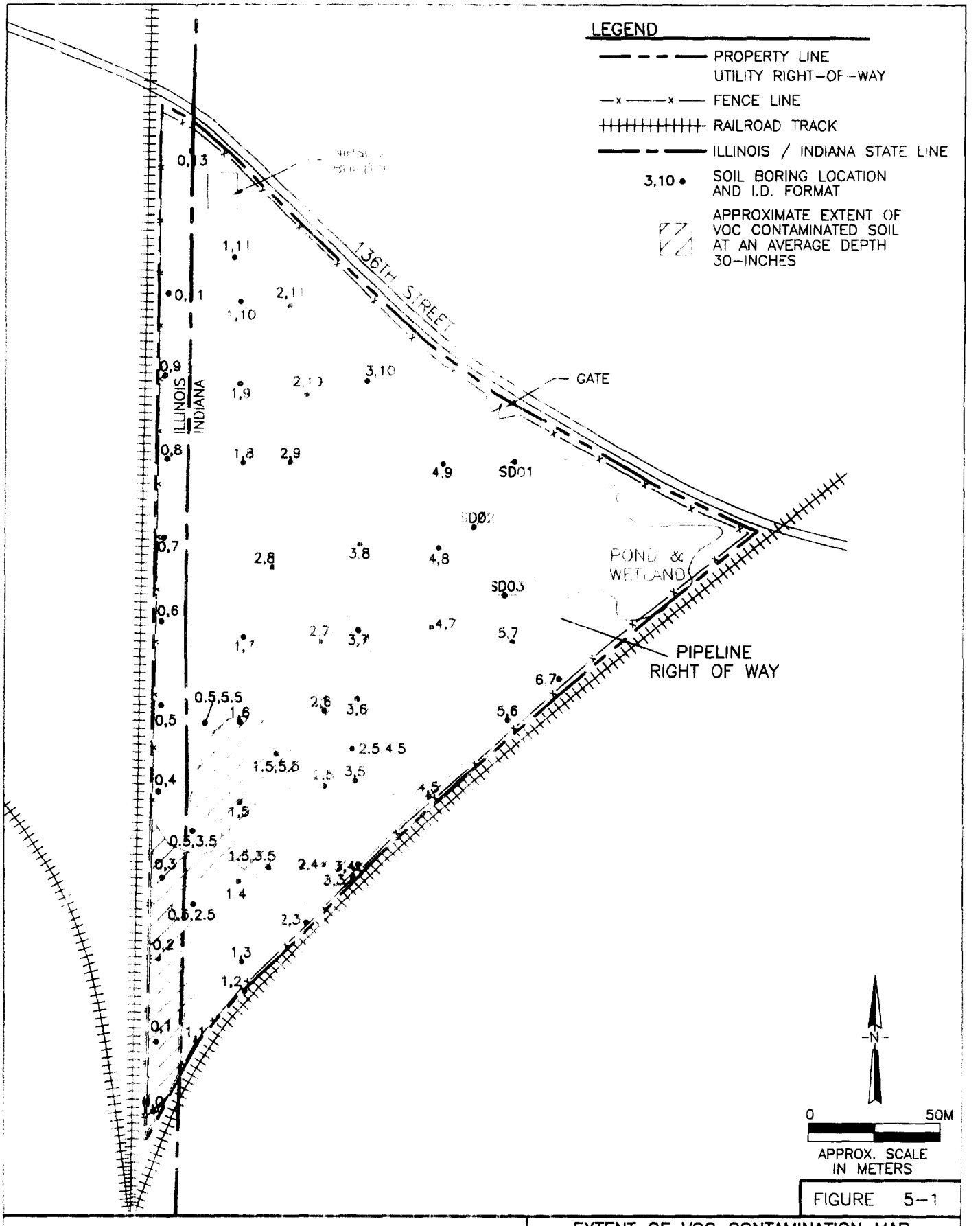

FIGURE 5-1

WESTON SOLUTIONS

750 E. Bunker Ct
Suite 500
Vernon Hills, Illinois
60061

EXTENT OF VOC CONTAMINATION MAP
CALUMET CONTAINER SITE
U.S. EPA
Chicago, Illinois

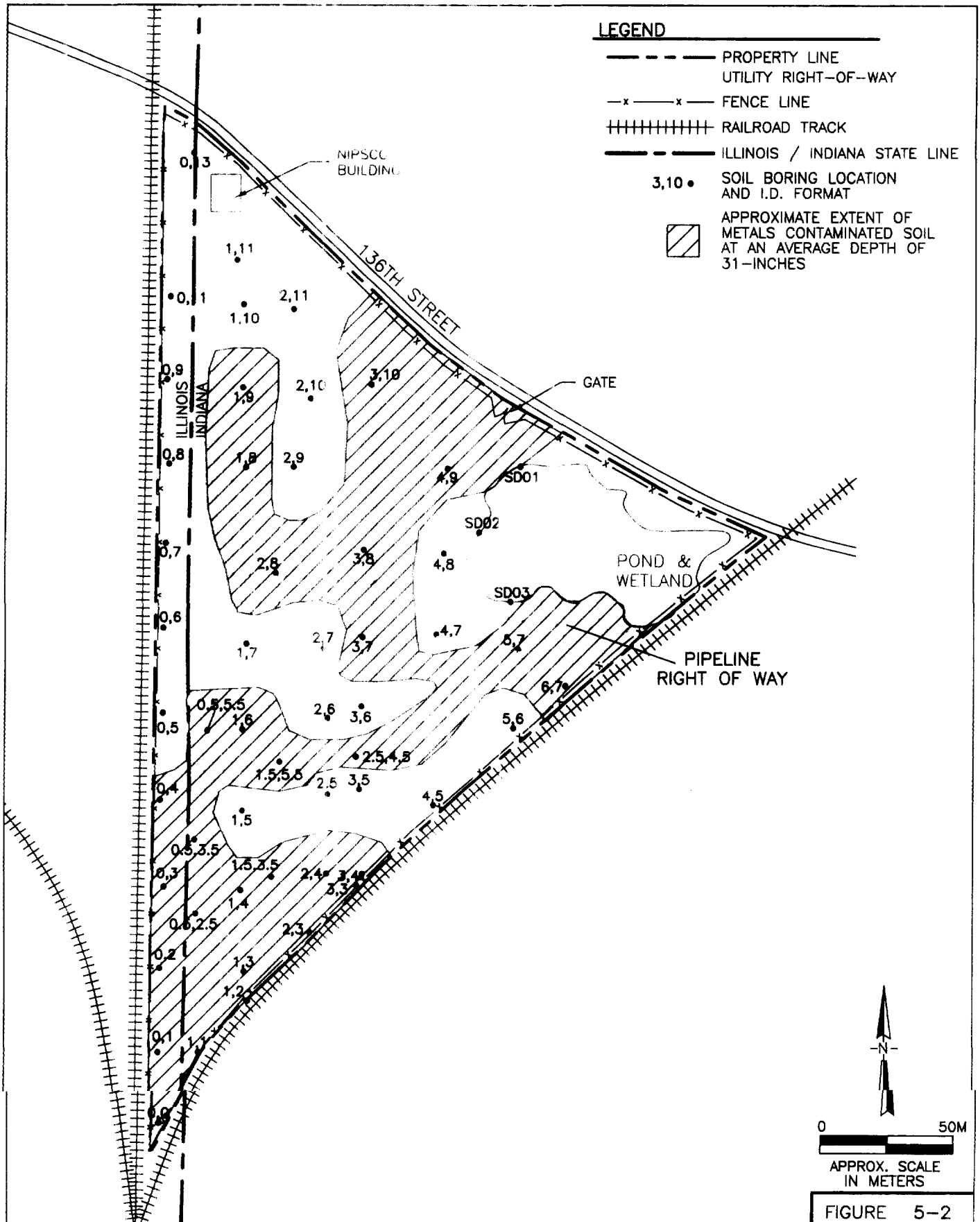

FIGURE 5-2

WESTON SOLUTIONS

750 E. Bunker Ct.
Suite 500
Vernon Hills, Illinois
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EXTENT OF METALS CONTAMINATION MAP
CALUMET CONTAINER SITE
U.S. EPA
Chicago, Illinois

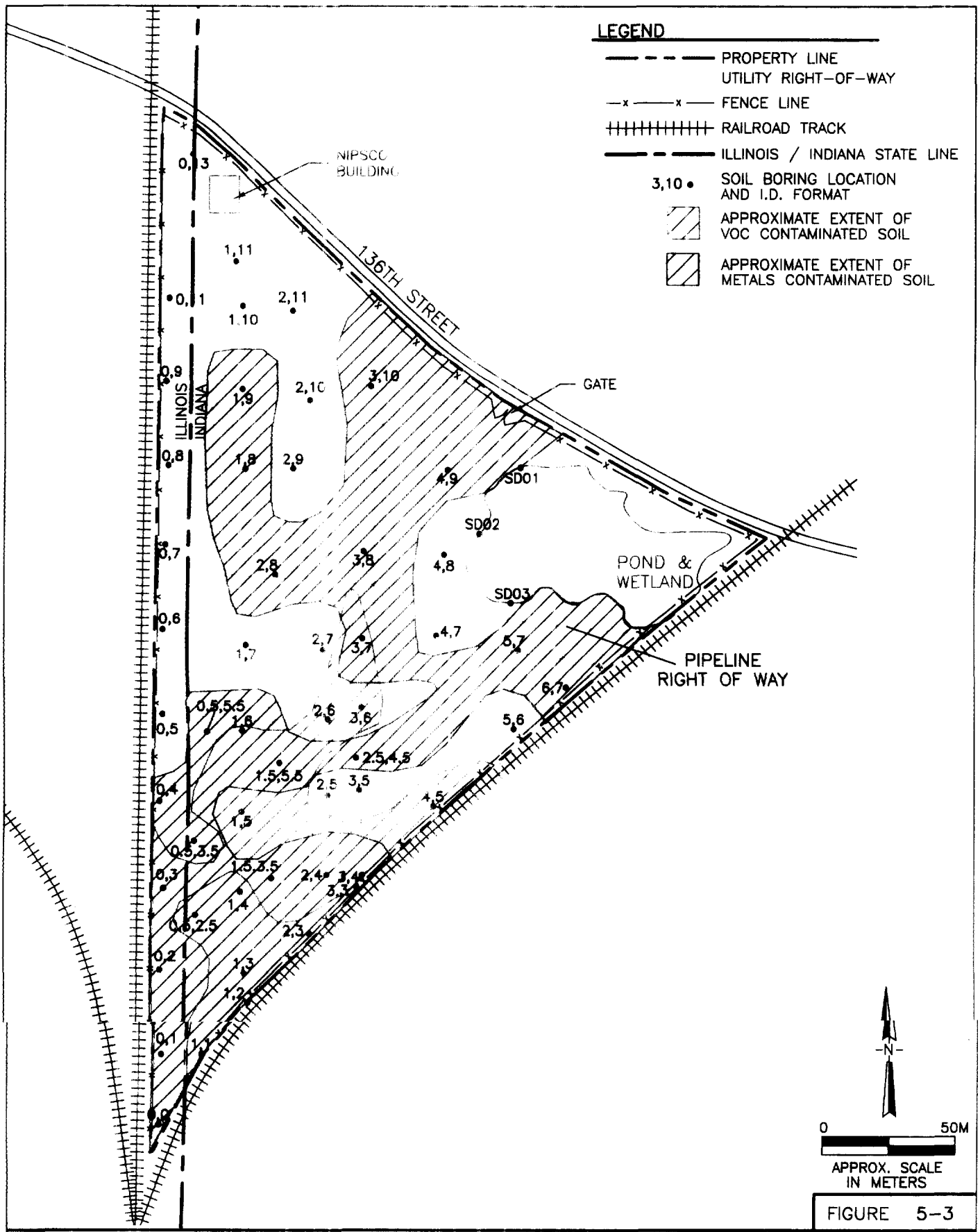

FIGURE 5-3

WESTON SOLUTIONS

750 E. Bunker Ct.
Suite 500
Vernon Hills, Illinois
60061

EXTENT OF CONTAMINATION MAP - COMINGLED WASTE
CALUMET CONTAINER SITE
U.S. EPA
Chicago, Illinois

TABLES

Table 4 - 1

Soil XRF Lead Screening Results
Calumet Container Site, Hammond, IN

Boring Location	Depth (feet)	Lead Result (ppm)	Precision +/-
0, 0	0.5	4,038	200
0, 0	3.0	<LOD	56.25
0, 1	1.0	930.4	81
0, 1	2.0	<LOD	62.1
0, 2	1.0	512.8	64.6
0, 3	1.0	966.4	89.9
0, 3	2.0	1,300	130
0, 4	0.5	1,140	180
0, 4	2.0	1,360	100
0, 5	0.5	561.6	63.8
0, 6	0.5	136.4	47.4
0, 6	3.0	<LOD	42.15
0, 7	1.0	<LOD	74.55
0, 8	0.0	56.8	37.8
0, 8	2.0	<LOD	40.5
0, 8	4.0	<LOD	55.5
0, 9	0.0	78.2	32.2
0, 9	2.0	<LOD	50.25
0, 9	4.0	<LOD	46.35
0, 10	0.0	<LOD	52.95
0, 10	1.0	<LOD	49.8
0, 10	3.0	<LOD	47.4
1, 1	0.5	518.8	55.8
1, 2	0.0	793.2	91.9
1, 2	1.5	<LOD	122.7
1, 2	2	4,288	260
1, 2	3	<LOD	48.3
2, 9	0.5	177.9	65.4
2, 9	3	<LOD	66.3
2, 10	1	80.2	45.6
2, 10	2	150.8	51.6
2, 10	4	68	40.9
2, 11	0	82.9	41.6
2, 11	1.5	<LOD	63.15
2, 11	2.5	<LOD	50.55
2, 11	4	<LOD	79.65
3, 3	0.5	1169.6	120

Boring Location	Depth (feet)	Lead Result (ppm)	Precision +/-
1, 7	1	121.9	68.6
1, 7	3	<LOD	40.35
1, 8	0.5	95.1	38.8
1, 8	2.5	51.2	32.2
1, 8	4	<LOD	46.95
1, 9	0	140.3	43.6
1, 9	1.5	146.6	60.2
1, 9	3.5	<LOD	51
1, 10	0	<LOD	51.75
1, 10	2	<LOD	54.75
1, 10	4	<LOD	40.05
2, 3	1	666.4	77.9
2, 3	2	1,400	130
2, 4	0.5	1189.6	150
2, 4	2	4649.6	290
2, 5	0.5	410.8	64.2
2, 5	2	177.9	69.5
2, 6	0.5	172.9	48
2, 6	2	42	27.5
2, 8	0	749.2	85.7
2, 8	1	243.4	69.2
2, 8	3	<LOD	54.6
2, 8	4	70.7	41.9
4, 9	2	265.6	76.2
5, 6	0	232.6	48.4
5, 6	1	139.3	39.3
5, 6	3.5	<LOD	39.9
5, 7	1	6848	240
5, 7	2.5	<LOD	43.05
6, 7	0.5	<LOD	43.2
6, 7	1	1659.2	130
6, 7	2.5	414	56.9
0.5, 2.5	0	660.8	83.3
0.5, 2.5	2	8057.6	400
0.5, 2.5	3	<LOD	60.3
0.5, 2.5	5	<LOD	57.6
0.5, 2.5	6.5	<LOD	48.3

Table 4 - 1

Soil XRF Lead Screening Results
Calumet Container Site, Hammond, IN

Boring Location	Depth (feet)	Lead Result (ppm)	Precision +/-
3, 3	3	<LOD	54.3
3, 4	1	58	38.5
3, 4	2.5	<LOD	54.75
3, 5	0.5	177.9	69.5
3, 5	2.5	678.8	68.8
3, 6	0.5	<LOD	85.35
3, 6	3	<LOD	58.5
3, 7	1	157.8	90.5
3, 7	3	<LOD	49.05
3, 8	0.5	752	74.4
3, 8	2.5	<LOD	51.75
3, 9	1	92.9	52.2
3, 9	3	<LOD	42.6
3, 10	0	134.1	56.2
3, 10	1	103.4	42.8
3, 10	3	180.7	61.8
3, 10	4	<LOD	56.1
4, 5	0.5	290.2	58.5
4, 7	1	<LOD	70.65
4, 7	2	<LOD	52.65
4, 8	1	130	60.3
4, 8	3	<LOD	56.85
4, 9	1	1469.6	120
1, 3	0.5	841.6	80.2
1, 3	2	86.6	41.4
1, 4	1	1868.8	94.7
1, 4	2	<LOD	60.45
1, 5	1	1969.6	120

Boring Location	Depth (feet)	Lead Result (ppm)	Precision +/-
0.5, 2.5	9	<LOD	56.7
0.5, 3.5	0	2560	200
0.5, 3.5	1	1840	150
0.5, 3.5	2.5	7974.4	490
0.5, 5	0.5	795.2	84.3
0.5, 5	1.5	1429.6	170
0.5, 5	2.5	601.6	92.9
0.5, 5	4	<LOD	55.2
1.5, 3.5	0	1960	140
1.5, 3.5	1	2689.6	210
1.5, 3.5	1.5	<LOD	51.45
1.5, 3.5	3	<LOD	51.75
1.5, 5.5	0	1840	140
1.5, 5.5	1.5	291.8	78.8
1.5, 5.5	3	<LOD	58.65
2.5, 4.5	0	972	98.4
2.5, 4.5	1	<LOD	52.2
2.5, 4.5	3	<LOD	53.4
SD-1	0.5	<LOD	50.55
SD-1	2	<LOD	43.5
SD-2	1	<LOD	51.9
SD-2	2	<LOD	41.85
SD-3	1	<LOD	46.35
SD-3	3	<LOD	49.8

ppm= parts per million
<LOD= Less than limit of detection

Table 4 - 2

XRF/Laboratory Confirmation Sampling Lead Analysis Results
Calumet Container Site, Hammond, IN

Sample ID	CC (SD-02)	CC (0,10)	CC (0,10)	CC (0.5,2.5)	CC (1,2)	CC (1,8)	CC (1,9)	CC (1,9)
Sample Type	sediment	soil	soil	soil	soil	soil	soil	soil
Date Sampled	5/20/2002	5/20/2002	5/20/2002	5/20/2002	5/20/2002	5/20/2002	5/20/2002	5/20/2002
Depth	(0-1')	(3'-4')	(3'-4')DUP	(1'-2')	(2-3')	(3'-4')	(3'-4')	(3'-4')DUP
Analysis								
Lead (mg/kg)	47.7	2.8	3.15	6,520	1,490.00	680	13,000	13,000
XRF Reading (ppm, mg/kg)	< LOD	< LOD	< LOD	8057.6	4288.0	51.2	361.2	361.2
XRF Precision	N.A.	N.A.	N.A.	400.0	260.0	32.2	68.8	68.8
XRF Sample Number	5	29	29	60	57	43	21	21
Relative Percent Difference	N.A.	N.A.	N.A.	11	48	86	95	95

Sample concentrations flagged with U were below method detection limits
Sample concentrations flagged with J are estimated
N.A. = Not applicable
mg/kg = milligrams per kilogram = parts per million (ppm)
<LOD= Less than level of deduction

Table 4 - 2

XRF/Laboratory Confirmation Sampling Lead Analysis Results
Calumet Container Site, Hammond, IN

Sample ID	CC (2,8)	CC (2,8)	CC (3-7)	CC (3-8)	CC (3,10)	CC (4,7)	CC (5,6)	CC (6,7)
Sample Type	soil	soil	soil	soil	soil	soil	soil	soil
Date Sampled	5/20/2002	5/20/2002	5/1/2002	5/1/2002	5/20/2002	5/1/2002	5/20/2002	5/20/2002
Depth	(0-6")	(2'-4')	1-2'	0-1'	(0-2')	1-2'	(0-6")	(3'-4')
Analysis								
Lead (mg/kg)	155	1,400	133	805	4,300	30.5	280	1,320
XRF Reading (ppm, mg/kg)	749.2	< LOD	157.8	752.0	134.1	< LOD	139.3	1659
XRF Precision	85.7	N.A.	90.5	74.4	56.2	N.A.	39.3	130
XRF Sample Number	38	40	53	61	47	51	15	12
Relative Percent Difference	66	N.A.	9	3	94	N.A.	34	11

Sample concentrations flagged with U were below method detection limits
Sample concentrations flagged with J are estimated
N.A. = Not applicable
mg/kg = milligrams per kilogram = parts per million (ppm)
<LOD= Less than level of deduction

Table 4 - 3

Surface and Subsurface Soil and Sediment Lead and TAL Metals Sampling Results
Calumet Container Site, Hammond, IN

Sample ID	CC (SD-02)	CC (0,10)	CC (0,10)	CC (0.5,2.5)	CC (1,2)	CC (1,8)	CC (1,9)	Screening Level Industrial		
Sample Type	sediment	soil	soil	soil	soil	soil	soil			
Date Sampled	5/20/2002	5/20/2002	5/20/2002	5/20/2002	5/20/2002	5/20/2002	5/20/2002			
Depth	0-1'	3'-4'	3'-4' DUP	1'-2'	2-3'	3'-4'	3'-4'			
Chemical Name								Region IX[a]	RISC[b]	TACO[c]
Aluminum (mg/kg)	N.A.	N.A.	N.A.	N.A.	N.A.	3.90 U	3.90 U	**100,000**	N.L.	N.L.
Antimony (mg/kg)	N.A.	N.A.	N.A.	N.A.	N.A.	4.36	2.11	818	**620**	820[e]
Arsenic (mg/kg)	N.A.	N.A.	N.A.	N.A.	N.A.	14	3.90	439	**20**	1,200[d]
Barium (mg/kg)	N.A.	N.A.	N.A.	N.A.	N.A.	0.33 U	0.33 U	100,000	**98,000**	N.L.
Beryllium (mg/kg)	N.A.	N.A.	N.A.	N.A.	N.A.	0.33 U	0.33 U	**2,240**	2,900	2,100[d]
Cadmium (mg/kg)	N.A.	N.A.	N.A.	N.A.	N.A.	**2,000**	**21,000**	809	**780**	2,000[e]
Calcium (mg/kg)	N.A.	N.A.	N.A.	N.A.	N.A.	3.10	2.70	N.L.	N.L.	N.L.
Chromium (mg/kg)	N.A.	N.A.	N.A.	N.A.	N.A.	1.00	1.50	448	N.L.	**420[d]**
Cobalt (mg/kg)	N.A.	N.A.	N.A.	N.A.	N.A.	4.80	2.20	**100,000**	N.L.	120,000[e]
Copper (mg/kg)	N.A.	N.A.	N.A.	N.A.	N.A.	2,800	2,000	75,908	**57,000**	82,000[e]
Iron (mg/kg)	N.A.	N.A.	N.A.	N.A.	N.A.	5.85	3.73	**100,000**	N.L.	N.L.
Lead (mg/kg)	47.7	2.8	3.15	**6,520**	**1,490**	680	**13,000**	750	1,300	**400[e]**
Magnesium (mg/kg)	N.A.	N.A.	N.A.	N.A.	N.A.	20	91	N.L.	N.L.	N.L.
Manganese (mg/kg)	N.A.	N.A.	N.A.	N.A.	N.A.	0.03 U	0.03 U	**32,300**	N.L.	91,000[d]
Mercury (mg/kg)	N.A.	N.A.	N.A.	N.A.	N.A.	3.3	2.8	613	**150**	610[e]
Nickel (mg/kg)	N.A.	N.A.	N.A.	N.A.	N.A.	120	130	40,877	31,000	**21,000[d]**
Potassium (mg/kg)	N.A.	N.A.	N.A.	N.A.	N.A.	0.46 U	0.46 U	N.L.	N.L.	N.L.
Silver (mg/kg)	N.A.	N.A.	N.A.	N.A.	N.A.	66 U	75	10,220	**7,800**	10,000[e]
Sodium (mg/kg)	N.A.	N.A.	N.A.	N.A.	N.A.	0.33 U	0.33 U	N.L.	N.L.	N.L.
Thallium (mg/kg)	N.A.	N.A.	N.A.	N.A.	N.A.	4.3	2.9	**135**	140	160[e]
Vanadium (mg/kg)	N.A.	N.A.	N.A.	N.A.	N.A.	16	10	14,308	N.L.	**14,000[e]**
Zinc (mg/kg)	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	**100,000**	470,000	610,000[e]

Lead results compared to U.S. EPA Region V PRG, 800 mg/kg.

[a] U.S. EPA Region IX Industrial PRGs for Combined Exposure Pathways

[b] Indiana RISC closure levels, direct contact soils

[c] Illinois EPA Tiered Approach to Corrective Action Objectives (TACO)

[d] TACO Exposure Route-Specific Values for Soils, Industrial - Commercial, Inhalation

[e] TACO Exposure Route-Specific Values for Soils, Industrial - Commercial, Ingestion

Bold and highlighted sample concentrations are higher than the most conservative industrial criteria level for that compound

Highlighted criteria levels are the most conservative of those listed for industrial soils

Sample concentrations flagged with U were below method detection limits

Sample concentrations flagged with J are estimated

N.L. = Not listed

N.A. = Not analyzed

mg/kg = milligrams per kilogram

Table 4 - 3

Surface and Subsurface Soil and Sediment Lead and TAL Metals Sampling Results
Calumet Container Site, Hammond, IN

Sample ID	CC (1,9)	CC (2,8)	CC (2,8)	CC (3-7)	CC (3-8)	CC (3,10)	CC (4,7)	CC (5,6)	CC(6,7)	Screening Level Industrial		
Sample Type	soil	soil	soil	soil	soil	soil	soil	soil	soil			
Date Sampled	5/20/2002	5/20/2002	5/20/2002	5/1/2002	5/1/2002	5/20/2002	5/1/2002	5/20/2002	5/20/2002			
Depth	3'-4'DUP	0-6"	2'-4'	1-2'	0-1'	0-2'	1-2'	0-6"	3'-4'			
Chemical Name										Region IX[a]	RISC[b]	TACO[c]
Aluminum (mg/kg)	4 U	N.A.	4 U	5,600	2,000	4 U	2,200	N.A.	5,200	**100,000**	N.L.	N.L.
Antimony (mg/kg)	2.06 U	N.A.	21.50	45 U	4.6 U	13.50	4.6 U	N.A.	8.6	818	**620**	820[e]
Arsenic (mg/kg)	3.80 U	N.A.	**45**	**64.9**	14.4	**280**	6.5	N.A.	6.86	439	**20**	1,200[d]
Barium (mg/kg)	0.33 U	N.A.	0.33 U	71	160	0.38	28	N.A.	610	100,000	**98,000**	N.L.
Beryllium (mg/kg)	0.33 U	N.A.	0.66	3.75 U	0.345	0.64	0.4 U	N.A.	1.06	**2,240**	2,900	2,100[d]
Cadmium (mg/kg)	**22,000**	N.A.	**6,300**	3.75 U	2.64	**27,000**	0.4 U	N.A.	4.12	809	**780**	2,000[e]
Calcium (mg/kg)	2.90	N.A.	4.50	93,000	88,000	20	12,000	N.A.	32000	N.L.	N.L.	N.L.
Chromium (mg/kg)	1.40	N.A.	2.10	**780**	170	3.50	9.4	N.A.	210	448	N.L.	**420[d]**
Cobalt (mg/kg)	2.40	N.A.	37	6.7	6.6	27	1.9	N.A.	9.4	**100,000**	N.L.	120,000[e]
Copper (mg/kg)	2,100	N.A.	12,000	28	140	19,000	15.0	N.A.	190	75,908	**57,000**	82,000[e]
Iron (mg/kg)	3.36	N.A.	51.8	**120,000**	19,000	161	8,100	N.A.	8,200	**100,000**	N.L.	N.L.
Lead (mg/kg)	**13,000**	155	**1,400**	133	**805**	**4,300**	30.5	280	**1,320**	750	1,300	**400[e]**
Magnesium (mg/kg)	93	N.A.	91	37,000	49,000	1,300	5,100	N.A.	9400	N.L.	N.L.	N.L.
Manganese (mg/kg)	0.03 U	N.A.	0.06	25,000	1,800	0.11	450	N.A.	840	**32,300**	N.L.	91,000[d]
Mercury (mg/kg)	2.9	N.A.	9	0.3	0.96	14	0.08	N.A.	.58	613	**150**	610[e]
Nickel (mg/kg)	130	N.A.	160	15 U	12	350	4.9	N.A.	9.8	40,877	31,000	**21,000[d]**
Potassium (mg/kg)	0.47 U	N.A.	0.56	750 U	440	0.47 U	220	N.A.	640	N.L.	N.L.	N.L.
Silver (mg/kg)	72	N.A.	66 U	3.7 U	1.2	190	0.38 U	N.A.	1.6	10,220	**7,800**	10,000[e]
Sodium (mg/kg)	0.33 U	N.A.	1.09	750 U	160	2.16	76.0 U	N.A.	400	N.L.	N.L.	N.L.
Thallium (mg/kg)	2.8	N.A.	7.1	12.9	1.29	13	0.609	N.A.	0.331 U	**135**	140	160[e]
Vanadium (mg/kg)	9.80	N.A.	160	240	38	530	7.0	N.A.	10	14,308	N.L.	**14,000[e]**
Zinc (mg/kg)	N.A.	N.A.	N.A.	38	260	N.A.	62.0	N.A.	680	**100,000**	470,000	610,000[e]

Lead results compared to U.S. EPA Region V PRG, 800 mg/kg.

[a] U.S. EPA Region IX Industrial PRGs for Combined Exposure Pathways

[b] Indiana RISC closure levels, direct contact soils

[c] Illinois EPA Tiered Approach to Corrective Action Objectives (TACO)

[d] TACO Exposure Route-Specific Values for Soils, Industrial - Commercial, Inhalation

[e] TACO Exposure Route-Specific Values for Soils, Industrial - Commercial, Ingestion

Bold and highlighted sample concentrations are higher than the most conservative industrial criteria level for that compound

Highlighted criteria levels are the most conservative of those listed for industrial soils

Sample concentrations flagged with U were below method detection limits

Sample concentrations flagged with J are estimated

N.L. = Not listed

N.A. = Not analyzed

mg/kg = milligrams per kilogram

Table 4 -4

Surface and Subsurface Soil Volatile Organic Compounds Sampling Results
Calumet Container Site, Hammond, IN

Sample ID	CC-(2,3)	CC-(2,4)	CC- (2,8)	CC-(3,5)	CC- (3,10)	CC-(5,7)	CC-(6,7)	Screening Level Industrial		
Sample Type	soil	soil	soil	soil	soil	soil	soil			
Depth	1'-2'	1'-2'	2'-4'	1'-2'	0-2'	1'-2'	3'-4'			
Date Sampled	4/30/2002	5/1/2002	5/20/2002	5/1/2002	5/21/2002	5/1/2002	5/20/2002			
Chemical Name								Region IX[a]	RISC[b]	TACO[c,d]
1,2,4-Trichlorobenzene (ug/kg)	N.A.	8,000 J	170 U	16 U	7 U	16 UJ	1,300 U	3,000,000	4,900,000	3,200,000
1,2,4-Trimethylbenzene (ug/kg)	N.A.	410 U	670	19	17	88	18,000	170,000	N.L.	N.L.
1,2-Dichloropropane (ug/kg)	2,700 U	**2,600**	170 U	16 U	7 U	16 U	1,300 U	800	7,200	23,000
1,3,5-Trimethylbenzene (ug/kg)	N.A.	410 U	200	16 U	32	24	5,600	69,800	N.L.	N.L.
Acetone (ug/kg)	27,000 U	2,000 U	870 U	80 U	180	80 U	6,500 U	6,220,000	5,600,000	100,000,000
Benzene (ug/kg)	2,700 U	410 U	170 U	16 U	7 U	16 U	1,300 U	1,500	13,000	1,600
2-Butanone (ug/kg)	27,000 U	2,000 U	870 U	80 U	140	80 U	6,500 U	N.L.	N.L.	N.L.
Ethylbenzene (ug/kg)	21,000	1,600	550	51	7 U	200	14,000	230,000	6,800,000	400,000
Isopropylbenzene (Cumene) (ug/kg)	N.A.	410 U	170 U	16 U	7 U	16 U	1,100	522,000	N.L.	N.L.
m/p-xylene (total xylenes) (ug/kg)	66,000	7,600	2,200	180	71	640	57,000	210,000	6,200,000	320,000
Naphthalene (ug/kg)	N.A.	1,100 J	580	16 UJ	12	29 J	8,600	N.L.	8,000,000	270,000
n-Butylbenzene (ug/kg)	N.A.	920	220	16 U	7 U	16 U	2,400	240,000	N.L.	N.L.
n-Propylbenzene (ug/kg)	N.A.	700	170 U	16 U	7 U	16 U	2,000	240,000	N.L.	N.L.
o-xylene (ug/kg)	N.A.	3,400	740	48	52	210	18,000	N.L.	N.L.	410,000
p-isopropyltoluene	N.A.	510	170 U	16 U	7 U	16 U	1,300	N.L.	N.L.	N.L.
Styrene	2,700 U	410 U	170 U	16 U	7 U	16 U	1,300 U	1,700,000	16,000,000	1,500,000
Tetrachloroethene	2,700 U	410 U	170 U	16 U	7 U	16 U	1,300 U	N.L.	N.L.	N.L.
Toluene (ug/kg)	6,900	940	170 U	240	7 U	850	1,200	520,000	2,200,000	650,000

This table lists only compounds that were detected during analysis. See Appendix C for complete laboratory reports.

[a] U.S. EPA Region IX Industrial PRGs for Combined Exposure Pathways

[b] Indiana RISC closure levels, direct contact soils

[c] Illinois EPA Tiered Approach to Corrective Action Objectives (TACO)

[d] TACO Exposure Route-Specific Values for Soils, Industrial - Commercial, Inhalation

Bold and highlighted sample concentrations are higher than the most conservative industrial criteria level for that compound

Highlighted screening levels are the most conservative of those listed for industrial soils

Sample concentrations flagged with U were below method detection limits

Sample concentrations flagged with J are estimated

N.L. = Not listed

N/A = Not Analyzed

ug/kg = micrograms per kilogram

Table 4 -5

Surface and Subsurface Soil Semi-Volatile Organic Compounds Sampling Results
Calumet Container Site, Hammond, IN

Sample ID	CC-(0,3)	CC-(0,4)	CC-(1,3)	CC-(1,7)	CC-(2,4)	CC-(2, 8)	CC-(3,5)	CC-(3,10)	CC-(5,7)	CC-(6,7)	Screening Level Industrial		
Sample Type	soil	soil	soil	soil	soil	soil	soil	soil	soil	soil			
Depth	1'-2'	1'-2'	1'-2'	1'-2'	1'-2'	2'-4'	1'-2'	0'-2'	1'-2'	3'-4'			
Date Sampled	5/1/2002	5/1/2002	5/15/2002	5/1/2002	5/1/2002	5/20/2002	5/1/2002	5/21/2002	5/1/2002	5/20/2002			
Chemical Name											Region IX[a]	RISC[b]	TACO[c,d]
2-Methylnaphthalene (ug/kg)	2,200 U	2,000 U	2,300 U	4,700	2,200 U	9,200 U	2,100 U	8,700 U	2,200 U	8,700 U	N.L.	N.L.	N.L.
bis-(2-ethylhexyl)phthalate (ug/kg)	14,000	12,000	2,300 U	12,000	2,200 U	9,200 U	7,300	8,700 U	2,200 U	8,700 U	180,000	980,000	31,000,000
Naphthalene (ug/kg)	2,200 U	2,000 U	2,300 U	8,300	2,200 U	9,200 U	2,100 U	8,700 U	2,200 U	8,700 U	N.L.	8,000,000	270,000

This table lists only compounds that were detected during analysis. See Appendix C for complete laboratory reports.

[a] U.S. EPA Region IX Industrial PRGs for Combined Exposure Pathways

[b] Indiana RISC closure levels, direct contact soils

[c] Illinois EPA Tiered Approach to Corrective Action Objectives (TACO)

[d] TACO Exposure Route-Specific Values for Soils, Industrial - Commercial, Inhalation

Bold and highlighted sample concentrations are higher than the most conservative industrial criteria level for that compound

Highlighted screening levels are the most conservative of those listed for industrial soils

Sample concentrations flagged with U were below method detection limits

Sample concentrations flagged with J are estimated

N.L. = Not listed

N.A. = Not analyzed

ug/kg = micrograms per kilogram

Table 4 - 6

Surface Soil Pesticides Sampling Results
Calumet Container Site, Hammond, IN

Sample ID	CC (0,3)	CC (0,4)	CC (1,3)	CC (1,7)	CC (2,4)	CC (2,8)	CC (3,5)	CC (3,10)	CC (5,7)	CC (6,7)	Criteria Level Industrial		
Sample Type	soil	soil	soil	soil	soil	soil	soil	soil	soil	soil			
Date Sampled	5/1/2002	5/1/2002	5/1/2002	5/1/2002	5/1/2002	5/20/2002	5/1/2002	5/21/2002	5/1/2002	5/20/2002			
Depth	1'-2'	1'-2'	1'-2'	1'-2'	1'-2'	2'-4'	1'-2'	0-2'	1'-2'	3'-4'			
Chemical Name											Region IX[a]	RISC[b]	TACO[c]
Aldrin (ug/kg)	4.3 UJ	4.0 UJ	4.6 UJ	25 J	4.3 UJ	2.3 U	4.3 U	2.3 U	4.3 UJ	2.2 U	145	800	6,600[d]
alpha-BHC (ug/kg)	4.3 UJ	4.0 UJ	4.6 UJ	4.0 UJ	4.3 UJ	2.2 U	4.3	2.2 U	4.3 UJ	2.2 U	594	4,000	1,500[d]
beta-BHC (ug/kg)	4.3 UJ	4.0 UJ	4.6 UJ	4.0 UJ	4.3 UJ	2.3 U	4.3 U	2.2 U	4.3 UJ	2.2 U	2,080	14,000	N.L.
Chlordane (Technical)	75 J	84 J	41 J	8.0 UJ	15 J	4.6 U	94	17	8.7 J	80	11,000	68,000	140,000[d]
delta-BHC (ug/kg)	4.3 UJ	4.0 UJ	4.6 UJ	4.0 UJ	4.3 UJ	2.3 U	4.3 U	2.2 U	4.3 UJ	2.2 U	N.L.	N.L.	N.L.
gamma-BHC (Lindane) (ug/kg)	4.3 UJ	4.0 UJ	4.6 UJ	4.0 UJ	4.3 UJ	2.3 U	4.3 U	2.2	4.3 UJ	2.2 U	2,881	19,000	4,000[e]
4,4'-DDD (ug/kg)	8.7 UJ	8.1 UJ	9.2 UJ	8.0 UJ	8.6 UJ	4.6 U	8.6 U	4.3 U	8.7 UJ	4.3 U	17,078	120,000	24,000[e]
4,4'-DDE (ug/kg)	8.7 UJ	8.1 UJ	9.2 UJ	8.0 UJ	8.6 UJ	50	8.6 U	4.3 U	8.7 UJ	4.3 U	12,055	86,000	17,000[e]
4,4'-DDT (ug/kg)	210 J	220 J	66 J	64 J	38 J	78	8.6 U	4.3 U	14 J	61	12,055	86,000	1,500,000[d]
Dieldrin (ug/kg)	8.7 UJ	8.1 UJ	9.2 UJ	8.0 UJ	8.6 UJ	4.6 U	8.6 U	2.3	8.7 UJ	4.3 U	154	860	2,200[d]
Endosulfan I (ug/kg)	4.3 UJ	4.0 UJ	4.6 UJ	4.0 UJ	4.3 UJ	2.3 U	4.3 U	15	4.3 UJ	26	5,285,514	2,900,000	12,000,000[e]
Endosulfan II (ug/kg)	8.7 UJ	8.1 UJ	9.2 UJ	8.0 UJ	8.6 UJ	4.6 U	8.6 U	4.3 U	8.7 UJ	4.3 U	N.L.	N.L.	N.L.
Endosulfan sulfate (ug/kg)	8.7 UJ	8.1 UJ	9.2 UJ	8.0 UJ	8.6 UJ	4.6 U	8.6 U	4.3 U	8.7 UJ	4.3 U	N.L.	N.L.	N.L.
Endrin (ug/kg)	8.7 UJ	8.1 UJ	9.2 UJ	8.0 UJ	8.6 UJ	4.6 U	8.6 U	4.3 U	8.7 UJ	4.3 U	264,276	150,000	610,000[e]
Endrin aldehyde (ug/kg)	8.7 UJ	8.1 UJ	9.2 UJ	8.0 UJ	8.6 UJ	4.6 U	8.6 U	4.3 U	8.7 UJ	4.3 U	N.L.	N.L.	N.L.
Endrin ketone (ug/kg)	8.7 UJ	8.1 UJ	9.2 UJ	8.0 UJ	8.6 UJ	4.6 U	8.6 U	4.3 U	8.7 UJ	4.3 U	N.L.	N.L.	N.L.
Heptachlor (ug/kg)	4.3 UJ	4.0 UJ	4.6 UJ	4.0 UJ	4.3 UJ	2.3 U	4.3 U	2.2 U	4.3 UJ	2.2 U	548	1,200	11,000[d]
Heptachlor epoxide (ug/kg)	4.3 UJ	4.0 UJ	4.6 UJ	4.0 UJ	4.3 UJ	2.3 U	4.3 U	2.2 U	4.3 UJ	2.2 U	271	1,500	9,200[d]
Methoxychlor (ug/kg)	44 UJ	41 UJ	46 UJ	40 UJ	43 UJ	23 U	43 U	22 U	44 UJ	2.2 U	4,404,595	2,500,000	10,000,000[e]
Toxaphene (ug/kg)	87 UJ	81 UJ	92 UJ	80 UJ	86 UJ	46 U	86 U	43 U	87 UJ	43 U	2,242	12,000	170,000[d]

[a] U.S. EPA Region IX Industrial PRGs for Combined Exposure Pathways
[b] Indiana RISC closure levels, direct contact soils
[c] Illinois EPA Tiered Approach to Corrective Action Objectives (TACO)
[d] TACO Exposure Route-Specific Values for Soils, Industrial - Commercial, Inhalation
[e] TACO Exposure Route-Specific Values for Soils, Industrial - Commercial, Ingestion
Bold and highlighted sample concentrations are higher than the most conservative industrial criteria level for that compound
Highlighted criteria levels are the most conservative of those listed for industrial soils
Sample concentrations flagged with U were below method detection limits
Sample concentrations flagged with J are estimated
N.L. = not listed
ug/kg = micrograms per kilogram

APPENDIX A

GEOPROBE BORING LOGS

LOG OF BORING 0,0

U.S. Environmental Protection Agency
Calumet Container
Hammond, Illinois

Date Drilled	: 4/30/02	Borehole Diameter (in.):	3
Drilling Method	: Geoprobe	Total Recovery (in.)	: 41
Drilled By	: EPA		
Logged By	: Don Paxton		
X, Y Coordinates	:		

Depth in Inches	GRAPHIC	USCS	DESCRIPTION	Samples	Sample Interval (Inches)	REMARKS
0			FILL with heavy staining from 21 to 24"			
3						
6						
9				1	2	XRF - Pb = 4038.4 +/- 200 ppm
12		AR				
15						
18						
21						
24			Oil stained SAND with some gravel			VOCs = 109 ppm
27		SW				
30						
33		AR	Gravel FILL			
36		SW	Light brown SAND	2	4	XRF - Pb = below detectable limit
39		SW	Black SAND			VOCs = 8 ppm
42			Core completed at 41 inches bgs.			
45						
48						

08-15-2002 K:\Calumet Container START\Boring Logs\0.0.BOR

LOG OF BORING 0,1

U.S. Environmental Protection Agency
Calumet Container
Hammond, Illinois

Date Drilled	: 4/30/02	Borehole Diameter (in.): 3	
Drilling Method	: Geoprobe	Total Recovery (in.)	: 29
Drilled By	: EPA		
Logged By	: Don Paxton		
X, Y Coordinates	:		

Depth in Inches	GRAPHIC	USCS	DESCRIPTION	Samples	Sample Interval (Inches)	REMARKS
0			Dark brown FILL with silty soil and some fine sand			
3						
6						
9						
12		AR		1	1	VOCs = 1385 ppm XRF - Pb = 930.4 +/- 81.0 ppm
15						
18						
21						
24		SW	Brown to dark brown very fine SAND	2	1	XRF - Pb = below detectable limit
27						
30			Core completed at 29 inches bgs.			
33						
36						
39						
42						
45						
48						

LOG OF BORING 0,2

U.S. Environmental Protection Agency
Calumet Container

Date Drilled : 4/30/02
Drilling Method : Geoprobe
Drilled By : EPA
Logged By : Don Paxton
X, Y Coordinates :

Borehole Diameter (in.): 3
Total Recovery (in.) : 33

Depth in Inches	GRAPHIC	USCS	DESCRIPTION	Samples	Sample Interval (Inches)	REMARKS
0–18		AR	Brown FILL material with light blue paint at 12"	1	3	XRF - Pb = 512.8 +/- 64.6 ppm VOCs = 8.6 ppm
18–24		OL	Black stained SOIL			
24–33		SW	Black stained SAND	2	2	XRF - Pb = 103.4 +/- 47.7 ppm
33–48			Core completed at 33 inches bgs.			

08-15-2002 K:\Calumet Container START\Boring Logs\0.2.BOR

LOG OF BORING 0,3

U.S. Environmental Protection Agency
Calumet Container
Hammond, Illinois

Date Drilled : 4/30/02
Drilling Method : Geoprobe
Drilled By : EPA
Logged By : Don Paxton
X, Y Coordinates :

Borehole Diameter (in.): 3
Total Recovery (in.) : 45

Depth in Inches	GRAPHIC	USCS	DESCRIPTION	Samples	Sample Interval (Inches)	REMARKS
0–3		OL	Organic SOIL			
6–30		AR	FILL	1	1	XRF - Pb = 966.4 +/- 89.9 ppm
				2	1	VOCs = 1163 ppm XRF - Pb = 1300.0 +/-130.0 ppm
30–36		SW	Black stained, oily SAND			
36–45		SW	Gray SAND			
45–48			Core completed at 45 inches bgs.			

08-15-2002 K:\Calumet Container START\Boring Logs\0.3.BOR

LOG OF BORING 0,4

U.S. Environmental Protection Agency
Calumet Container
Hammond, Illinois

Date Drilled	: 4/30/02	Borehole Diameter (in.): 3	
Drilling Method	: Geoprobe	Total Recovery (in.)	: 37
Drilled By	: EPA		
Logged By	: Don Paxton		
X, Y Coordinates	:		

Depth in Inches	GRAPHIC	USCS	DESCRIPTION	Samples	Sample Interval (Inches)	REMARKS
0						
		OL	Organic SOIL			
3						
6		SW	Light brown gravelly SAND	1	1	XRF - Pb = 1140.0 +/- 180.0 ppm
9						
12						
15						VOCs = 37 ppm
18						
21						
24		SW	Black stained SAND with white soft material			
27						
30						
33				2	1	XRF - Pb = 1360.00 +/- 100.0 ppm
36						
39			Core completed at 37 inches bgs.			
42						
45						
48						

LOG OF BORING 0,5

U.S. Environmental Protection Agency
Calumet Container
Hammond, Illinois

Date Drilled	: 4/30/02	Borehole Diameter (in.): 3	
Drilling Method	: Geoprobe	Total Recovery (in.)	: 18
Drilled By	: EPA		
Logged By	: Don Paxton		
X, Y Coordinates	:		

Depth in Inches	GRAPHIC	USCS	DESCRIPTION	Samples	Sample Interval (Inches)	REMARKS
0						
3			FILL			
6		AR		1	2	XRF- Pb = 561.6 +/- 63.8 ppm
9						
12			Fine Dark brown SAND			
15		SW				
18			Core completed at 18 inches bgs.			
21						
24						
27						
30						
33						
36						
39						
42						
45						
48						

LOG OF BORING 0,6

U.S. Environmental Protection Agency
Calumet Container
Hammond, Illinois

Date Drilled	: 4/30/02	Borehole Diameter (in.): 3	
Drilling Method	: Geoprobe	Total Recovery (in.)	: 36
Drilled By	: EPA		
Logged By	: Don Paxton		
X, Y Coordinates	:		

Depth in Inches	GRAPHIC	USCS	DESCRIPTION	Samples	Sample Interval (Inches)	REMARKS
0			FILL			
3						
6						
9		AR		1	1	XRF - Pb = 136.4 +/- 47.4 ppm
12						
15						
18			Fine gray SAND wet			
21						
24						
27		SW				
30						
33				2	1	XRF - Pb = below detectable limit
36			Core completed at 36 inches bgs.			
39						
42						
45						
48						

LOG OF BORING 0,7

U.S. Environmental Protection Agency
Calumet Container
Hammond, Illinois

Date Drilled	: 5/1/02	Borehole Diameter (in.): 3	
Drilling Method	: Geoprobe	Total Recovery (in.)	: 19
Drilled By	: EPA		
Logged By	: Don Paxton		
X, Y Coordinates	:		

Depth in Inches	GRAPHIC	USCS	DESCRIPTION	Samples	Sample Interval (Inches)	REMARKS
0		OL	Silty CLAY			
3		SW	Brown SAND with red staining	1	1	XRF - Pb = below detectable limit
6						
9						
12						
15						
18						
21			Core completed at 19 inches bgs.			
24						
27						
30						
33						
36						
39						
42						
45						
48						

LOG OF BORING 0,8

U.S. Environmental Protection Agency
Calumet Container
Hammond, Illinois

Date Drilled	: 5/20/02	Borehole Diameter (in.):	3
Drilling Method	: Geoprobe	Total Recovery (in.)	: 34
Drilled By	: EPA		
Logged By	: Don Paxton		
X, Y Coordinates	:		

Depth in Inches	GRAPHIC	USCS	DESCRIPTION	Samples	Sample Interval (Inches)	REMARKS
0		AR	Black silty sand FILL with some gravel, moist	1	1	XRF - Pb = 56.8 +/- 37.8 ppm
18		SW	Greyish SAND, moist	2	1	XRF - Pb = below detectable limit
33				3	1	XRF - Pb = below detectable limit

Core completed at 34 inches bgs.

Depth scale: 0, 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, 42, 45, 48

08-13-2002 K:\Calumet Container START\Boring Logs\0.8.BOR

LOG OF BORING 0,9

U.S. Environmental Protection Agency
Calumet Container
Hammond, Illinois

Date Drilled : 5/20/02
Drilling Method : Geoprobe
Drilled By : EPA
Logged By : Don Paxton
X, Y Coordinates :

Borehole Diameter (in.): 3
Total Recovery (in.) : 30

Depth in Inches	GRAPHIC	USCS	DESCRIPTION	Samples	Sample Interval (Inches)	REMARKS
0–3		AR	Black organic soil FILL with roots, moist	1	1	XRF - Pb = 78.2 +/- 32.2 ppm
6–12		SP	Brown SAND with rocks, moist			
15–18		PT	Black organic PEAT	2	1	XRF - Pb = below detectable limit
21–27		SW	Brwn to gray fine SAND, moist			
30				3	1	XRF - Pb = below detectable limit

Core completed at 30 inches bgs.

Depth in Inches: 0, 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, 42, 45, 48

LOG OF BORING 0,10

U.S. Environmental Protection Agency
Calumet Container
Hammond, Illinois

Date Drilled : 5/20/02
Drilling Method : Geoprobe
Drilled By : EPA
Logged By : Don Paxton
X, Y Coordinates :

Borehole Diameter (in.): 3
Total Recovery (in.) : 27

Depth in Inches	GRAPHIC	USCS	DESCRIPTION	Samples	Sample Interval (Inches)	REMARKS
0		AR	FILL with brownish sand and some gravel	1	1	XRF - Pb = below detectable limit
3						
6		PT	Blackish organic PEAT			
9						
12				2	1	XRF - Pb = below detectable limit
15		OL	Greyish organic fine SILT			
18						
21				3	1	XRF - Pb = below detectable limit
24						
27			Core completed at 27 inches bgs.			
30						
33						
36						
39						
42						
45						
48						

08-13-2002 K:\Calumet Container START\Boring Logs\0.10.BOR

LOG OF BORING 0.5, 2.5

U.S. Environmental Protection Agency
Calumet Container
Hammond, Illinois

Date Drilled : 5/21/02
Drilling Method : Geoprobe
Drilled By : EPA
Logged By : Don Paxton
X, Y Coordinates :

Borehole Diameter (in.): 3
Total Recovery (in.) : 40

Depth in Inches	GRAPHIC	USCS	DESCRIPTION	Samples	Sample Interval (Inches)	REMARKS
0		AR	FILL with slag	1	2	XRF - Pb = 660.8 +/- 83.3 ppm
3						
6						
9						
12		SM	Brownish and tan silty SAND FILL			
15						
18		SW	Tan fine grained SAND, wet	2	2	XRF - Pb = 8057.6 +/- 400.0 ppm
21						
24						
27						
30						
33						
36						
39				3	2	XRF - Pb = below detectable limit
42			Core completed at 40 inches bgs.			
45						
48						

LOG OF BORING 0.5, 3.5

U.S. Environmental Protection Agency
Calumet Container
Hammond, Illinois

Date Drilled : 5/21/02
Drilling Method : Geoprobe
Drilled By : EPA
Logged By : Don Paxton
X, Y Coordinates :

Borehole Diameter (in.): 3
Total Recovery (in.) : 29

Depth in Inches	GRAPHIC	USCS	DESCRIPTION	Samples	Sample Interval (Inches)	REMARKS
0			Top soil FILL	1	2	XRF - Pb = 5260.0 +/- 200.0 ppm
3		AR				
6			FILL with brick, sand, slag glass and metal bits, mixed with sand, solvent odor			
9						
12						
15				2	2	XRF - Pb = 1840.0 +/- 150.0 ppm
18		AR				
21						
24				3	2	XRF - Pb = 7974.4 +/- 490.0 ppm
27						
30			Core completed at 29 inches bgs.			
33						
36						
39						
42						
45						
48						

LOG OF BORING 0.5, 5

U.S. Environmental Protection Agency
Calumet Container
Hammond, Illinois

Date Drilled : 5/21/02
Drilling Method : Geoprobe
Drilled By : EPA
Logged By : Don Paxton
X, Y Coordinates :

Borehole Diameter (in.): 3
Total Recovery (in.) : 45

Depth in Inches	GRAPHIC	USCS	DESCRIPTION	Samples	Sample Interval (Inches)	REMARKS
0–6		AR	Top soil FILL	1	2	XRF - Pb = 8057.6 +/- 400.0 ppm
6–9		SW	Brown to tan fine SAND			
9–24		AR	Black FILL material with gravel, glass, metal and black sand			
24–36		AR	Reddish gravel FILL	2	2	XRF - Pb = 1429.6 +/- 170.0 ppm
				3	2	XRF - Pb = 601.6 +/- 92.9 ppm
36–45		SW	Light trey SAND, moist			
45–48			Core completed at 45 inches bgs.			

08-13-2002 K:\Calumet Container START\Boring Logs\0.55.BOR

LOG OF BORING 1,1

U.S. Environmental Protection Agency
Calumet Container
Hammond, Illinois

Date Drilled : 4/30/02
Drilling Method : Geoprobe
Drilled By : EPA
Logged By : Don Paxton
X, Y Coordinates : :

Borehole Diameter (in.): 3
Total Recovery (in.) : 13

Depth in Inches	GRAPHIC	USCS	DESCRIPTION	Samples	Sample Interval (Inches)	REMARKS
0			Light brown SAND			
3						
6		SW		1	12	XRF - Pb = 518.80 +/- 55.8 ppm
9						
12		SW	Stained black SAND			VOCs = 1494 ppm
			Core completed at 13 inches bgs.			
15						
18						
21						
24						
27						
30						
33						
36						
39						
42						
45						
48						

LOG OF BORING 1,2

U.S. Environmental Protection Agency
Calumet Container
Hammond, Illinois

Date Drilled : 5/21/02
Drilling Method : Geoprobe
Drilled By : EPA
Logged By : Don Paxton
X, Y Coordinates :

Borehole Diameter (in.): 3
Total Recovery (in.) : 38

Depth in Inches	GRAPHIC	USCS	DESCRIPTION	Samples	Sample Interval (Inches)	REMARKS
0		SW	Top soil mixed with brown SAND	1	1	XRF - Pb = 793.2 +/- 91.9 ppm
15		AR	Blueish gray FILL with sand and stones	2	1	XRF - Pb = below detectable limit
24		AR	Blueish sand FILL mixed with paint residue			
30		SW	Blackish finely grained SAND, moist	3	1	XRF - Pb = 4288.0 +/- 260.0 ppm
				4	1	XRF - Pb = below detectable limit

Core completed at 38 inches bgs.

08-13-2002 K:\Calumet Container START\Boring Logs\1.2.BOR

LOG OF BORING 1,3

U.S. Environmental Protection Agency
Calumet Container
Hammond, Illinois

Date Drilled : 4/30/02
Drilling Method : Geoprobe
Drilled By : EPA
Logged By : Don Paxton
X, Y Coordinates :

Borehole Diameter (in.): 3
Total Recovery (in.) : 39

Depth in Inches	GRAPHIC	USCS	DESCRIPTION	Samples	Sample Interval (Inches)	REMARKS
0			FILL with light blue, green, yellow and red paint			
3				1	1	XRF - Pb = 841.6 +/- 80.2 ppm
6		AR				
9						
12						VOCs = 304 ppm
			FILL with brown sand			
15						
18				2	2	XRF - Pb = 86.6 +/- 41.4 ppm
21						
24		AR				
27						
30						
33						
36			Dark brown to black stained SAND			
		SW				VOCs = 86 ppm
39			Core completed at 39 inches bgs.			
42						
45						
48						

08-15-2002 K:\Calumet Container START\Boring Logs\1.3.BOR

LOG OF BORING 1,4

U.S. Environmental Protection Agency
Calumet Container
Hammond, Illinois

Date Drilled : 4/30/02
Drilling Method : Geoprobe
Drilled By : EPA
Logged By : Don Paxton
X, Y Coordinates :

Borehole Diameter (in.): 3
Total Recovery (in.) : 40

Depth in Inches	GRAPHIC	USCS	DESCRIPTION	Samples	Sample Interval (Inches)	REMARKS
0			FILL			
3						
6						
9						
12		AR		1	1	XRF - Pb = 1868.8 +/- 94.7 ppm
15						
18						
21						
24						
27			Dark brown grading to tan fine SAND	2	1	XRF - Pb = below detectable limit
30						
33		SW				
36						
39						
42			Core completed at 40 inches bgs.			
45						
48						

LOG OF BORING 1,5

U.S. Environmental Protection Agency
Calumet Container
Hammond, Illinois

Date Drilled	: 4/30/02	Borehole Diameter (in.): 3	
Drilling Method	: Geoprobe	Total Recovery (in.)	: 48
Drilled By	: EPA		
Logged By	: Don Paxton		
X, Y Coordinates	:		

Depth in Inches	GRAPHIC	USCS	DESCRIPTION	Samples	Sample Interval (Inches)	REMARKS
0			FILL			
3						
6						
9						
12		AR		1	1	XRF - Pb = 1969.6 +/- 120.0
15						VOCs = 105 ppm
18						
21						
24			Black stained SAND			
27				2	1	XRF - Pb = below detectable limit
30		SW				
33			Dark gray fine SAND			
36						
39		SW				
42						
45						
48						

LOG OF BORING 1,7

U.S. Environmental Protection Agency
Calumet Container
Hammond, Illinois

Date Drilled : 5/1/02
Drilling Method : Geoprobe
Drilled By : EPA
Logged By : Don Paxton
X, Y Coordinates :

Borehole Diameter (in.): 3
Total Recovery (in.) : 39

Depth in Inches	GRAPHIC	USCS	DESCRIPTION	Samples	Sample Interval (Inches)	REMARKS
0		AR	FILL with blue material			
3						
6						
9						
12						
15				1	1	XRF - Pb = 121.9 +/- 68.6 ppm
18						
21						
24						
27		SW	Dark stained SAND with organic odor			
30						
33						
36				2	1	XRF - Pb = below detectable limit
39			Core completed at 39 inches bgs.			
42						
45						
48						

08-13-2002 K:\Calumet Container START\Boring Logs\1.7.BOR

LOG OF BORING 1,8

U.S. Environmental Protection Agency
Calumet Container
Hammond, Illinois

Date Drilled : 5/20/02
Drilling Method : Geoprobe
Drilled By : EPA
Logged By : Don Paxton
X, Y Coordinates :

Borehole Diameter (in.): 3
Total Recovery (in.) : 37

Depth in Inches	GRAPHIC	USCS	DESCRIPTION	Samples	Sample Interval (Inches)	REMARKS
0			Silty sand FILL with some gravel, wet	1	1	XRF - Pb = 95.1 +/- 38.8 ppm
3		AR				
6			Gravel FILL, wet			
9		AR				
12			Silty SAND, wet			
15		SM				
18				2	1	XRF - Pb = 51.2 +/- 32.2 ppm
21			PEAT with some roots, wet			
24		PT				
27						
30			Gray fine SAND, wet			
33		SM				
36				3	1	XRF - Pb = below detectable limit
			Core completed at 37 inches bgs.			
39						
42						
45						
48						

08-13-2002 K:\Calumet Container START\Boring Logs\1.8.BOR

LOG OF BORING 1,9

U.S. Environmental Protection Agency
Calumet Container
Hammond, Illinois

Date Drilled	: 5/20/02	Borehole Diameter (in.): 3	
Drilling Method	: Geoprobe	Total Recovery (in.)	: 28
Drilled By	: EPA		
Logged By	: Don Paxton		
X, Y Coordinates	:		

Depth in Inches	GRAPHIC	USCS	DESCRIPTION	Samples	Sample Interval (Inches)	REMARKS
0		SW	Brownish black gravelly SAND with some soil, moist	1	1	XRF - Pb = 140.3 +/- 43.6 ppm
3						
6		GW	Whitish GRAVEL with stone, moist			
9						
12						
15				2	1	XRF - Pb = 146.6 +/- 60.2 ppm
18		SW	Gray SAND, moist			
21						
24						
27				3	1	XRF - Pb = below detectable limit
			Core completed at 28 inches bgs.			
30						
33						
36						
39						
42						
45						
48						

LOG OF BORING 1,10

U.S. Environmental Protection Agency
Calumet Container
Hammond, Illinois

Date Drilled : 5/20/02
Drilling Method : Geoprobe
Drilled By : EPA
Logged By : Don Paxton
X, Y Coordinates :

Borehole Diameter (in.): 3
Total Recovery (in.) : 32

Depth in Inches	GRAPHIC	USCS	DESCRIPTION	Samples	Sample Recovery (Inches)	REMARKS
0			Brownish top soil FILL with some soil, moist	1	1	XRF - Pb = below detectable limit
3		AR				
6			Gray and brown topsoil with gravel FILL			
9						
12						
15		AR		2	1	XRF - Pb = below detectable limit
18						
21						
24						
27			Black organic PEAT			
30		PT		3	1	XRF - Pb = below detectable limit
33			Core completed at 32 inches bgs.			
36						
39						
42						
45						
48						

LOG OF BORING 1.5, 3.5

U.S. Environmental Protection Agency
Calumet Container
Hammond, Illinois

Date Drilled : 5/21/02
Drilling Method : Geoprobe
Drilled By : EPA
Logged By : Don Paxton
X, Y Coordinates :

Borehole Diameter (in.): 3
Total Recovery (in.) : 45

Depth in Inches	GRAPHIC	USCS	DESCRIPTION	Samples	Sample Interval (Inches)	REMARKS
0		AR	FILL material with brick, white stone slag with silt	1	2	XRF - Pb = 1960.0 +/- 140.0 ppm
3						
6						
9						
12				2	2	XRF - Pb = 2689.6 +/- 210.0 ppm
15						
18		SM	Silty black SAND			
21						
24		SW	Tane fine grained SAND moist	3	2	XRF - Pb = below detectable limit
27						
30						
33						
36				4	9	XRF - Pb = below detectable limit
39						
42						
45			Core completed at 45 inches bgs.			
48						

08-13-2002 K:\Calumet Container START\Boring Logs\1.53.5.BOR

LOG OF BORING 1.5, 5.5

U.S. Environmental Protection Agency
Calumet Container
Hammond, Illinois

Date Drilled	: 5/21/02	Borehole Diameter (in.): 3	
Drilling Method	: Geoprobe	Total Recovery (in.)	: 36
Drilled By	: EPA		
Logged By	: Don Paxton		
X, Y Coordinates	:		

Depth in Inches	GRAPHIC	USCS	DESCRIPTION	Samples	Sample Interval (Inches)	REMARKS
0			Top soil FILL with stones	1	1	XRF - Pb = 1840.0 +/- 140.0 ppm
3		AR				
6			Whitish gravel and stone FILL			
9		AR				
12						
15						
18				2	1	XRF - Pb = 291.8 +/- 78.8 ppm
21						
24		OL				
27						
30						
33						
36			Brick and slag FILL	3	1	XRF - Pb = below detectable limit
39			Core completed at 36 inches bgs.			
42						
45						
48						

08-13-2002 K:\Calumet Container START\Boring Logs\1.55.5.BOR

LOG OF BORING 2,3

U.S. Environmental Protection Agency
Calumet Container
Hammond, Illinois

Date Drilled : 4/30/02
Drilling Method : Geoprobe
Drilled By : EPA
Logged By : Don Paxton
X, Y Coordinates :

Borehole Diameter (in.): 3
Total Recovery (in.) : 36

Depth in Inches	GRAPHIC	USCS	DESCRIPTION	Samples	Sample Interval (Inches)	REMARKS
0			Slag FILL			
3						
6						
9						
12				1	1	XRF - Pb = 666.4 +/- 77.9 ppm VOCs = 47.9 ppm
15		AR				
18						
21						
24						
27				2	1	XRF - Pb = 1400.0 +/- 130.0 ppm
30						
33		SW	Dark brown native fine SAND			
36			Core completed at 36 inches bgs.			
39						
42						
45						
48						

08-15-2002 K:\Calumet Container START\Boring Logs\2,3.BOR

LOG OF BORING 2,4

U.S. Environmental Protection Agency
Calumet Container
Hammond, Illinois

Date Drilled	: 5/1/02	Borehole Diameter (in.): 3	
Drilling Method	: Geoprobe	Total Recovery (in.)	: 34
Drilled By	: EPA		
Logged By	: Don Paxton		
X, Y Coordinates	:		

Depth in Inches	GRAPHIC	USCS	DESCRIPTION	Samples	Sample Interval (Inches)	REMARKS
0		AR	Light brown silty clay lome soil FILL	1	1	XRF - Pb = 1189.6 +/- 150.0 ppm
3						
6		AR	Brown gravel FILL			
9						
12						VOCs = 2.5 ppm
15						
18		AR	Brown gravel FILL with dark staining	2	2	XRF - Pb = 4649.6 +/- 290.0 ppm
21						
24		AR	Black gravel FILL with larger particle size than above			
27						
30						VOCs = 0 ppm
33						
36			Core completed at 34 inches bgs.			
39						
42						
45						
48						

LOG OF BORING 2,5

U.S. Environmental Protection Agency
Calumet Container
Hammond, Illinois

Date Drilled : 5/1/02
Drilling Method : Geoprobe
Drilled By : EPA
Logged By : Don Paxton
X, Y Coordinates :

Borehole Diameter (in.): 3
Total Recovery (in.) : 37

Depth in Inches	GRAPHIC	USCS	DESCRIPTION	Samples	Sample Interval (Inches)	REMARKS
0			FILL with pink, green and blue paint			
3						
6				1	1	XRF - Pb = 410.8 +/- 64.2 ppm
9						
12						
15		AR				
18						VOCs = 0 ppm
21						
24						
27				2	1	XRF - Pb = 177.9 +/- 69.5 ppm
30		CL	Black sandy CLAY			
33						
36		SW	Gray fine SAND			
39			Core completed at 37 inches bgs.			
42						
45						
48						

08-15-2002 K:\Calumet Container START\Boring Logs\2.5.BOR

LOG OF BORING 2,6

U.S. Environmental Protection Agency
Calumet Container
Hammond, Illinois

Date Drilled	: 5/1/02	Borehole Diameter (in.): 3	
Drilling Method	: Geoprobe	Total Recovery (in.)	: 22
Drilled By	: EPA		
Logged By	: Don Paxton		
X, Y Coordinates	:		

Depth in Inches	GRAPHIC	USCS	DESCRIPTION	Samples	Sample Interval (Inches)	REMARKS
0			FILL			
3						
6				1	1	XRF - Pb = 172.9 +/- 48.0 ppm
9		AR				
12						
15						VOCs = 0.2 ppm
18			Dark black fine SAND with trace clay			
21		SW		2	1	XRF - Pb = 42.0 +/- 27.5 ppm
24			Core completed at 22 inches bgs.			
27						
30						
33						
36						
39						
42						
45						
48						

08-15-2002 K:\Calumet Container START\Boring Logs\2,6.BOR

LOG OF BORING 2,8

U.S. Environmental Protection Agency
Calumet Container
Hammond, Illinois

Date Drilled : 5/20/02
Drilling Method : Geoprobe
Drilled By : EPA
Logged By : Don Paxton
X, Y Coordinates :

Borehole Diameter (in.): 3
Total Recovery (in.) : 28

Depth in Inches	GRAPHIC	USCS	DESCRIPTION	Samples	Sample Interval (Inches)	REMARKS
0		AR	FILL with brown rocky topsoil, dry	1	1	XRF - Pb = 749.2 +/- 85.7 ppm
3		AR	FILL with brown sand and gravel			
6		PT	Black organic PEAT silty to gravelly	2	1	XRF - Pb = 243.4 +/- 69.2 ppm
9						
12						
15						
18						
21				3	1	XRF - Pb = below detectable limit
24						
27		SW	Gray SAND	4	1	XRF - Pb = 70.7 +/- 41.9 ppm
30			Core completed at 30 inches bgs.			
33						
36						
39						
42						
45						
48						

08-13-2002 K:\Calumet Container START\Boring Logs\2.8.BOR

LOG OF BORING 2,9

U.S. Environmental Protection Agency
Calumet Container
Hammond, Illinois

Date Drilled : 5/1/02
Drilling Method : Geoprobe
Drilled By : EPA
Logged By : Don Paxton
X, Y Coordinates :

Borehole Diameter (in.): 3
Total Recovery (in.) : 33

Depth in Inches	GRAPHIC	USCS	DESCRIPTION	Samples	Sample Interval (Inches)	REMARKS
0						
3		AR	FILL			
6				1	1	XRF - Pb = 177.9 +/- 65.4 ppm
9		AR	FILL with white crushed rock			
12			FILL			
15						
18						
21		AR				
24						
27						
30						
33				2	1	XRF - Pb = below detectable limit
36			Core completed at 33 inches bgs.			
39						
42						
45						
48						

LOG OF BORING 2,10

U.S. Environmental Protection Agency
Calumet Container
Hammond, Illinois

Date Drilled : 5/21/02
Drilling Method : Geoprobe
Drilled By : EPA
Logged By : Don Paxton
X, Y Coordinates :

Borehole Diameter (in.): 3
Total Recovery (in.) : 39

Depth in Inches	GRAPHIC	USCS	DESCRIPTION	Samples	Sample Interval (Inches)	REMARKS
0–3		AR	FILL with topsoil			
3–9		AR	FILL with whitish stones	1	1	XRF - Pb = 80.2 +/- 45.6 ppm
9–18		SM	Brown sand and gravel FILL	2	1	XRF - Pb = 150.8 +/- 51.6 ppm
18–30		SW	Blackish silty SAND mixed with gravel, moist	3	1	XRF - Pb = 68.0 +/- 40.9 ppm
30–39		SW	Gray and black SAND mixed with gravel, wet			

Core completed at 39 inches bgs.

08-13-2002 K:\Calumet Container START\Boring Logs\2.10.BOR

LOG OF BORING 2,11

U.S. Environmental Protection Agency
Calumet Container
Hammond, Illinois

Date Drilled	: 5/20/02	Borehole Diameter (in.): 3	
Drilling Method	: Geoprobe	Total Recovery (in.)	: 32
Drilled By	: EPA		
Logged By	: Don Paxton		
X, Y Coordinates	:		

Depth in Inches	GRAPHIC	USCS	DESCRIPTION	Samples	Sample Interval (Inches)	REMARKS
0			FILL with brown topsoil mixed with gravel and sand, dry increasing moisture with depth	1	1	XRF - Pb = 82.9 +/- 41.6 ppm
3						
6						
9				2	1	XRF - Pb = below detectable limit
12						
15		AR				
18				3	1	XRF - Pb = below detectable limit
21						
24						
27						
30				4	1	XRF - Pb = below detectable limit
33			Core completed at 32 inches bgs.			
36						
39						
42						
45						
48						

08-13-2002 K:\Calumet Container START\Boring Logs\2.11.BOR

LOG OF BORING 2.5, 4.5

U.S. Environmental Protection Agency
Calumet Container
Hammond, Illinois

Date Drilled	: 5/21/02	Borehole Diameter (in.): 3	
Drilling Method	: Geoprobe	Total Recovery (in.)	: 40
Drilled By	: EPA		
Logged By	: Don Paxton		
X, Y Coordinates	:		

Depth in Inches	GRAPHIC	USCS	DESCRIPTION	Samples	Sample Interval (Inches)	REMARKS
0		AR	FILL with slag	1	2	XRF - Pb = 972.0 +/- 98.4 ppm
3						
6						
9						
12		SM	Brownish and tan silty SAND FILL			
15						
18		SW	Tan fine grained SAND, wet	2	2	XRF - Pb = below detectable limit
21						
24						
27						
30						
33						
36						
39				3	2	XRF - Pb = below detectable limit
42			Core completed at 40 inches bgs.			
45						
48						

LOG OF BORING 3,3

U.S. Environmental Protection Agency
Calumet Container
Hammond, Illinois

Date Drilled	: 5/1/02	Borehole Diameter (in.): 3	
Drilling Method	: Geoprobe	Total Recovery (in.)	: 37
Drilled By	: EPA		
Logged By	: Don Paxton		
X, Y Coordinates	:		

Depth in Inches	GRAPHIC	USCS	DESCRIPTION	Samples	Sample Interval (Inches)	REMARKS
0			FILL			
3						
6				1	1	XRF - Pb = 1169.6 +/- 120.0 ppm
9						
		AR				
12						
15						
18						
21			Black very fine SAND			
24						
		SW				
27						
30						
			Mottled SAND			
33		SW				
36				2	1	XRF - Pb = below detectable limit
			Core completed at 37 inches bgs.			
39						
42						
45						
48						

08-13-2002 K:\Calumet Container START\Boring Logs\3,3.BOR

LOG OF BORING 3,4

U.S. Environmental Protection Agency
Calumet Container
Hammond, Illinois

Date Drilled	: 5/1/02	Borehole Diameter (in.): 3	
Drilling Method	: Geoprobe	Total Recovery (in.)	: 32
Drilled By	: EPA		
Logged By	: Don Paxton		
X, Y Coordinates	:		

Depth in Inches	GRAPHIC	USCS	DESCRIPTION	Samples	Sample Interval (Inches)	REMARKS
0						
3		AR	FILL			
6			Tan native SAND (swampy area) grading to black and gray			
9				1	1	XRF - Pb = 58.0 +/- 38.5 ppm
12						
15						
18		SW				
21						
24						VOCs = 0 ppm
27						
30				2	1	XRF - Pb = below detectable limit
33			Core completed at 32 inches bgs.			
36						
39						
42						
45						
48						

LOG OF BORING 3,5

U.S. Environmental Protection Agency
Calumet Container
Hammond, Illinois

Date Drilled	: 5/1/02	Borehole Diameter (in.): 3	
Drilling Method	: Geoprobe	Total Recovery (in.)	: 40
Drilled By	: EPA		
Logged By	: Don Paxton		
X, Y Coordinates	:		

Depth in Inches	GRAPHIC	USCS	DESCRIPTION	Samples	Sample Interval (Inches)	REMARKS
0			FILL			
3						
6				1	1	XRF - Pb = 177.9 +/- 69.5 ppm
9						
12		AR				
15						
						VOCs = 330 ppm
18						
21						
24			FILL with brown clay			
27						
		AR				
30						VOCs = 64 ppm
				2	1	XRF - Pb = 678.8 +/- 68.8 ppm
33			Black fine SAND			
36		SW				
39						
			Core completed at 40 inches bgs.			
42						
45						
48						

08-15-2002 K:\Calumet Container START\Boring Logs\3.5.BOR

LOG OF BORING 3,6

U.S. Environmental Protection Agency
Calumet Container
Hammond, Illinois

Date Drilled : 5/1/02
Drilling Method : Geoprobe
Drilled By : EPA
Logged By : Don Paxton
X, Y Coordinates :

Borehole Diameter (in.): 3
Total Recovery (in.) : 35

Depth in Inches	GRAPHIC	USCS	DESCRIPTION	Samples	Sample Interval (Inches)	REMARKS
0			FILL			
3						
6		AR		1	1	XRF - Pb = below detectable limit
9						
12			Light brown fine SAND with traces of clay and black staining between 20 and 23"			
15						
18						
21		SW				VOCs = 1.3 ppm
24						
27						
30						
33				2	1	XRF - Pb = below detectable limit
36			Core completed at 35 inches bgs.			
39						
42						
45						
48						

08-15-2002 K:\Calumet Container START\Boring Logs\3.6.BOR

LOG OF BORING 3,7

U.S. Environmental Protection Agency
Calumet Container
Hammond, Illinois

Date Drilled : 5/1/02
Drilling Method : Geoprobe
Drilled By : EPA
Logged By : Don Paxton
X, Y Coordinates :

Borehole Diameter (in.): 3
Total Recovery (in.) : 44

Depth in Inches	GRAPHIC	USCS	DESCRIPTION	Samples	Sample Interval (Inches)	REMARKS
0			FILL with pink and light blue material throughout			
3						
6						
9						
12						
15				1	1	XRF - Pb = 157.8 +/- 90.5 ppm
18						
21		AR				VOCs = 0 ppm
24						
27						
30						
33						
36				2	1	XRF - Pb = below detectable limit
39						
42						
45			Core completed at 44 inches bgs.			
48						

LOG OF BORING 3,8

U.S. Environmental Protection Agency
Calumet Container
Hammond, Illinois

Date Drilled : 5/1/02
Drilling Method : Geoprobe
Drilled By : EPA
Logged By : Don Paxton
X, Y Coordinates :

Borehole Diameter (in.): 3
Total Recovery (in.) : 32

Depth in Inches	GRAPHIC	USCS	DESCRIPTION	Samples	Sample Interval (Inches)	REMARKS
0			FILL			
3						
6						
9		AR		1	1	XRF - Pb = 752.0 +/- 74.4 ppm
12						
15						
18			Dark brown to black GRAVEL			
21						
24		GW				
27						
30		SW	Dark grey to black fine SAND	2	1	XRF - Pb = below detectable limit
33			Core completed at 32 inches bgs.			
36						
39						
42						
45						
48						

08-13-2002 K:\Calumet Container START\Boring Logs\3.8.BOR

LOG OF BORING 3,9

U.S. Environmental Protection Agency
Calumet Container
Hammond, Illinois

Date Drilled : 5/1/02
Drilling Method : Geoprobe
Drilled By : EPA
Logged By : Don Paxton
X, Y Coordinates :

Borehole Diameter (in.): 3
Total Recovery (in.) : 39

Depth in Inches	GRAPHIC	USCS	DESCRIPTION	Samples	Sample Interval (Inches)	REMARKS
0			FILL			
3						
6						
9		AR		1	2	XRF - Pb = 82.9 +/- 52.2 ppm
12						
15						
18						
21			Brown SAND			
24		SW				
27						
30			FILL			
33		AR				
36				2	1	XRF - Pb = below detectable limit
		SW	Dark stained fine SAND with some silt			
39			Core completed at 39 inches bgs.			
42						
45						
48						

08-13-2002 K:\Calumet Container START\Boring Logs\3.9.BOR

LOG OF BORING 3,10

U.S. Environmental Protection Agency
Calumet Container
Hammond, Illinois

Date Drilled : 5/21/02
Drilling Method : Geoprobe
Drilled By : EPA
Logged By : Don Paxton
X, Y Coordinates :

Borehole Diameter (in.): 3
Total Recovery (in.) : 39

Depth in Inches	GRAPHIC	USCS	DESCRIPTION	Samples	Sample Interval (Inches)	REMARKS
0–3		AR	Light brown topsoil FILL	1	1	XRF - Pb = 134.1 +/- 56.2 ppm
6–18		AR	Brick and sand FILL with stratified layers or red brick, orangish brick, grey sand	2	1	XRF - Pb = 103.4 +/- 42.8 ppm
21		SW	Grey to brown SAND			
24–27		AR	Grey gravel and stone FILL	3	1	XRF - Pb = 180.7 +/- 61.8 ppm
30		SW	Grey SAND			
33		GW	Grey stone and GRAVEL			
36–39		SW	Grey SAND	4	1	XRF - Pb = below detectable limit

Core completed at 39 inches bgs.

08-13-2002 K:\Calumet Container START\Boring Logs\3.10.BOR

LOG OF BORING 4,5

U.S. Environmental Protection Agency
Calumet Container
Hammond, Illinois

Date Drilled	: 4/30/02	Borehole Diameter (in.): 3	
Drilling Method	: Geoprobe	Total Recovery (in.)	: 12
Drilled By	: EPA		
Logged By	: Don Paxton		
X, Y Coordinates	:		

Depth in Inches	GRAPHIC	USCS	DESCRIPTION	Samples	Sample Interval (Inches)	REMARKS
0			Dark brown SAND			
3		SW				
6			Tan SAND	1	1	XRF - Pb = 290.2 +/- 58.5 ppm
9						
		SW				
12			Core completed at 12 inches bgs.			
15						
18						
21						
24						
27						
30						
33						
36						
39						
42						
45						
48						

LOG OF BORING 4,7

U.S. Environmental Protection Agency
Calumet Container
Hammond, Illinois

Date Drilled : 5/1/02
Drilling Method : Geoprobe
Drilled By : EPA
Logged By : Don Paxton
X, Y Coordinates :

Borehole Diameter (in.): 3
Total Recovery (in.) : 32

Depth in Inches	GRAPHIC	USCS	DESCRIPTION	Samples	Sample Interval (Inches)	REMARKS
0			FILL			
3						
6						
9		AR				
12						
15				1	2	XRF - Pb = below detectable limit
18						
21			Brown SAND with black stains at 20" grading to grey			VOCs = 0 ppm
24		SW				
27						
30				2	1	XRF - Pb = below detectable limit
33			Core completed at 32 inches bgs.			
36						
39						
42						
45						
48						

LOG OF BORING 4,8

U.S. Environmental Protection Agency
Calumet Container
Hammond, Illinois

Date Drilled	: 5/1/02	Borehole Diameter (in.): 3	
Drilling Method	: Geoprobe	Total Recovery (in.)	: 34
Drilled By	: EPA		
Logged By	: Don Paxton		
X, Y Coordinates	:		

Depth in Inches	GRAPHIC	USCS	DESCRIPTION	Samples	Sample Interval (Inches)	REMARKS
0			FILL with black stain water mark at 19"			
3						
6						
9						
12				1	1	XRF - Pb = 130.0 +/- 60.3 ppm
15		AR				
18						
21						
24						
27						
30		SW	Grey fine SAND			
33				2	1	XRF - Pb = below detectable limit
			Core completed at 34 inches bgs.			
36						
39						
42						
45						
48						

LOG OF BORING 4,9

U.S. Environmental Protection Agency
Calumet Container
Hammond, Illinois

Date Drilled	: 4/30/02	Borehole Diameter (in.): 3
Drilling Method	: Geoprobe	Total Recovery (in.) : 41
Drilled By	: EPA	
Logged By	: Don Paxton	
X, Y Coordinates	:	

Depth in Inches	GRAPHIC	USCS	DESCRIPTION	Samples	Sample Interval (Inches)	REMARKS
0		AR	FILL with dark brown sandy gravel and some brick			
3						
6						
9						
12				1	1	XRF - Pb = 1469.6 +/- 120.0 ppm
15						
18		OL	Dark brown to grey silty CLAY			VOCs = 0 ppm
21						
24				2	1	XRF - Pb = 265.6 +/- 76.2 ppm
27						
30						
33		PT	PEAT with some roots and moist wetland soil			
36		SW	Grey SAND			
39						
42			Core completed at 41 inches bgs.			
45						
48						

08-15-2002 K:\Calumet Container START\Boring Logs\4.9.BOR

LOG OF BORING 5,6

U.S. Environmental Protection Agency
Calumet Container
Hammond, Illinois

Date Drilled	: 5/20/02	Borehole Diameter (in.): 3	
Drilling Method	: Geoprobe	Total Recovery (in.)	: 32
Drilled By	: EPA		
Logged By	: Don Paxton		
X, Y Coordinates	:		

Depth in Inches	GRAPHIC	USCS	DESCRIPTION	Samples	Sample Interval (Inches)	REMARKS
0		AR	Sandy FILL with some gravel and metal pieces	1	1	XRF - Pb = 78.2 +/- 32.2 ppm
3						
6						
9						
12		AR	Blackish organic FILL material with greyish sand grading to blackish sand and material	2	1	XRF - Pb = below detectable limit
15						
18						
21						
24						
27						
30				3	1	XRF - Pb = below detectable limit
33			Core completed at 32 inches bgs.			
36						
39						
42						
45						
48						

08-13-2002 K:\Calumet Container START\Boring Logs\5,6.BOR

LOG OF BORING 5,7

U.S. Environmental Protection Agency
Calumet Container
Hammond, Illinois

Date Drilled : 5/1/02
Drilling Method : Geoprobe
Drilled By : EPA
Logged By : Don Paxton
X, Y Coordinates :

Borehole Diameter (in.): 3
Total Recovery (in.) : 32

Depth in Inches	GRAPHIC	USCS	DESCRIPTION	Samples	Sample Interval (Inches)	REMARKS
0		AR	FILL with layer of red brick at 5" bgs.			
3						
6						
9						
12						
15				1	1	XRF - Pb = 180.7 +/- 61.8 ppm
18		SW	Dark brown fine SAND			
21						
24						
27						
30				2	1	XRF - Pb = below detectable limit
33			Core completed at 32 inches bgs.			
36						
39						
42						
45						
48						

LOG OF BORING 6,7

U.S. Environmental Protection Agency
Calumet Container
Hammond, Illinois

Date Drilled : 5/20/02
Drilling Method : Geoprobe
Drilled By : EPA
Logged By : Don Paxton
X, Y Coordinates :

Borehole Diameter (in.): 3
Total Recovery (in.) : 33

Depth in Inches	GRAPHIC	USCS	DESCRIPTION	Samples	Sample Interval (Inches)	REMARKS
0		AR	FILL with layer of red brick at 5" bgs.			
3				1	1	XRF - Pb = below detectable limit
6						
9				2	1	XRF - Pb = 1659.2 +/- 130.0 ppm
12						
15						
18		SW	Dark brown fine SAND			
21				3	1	XRF - Pb = 414.0 +/- 56.9 ppm
24						
27						
30						
33			Core completed at 33 inches bgs.			
36						
39						
42						
45						
48						

LOG OF BORING SD-1

U.S. Environmental Protection Agency
Calumet Container
Hammond, Illinois

Date Drilled	: 5/20/02	Borehole Diameter (in.): 3	
Drilling Method	: Geoprobe	Total Recovery (in.)	: 31
Drilled By	: EPA		
Logged By	: Don Paxton		
X, Y Coordinates	:		

Depth in Inches	GRAPHIC	USCS	DESCRIPTION	Samples	Sample Interval (Inches)	REMARKS
0						
3		PT	Organic material with wood	1	1	XRF - Pb = below detectable limit
6		SW	Fine SAND			
9						
12		PT	Black PEAT			
15						
18		SW	Greyish SAND with streaks of black organic material	2	1	XRF - Pb = below detectable limit
21						
24						
27						
30						
33			Core completed at 31 inches bgs.			
36						
39						
42						
45						
48						

LOG OF BORING SD-2

U.S. Environmental Protection Agency
Calumet Container
Hammond, Illinois

Date Drilled	: 5/20/02	Borehole Diameter (in.): 3	
Drilling Method	: Geoprobe	Total Recovery (in.)	: 28
Drilled By	: EPA		
Logged By	: Don Paxton		
X, Y Coordinates	:		

Depth in Inches	GRAPHIC	USCS	DESCRIPTION	Samples	Sample Interval (Inches)	REMARKS
0			Black organic SOIL and material, loam, wet			
3		PT				XRF - Pb = below detectable limit
6			Greyish wet SAND with black organic material			
9				1	2	
12						
15		SW		2	2	XRF - Pb = 85.6 +/- 36.7 ppm
18						
21						
24						
27						
			Core completed at 28 inches bgs.			
30						
33						
36						
39						
42						
45						
48						

08-13-2002 K:\Calumet Container START\Boring Logs\SD-2.BOR

LOG OF BORING SD-3

U.S. Environmental Protection Agency
Calumet Container
Hammond, Illinois

Date Drilled	: 5/20/02	Borehole Diameter (in.): 3	
Drilling Method	: Geoprobe	Total Recovery (in.)	: 22
Drilled By	: EPA		
Logged By	: Don Paxton		
X, Y Coordinates	:		

Depth in Inches	GRAPHIC	USCS	DESCRIPTION	Samples	Sample Interval (Inches)	REMARKS
0		PT	Dark organic SOIL and material with greyish wet sand increasing with depth	1	2	XRF - Pb = below detectable limit
3						
6						
9				2	2	XRF - Pb = below detectable limit
12						
15						
18						
21				3	2	XRF - Pb = below detectable limit
24			Core completed at 22 inches bgs.			
27						
30						
33						
36						
39						
42						
45						
48						

APPENDIX B

XRF DATA

Calumet Container & RT Data

No	Cor1	Date/Time	Mo ± Prec	Zr ± Prec	Sr ± Prec	Rh ± Prec	Pb ± Prec	[illegible]	[illegible]	[illegible]	[illegible]	[illegible] ± Prec	Co ± Prec	Fe ± Prec	Mn ± Prec	Cr ± Prec
1	Shutter Cal 1	4/11/2002 24:52:27	NA	NA	NA	NA	NA	[illegible]	[illegible]	[illegible]	[illegible]	NA	NA	NA	NA	NA
2		4/11/2002 24:53:13	<LOD = 17.40	<LOD = 11.25	<LOD = 13.50	<LOD = 27.30	<LOD = 35.55	[illegible]	[illegible]	<LOD [illegible]	[illegible]	[illegible]	<LOD = 93.60	<LOD = 255.00	<LOD = 240.00	<LOD = 2848.80
3		4/11/2002 24:55:11	<LOD = 23.55	106.10 ± 17.60	174.10 ± 22.70	146.09 ± 41.10	<LOD = 62.55	<LOD = 46.65	<LOD [illegible]	83[illegible]	<LOD = [illegible]	<LOD = 300.00	<LOD = 450.00	26393.60 ± 1300.00	<LOD = 1215.00	<LOD = 8246.40
4		4/11/2002 24:57:15	<LOD = 27.00	186.70 ± 23.00	176.80 ± 25.60	178.30 ± 50.50	1140.00 ± 110.00	<LOD = 131.85	<LOD [illegible]	325.6[illegible]	<LOD = [illegible]	<LOD = 315.00	<LOD = 120.00	20198.40 ± 1200.00	1929.60 ± 829.60	<LOD = 8697.60
5		4/11/2002 24:59:15	<LOD = 30.30	91.00 ± 22.20	236.00 ± 34.90	210.60 ± 72.10	5507.20 ± 290.00	535.20 ± 200.00	<LOD = 34.20	6880.00 ± 490.00	2899.20 ± 280.00	<LOD = 555.00	<LOD = 600.00	32691.20 ± 1800.00	10195.20 ± 1400.00	<LOD = 16492.80
6	Shutter Cal 1	4/14/2002 21:03:09	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
7	Shutter Cal 1	4/14/2002 21:08:41	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
8	Shutter Cal 1	4/14/2002 23:29:31	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
9		4/14/2002 23:30:04	<LOD = 10.20	100.60 ± 7.50	79.10 ± 7.80	72.20 ± 14.60	150.60 ± 21.40	<LOD = 25.50	<LOD = 3.45	692.40 ± 42.40	82.90 ± 46.10	<LOD = 101.70	169.40 ± 87.10	8825.60 ± 310.00	783.20 ± 250.00	<LOD = 2700.00
10		4/14/2002 23:35:57	<LOD = 10.65	119.40 ± 8.10	85.10 ± 8.20	67.90 ± 14.90	173.50 ± 22.60	<LOD = 26.70	<LOD = 3.60	500.80 ± 37.50	<LOD = 64.50	<LOD = 105.75	201.40 ± 90.50	9126.40 ± 330.00	681.60 ± 250.00	<LOD = 2700.00
11		4/14/2002 23:41:53	14.90 ± 8.90	134.40 ± 9.80	72.70 ± 9.20	67.30 ± 17.00	49.70 ± 21.20	<LOD = 26.40	<LOD = 4.05	376.80 ± 39.80	<LOD = 74.10	<LOD = 119.85	<LOD = 144.90	7776.00 ± 350.00	534.00 ± 270.00	<LOD = 3000.00
12		4/14/2002 23:46:39	<LOD = 12.75	107.90 ± 9.30	97.00 ± 10.10	69.10 ± 17.90	108.50 ± 24.50	<LOD = 29.55	<LOD = 4.35	533.60 ± 46.30	<LOD = 82.95	<LOD = 137.25	<LOD = 165.00	10899.20 ± 420.00	800.80 ± 330.00	12000.00 ± 2800.00
13		4/14/2002 23:53:46	<LOD = 10.50	132.70 ± 8.30	61.00 ± 7.40	59.00 ± 13.80	77.30 ± 18.50	<LOD = 22.65	<LOD = 3.45	517.60 ± 37.90	<LOD = 65.10	<LOD = 100.65	173.20 ± 82.00	7238.40 ± 290.00	600.80 ± 230.00	<LOD = 2700.00
14		4/14/2002 23:59:07	14.60 ± 9.70	109.10 ± 10.20	105.60 ± 11.30	82.60 ± 20.50	154.50 ± 29.30	<LOD = 34.65	<LOD = 4.95	567.60 ± 52.30	100.50 ± 65.80	260.20 ± 120.00	<LOD = 210.00	14899.20 ± 540.00	1180.00 ± 410.00	8364.80 ± 3200.00
15		4/14/2002 24:08:09	<LOD = 10.65	64.50 ± 6.90	41.10 ± 7.20	66.00 ± 14.80	135.80 ± 22.20	<LOD = 26.55	<LOD = 3.75	848.80 ± 50.00	<LOD = 78.15	<LOD = 108.15	<LOD = 134.25	8416.00 ± 330.00	531.20 ± 250.00	<LOD = 2848.80
16		4/14/2002 24:13:28	<LOD = 10.20	90.90 ± 7.40	55.80 ± 7.30	65.50 ± 14.30	64.30 ± 18.50	<LOD = 21.45	<LOD = 3.30	382.40 ± 34.30	75.00 ± 41.10	<LOD = 95.85	125.90 ± 81.30	7046.40 ± 290.00	624.00 ± 230.00	<LOD = 2548.80
17		4/14/2002 24:18:58	<LOD = 11.10	101.50 ± 8.10	74.40 ± 8.40	76.70 ± 16.10	220.20 ± 25.90	<LOD = 32.10	<LOD = 4.35	1040.00 ± 55.20	97.40 ± 57.70	<LOD = 126.90	<LOD = 165.00	13094.40 ± 420.00	1129.60 ± 310.00	<LOD = 3300.00
18		4/14/2002 24:24:02	<LOD = 10.20	85.10 ± 7.40	58.50 ± 7.70	61.40 ± 14.80	230.60 ± 25.30	<LOD = 30.45	<LOD = 4.20	842.40 ± 49.20	110.80 ± 53.80	<LOD = 123.90	197.20 ± 110.00	13299.20 ± 410.00	861.60 ± 310.00	5459.20 ± 2400.00
19		4/14/2002 24:42:14	<LOD = 10.35	93.70 ± 7.20	37.20 ± 6.50	56.30 ± 13.10	44.10 ± 16.70	<LOD = 19.95	<LOD = 3.00	177.00 ± 25.40	<LOD = 50.55	<LOD = 93.60	<LOD = 117.30	7014.40 ± 280.00	743.20 ± 230.00	<LOD = 2400.00
20		4/14/2002 24:47:16	<LOD = 12.60	48.90 ± 8.10	95.80 ± 11.00	67.70 ± 20.50	799.20 ± 49.60	<LOD = 59.10	<LOD = 7.05	800.40 ± 58.50	<LOD = 98.70	<LOD = 165.00	<LOD = 225.00	18393.60 ± 600.00	1529.60 ± 430.00	<LOD = 4500.00
21		4/15/2002 01:10:10	<LOD = 10.20	83.30 ± 7.30	83.60 ± 8.20	73.90 ± 15.30	160.50 ± 22.50	<LOD = 27.15	<LOD = 3.75	489.60 ± 37.80	<LOD = 66.00	<LOD = 107.10	<LOD = 137.55	9619.20 ± 340.00	819.20 ± 260.00	<LOD = 2848.80
22		4/15/2002 01:16:42	<LOD = 10.65	111.40 ± 8.10	89.70 ± 8.50	81.20 ± 15.70	76.90 ± 19.70	<LOD = 23.25	<LOD = 3.30	213.80 ± 28.50	<LOD = 58.50	<LOD = 108.00	214.40 ± 91.10	8704.00 ± 330.00	828.80 ± 250.00	<LOD = 2700.00
23		4/15/2002 01:21:41	<LOD = 12.90	197.30 ± 10.90	92.50 ± 9.40	63.80 ± 16.70	154.50 ± 24.80	<LOD = 29.10	<LOD = 4.05	276.40 ± 34.80	104.00 ± 48.90	<LOD = 144.15	409.00 ± 140.00	19993.60 ± 570.00	4147.20 ± 450.00	<LOD = 4500.00
24		4/15/2002 01:30:19	<LOD = 11.85	116.80 ± 8.80	75.30 ± 8.70	93.70 ± 17.30	100.70 ± 22.50	<LOD = 26.55	<LOD = 3.60	231.80 ± 32.00	93.60 ± 44.50	<LOD = 117.60	<LOD = 150.00	9996.80 ± 370.00	535.20 ± 280.00	<LOD = 3000.00
25		4/15/2002 01:36:18	<LOD = 11.55	90.00 ± 8.20	74.50 ± 8.80	80.00 ± 17.30	287.80 ± 29.60	<LOD = 36.30	<LOD = 4.80	453.60 ± 40.80	<LOD = 76.65	<LOD = 142.80	364.20 ± 140.00	18188.80 ± 530.00	1720.00 ± 390.00	<LOD = 4048.80
26		4/15/2002 01:51:53	<LOD = 12.15	141.90 ± 9.30	57.50 ± 8.10	73.60 ± 16.30	204.80 ± 26.00	<LOD = 31.35	<LOD = 4.05	225.40 ± 31.40	<LOD = 64.35	<LOD = 119.85	190.40 ± 110.00	11494.40 ± 400.00	1939.20 ± 330.00	<LOD = 3448.80
27		4/15/2002 01:57:00	<LOD = 12.45	135.10 ± 9.50	65.30 ± 8.70	75.40 ± 17.00	164.60 ± 25.50	<LOD = 30.90	<LOD = 4.20	234.60 ± 33.30	84.90 ± 46.50	<LOD = 130.50	224.40 ± 120.00	13094.40 ± 450.00	1300.00 ± 340.00	<LOD = 3600.00
28		4/15/2002 02:01:14	<LOD = 14.40	125.30 ± 10.90	39.70 ± 9.10	76.20 ± 19.40	63.20 ± 24.60	<LOD = 28.65	<LOD = 4.05	112.70 ± 31.30	<LOD = 69.30	<LOD = 132.00	242.20 ± 120.00	8198.40 ± 420.00	1089.60 ± 340.00	<LOD = 3748.80
29		4/15/2002 02:08:14	<LOD = 13.95	98.80 ± 9.90	50.90 ± 9.70	81.20 ± 20.30	336.20 ± 37.10	<LOD = 44.10	<LOD = 5.70	239.00 ± 38.90	112.10 ± 51.50	<LOD = 126.45	184.50 ± 120.00	8409.60 ± 420.00	3019.20 ± 400.00	<LOD = 4200.00
30		4/15/2002 02:11:44	<LOD = 10.20	91.20 ± 7.40	82.20 ± 8.20	55.60 ± 14.70	409.60 ± 29.80	<LOD = 36.75	<LOD = 4.35	622.40 ± 41.50	<LOD = 70.65	<LOD = 115.50	270.00 ± 100.00	11596.80 ± 370.00	<LOD = 405.00	<LOD = 3000.00
31		4/15/2002 02:20:27	<LOD = 15.45	97.30 ± 11.10	63.40 ± 11.20	87.90 ± 22.90	87.70 ± 29.50	<LOD = 35.40	<LOD = 5.10	152.90 ± 37.80	<LOD = 81.30	<LOD = 165.00	<LOD = 210.00	11296.00 ± 540.00	1140.00 ± 420.00	<LOD = 4648.80
32		4/15/2002 02:24:44	<LOD = 12.60	9.20 ± 6.10	19.80 ± 7.80	23.40 ± 14.80	106.20 ± 25.10	<LOD = 31.95	<LOD = 4.80	404.60 ± 48.30	267.20 ± 63.60	<LOD = 138.60	236.40 ± 130.00	9958.40 ± 470.00	2219.20 ± 400.00	<LOD = 4048.80
33		4/15/2002 02:27:19	<LOD = 35.85	<LOD = 15.30	<LOD = 22.95	<LOD = 32.85	<LOD = 82.50	<LOD = 63.75	<LOD = 6.45	<LOD = 137.40	<LOD = 195.00	<LOD = 330.00	<LOD = 435.00	4988.80 ± 1100.00	<LOD = 1290.00	<LOD = 10195.20
34	Shutter Cal 1	4/15/2002 03:52:45	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
35		4/15/2002 04:02:26	<LOD = 14.25	58.30 ± 9.40	51.90 ± 10.60	99.80 ± 23.30	177.90 ± 34.20	<LOD = 41.55	<LOD = 5.25	250.20 ± 43.40	<LOD = 87.15	<LOD = 165.00	<LOD = 225.00	13094.40 ± 580.00	<LOD = 630.00	<LOD = 4500.00
36		4/15/2002 04:05:35	<LOD = 12.15	76.40 ± 8.20	68.20 ± 9.60	101.40 ± 20.70	1109.60 ± 53.90	<LOD = 64.20	<LOD = 7.20	1040.00 ± 61.30	<LOD = 102.15	<LOD = 180.00	467.60 ± 180.00	32896.00 ± 800.00	1788.80 ± 510.00	<LOD = 5097.60
37		4/15/2002 04:14:56	14.50 ± 7.60	43.60 ± 6.80	66.80 ± 8.70	65.40 ± 17.10	586.80 ± 38.60	<LOD = 47.85	<LOD = 5.70	437.60 ± 41.30	96.50 ± 55.80	<LOD = 180.00	532.40 ± 190.00	38297.60 ± 849.60	952.00 ± 510.00	<LOD = 4948.80
38		4/15/2002 04:27:06	<LOD = 16.20	65.50 ± 10.20	37.10 ± 10.60	70.60 ± 22.70	279.00 ± 40.70	<LOD = 47.85	<LOD = 6.30	329.20 ± 51.40	<LOD = 102.30	<LOD = 195.00	270.80 ± 170.00	13388.80 ± 620.00	1129.60 ± 470.00	<LOD = 5400.00
39		4/15/2002 04:30:40	<LOD = 16.20	88.30 ± 11.20	49.80 ± 11.20	107.70 ± 25.20	242.40 ± 39.50	<LOD = 47.10	<LOD = 6.15	222.60 ± 46.40	<LOD = 105.60	379.80 ± 140.00	288.60 ± 180.00	16089.60 ± 680.00	773.60 ± 480.00	<LOD = 5246.40
40		4/15/2002 04:37:32	<LOD = 20.55	57.80 ± 12.20	49.80 ± 13.70	103.30 ± 30.50	305.80 ± 51.80	<LOD = 61.50	<LOD = 7.50	381.40 ± 65.20	<LOD = 127.20	<LOD = 240.00	<LOD = 330.00	17600.00 ± 880.00	<LOD = 900.00	<LOD = 6297.60
41		4/15/2002 04:41:00	<LOD = 19.05	186.90 ± 15.80	50.00 ± 12.20	92.20 ± 26.00	127.00 ± 36.10	<LOD = 43.05	<LOD = 5.85	206.20 ± 48.60	<LOD = 108.60	<LOD = 210.00	<LOD = 270.00	14489.60 ± 700.00	814.00 ± 510.00	<LOD = 5548.80
42	Shutter Cal 1	4/15/2002 04:54:18	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
43		4/15/2002 04:54:26	<LOD = 15.60	92.70 ± 11.20	60.70 ± 11.50	122.10 ± 25.80	241.60 ± 39.10	<LOD = 46.95	<LOD = 6.00	538.00 ± 59.30	<LOD = 107.85	<LOD = 195.00	385.00 ± 190.00	19494.40 ± 750.00	1249.60 ± 530.00	<LOD = 5400.00
44		4/15/2002 04:58:01	21.10 ± 13.00	86.90 ± 12.70	89.80 ± 14.70	97.10 ± 29.40	584.40 ± 59.90	<LOD = 73.65	<LOD = 8.85	740.80 ± 78.20	<LOD = 144.60	<LOD = 285.00	620.80 ± 280.00	34099.20 ± 1200.00	1929.60 ± 760.00	<LOD = 7646.40
45		4/15/2002 05:26:13	<LOD = 17.85	128.40 ± 13.20	80.90 ± 12.90	84.40 ± 24.90	175.40 ± 36.80	<LOD = 44.25	<LOD = 5.70	323.40 ± 50.90	<LOD = 96.15	<LOD = 180.00	<LOD = 240.00	11596.80 ± 580.00	651.60 ± 430.00	<LOD = 4500.00
46		4/15/2002 05:29:15	<LOD = 17.85	174.80 ± 14.60	99.60 ± 13.50	73.30 ± 24.10	195.60 ± 36.90	<LOD = 43.05	<LOD = 5.25	212.80 ± 43.50	<LOD = 88.95	<LOD = 180.00	303.00 ± 150.00	10598.40 ± 550.00	624.00 ± 410.00	<LOD = 4500.00
47		4/15/2002 05:35:09	<LOD = 17.40	133.40 ± 13.50	110.40 ± 14.20	105.40 ± 27.00	227.80 ± 40.20	<LOD = 49.05	<LOD = 6.30	266.40 ± 48.70	<LOD = 99.75	<LOD = 180.00	255.20 ± 160.00	12000.00 ± 600.00	1160.00 ± 450.00	<LOD = 4800.00
48		4/15/2002 05:38:34	<LOD = 16.50	199.00 ± 14.30	97.40 ± 12.50	112.00 ± 24.50	42.10 ± 27.20	<LOD = 30.75	<LOD = 4.35	84.60 ± 32.40	<LOD = 75.30	<LOD = 148.80	<LOD = 210.00	10598.40 ± 520.00	2400.00 ± 440.00	<LOD = 4500.00
49		4/15/2002 05:47:14	<LOD = 19.05	173.40 ± 15.80	110.70 ± 15.30	97.30 ± 28.50	258.60 ± 44.50	<LOD = 54.15	<LOD = 7.05	228.80 ± 50.80	115.90 ± 73.10	<LOD = 195.00	<LOD = 255.00	12595.20 ± 650.00	<LOD = 705.00	<LOD = 5097.60
50		4/15/2002 05:50:14	<LOD = 17.55	170.00 ± 14.20	106.70 ± 13.50	101.00 ± 25.50	159.20 ± 35.00	<LOD = 40.50	<LOD = 5.25	162.10 ± 40.00	<LOD = 85.95	<LOD = 150.00	<LOD = 210.00	8697.60 ± 490.00	1708.80 ± 410.00	<LOD = 4500.00
51		4/15/2002 05:55:50	<LOD = 16.80	64.10 ± 11.00	99.10 ± 13.90	82.40 ± 25.60	157.60 ± 36.80	<LOD = 45.45	<LOD = 6.15	284.80 ± 50.20	<LOD = 100.50	<LOD = 180.00	<LOD = 270.00	15193.60 ± 690.00	976.80 ± 500.00	<LOD = 5097.60
52		4/15/2002 05:59:26	<LOD = 11.40	75.60 ± 7.70	53.30 ± 8.20	80.20 ± 17.20	414.80 ± 33.60	<LOD = 40.95	<LOD = 4.80	485.60 ± 41.60	<LOD = 75.75	<LOD = 150.00	470.00 ± 150.00	23692.80 ± 620.00	1469.60 ± 420.00	<LOD = 4200.00
53		4/15/2002 06:05:18	<LOD = 78.30	<LOD = 39.75	<LOD = 46.65	<LOD = 133.95	<LOD = 195.00	<LOD = 125.85	<LOD = 16.80	<LOD = 150.00	<LOD = 180.00	<LOD = 450.00	<LOD = 330.00	<LOD = 1050.00	<LOD = 750.00	<LOD = 3600.00
54		4/15/2002 06:08:50	<LOD = 17.25	171.80 ± 14.20	114.60 ± 13.70	93.30 ± 24.90	152.30 ± 34.20	<LOD = 39.90	<LOD = 5.10	148.90 ± 38.80	<LOD = 84.60	<LOD = 165.00	<LOD = 210.00	9235.20 ± 490.00	<LOD = 555.00	<LOD = 4048.80
55		4/15/2002 06:11:53	<LOD = 12.90	179.90 ± 10.70	129.50 ± 10.70	98.20 ± 19.40	346.00 ± 32.40	<LOD = 39.15	<LOD = 4.95	338.80 ± 37.30	82.30 ± 48.20	<LOD = 127.05	271.60 ± 120.00	12595.20 ± 440.00	2440.00 ± 360.00	<LOD = 3748.80
56		4/15/2002 06:25:47	<LOD = 15.45	132.40 ± 12.10	91.60 ± 12.00	108.70 ± 23.80	92.40 ± 29.20	<LOD = 34.50	<LOD = 4.50	143.90 ± 35.90	<LOD = 78.15	<LOD = 142.80	<LOD = 195.00	8537.60 ± 460.00	2259.20 ± 400.00	<LOD = 4348.80
57		4/15/2002 06:29:20	<LOD = 14.40	133.60 ± 11.30	58.50 ± 9.90	66.90 ± 19.10	<LOD = 33.15	<LOD = 26.55	<LOD = 3.75	93.50 ± 30.40	<LOD = 69.75	<LOD = 133.20	170.80 ± 110.00	7526.40 ± 400.00	<LOD = 450.00	<LOD = 3300.00
58		4/15/2002 06:39:24	<LOD = 16.05	89.70 ± 11.00	46.40 ± 10.70	90.30 ± 23.20	157.20 ± 33.90	<LOD = 39.45	<LOD = 5.10	240.20 ± 44.50	94.00 ± 61.00	<LOD = 165.00	<LOD = 225.00	11897.60 ± 570.00	1060.00 ± 430.00	<LOD = 4348.80
59		4/15/2002 06:42:53	<LOD = 13.35	26.10 ± 7.60	38.30 ± 9.50	42.70 ± 18.40	261.60 ± 35.60	<LOD = 44.85	<LOD = 6.00	318.80 ± 46.20	160.50 ± 60.10	<LOD = 143.25	<LOD = 195.00	9958.40 ± 500.00	4377.60 ± 480.00	<LOD = 4800.00
60		4/15/2002 06:50:57	<LOD = 15.00	140.80 ± 11.50	60.00 ± 10.00	76.60 ± 19.90	54.90 ± 24.50	<LOD = 28.65	<LOD = 3.90	145.20 ± 33.60	<LOD = 72.15	<LOD = 139.80	<LOD = 180.00	9638.40 ± 450.00	709.20 ± 350.00	<LOD = 3900.00
61		4/15/2002 06:54:35	11.00 ± 7.10	47.30 ± 6.40	40.90 ± 7.30	64.80 ± 15.40	384.60 ± 30.90	<LOD = 37.80	<LOD = 4.80	568.80 ± 42.40	<LOD = 73.35	<LOD = 130.35	234.60 ± 120.00	16396.80 ± 480.00	746.00 ± 330.00	<LOD = 3448.80
62		4/15/2002 07:09:45	<LOD = 21.15	163.50 ± 16.10	77.20 ± 14.40	157.60 ± 32.60	<LOD = 52.65	<LOD = 42.60	<LOD = 6.00	126.80 ± 44.90	<LOD = 102.75	<LOD = 195.00	<LOD = 255.00	11897.60 ± 660.00	<LOD = 720.00	<LOD = 5400.00
63		4/15/2002 07:12:53	<LOD = 12.00	201.40 ± 10.30	62.70 ± 8.40	77.70 ± 17.40	987.20 ± 45.70	<LOD = 55.20	<LOD = 6.15	1020.00 ± 62.20	1509.60 ± 92.60	<LOD = 150.00	218.80 ± 110.00	12396.80 ± 400.00	659.60 ± 290.00	<LOD = 3148.80
64		4/15/2002 07:38:32	<LOD = 13.20	155.70 ± 10.70	90.50 ± 10.30	101.90 ± 20.70	640.80 ± 43.20	<LOD = 50.25	<LOD = 5.55	357.80 ± 40.30	<LOD = 77.10	<LOD = 150.00	357.40 ± 140.00	16089.60 ± 530.00	1209.60 ± 380.00	<LOD = 4048.80
65		4/15/2002 07:43:32	<LOD = 12.00	60.80 ± 7.60	55.20 ± 8.70	64.00 ± 17.60	620.00 ± 40.80	<LOD = 49.20	<LOD = 6.00	554.40 ± 51.40	<LOD = 118.65	2828.80 ± 170.00	254.00 ± 140.00	16294.40 ± 520.00	1069.60 ± 380.00	5878.40 ± 2899.20
66		4/15/2002 07:57:09	<LOD = 17.55	138.90 ± 13.40	84.80 ± 13.00	164.70 ± 29.40	66.50 ± 32.60	<LOD = 37.20	<LOD = 5.25	142.70 ± 39.90	<LOD = 90.30	<LOD = 195.00	<LOD = 270.00	17190.40 ± 720.00	1220.00 ± 520.00	<LOD = 5400.00
67		4/15/2002 07:59:12	<LOD = 2848.80	<LOD = 1950.00	<LOD = 1800.00	<LOD = 2848.80	<LOD = 8548.80	<LOD = 9000.00	<LOD = 4500.00	<LOD = 34483.20	<LOD = 86937.60	<LOD = 1319731.225	<LOD = 58483.20	<LOD = 314880.00	<LOD = 92928.00	<LOD = 884736.00
68		4/15/2002 08:00:55	<LOD = 13.20	22.00 ± 7.40	60.40 ± 10.20	46.20 ± 18.50	222.00 ± 32.80	<LOD = 39.60	<LOD = 4.95	277.00 ± 41.50	<LOD = 78.90	<LOD = 145.65	290.80 ± 130.00	9875.20 ± 470.00	<LOD = 525.00	<LOD = 3900.00
69	Shutter Cal 1	4/15/2002 21:25:20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
70		4/15/2002 22:13:17	<LOD = 16.80	108.60 ± 12.50	80.30 ± 12.90	113.50 ± 26.60	89.40 ± 32.70	<LOD = 38.85	<LOD = 5.10	315.20 ± 50.50	<LOD = 97.95	<LOD = 180.00	346.00 ± 170.00	12396.80 ± 610.00	1020.00 ± 460.00	<LOD = 4800.00
71		4/15/2002 22:16:37	<LOD = 15.45	140.30 ± 11.90	69.20 ± 10.80	90.00 ± 21.50	<LOD = 35.55	<LOD = 28.20	<LOD = 4.65	117.50 ± 35.30	<LOD = 87.00	518.80 ± 120.00	181.40 ± 120.00	7584.00 ± 420.00	689.20 ± 330.00	<LOD = 3748.80
72		4/15/2002 22:18:56	<LOD = 15.45	140.30 ± 11.90	69.20 ± 10.80	90.00 ± 21.50	<LOD = 35.55	<LOD = 28.20	<LOD = 4.65	117.50 ± 35.30	<LOD = 87.00	518.80 ± 120.00	181.40 ± 120.00	7584.00 ± 420.00	689.20 ± 330.00	<LOD = 3748.80
73		4/15/2002 22:21:09	<LOD = 15.45	140.30 ± 11.90	69.20 ± 10.80	90.00 ± 21.50	<LOD = 35.55	<LOD = 28.20	<LOD = 4.65	117.50 ± 35.30	<LOD = 87.00	518.80 ± 120.00	181.40 ± 120.00	7584.00 ± 420.00	689.20 ± 330.00	<LOD = 3748.80
74		4/15/2002 22:21:12	<LOD = 16.65	121.40 ± 12.20	101.00 ± 12.90	88.50 ± 23.70	51.80 ± 27.80	<LOD = 32.25	<LOD = 4.80	165.10 ± 38.70	<LOD = 82.35	<LOD = 150.00	<LOD = 210.00	10400.00 ± 520.00	586.80 ± 390.00	<LOD = 4200.00
75		4/15/2002 22:24:40	<LOD = 16.20	144.00 ± 12.80	75.30 ± 11.70	57.50 ± 20.90	91.70 ± 28.70	<LOD = 32.55	<LOD = 4.50	148.60 ± 38.30	<LOD = 86.85	341.80 ± 120.00	<LOD = 195.00	9657.60 ± 500.00	1029.60 ± 390.00	<LOD = 4500.00
76		4/15/2002 22:39:10	<LOD = 19.20	62.20 ± 13.30	102.10 ± 17.10	68.00 ± 30.80	357.40 ± 56.30	<LOD = 67.95	<LOD = 8.70	492.80 ± 73.90	<LOD = 134.40	<LOD = 240.00	<LOD = 345.00	17996.80 ± 920.00	1939.20 ± 670.00	<LOD = 7200.00
77		4/15/2002 22:42:10	<LOD = 20.25	87.20 ± 14.50	131.90 ± 18.10	69.40 ± 30.40	146.80 ± 43.30	<LOD = 51.15	<LOD = 6.75	418.80 ± 70.00	<LOD = 139.95	<LOD = 240.00	<LOD = 330.00	17088.00 ± 880.00	1369.60 ± 630.00	<LOD = 6600.00
78		4/15/2002 22:44:32	<LOD = 20.25	87.20 ± 14.50	131.90 ± 18.10	69.40 ± 30.40	146.80 ± 43.30	<LOD = 51.15	<LOD = 6.75	418.80 ± 70.00	<LOD = 139.95	<LOD = 240.00	<LOD = 330.00	17088.00 ± 880.00	1369.60 ± 630.00	<LOD = 6600.00
79		4/15/2002 22:49:45	<LOD = 19.50	61.10 ± 11.70	62.30 ± 14.10	<LOD = 38.25	1460.00 ± 88.70	<LOD = 106.35	<LOD = 12.90	1620.00 ± 110.00	426.40 ± 150.00	<LOD = 525.00	<LOD = 885.00	187904.00 ± 4697.60	13696.00 ± 1699.20	<LOD = 16492.80
80		4/15/2002 22:55:16	<LOD = 26.10	39.60 ± 15.30	55.50 ± 18.90	<LOD = 50.85	479.20 ± 78.80	<LOD = 99.60	<LOD = 13.20	1020.00 ± 130.00	<LOD = 240.00	<LOD = 405.00	<LOD = 615.00	39091.20 ± 1899.20	3667.20 ± 1200.00	<LOD = 12297.60
81		4/15/2002 22:59:40	<LOD = 17.70	78.00 ± 11.70	51.80 ± 12.10	57.50 ± 23.60	196.80 ± 39.20	<LOD = 47.55	<LOD = 6.00	207.00 ± 48.00	<LOD = 106.95	<LOD = 225.00	<LOD = 330.00	23296.00 ± 929.60	1760.00 ± 640.00	<LOD = 6446.40
82		4/15/2002 23:32:13	<LOD = 14.70	110.00 ± 10.90	35.80 ± 9.30	77.70 ± 20.10	<LOD = 33.15	<LOD = 26.25	<LOD = 3.90	44.40 ± 27.90	<LOD = 69.30	<LOD = 137.55	<LOD = 180.00	7366.40 ± 410.00	639.60 ± 330.00	<LOD = 3748.80
83		4/15/2002 23:35:50	<LOD = 15.15	85.80 ± 10.90	42.50 ± 10.10	73.70 ± 21.20	99.70 ± 29.30	<LOD = 35.85	<LOD = 4.65	157.40 ± 38.00	<LOD = 82.20	<LOD = 150.00	<LOD = 210.00	9977.60 ± 510.00	853.60 ± 390.00	<LOD = 4200.00
84	Shutter Cal 1	4/15/2002 09:54:16	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
85		4/15/2002 09:57:39	<LOD = 10.20	85.20 ± 7.30	36.40 ± 7.20	58.20 ± 15.40	840.80 ± 41.20	<LOD = 48.75	<LOD = 5.40	480.40 ± 38.40	<LOD = 65.70	<LOD = 104.70	162.60 ± 86.90	8025.60 ± 310.00	444.80 ± 240.00	<LOD = 2700.00
86		4/15/2002 10:02:31	<LOD = 14.40	70.00 ± 9.80	53.20 ± 10.40	50.50 ± 19.30	73.00 ± 26.40	<LOD = 31.50	<LOD = 4.50	142.70 ± 35.40	<LOD = 73.50	<LOD = 133.50	<LOD = 165.00	6467.20 ± 400.00	478.00 ± 310.00	<LOD = 3600.00
87		4/15/2002 10:05:33	<LOD = 23.70	105.40 ± 15.70	51.40 ± 14.90	75.70 ± 30.50	94.20 ± 42.00	<LOD = 51.75	<LOD =

No	Cor1	Date/Time	Mo ± Prec	Zr ± Prec	Sr ± Prec	Rb ± Prec	Pb ± Prec	As ± Prec	Hg ± Prec	Zn ± Prec	Cu ± Prec	Ni ± Prec	Co ± Prec	Fe ± Prec	Mn ± Prec	Cr ± Prec
90		4/15/2002 10:14:00	<LOD = 18.00	87.30 ± 12.10	50.40 ± 12.10	120.70 ± 27.80	<LOD = 48.15	<LOD = 39.00	<LOD = 5.55	193.80 ± 46.10	<LOD = 99.15	<LOD = 210.00	345.40 ± 190.00	15296.00 ± 730.00	843.20 ± 520.00	<LOD = 5400.00
91		4/15/2002 10:24:36	<LOD = 16.05	152.10 ± 12.90	57.80 ± 10.80	80.80 ± 21.80	<LOD = 38.10	<LOD = 29.70	<LOD = 4.35	84.70 ± 31.60	<LOD = 69.90	<LOD = 139.20	<LOD = 180.00	6944.00 ± 420.00	509.60 ± 330.00	<LOD = 3600.00
92		4/15/2002 10:26:46	<LOD = 270.00	<LOD = 150.00	<LOD = 165.00	<LOD = 630.00	<LOD = 450.00	<LOD = 600.00	<LOD = 47.40	<LOD = 2100.00	<LOD = 5246.40	30284.80 ± 9996.80	<LOD = 4500.00	<LOD = 9897.60	<LOD = 6748.80	<LOD = 89932.80
93		4/15/2002 10:28:32	<LOD = 17.70	149.10 ± 13.90	84.70 ± 13.00	77.50 ± 24.20	58.80 ± 29.90	<LOD = 36.15	<LOD = 5.40	135.20 ± 39.10	<LOD = 84.30	<LOD = 165.00	<LOD = 210.00	8659.20 ± 500.00	<LOD = 570.00	<LOD = 4200.00
94		4/15/2002 10:31:08	<LOD = 16.05	145.70 ± 12.80	88.50 ± 12.30	77.00 ± 22.60	137.70 ± 31.80	<LOD = 37.50	<LOD = 4.95	229.20 ± 42.30	<LOD = 86.10	<LOD = 165.00	<LOD = 195.00	9606.40 ± 490.00	558.40 ± 370.00	<LOD = 4048.80
95		4/15/2002 11:04:51	<LOD = 15.30	84.70 ± 10.80	45.80 ± 10.60	97.20 ± 23.50	111.90 ± 31.50	<LOD = 38.70	<LOD = 4.80	192.30 ± 41.10	<LOD = 86.10	<LOD = 180.00	<LOD = 240.00	13094.40 ± 600.00	<LOD = 645.00	<LOD = 4648.80
96		4/15/2002 11:09:07	<LOD = 21.60	78.40 ± 14.60	81.50 ± 16.70	89.60 ± 32.80	187.20 ± 49.20	<LOD = 58.20	<LOD = 8.10	481.20 ± 77.00	<LOD = 146.10	<LOD = 255.00	<LOD = 360.00	18688.00 ± 980.00	<LOD = 1005.00	<LOD = 7046.40
97		4/15/2002 11:17:39	<LOD = 15.00	130.10 ± 11.60	52.20 ± 10.20	88.90 ± 21.40	<LOD = 37.05	<LOD = 29.40	<LOD = 4.65	162.50 ± 36.00	<LOD = 75.75	<LOD = 150.00	<LOD = 195.00	9939.20 ± 480.00	603.60 ± 360.00	<LOD = 4048.80
98		4/15/2002 11:20:38	<LOD = 17.85	172.60 ± 14.70	65.00 ± 12.30	90.10 ± 25.00	90.80 ± 32.40	<LOD = 37.80	<LOD = 5.25	156.40 ± 41.60	<LOD = 91.20	<LOD = 180.00	275.00 ± 160.00	10496.00 ± 560.00	965.60 ± 430.00	<LOD = 4948.80
99		4/15/2002 11:41:17	<LOD = 18.90	212.20 ± 15.90	71.00 ± 12.50	106.90 ± 25.90	<LOD = 44.10	<LOD = 34.20	<LOD = 4.80	92.50 ± 36.80	<LOD = 87.75	<LOD = 180.00	<LOD = 255.00	13094.40 ± 620.00	764.40 ± 450.00	<LOD = 4800.00
100		4/15/2002 11:44:22	<LOD = 25.05	518.40 ± 27.00	77.20 ± 14.60	124.00 ± 30.60	79.60 ± 36.80	<LOD = 42.45	<LOD = 6.45	162.80 ± 46.60	<LOD = 100.80	<LOD = 195.00	295.60 ± 170.00	10496.00 ± 610.00	<LOD = 675.00	<LOD = 5097.60
101		4/15/2002 11:47:24	22.80 ± 9.40	72.60 ± 8.70	56.50 ± 9.70	72.50 ± 19.90	624.00 ± 45.00	<LOD = 54.45	<LOD = 6.45	613.20 ± 54.40	178.80 ± 72.30	<LOD = 225.00	476.00 ± 220.00	39475.20 ± 989.60	1269.60 ± 590.00	<LOD = 5846.40
102		4/15/2002 11:53:16	<LOD = 21.30	47.80 ± 12.80	45.10 ± 14.60	<LOD = 40.35	148.00 ± 44.60	<LOD = 56.85	<LOD = 8.40	546.80 ± 83.20	<LOD = 147.45	<LOD = 240.00	<LOD = 300.00	10598.40 ± 740.00	860.00 ± 570.00	<LOD = 6148.80
103		4/15/2002 11:55:29	<LOD = 27.00	296.80 ± 25.60	55.60 ± 16.50	129.20 ± 37.50	<LOD = 57.75	<LOD = 45.75	<LOD = 7.05	89.80 ± 49.50	<LOD = 112.65	<LOD = 240.00	<LOD = 300.00	9958.40 ± 740.00	<LOD = 825.00	<LOD = 6148.80
104		4/15/2002 12:08:30	<LOD = 17.25	99.00 ± 12.40	95.40 ± 13.80	76.20 ± 25.20	165.90 ± 37.10	<LOD = 44.40	<LOD = 6.30	309.20 ± 51.70	<LOD = 100.65	<LOD = 195.00	<LOD = 240.00	12396.80 ± 620.00	764.40 ± 460.00	<LOD = 5097.60
105		4/15/2002 12:11:56	<LOD = 13.95	86.20 ± 9.80	51.40 ± 9.80	74.90 ± 20.10	143.10 ± 29.50	<LOD = 37.80	<LOD = 5.25	292.00 ± 42.50	<LOD = 84.45	<LOD = 165.00	401.40 ± 160.00	15488.00 ± 600.00	639.20 ± 420.00	<LOD = 4348.80
106		4/15/2002 12:18:59	<LOD = 21.60	159.60 ± 18.60	116.10 ± 18.50	62.40 ± 30.90	117.70 ± 42.80	<LOD = 53.70	<LOD = 7.50	497.20 ± 76.60	<LOD = 136.05	<LOD = 255.00	<LOD = 345.00	15897.60 ± 900.00	<LOD = 915.00	<LOD = 6446.40
107		4/15/2002 12:21:00	<LOD = 25.80	82.80 ± 17.30	64.20 ± 18.30	52.40 ± 33.40	89.90 ± 47.20	<LOD = 58.50	<LOD = 8.40	215.20 ± 67.90	<LOD = 136.65	<LOD = 240.00	<LOD = 330.00	10400.00 ± 840.00	<LOD = 945.00	<LOD = 6748.80
108		4/15/2002 12:23:16	<LOD = 9.60	19.30 ± 5.20	33.00 ± 6.90	24.10 ± 13.20	689.20 ± 37.40	<LOD = 45.45	6.20 ± 3.70	550.40 ± 42.90	392.40 ± 56.90	<LOD = 119.85	241.80 ± 98.90	10400.00 ± 360.00	1280.00 ± 280.00	<LOD = 3000.00
109	Shutter Cal 1	4/15/2002 13:47:30	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
110		4/15/2002 13:48:00	<LOD = 14.85	113.40 ± 10.90	44.70 ± 9.70	80.70 ± 20.70	150.00 ± 30.50	<LOD = 36.00	<LOD = 4.80	228.40 ± 39.50	<LOD = 77.55	<LOD = 138.15	<LOD = 180.00	8428.80 ± 440.00	609.60 ± 340.00	<LOD = 3600.00
111		4/15/2002 13:51:08	<LOD = 15.15	104.40 ± 10.90	43.30 ± 9.80	64.00 ± 19.90	95.30 ± 27.80	<LOD = 33.15	<LOD = 4.65	177.00 ± 38.10	<LOD = 80.10	<LOD = 143.25	<LOD = 180.00	7724.80 ± 430.00	628.40 ± 340.00	<LOD = 3600.00
112		4/15/2002 13:57:30	<LOD = 18.45	148.80 ± 14.10	86.30 ± 13.40	86.50 ± 25.70	200.80 ± 39.00	<LOD = 46.80	<LOD = 6.60	313.00 ± 51.50	<LOD = 100.20	<LOD = 195.00	305.00 ± 180.00	14195.20 ± 660.00	<LOD = 690.00	<LOD = 5097.60
113		4/15/2002 13:59:57	<LOD = 16.20	126.40 ± 12.50	100.60 ± 13.10	103.10 ± 25.50	343.00 ± 43.00	<LOD = 51.45	<LOD = 6.30	282.80 ± 45.90	<LOD = 87.90	<LOD = 165.00	<LOD = 225.00	12697.60 ± 580.00	2179.20 ± 470.00	<LOD = 4948.80
114		4/15/2002 14:09:30	<LOD = 17.55	125.10 ± 13.30	78.50 ± 13.20	99.00 ± 26.70	290.20 ± 43.80	<LOD = 53.10	<LOD = 7.05	682.40 ± 71.20	193.80 ± 85.40	<LOD = 195.00	<LOD = 255.00	13696.00 ± 660.00	2449.60 ± 530.00	<LOD = 5400.00
115		4/15/2002 14:12:30	<LOD = 19.05	215.00 ± 16.50	93.60 ± 13.90	108.20 ± 27.40	163.40 ± 37.80	<LOD = 44.85	<LOD = 5.85	304.40 ± 50.80	<LOD = 99.15	<LOD = 210.00	399.00 ± 180.00	15091.20 ± 690.00	<LOD = 705.00	5468.80 ± 3497.60
116		4/15/2002 14:18:21	<LOD = 20.25	150.50 ± 15.70	86.30 ± 15.00	121.10 ± 31.10	252.20 ± 47.20	<LOD = 56.10	<LOD = 7.65	379.80 ± 61.90	<LOD = 120.15	<LOD = 225.00	<LOD = 300.00	16000.00 ± 790.00	2440.00 ± 610.00	<LOD = 6297.60
117		4/15/2002 14:21:00	<LOD = 14.85	37.10 ± 8.60	50.90 ± 10.80	34.50 ± 20.10	546.40 ± 49.00	<LOD = 59.85	<LOD = 7.50	766.80 ± 67.90	196.00 ± 79.20	<LOD = 195.00	464.40 ± 190.00	19596.80 ± 750.00	4828.80 ± 600.00	<LOD = 6000.00
118		4/15/2002 14:38:46	<LOD = 18.30	146.00 ± 14.10	107.10 ± 14.30	95.60 ± 26.70	209.20 ± 39.60	<LOD = 46.05	<LOD = 6.15	407.60 ± 56.30	<LOD = 106.20	<LOD = 210.00	<LOD = 285.00	17497.60 ± 740.00	<LOD = 750.00	<LOD = 5246.40
119		4/15/2002 14:41:43	<LOD = 16.35	70.40 ± 10.40	65.50 ± 11.90	113.70 ± 26.20	461.60 ± 48.80	<LOD = 58.35	<LOD = 7.50	530.80 ± 61.10	199.30 ± 79.30	<LOD = 225.00	462.80 ± 230.00	29286.40 ± 980.00	5849.60 ± 730.00	<LOD = 7046.40
120		4/15/2002 14:53:37	<LOD = 19.50	189.40 ± 16.30	92.80 ± 14.40	116.70 ± 29.00	101.50 ± 36.30	<LOD = 43.80	<LOD = 6.15	121.50 ± 42.30	<LOD = 98.70	<LOD = 210.00	325.20 ± 190.00	14092.80 ± 700.00	2899.20 ± 570.00	<LOD = 6000.00
121		4/15/2002 14:56:02	<LOD = 15.15	108.10 ± 10.70	101.00 ± 12.10	90.30 ± 23.50	776.40 ± 52.80	<LOD = 62.25	<LOD = 7.35	577.20 ± 56.00	<LOD = 107.70	<LOD = 210.00	411.60 ± 190.00	27392.00 ± 820.00	1560.00 ± 540.00	<LOD = 5548.80
122		4/15/2002 15:01:46	<LOD = 11.70	83.40 ± 7.90	53.90 ± 8.40	91.20 ± 18.20	618.00 ± 39.60	<LOD = 48.15	<LOD = 5.70	261.00 ± 34.10	<LOD = 72.30	<LOD = 165.00	487.60 ± 170.00	31385.60 ± 740.00	<LOD = 690.00	<LOD = 4648.80
123		4/15/2002 15:06:45	<LOD = 19.05	180.10 ± 15.80	126.40 ± 15.50	92.30 ± 27.40	101.50 ± 34.80	<LOD = 40.50	<LOD = 6.00	198.00 ± 45.60	<LOD = 93.90	<LOD = 180.00	<LOD = 210.00	8569.60 ± 520.00	<LOD = 585.00	<LOD = 4500.00
124		4/15/2002 15:09:24	<LOD = 13.95	141.00 ± 10.70	110.50 ± 11.20	93.00 ± 21.00	522.80 ± 41.00	<LOD = 48.15	<LOD = 5.85	823.20 ± 57.40	<LOD = 96.75	<LOD = 180.00	270.00 ± 170.00	25689.60 ± 710.00	<LOD = 690.00	<LOD = 4648.80
125		4/15/2002 15:31:53	<LOD = 20.25	206.20 ± 16.80	83.30 ± 13.80	94.60 ± 26.90	<LOD = 46.65	<LOD = 39.45	<LOD = 5.70	275.80 ± 51.70	<LOD = 106.65	<LOD = 210.00	496.40 ± 190.00	14988.80 ± 710.00	<LOD = 705.00	<LOD = 5246.40
126		4/15/2002 15:34:43	<LOD = 19.50	127.70 ± 14.70	113.90 ± 15.90	97.60 ± 29.60	308.20 ± 48.50	<LOD = 58.50	<LOD = 7.65	640.80 ± 74.40	148.90 ± 90.60	<LOD = 240.00	<LOD = 330.00	19993.60 ± 880.00	2979.20 ± 660.00	<LOD = 6600.00
127		4/15/2002 15:58:35	<LOD = 16.65	61.70 ± 10.50	67.50 ± 12.20	79.80 ± 24.20	166.30 ± 36.20	<LOD = 44.55	<LOD = 6.45	1009.60 ± 81.20	<LOD = 127.65	<LOD = 210.00	311.00 ± 180.00	15795.20 ± 700.00	<LOD = 720.00	<LOD = 5400.00
128		4/15/2002 16:04:46	<LOD = 14.85	77.90 ± 10.30	48.10 ± 10.40	106.20 ± 23.40	54.80 ± 27.70	<LOD = 32.85	<LOD = 4.80	581.20 ± 59.00	<LOD = 101.10	<LOD = 180.00	337.60 ± 160.00	12697.60 ± 570.00	<LOD = 615.00	<LOD = 4500.00
129		4/15/2002 16:07:55	<LOD = 13.35	44.60 ± 7.90	36.90 ± 8.90	66.10 ± 18.70	171.50 ± 29.90	<LOD = 37.05	<LOD = 6.15	1748.80 ± 89.70	<LOD = 125.10	<LOD = 165.00	321.00 ± 150.00	14988.80 ± 570.00	<LOD = 600.00	<LOD = 4200.00
130		4/15/2002 16:12:44	<LOD = 16.35	114.30 ± 12.30	67.40 ± 12.10	142.90 ± 27.60	131.00 ± 35.00	<LOD = 41.25	<LOD = 5.55	804.00 ± 71.60	<LOD = 118.20	<LOD = 195.00	295.60 ± 190.00	17894.40 ± 730.00	<LOD = 765.00	<LOD = 5400.00
131		4/15/2002 16:18:51	<LOD = 13.05	57.80 ± 8.60	47.30 ± 9.40	89.10 ± 20.20	63.10 ± 24.90	<LOD = 29.40	<LOD = 4.50	596.00 ± 54.10	<LOD = 88.80	<LOD = 150.00	<LOD = 195.00	9984.00 ± 460.00	<LOD = 510.00	<LOD = 3748.80
132		4/15/2002 16:21:16	<LOD = 9.90	68.60 ± 6.70	44.40 ± 7.10	76.90 ± 15.20	418.40 ± 30.30	<LOD = 37.05	<LOD = 4.65	943.20 ± 50.20	86.60 ± 53.60	<LOD = 126.00	236.80 ± 110.00	14988.80 ± 430.00	658.00 ± 300.00	<LOD = 3300.00
133		4/15/2002 16:26:05	<LOD = 11.85	37.30 ± 7.10	22.80 ± 7.60	56.80 ± 16.50	69.50 ± 22.60	<LOD = 27.00	<LOD = 4.50	785.20 ± 57.80	<LOD = 87.75	<LOD = 123.60	164.40 ± 100.00	6604.80 ± 350.00	<LOD = 405.00	<LOD = 3148.80
134		4/15/2002 16:28:36	<LOD = 9.60	24.20 ± 5.40	10.50 ± 5.80	33.20 ± 12.10	52.90 ± 17.30	<LOD = 21.45	<LOD = 3.30	398.80 ± 36.90	<LOD = 61.95	<LOD = 91.80	132.70 ± 71.50	3929.60 ± 240.00	320.60 ± 200.00	<LOD = 2400.00
135		4/15/2002 16:45:15	<LOD = 13.05	84.70 ± 9.30	28.90 ± 8.40	49.00 ± 17.00	105.20 ± 25.60	<LOD = 31.35	<LOD = 4.95	873.60 ± 63.80	<LOD = 100.20	<LOD = 139.80	<LOD = 180.00	8307.20 ± 410.00	703.60 ± 320.00	<LOD = 3600.00
136		4/15/2002 16:48:05	<LOD = 15.90	163.90 ± 13.00	56.00 ± 10.60	84.30 ± 21.90	121.10 ± 30.20	<LOD = 37.05	<LOD = 5.10	888.80 ± 69.70	<LOD = 110.55	<LOD = 165.00	<LOD = 225.00	12800.00 ± 560.00	<LOD = 600.00	<LOD = 4348.80
137		4/15/2002 16:50:42	<LOD = 16.50	178.90 ± 13.60	51.10 ± 10.50	60.70 ± 20.20	40.90 ± 25.10	<LOD = 30.90	<LOD = 4.95	311.20 ± 45.50	<LOD = 84.15	<LOD = 150.00	<LOD = 195.00	9568.00 ± 480.00	<LOD = 540.00	<LOD = 4048.80
138		4/15/2002 16:53:17	<LOD = 18.60	25.50 ± 11.00	130.50 ± 17.20	<LOD = 36.45	60.10 ± 33.80	<LOD = 41.55	<LOD = 7.20	738.00 ± 82.50	<LOD = 141.15	410.40 ± 150.00	<LOD = 210.00	5689.60 ± 480.00	<LOD = 570.00	<LOD = 4800.00
139		4/15/2002 17:00:58	<LOD = 16.05	136.10 ± 12.30	74.50 ± 11.60	123.40 ± 24.90	97.40 ± 31.00	<LOD = 36.30	<LOD = 5.25	342.80 ± 48.10	<LOD = 94.20	<LOD = 180.00	<LOD = 255.00	17689.60 ± 680.00	<LOD = 690.00	<LOD = 4800.00
140		4/15/2002 17:06:03	<LOD = 20.85	224.20 ± 17.80	82.30 ± 14.10	81.00 ± 26.60	<LOD = 44.25	<LOD = 35.25	<LOD = 5.55	127.40 ± 43.20	<LOD = 98.55	<LOD = 195.00	<LOD = 255.00	11296.00 ± 620.00	<LOD = 660.00	<LOD = 4948.80
141		4/15/2002 17:10:42	<LOD = 21.30	95.30 ± 14.10	49.40 ± 13.70	92.30 ± 29.50	127.10 ± 41.40	<LOD = 48.75	<LOD = 7.05	285.40 ± 59.70	<LOD = 124.50	<LOD = 240.00	<LOD = 345.00	17689.60 ± 880.00	<LOD = 900.00	<LOD = 6148.80
142		4/15/2002 17:13:46	<LOD = 17.25	114.40 ± 12.90	72.50 ± 12.90	118.20 ± 27.60	172.10 ± 38.50	<LOD = 47.10	<LOD = 6.45	680.80 ± 69.90	<LOD = 121.05	<LOD = 225.00	446.80 ± 210.00	20390.40 ± 829.60	875.20 ± 560.00	<LOD = 6000.00
143		4/15/2002 17:20:48	<LOD = 16.05	94.80 ± 11.20	69.00 ± 11.60	81.90 ± 22.70	<LOD = 40.05	<LOD = 32.25	<LOD = 4.80	220.20 ± 42.60	<LOD = 88.35	<LOD = 165.00	272.40 ± 140.00	10195.20 ± 520.00	<LOD = 585.00	<LOD = 4348.80
144		4/15/2002 17:24:09	<LOD = 20.40	91.40 ± 13.50	70.80 ± 14.20	101.90 ± 29.30	<LOD = 48.60	<LOD = 38.55	<LOD = 5.40	195.30 ± 49.50	<LOD = 102.45	<LOD = 210.00	310.20 ± 180.00	11200.00 ± 660.00	<LOD = 720.00	<LOD = 5246.40
145		4/15/2002 17:27:41	<LOD = 18.00	60.10 ± 11.00	60.30 ± 12.60	79.20 ± 25.20	110.60 ± 34.90	<LOD = 41.40	<LOD = 5.70	294.40 ± 52.50	<LOD = 103.05	<LOD = 195.00	<LOD = 240.00	11398.40 ± 610.00	<LOD = 675.00	<LOD = 4800.00
146		4/15/2002 17:31:06	<LOD = 14.25	68.20 ± 10.00	60.10 ± 10.90	72.60 ± 21.40	44.10 ± 26.00	<LOD = 30.90	<LOD = 4.50	212.40 ± 41.00	<LOD = 82.80	<LOD = 165.00	<LOD = 195.00	9644.80 ± 500.00	<LOD = 555.00	<LOD = 4200.00
147	Shutter Cal 1	4/16/2002 07:19:55	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
148		4/16/2002 07:50:12	<LOD = 20.25	103.50 ± 13.50	48.00 ± 12.70	65.70 ± 25.50	144.40 ± 38.80	<LOD = 46.05	<LOD = 6.75	245.20 ± 53.30	<LOD = 111.75	<LOD = 210.00	<LOD = 285.00	14592.00 ± 740.00	<LOD = 780.00	<LOD = 5697.60
149		4/16/2002 07:53:14	<LOD = 13.95	68.80 ± 8.90	46.00 ± 9.20	51.40 ± 17.60	73.20 ± 24.20	<LOD = 29.25	<LOD = 4.20	150.40 ± 33.50	<LOD = 71.40	<LOD = 131.55	<LOD = 165.00	8505.60 ± 420.00	660.40 ± 330.00	<LOD = 3748.80
150		4/16/2002 07:58:23	<LOD = 14.10	58.10 ± 9.00	36.50 ± 9.50	110.80 ± 22.70	146.60 ± 31.40	<LOD = 36.90	<LOD = 4.95	278.40 ± 43.00	<LOD = 83.55	<LOD = 150.00	<LOD = 225.00	12697.60 ± 550.00	928.00 ± 410.00	<LOD = 4348.80
151		4/16/2002 08:01:22	<LOD = 13.35	63.50 ± 8.90	41.50 ± 9.30	99.20 ± 21.20	172.20 ± 31.10	<LOD = 36.30	<LOD = 4.50	245.20 ± 39.50	<LOD = 79.35	<LOD = 150.00	309.00 ± 140.00	11494.40 ± 500.00	684.80 ± 370.00	<LOD = 3900.00
152		4/16/2002 08:09:14	<LOD = 18.15	98.90 ± 12.80	85.80 ± 13.80	85.30 ± 26.30	152.30 ± 37.60	<LOD = 45.00	<LOD = 6.00	189.50 ± 45.90	<LOD = 97.20	<LOD = 180.00	<LOD = 240.00	11296.00 ± 610.00	1009.60 ± 470.00	<LOD = 5097.60
153		4/16/2002 08:13:12	<LOD = 9.00	10.70 ± 4.90	35.90 ± 6.60	16.50 ± 10.90	<LOD = 21.15	<LOD = 16.80	<LOD = 2.55	125.40 ± 23.50	<LOD = 46.35	<LOD = 77.10	<LOD = 76.95	1908.80 ± 170.00	307.60 ± 150.00	<LOD = 1950.00
154		4/16/2002 08:16:59	<LOD = 14.40	105.30 ± 10.60	73.30 ± 10.70	86.40 ± 20.90	42.30 ± 24.30	<LOD = 28.35	<LOD = 4.05	92.90 ± 30.30	<LOD = 68.25	<LOD = 137.25	<LOD = 180.00	8928.00 ± 440.00	853.60 ± 350.00	<LOD = 3900.00
155		4/16/2002 08:19:36	<LOD = 15.90	104.40 ± 11.60	74.40 ± 11.80	75.30 ± 22.50	109.20 ± 30.70	<LOD = 36.60	<LOD = 5.10	109.90 ± 35.00	<LOD = 77.85	<LOD = 150.00	222.00 ± 140.00	9785.60 ± 510.00	1020.00 ± 400.00	<LOD = 4348.80
156		4/16/2002 08:27:28	<LOD = 15.60	66.20 ± 10.30	68.80 ± 11.90	65.30 ± 22.60	270.40 ± 39.60	<LOD = 48.15	<LOD = 6.45	413.20 ± 54.30	<LOD = 101.25	<LOD = 180.00	<LOD = 255.00	14899.20 ± 650.00	1269.60 ± 480.00	<LOD = 4800.00
157		4/16/2002 08:30:19	<LOD = 13.50	86.00 ± 9.90	58.10 ± 10.20	74.10 ± 20.30	143.90 ± 29.70	<LOD = 35.40	<LOD = 4.80	235.60 ± 39.80	<LOD = 81.30	<LOD = 150.00	319.00 ± 140.00	12396.80 ± 530.00	1149.60 ± 400.00	<LOD = 4348.80
158		4/16/2002 08:38:14	<LOD = 18.30	197.00 ± 15.40	50.90 ± 11.50	79.30 ± 23.40	<LOD = 39.75	<LOD = 30.90	<LOD = 4.35	<LOD = 47.85	<LOD = 80.10	<LOD = 148.35	<LOD = 195.00	7366.40 ± 460.00	<LOD = 525.00	<LOD = 4048.80
159		4/16/2002 08:41:01	<LOD = 14.40	140.10 ± 11.20	47.30 ± 9.30	68.90 ± 18.70	48.00 ± 23.10	<LOD = 27.45	<LOD = 4.20	65.70 ± 27.10	<LOD = 62.10	<LOD = 125.85	<LOD = 165.00	6726.40 ± 370.00	751.60 ± 300.00	<LOD = 3300.00
160		4/16/2002 08:46:42	<LOD = 19.05	95.20 ± 12.90	37.90 ± 11.90	83.50 ± 26.10	80.30 ± 34.60	<LOD = 40.80	<LOD = 6.30	141.60 ± 45.00	<LOD = 101.55	<LOD = 195.00	<LOD = 255.00	10598.40 ± 620.00	860.80 ± 470.00	<LOD = 5097.60
161		4/16/2002 08:49:20	<LOD = 16.20	158.60 ± 12.80	38.60 ± 9.70	56.00 ± 19.20	<LOD = 33.60	<LOD = 25.05	<LOD = 3.45	<LOD = 41.10	<LOD = 65.55	<LOD = 130.05	<LOD = 165.00	5468.80 ± 370.00	469.60 ± 300.00	<LOD = 3300.00
162		4/16/2002 08:54:39	<LOD = 16.65	139.70 ± 12.70	52.30 ± 10.70	61.00 ± 20.70	<LOD = 36.90	<LOD = 29.10	<LOD = 4.50	58.10 ± 31.50	<LOD = 76.35	<LOD = 144.90	<LOD = 180.00	8089.60 ± 460.00	620.80 ± 360.00	<LOD = 4048.80
163		4/16/2002 08:57:36	<LOD = 14.85	117.30 ± 11.40	36.30 ± 9.50	60.00 ± 19.40	<LOD = 32.70	<LOD = 26.70	<LOD = 4.20	63.80 ± 30.40	<LOD = 73.05	<LOD = 139.65	<LOD = 180.00	7315.20 ± 420.00	728.80 ± 340.00	<LOD = 3900.00
164		4/16/2002 09:22:09	<LOD = 18.90	69.90 ± 12.20	40.00 ± 12.70	97.10 ± 29.00	315.40 ± 50.50	<LOD = 63.30	<LOD = 7.80	265.80 ± 56.50	<LOD = 121.80	<LOD = 270.00	<LOD = 420.00	32000.00 ± 1200.00	1739.20 ± 780.00	<LOD = 7800.00
165		4/16/2002 09:25:22	<LOD = 17.40	148.80 ± 13.70	84.00 ± 12.90	123.30 ± 26.80	45.80 ± 29.90	<LOD = 34.95	<LOD = 4.50	95.90 ± 36.60	<LOD = 87.15	<LOD = 180.00	260.20 ± 160.00	11494.40 ± 580.00	969.60 ± 440.00	<LOD = 4800.00
166		4/16/2002 09:28:22	<LOD = 16.80	150.20 ± 13.50	69.70 ± 12.00	98.30 ± 24.60	67.40 ± 30.00	<LOD = 35.70	<LOD = 4.80	197.70 ± 41.90	<LOD = 86.40	<LOD = 180.00	265.00 ± 160.00	13196.80 ± 610.00	1449.60 ± 470.00	<LOD = 4948.80
167		4/16/2002 09:31:08	<LOD = 20.70	134.40 ± 15.50	74.50 ± 14.60	86.90 ± 28.70	<LOD = 50.85	<LOD = 41.10	<LOD = 6.00	148.20 ± 47.60	<LOD = 105.75	<LOD = 210.00	<LOD = 285.00	12697.60 ± 710.00	836.80 ± 520.00	<LOD = 5697.60
168		4/16/2002 09:41:36	<LOD = 16.05	114.70 ± 11.70	74.10 ± 11.50	89.40 ± 22.70	47.30 ± 26.60	<LOD = 32.55	<LOD = 4.80	380.40 ± 49.80	<LOD = 92.55	<LOD = 165.00	<LOD = 195.00	8908.80 ± 470.00	792.80 ± 370.00	<LOD = 4048.80
169		4/16/2002 09:44:25	<LOD = 13.80	116.40 ± 10.40	42.20 ± 8.90	48.70 ± 17.10	49.80 ± 22.20	<LOD = 25.80	<LOD = 3.60	269.60 ± 39.20	<LOD = 74.85	<LOD = 125.70	<LOD = 165.00	7539.20 ± 390.00	769.20 ± 310.00	<LOD = 3448.80
170		4/16/2002 09:49:28	<LOD = 16.05	107.10 ± 11.50	55.60 ± 10.90	76.20 ± 21.90	76.90 ± 28.50	<LOD = 35.25	<LOD = 5.10	474.80 ± 55.10	<LOD = 96.75	<LOD = 165.00	<LOD = 210.00	10796.80 ± 530.00	827.20 ± 410.00	<LOD = 4500.00
171		4/16/2002 09:52:19	<LOD = 14.55	90.50 ± 10.50	44.80 ± 10.10	77.80 ± 21.30	148.50 ± 31.60	<LOD = 38.10	<LOD = 4.80	821.60 ± 68.40	141.80 ± 76.60	<LOD = 180.00	<LOD = 270.00	19494.40 ± 720.00	1489.60 ± 510.00	<LOD = 5097.60
172		4/16/2002 09:59:38	<LOD = 18.60	103.60 ± 13.20	70.20 ± 13.40	54.10 ± 24.30	132.20 ± 36.50	<LOD = 43.80	<LOD = 6.15	455.20 ± 63.20	<LOD = 115.80	<LOD = 195.00	<LOD = 255.00	11596.80 ± 640.00	965.60 ± 480.00	<LOD = 5246.40
173		4/16/2002 10:02:07	<LOD = 17.55	92.10 ± 12.20	45.70 ± 11.70	88

Site: Date: 4/16/2002

No	Cor1	Date/Time	Mo ± Prec	Zr ± Prec	Sr ± Prec	Rb ± Prec	Pb ± Prec	As ± Prec	Hg ± Prec	Zn ± Prec	Cu ± Prec	Ni ± Prec	Co ± Prec	Fe ± Prec	Mn ± Prec	Cr ± Prec
180		4/16/2002 11:09.10	<LOD = 14.55	107.10 ± 10.90	59.30 ± 10.60	70.50 ± 20.90	269.20 ± 36.40	<LOD = 43.80	<LOD = 5.40	297.60 ± 44.10	<LOD = 85.20	<LOD = 165.00	<LOD = 210.00	11097.60 ± 510.00	1129.60 ± 400.00	<LOD = 4348.80
181		4/16/2002 11:12.13	<LOD = 11.55	47.10 ± 7.20	80.00 ± 9.30	83.40 ± 18.40	498.00 ± 37.10	<LOD = 45.30	<LOD = 5.55	682.80 ± 49.90	104.40 ± 60.10	<LOD = 180.00	321.60 ± 180.00	31488.00 ± 760.00	2948.80 ± 510.00	<LOD = 5097.60
182		4/16/2002 11:19.16	<LOD = 12.90	152.60 ± 10.50	55.90 ± 8.80	69.40 ± 17.30	74.90 ± 22.50	<LOD = 27.45	<LOD = 3.90	101.80 ± 27.70	<LOD = 63.00	<LOD = 120.30	<LOD = 150.00	8428.80 ± 380.00	701.20 ± 290.00	<LOD = 3300.00
183		4/16/2002 11:22.31	<LOD = 17.25	138.60 ± 13.00	49.70 ± 11.00	75.10 ± 22.30	60.50 ± 28.20	<LOD = 34.65	<LOD = 4.95	143.60 ± 38.20	<LOD = 82.20	<LOD = 150.00	240.60 ± 130.00	7827.20 ± 470.00	802.40 ± 370.00	<LOD = 4200.00
184		4/16/2002 11:29.31	<LOD = 13.50	146.50 ± 10.90	89.40 ± 10.30	81.40 ± 19.10	<LOD = 32.10	<LOD = 24.45	<LOD = 3.75	77.80 ± 26.50	<LOD = 60.15	<LOD = 115.65	192.40 ± 96.40	6000.00 ± 330.00	673.20 ± 270.00	<LOD = 3000.00
185		4/16/2002 11:32.26	<LOD = 16.80	139.70 ± 12.80	95.50 ± 12.60	90.10 ± 23.50	55.30 ± 27.70	<LOD = 32.10	<LOD = 4.50	143.30 ± 37.20	<LOD = 81.90	<LOD = 150.00	195.80 ± 130.00	7897.60 ± 450.00	1320.00 ± 380.00	<LOD = 4200.00
186		4/16/2002 11:52:14	<LOD = 11.40	108.10 ± 8.30	64.60 ± 8.50	94.50 ± 18.00	699.20 ± 40.20	<LOD = 48.60	<LOD = 5.70	268.60 ± 33.00	<LOD = 63.45	<LOD = 115.35	208.20 ± 99.80	9849.60 ± 360.00	1329.60 ± 290.00	<LOD = 3148.80
187		4/16/2002 11:56:43	<LOD = 10.35	100.30 ± 7.60	62.00 ± 7.70	86.50 ± 15.90	409.40 ± 30.30	<LOD = 36.45	<LOD = 4.35	189.20 ± 27.40	<LOD = 55.80	<LOD = 100.20	130.90 ± 85.80	8236.80 ± 310.00	1600.00 ± 270.00	<LOD = 2848.80
188		4/16/2002 12:01:39	<LOD = 16.20	116.90 ± 12.00	64.50 ± 11.50	85.80 ± 23.20	189.30 ± 35.30	<LOD = 42.00	<LOD = 5.55	193.00 ± 41.00	<LOD = 84.60	<LOD = 150.00	<LOD = 195.00	9964.80 ± 510.00	1100.00 ± 400.00	<LOD = 4500.00
189		4/16/2002 12:13:48	<LOD = 16.35	162.10 ± 13.20	49.60 ± 10.50	78.10 ± 21.60	<LOD = 38.55	<LOD = 28.95	<LOD = 4.65	96.30 ± 33.50	<LOD = 76.35	<LOD = 150.00	<LOD = 195.00	8320.00 ± 460.00	1040.00 ± 370.00	<LOD = 4048.80
190		4/16/2002 12:16:54	<LOD = 15.15	91.80 ± 10.30	24.70 ± 8.80	40.30 ± 17.40	<LOD = 34.20	<LOD = 28.05	<LOD = 4.20	135.20 ± 34.70	<LOD = 73.20	<LOD = 128.10	<LOD = 150.00	5548.80 ± 360.00	<LOD = 435.00	<LOD = 3300.00
191		4/16/2002 12:23.58	<LOD = 18.30	123.90 ± 13.50	105.20 ± 14.50	104.30 ± 27.90	310.80 ± 45.50	<LOD = 53.10	<LOD = 7.05	313.20 ± 53.10	113.20 ± 71.10	<LOD = 195.00	302.60 ± 180.00	15296.00 ± 700.00	2129.60 ± 540.00	<LOD = 5697.60
192		4/16/2002 12:26.40	<LOD = 16.65	146.80 ± 13.20	66.10 ± 11.80	102.20 ± 24.80	191.00 ± 36.60	<LOD = 44.25	<LOD = 6.15	278.00 ± 47.50	139.60 ± 64.10	<LOD = 165.00	247.00 ± 160.00	13094.40 ± 620.00	4880.00 ± 560.00	<LOD = 5548.80
193		4/16/2002 12:33.06	<LOD = 18.45	216.80 ± 16.20	82.60 ± 13.00	76.10 ± 24.20	<LOD = 41.85	<LOD = 33.75	<LOD = 5.25	<LOD = 50.25	<LOD = 84.00	<LOD = 165.00	<LOD = 210.00	8896.00 ± 510.00	789.60 ± 400.00	<LOD = 4348.80
194		4/16/2002 12:35:19	<LOD = 19.65	160.50 ± 15.40	78.20 ± 13.80	85.10 ± 26.70	94.30 ± 35.00	<LOD = 41.40	<LOD = 6.00	139.80 ± 43.80	<LOD = 97.95	<LOD = 180.00	<LOD = 240.00	9158.40 ± 560.00	2108.80 ± 480.00	<LOD = 5097.60
195		4/16/2002 12:40:48	<LOD = 15.60	152.50 ± 12.40	63.30 ± 10.60	56.40 ± 19.40	<LOD = 34.95	<LOD = 27.00	<LOD = 4.20	70.80 ± 30.30	<LOD = 72.45	<LOD = 141.15	166.00 ± 110.00	6816.00 ± 400.00	1000.00 ± 330.00	<LOD = 3748.80
196		4/16/2002 12:43:19	20.90 ± 12.70	117.70 ± 13.30	83.10 ± 13.40	89.10 ± 25.90	86.40 ± 33.10	<LOD = 40.95	<LOD = 5.70	175.00 ± 44.80	108.10 ± 65.80	<LOD = 180.00	<LOD = 240.00	11097.60 ± 600.00	3188.80 ± 530.00	<LOD = 5400.00
197		4/16/2002 12:45:19	20.90 ± 12.70	117.70 ± 13.30	83.10 ± 13.40	89.10 ± 25.90	86.40 ± 33.10	<LOD = 40.95	<LOD = 5.70	175.00 ± 44.80	108.10 ± 65.80	<LOD = 180.00	<LOD = 240.00	11097.60 ± 600.00	3188.80 ± 530.00	<LOD = 5400.00
198	Shutter Cal 1	4/16/2002 13:53:52	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
199		4/16/2002 14:04:20	<LOD = 19.20	123.90 ± 13.80	68.00 ± 13.20	124.80 ± 28.90	129.10 ± 37.80	<LOD = 44.55	<LOD = 6.00	331.40 ± 54.70	<LOD = 106.65	<LOD = 225.00	<LOD = 315.00	18790.40 ± 820.00	<LOD = 825.00	<LOD = 5846.40
200		4/16/2002 14:07:03	<LOD = 17.70	108.60 ± 13.00	69.10 ± 12.90	100.00 ± 26.50	<LOD = 44.25	<LOD = 36.15	<LOD = 5.55	185.90 ± 44.40	<LOD = 91.80	<LOD = 180.00	<LOD = 240.00	10995.20 ± 600.00	<LOD = 660.00	<LOD = 4948.80
201		4/16/2002 14:13:56	<LOD = 15.90	94.50 ± 11.20	55.70 ± 11.10	130.10 ± 25.70	107.40 ± 32.20	<LOD = 39.30	<LOD = 5.10	182.40 ± 40.10	<LOD = 84.45	<LOD = 180.00	<LOD = 240.00	14796.80 ± 630.00	<LOD = 660.00	<LOD = 4648.80
202		4/16/2002 14:16:34	<LOD = 13.50	69.80 ± 9.10	34.80 ± 9.10	100.20 ± 21.40	167.20 ± 31.30	<LOD = 36.90	<LOD = 4.95	277.00 ± 41.10	<LOD = 78.15	<LOD = 150.00	315.60 ± 140.00	11494.40 ± 510.00	<LOD = 555.00	<LOD = 4048.80
203		4/16/2002 14:24:38	<LOD = 14.25	122.30 ± 11.20	39.70 ± 9.40	49.70 ± 18.10	35.10 ± 22.80	<LOD = 26.85	<LOD = 4.20	109.50 ± 31.80	<LOD = 68.40	<LOD = 130.50	<LOD = 150.00	5817.60 ± 360.00	<LOD = 420.00	<LOD = 3448.80
204		4/16/2002 14:27:27	<LOD = 15.00	107.00 ± 10.80	35.90 ± 9.30	47.30 ± 18.00	<LOD = 32.25	<LOD = 25.95	<LOD = 4.05	<LOD = 39.75	<LOD = 65.85	<LOD = 126.30	<LOD = 147.45	4908.80 ± 340.00	455.20 ± 280.00	<LOD = 3300.00
205		4/16/2002 14:36:13	<LOD = 7.50	25.70 ± 4.30	<LOD = 6.90	39.70 ± 10.70	576.40 ± 28.60	165.30 ± 25.80	<LOD = 4.65	255.00 ± 24.90	46.20 ± 30.00	<LOD = 72.45	112.60 ± 57.70	4627.20 ± 200.00	393.80 ± 160.00	<LOD = 1950.00
206		4/16/2002 14:40:36	<LOD = 19.20	108.40 ± 13.60	57.80 ± 13.10	113.50 ± 28.90	89.20 ± 36.50	<LOD = 43.50	<LOD = 6.15	93.40 ± 42.30	<LOD = 104.55	<LOD = 225.00	<LOD = 300.00	15398.40 ± 760.00	<LOD = 795.00	<LOD = 5697.60
207		4/16/2002 14:58:58	<LOD = 17.10	144.90 ± 13.20	51.30 ± 11.10	84.70 ± 23.10	<LOD = 40.35	<LOD = 33.15	<LOD = 4.80	88.90 ± 34.60	<LOD = 81.60	<LOD = 165.00	355.60 ± 160.00	11200.00 ± 560.00	<LOD = 585.00	<LOD = 4348.80
208		4/16/2002 15:01:34	<LOD = 12.75	82.50 ± 9.00	56.00 ± 9.20	68.20 ± 18.00	37.40 ± 21.40	<LOD = 25.35	<LOD = 3.60	78.40 ± 27.00	<LOD = 62.25	<LOD = 127.05	<LOD = 165.00	7795.20 ± 380.00	<LOD = 420.00	<LOD = 3148.80
209		4/16/2002 15:08.43	<LOD = 17.40	192.50 ± 14.20	55.90 ± 10.90	84.20 ± 22.30	68.60 ± 28.00	<LOD = 33.30	<LOD = 4.50	158.50 ± 37.10	<LOD = 76.95	<LOD = 150.00	<LOD = 210.00	10297.60 ± 510.00	1689.60 ± 420.00	<LOD = 4500.00
210		4/16/2002 15:11:38	<LOD = 15.90	132.80 ± 12.50	71.10 ± 11.70	95.80 ± 23.80	149.00 ± 33.40	<LOD = 40.05	<LOD = 5.40	234.80 ± 43.70	<LOD = 90.30	<LOD = 165.00	295.80 ± 140.00	10099.20 ± 520.00	2099.20 ± 440.00	<LOD = 4648.80
211		4/16/2002 15:46:22	<LOD = 17.25	167.70 ± 14.50	137.90 ± 15.00	98.70 ± 26.40	97.70 ± 32.60	<LOD = 37.20	<LOD = 4.95	125.10 ± 38.60	<LOD = 89.85	<LOD = 195.00	296.80 ± 180.00	15897.60 ± 680.00	<LOD = 690.00	<LOD = 5097.60
212		4/16/2002 15:49:15	25.10 ± 12.40	158.00 ± 14.00	104.80 ± 13.60	108.00 ± 25.90	63.60 ± 30.30	<LOD = 34.65	<LOD = 4.95	136.60 ± 38.80	<LOD = 86.25	<LOD = 165.00	<LOD = 210.00	9408.00 ± 510.00	<LOD = 585.00	<LOD = 4500.00
213		4/16/2002 15:51:46	<LOD = 17.55	119.00 ± 13.10	122.40 ± 14.70	105.50 ± 27.20	166.60 ± 37.30	<LOD = 44.85	<LOD = 6.15	266.40 ± 48.90	<LOD = 101.10	<LOD = 180.00	302.20 ± 170.00	12396.80 ± 610.00	1988.80 ± 490.00	<LOD = 5246.40
214		4/16/2002 15:54:45	<LOD = 17.10	161.00 ± 13.60	97.00 ± 12.90	128.90 ± 26.30	103.00 ± 32.00	<LOD = 36.75	<LOD = 4.65	155.60 ± 38.90	<LOD = 85.65	<LOD = 165.00	<LOD = 210.00	10796.80 ± 530.00	<LOD = 585.00	<LOD = 4348.80
215		4/16/2002 16:02:47	<LOD = 13.95	85.70 ± 9.90	42.90 ± 9.60	75.30 ± 20.20	93.30 ± 27.30	<LOD = 32.70	<LOD = 4.65	146.10 ± 35.10	<LOD = 76.35	<LOD = 149.25	<LOD = 195.00	9856.00 ± 470.00	<LOD = 540.00	<LOD = 4048.80
216		4/16/2002 16:06:14	<LOD = 77.25	129.10 ± 57.90	<LOD = 89.55	<LOD = 210.00	1280.00 ± 370.00	<LOD = 480.00	352.20 ± 84.70	2280.00 ± 929.60	3520.00 ± 2000.00	78489.60 ± 8000.00	<LOD = 2400.00	18892.80 ± 3600.00	<LOD = 3900.00	<LOD = 38995.20
217		4/16/2002 16:06:37	<LOD = 14.55	84.50 ± 9.80	70.60 ± 11.20	49.20 ± 21.90	1409.60 ± 68.60	<LOD = 79.65	<LOD = 8.55	1000.00 ± 68.80	<LOD = 109.80	<LOD = 180.00	300.40 ± 150.00	16000.00 ± 580.00	<LOD = 600.00	<LOD = 4348.80
218		4/16/2002 16:14:59	<LOD = 41.85	85.60 ± 28.00	<LOD = 35.85	<LOD = 67.50	<LOD = 91.05	1029.60 ± 150.00	<LOD = 31.05	<LOD = 123.45	<LOD = 210.00	<LOD = 345.00	<LOD = 300.00	1569.60 ± 610.00	<LOD = 765.00	<LOD = 7646.40
219		4/16/2002 16:15:51	<LOD = 10.95	69.80 ± 7.50	63.70 ± 8.70	74.60 ± 17.90	882.40 ± 45.50	<LOD = 55.05	8.10 ± 4.40	734.40 ± 50.20	148.00 ± 60.30	<LOD = 165.00	332.00 ± 170.00	30489.60 ± 720.00	3369.60 ± 490.00	<LOD = 4948.80
220		4/16/2002 16:38:18	<LOD = 17.70	143.70 ± 13.90	78.20 ± 12.90	77.20 ± 24.30	52.30 ± 29.70	<LOD = 35.55	<LOD = 5.70	167.70 ± 41.80	<LOD = 86.85	<LOD = 165.00	<LOD = 210.00	9164.80 ± 520.00	<LOD = 585.00	<LOD = 4500.00
221		4/16/2002 16:41:16	<LOD = 19.65	144.40 ± 14.50	71.10 ± 13.20	106.20 ± 27.50	149.80 ± 38.00	<LOD = 44.40	<LOD = 5.85	272.40 ± 51.20	<LOD = 103.95	<LOD = 210.00	<LOD = 285.00	16998.40 ± 760.00	<LOD = 780.00	<LOD = 5548.80
222		4/16/2002 16:55:04	<LOD = 18.90	270.60 ± 17.50	109.00 ± 13.90	116.60 ± 26.70	<LOD = 43.80	<LOD = 34.80	<LOD = 5.10	107.30 ± 37.20	<LOD = 86.25	<LOD = 165.00	220.40 ± 140.00	8960.00 ± 500.00	<LOD = 570.00	<LOD = 4348.80
223		4/16/2002 16:57:51	<LOD = 16.80	180.80 ± 13.70	108.70 ± 12.80	100.60 ± 23.90	89.50 ± 29.40	<LOD = 35.55	<LOD = 4.65	183.60 ± 38.50	<LOD = 79.95	<LOD = 150.00	<LOD = 210.00	10796.80 ± 510.00	<LOD = 555.00	<LOD = 4200.00
224		4/16/2002 17:07.19	<LOD = 13.35	49.00 ± 8.80	67.70 ± 10.80	49.00 ± 19.30	137.50 ± 29.70	<LOD = 36.30	<LOD = 5.25	624.80 ± 58.40	<LOD = 96.75	<LOD = 165.00	247.60 ± 150.00	12595.20 ± 550.00	<LOD = 585.00	<LOD = 4348.80
225		4/16/2002 17:10:09	<LOD = 19.95	81.70 ± 12.80	45.70 ± 12.70	64.90 ± 25.60	54.90 ± 33.40	<LOD = 42.75	<LOD = 5.85	222.60 ± 52.30	<LOD = 108.15	<LOD = 195.00	<LOD = 225.00	9049.60 ± 580.00	<LOD = 630.00	<LOD = 4800.00
226		4/16/2002 17:20:36	<LOD = 15.00	65.70 ± 10.10	101.80 ± 12.70	81.10 ± 22.80	<LOD = 36.90	<LOD = 29.55	<LOD = 4.50	53.80 ± 30.00	<LOD = 70.20	<LOD = 133.05	<LOD = 150.00	5049.60 ± 360.00	<LOD = 435.00	<LOD = 3448.80
227		4/16/2002 17:23:21	<LOD = 17.10	138.00 ± 13.20	101.90 ± 13.40	111.20 ± 26.00	<LOD = 43.50	<LOD = 33.60	<LOD = 5.10	200.20 ± 42.70	<LOD = 90.60	<LOD = 180.00	<LOD = 240.00	13299.20 ± 610.00	<LOD = 645.00	<LOD = 4648.80
228		4/16/2002 17:29.43	<LOD = 13.95	83.50 ± 9.40	39.10 ± 8.90	87.70 ± 19.70	<LOD = 32.55	<LOD = 25.80	<LOD = 3.75	93.90 ± 29.60	<LOD = 67.95	<LOD = 133.35	223.00 ± 120.00	8275.20 ± 410.00	<LOD = 465.00	<LOD = 3448.80
229		4/16/2002 17:32.35	<LOD = 17.55	138.40 ± 13.40	50.40 ± 11.40	103.10 ± 25.00	<LOD = 41.40	<LOD = 33.00	<LOD = 4.65	84.60 ± 35.80	<LOD = 84.90	<LOD = 165.00	<LOD = 225.00	11097.60 ± 570.00	<LOD = 615.00	<LOD = 4348.80

Serial #XL700-U1018NR1932 Site: Date: 4/30/2002 to 5/3/2002

o	Cor1	Date/Time	Mo ± Prec	Zr ± Prec	Sr ± Prec	Rb ± Prec	Pb ± Prec	As ± Prec	Hg ± Prec	Zn ± Prec	Cu ± Prec	Ni ± Prec	Co ± Prec	Fe ± Prec	Mn ± Prec	Cr ± Prec
	Shutter Cal 1	4/30/2002 07 20 39	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2	Shutter Cal 1	4/30/2002 10 15 42	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3		4/30/2002 10 25 56	41 50 ± 27.10	<LOD = 23 40	61.10 ± 24.40	<LOD = 80 25	1629.60 ± 180.00	<LOD = 210 00	<LOD = 110.10	505.60 ± 190.00	<LOD = 570 00	<LOD = 1035.00	<LOD = 1125.00	18598.40 ± 3497.60	<LOD = 16492.80	<LOD = 915.00
4		4/30/2002 10 26 59	<LOD = 25 65	21 40 ± 10.10	42 90 ± 15 30	<LOD = 51.60	1469.60 ± 120.00	<LOD = 137.85	<LOD = 72.75	439 60 ± 130.00	<LOD = 375.00	<LOD = 690.00	<LOD = 780.00	17292.80 ± 2400.00	13196.80 ± 7494.40	<LOD = 645.00
5		4/30/2002 10 31 10	<LOD = 27 45	71.60 ± 13 20	149 40 ± 19.50	<LOD = 59.85	265.60 ± 76.20	97.70 ± 63.10	<LOD = 54.15	936.00 ± 160.00	<LOD = 480.00	<LOD = 1080.00	1509.60 ± 900.00	59596 80 ± 4297.60	20390.40 ± 12998.40	<LOD = 1035.00
6	Shutter Cal 1	4/30/2002 12 07 48	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
7	Shutter Cal 1	4/30/2002 13.05 28	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
8		4/30/2002 13 05.37	<LOD = 27 60	26 90 ± 12 00	89 70 ± 20 90	75.40 ± 47.70	4038.40 ± 200.00	<LOD = 225 00	<LOD = 121.35	6905 60 ± 410.00	2539.20 ± 680 00	<LOD = 1185.00	<LOD = 840.00	16294.40 ± 2400.00	<LOD = 10800.00	<LOD = 615.00
9		4/30/2002 13 08 45	<LOD = 18 15	19 50 ± 7.20	43 90 ± 10.10	41.00 ± 22.70	<LOD = 56.25	<LOD = 43.95	<LOD = 24.15	<LOD = 78.60	<LOD = 165.00	<LOD = 300.00	<LOD = 285.00	2308.80 ± 810.00	<LOD = 3900.00	<LOD = 225.00
0		4/30/2002 13 11.44	<LOD = 21 15	20 00 ± 8 30	44 00 ± 12.40	<LOD = 41.55	930 40 ± 81.00	<LOD = 97.35	<LOD = 51.75	900 80 ± 130.00	<LOD = 345 00	<LOD = 525.00	<LOD = 495.00	9459.20 ± 1500.00	<LOD = 6897.60	<LOD = 390.00
1		4/30/2002 13:14:18	<LOD = 18 60	29.40 ± 7 70	31.00 ± 9 90	38.90 ± 22.80	<LOD = 62.10	<LOD = 45 75	<LOD = 24 75	<LOD = 83.40	<LOD = 180.00	<LOD = 345.00	<LOD = 345.00	4857.60 ± 1000.00	<LOD = 4800.00	<LOD = 285.00
2		4/30/2002 13 17 03	<LOD = 17 25	36 40 ± 7.40	31 20 ± 9.50	40.70 ± 22.20	518 80 ± 55 80	<LOD = 66.00	<LOD = 33.60	219.20 ± 71.10	<LOD = 225.00	<LOD = 390.00	<LOD = 420.00	9497.60 ± 1200.00	<LOD = 5846.40	<LOD = 330.00
13		4/30/2002 13 24.06	<LOD = 20 85	53 80 ± 9.40	53 50 ± 12.10	<LOD = 39.45	512 80 ± 64 60	<LOD = 76 80	<LOD = 41.55	664.00 ± 110.00	<LOD = 300.00	<LOD = 510.00	<LOD = 525.00	11897.60 ± 1600.00	<LOD = 7497.60	<LOD = 420.00
14		4/30/2002 13 26 52	<LOD = 20 10	38 80 ± 8 40	21 20 ± 10 00	62 00 ± 25 00	103.40 ± 47.70	<LOD = 56.85	<LOD = 30 90	<LOD = 99.30	<LOD = 210.00	<LOD = 375.00	<LOD = 375.00	4947.20 ± 1100.00	<LOD = 5246.40	<LOD = 300.00
15		4/30/2002 13 42 54	25 80 ± 16 20	21 70 ± 9.50	66 20 ± 14 60	<LOD = 46 95	966 40 ± 89.90	<LOD = 106.35	<LOD = 54.45	464.00 ± 110.00	<LOD = 315.00	<LOD = 480.00	<LOD = 420.00	4918.40 ± 1200.00	<LOD = 5697.60	<LOD = 330.00
16		4/30/2002 13 45 14	<LOD = 30 90	25 40 ± 12 00	54 80 ± 18.10	<LOD = 61.50	1300.00 ± 130.00	<LOD = 147.30	<LOD = 77.70	537.20 ± 150.00	<LOD = 480.00	<LOD = 990.00	<LOD = 1185.00	34892.80 ± 3699.20	32793.60 ± 12000.00	<LOD = 990.00
17		4/30/2002 13 55 20	<LOD = 20 70	<LOD = 10.65	<LOD = 14 55	<LOD = 32.40	<LOD = 63 30	<LOD = 51.45	<LOD = 27.30	<LOD = 100.05	<LOD = 210.00	<LOD = 345.00	<LOD = 300.00	1668.80 ± 840.00	<LOD = 3900.00	<LOD = 240.00
18		4/30/2002 13 58.00	<LOD = 42 90	48.10 ± 19.10	40 20 ± 25 00	<LOD = 90 75	1140.00 ± 180.00	<LOD = 210 00	<LOD = 105.75	1029.60 ± 270.00	<LOD = 735 00	<LOD = 1125.00	<LOD = 1095.00	12896.00 ± 3299.20	<LOD = 14995.20	<LOD = 855.00
19		4/30/2002 13 59 13	<LOD = 23 40	47 60 ± 10 60	68.10 ± 15 10	<LOD = 48.30	1360.00 ± 100 00	<LOD = 122.70	<LOD = 64 05	1149.60 ± 150.00	<LOD = 405.00	<LOD = 615.00	<LOD = 615.00	13196.80 ± 1899.20	<LOD = 8548.80	<LOD = 480.00
20		4/30/2002 14 17.57	<LOD = 19 20	<LOD = 10 95	37 90 ± 10 90	40 60 ± 25.10	561.60 ± 63.80	<LOD = 77.25	<LOD = 40.20	365.40 ± 96 90	508.00 ± 200.00	<LOD = 465.00	<LOD = 405.00	5529.60 ± 1200.00	5760.00 ± 3699.20	<LOD = 315.00
21		4/30/2002 14 25 15	<LOD = 21.90	19 20 ± 8 30	48.00 ± 12.10	40 90 ± 27 20	290.20 ± 58.50	<LOD = 67 95	<LOD = 35.55	267 00 ± 87.10	<LOD = 270.00	<LOD = 465.00	<LOD = 495.00	8678.40 ± 1500.00	<LOD = 7046.40	<LOD = 405 00
22		4/30/2002 14 47.23	36.70 ± 15 40	25 90 ± 8.90	54.70 ± 13 10	<LOD = 43 05	841.60 ± 80.20	<LOD = 97 35	<LOD = 51.15	795.60 ± 130.00	<LOD = 360.00	<LOD = 600.00	817.60 ± 420.00	12800.00 ± 1899.20	13990.40 ± 5897.60	<LOD = 510.00
23		4/30/2002 14.50 01	<LOD = 19 35	40.90 ± 7 90	40 40 ± 9.90	<LOD = 33 00	86 60 ± 41.40	<LOD = 50 40	<LOD = 28 05	267.60 ± 73 90	<LOD = 225.00	<LOD = 390.00	<LOD = 390.00	7596.80 ± 1200.00	<LOD = 5697.60	<LOD = 330 00
24	Shutter Cal 1	4/30/2002 15 02.50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
25		4/30/2002 15 06 52	26 40 ± 15 90	31 80 ± 9.50	46 40 ± 13 20	<LOD = 45 15	666.40 ± 77.90	<LOD = 95 25	<LOD = 50.25	642 80 ± 120.00	<LOD = 360 00	<LOD = 660.00	<LOD = 735.00	19392.00 ± 2299 20	14195.20 ± 7097 60	<LOD = 600 00
26		4/30/2002 15 09 35	47 50 ± 21 50	<LOD = 17 70	65.70 ± 18 90	<LOD = 61 35	1400.00 ± 130 00	<LOD = 150 00	<LOD = 82 20	1460 00 ± 210 00	<LOD = 600 00	<LOD = 990 00	<LOD = 1035 00	27289 60 ± 3299.20	16089.60 ± 9996 80	<LOD = 855 00
27		4/30/2002 15:25 46	54 70 ± 14 00	36 70 ± 8 20	52 50 ± 11 90	<LOD = 39 15	1868 80 ± 94.70	<LOD = 111 45	<LOD = 58 65	2320.00 ± 170.00	603 20 ± 310 00	<LOD = 810.00	<LOD = 885.00	50099.20 ± 2800.00	14297 60 ± 8396 80	<LOD = 705 00
28		4/30/2002 15 32 03	<LOD = 19 05	22 90 ± 7.40	43 10 ± 10.30	45 00 ± 23 40	<LOD = 60 45	<LOD = 46.05	<LOD = 26.10	103.40 ± 61.20	<LOD = 195.00	<LOD = 360.00	<LOD = 390.00	5187.20 ± 1100.00	8038.40 ± 3699 20	<LOD = 315 00
29		4/30/2002 15 37.40	92 80 ± 18 70	19 30 ± 9 60	35.60 ± 14.60	<LOD = 51 90	1969 60 ± 120.00	<LOD = 142 80	<LOD = 71.25	458.00 ± 120.00	<LOD = 360.00	<LOD = 645.00	<LOD = 660.00	12000.00 ± 2000.00	16588 80 ± 6499 20	<LOD = 570 00
10		4/30/2002 15 42 52	11 60 ± 7 50	12 30 ± 4 20	44 00 ± 6 20	52.30 ± 14.30	<LOD = 36 90	<LOD = 27.45	<LOD = 14 10	53.20 ± 33.40	<LOD = 107.10	<LOD = 210.00	<LOD = 195.00	3817.60 ± 580.00	3587.20 ± 1899 20	<LOD = 165.00
31	Shutter Cal 1	5/1/2002 07.43.38	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
32		5/1/2002 08 24 26	<LOD = 130 80	<LOD = 81.90	<LOD = 95.85	<LOD = 270.00	750.40 ± 470.00	<LOD = 630.00	<LOD = 375.00	2440.00 ± 1100.00	<LOD = 3148.80	<LOD = 5400.00	<LOD = 5400 00	40089 60 ± 16998.40	<LOD = 79488 00	<LOD = 4348.80
33		5/1/2002 08 25.37	<LOD = 133 50	<LOD = 75.30	<LOD = 106.20	<LOD = 210.00	1040.00 ± 460.00	<LOD = 585.00	<LOD = 330.00	2009 60 ± 1000 00	<LOD = 3000.00	<LOD = 4948.80	<LOD = 5246.40	26982.40 ± 14988.80	<LOD = 72000.00	<LOD = 4048 80
34		5/1/2002 08 25 44	<LOD = 142 50	<LOD = 79 95	<LOD = 92.40	<LOD = 225.00	1809.60 ± 580.00	<LOD = 660.00	<LOD = 315.00	2899.20 ± 1200.00	<LOD = 3148.80	<LOD = 4800.00	<LOD = 5400.00	46182.40 ± 16998.40	<LOD = 72000.00	<LOD = 4048.80
35		5/1/2002 08.26 02	<LOD = 37 95	43.10 ± 15.90	35.00 ± 21 40	<LOD = 75.60	1189.60 ± 150.00	<LOD = 180.00	<LOD = 100.35	1889.60 ± 300.00	<LOD = 810 00	<LOD = 1364.40	<LOD = 1484.40	31385.60 ± 4598.40	<LOD = 20985.60	<LOD = 1155 00
36		5/1/2002 08 27 15	70 70 ± 28 00	<LOD = 23.25	64 80 ± 27.70	<LOD = 90.15	4649.60 ± 290.00	<LOD = 315.00	189.30 ± 110 00	1889 60 ± 320.00	1460.00 ± 610.00	<LOD = 1470.00	<LOD = 1484 40	34278.40 ± 4598.40	24192.00 ± 13990.40	<LOD = 1200.00
37		5/1/2002 08 29.38	<LOD = 30 75	<LOD = 17.40	73 00 ± 18.30	<LOD = 57.30	1169.60 ± 120.00	<LOD = 144 15	<LOD = 74.70	844.00 ± 170.00	<LOD = 510.00	<LOD = 960.00	<LOD = 1110.00	32486.40 ± 3497.60	23296.00 ± 10995.20	<LOD = 945.00
38		5/1/2002 08 32 12	<LOD = 16 35	<LOD = 9.00	44.70 ± 9.50	41 10 ± 21.30	<LOD = 54.30	<LOD = 41.10	<LOD = 22.05	<LOD = 71.40	<LOD = 150.00	<LOD = 255.00	<LOD = 240.00	1748 80 ± 690.00	<LOD = 3300.00	<LOD = 195.00
39		5/1/2002 08.51.39	<LOD = 21 75	16 10 ± 8 50	54.10 ± 12.70	<LOD = 41.40	410.80 ± 64.20	<LOD = 74.70	<LOD = 38.55	<LOD = 121.50	<LOD = 270.00	<LOD = 495.00	<LOD = 540.00	9344.00 ± 1600.00	<LOD = 7497.60	<LOD = 420.00
40		5/1/2002 08:54 11	<LOD = 30.75	59 10 ± 12 90	51.20 ± 15 60	<LOD = 50.55	177.90 ± 69.50	<LOD = 81.60	<LOD = 45.60	<LOD = 165.00	<LOD = 420.00	<LOD = 1125.00	<LOD = 1470.00	65280.00 ± 4899.20	62668.80 ± 14988.80	<LOD = 1304.40
41		5/1/2002 09.05.16	<LOD = 19 95	27.20 ± 8 10	36 10 ± 11.10	40.00 ± 25.70	678 80 ± 68 80	<LOD = 81 90	<LOD = 42.60	612.40 ± 110.00	<LOD = 300.00	<LOD = 450.00	<LOD = 435.00	7616 00 ± 1300.00	<LOD = 6148.80	<LOD = 360.00
42		5/1/2002 09 07:53	<LOD = 63.00	<LOD = 34 05	<LOD = 53.55	<LOD = 107 85	<LOD = 180.00	<LOD = 150.00	<LOD = 97.35	<LOD = 300.00	<LOD = 570.00	<LOD = 1020.00	<LOD = 1020.00	<LOD = 4648.80	<LOD = 14697.60	<LOD = 840.00
43		5/1/2002 09.08.09	<LOD = 17 40	16.90 ± 6.70	40 30 ± 9 50	37.90 ± 21.40	58.00 ± 38.50	<LOD = 43.05	<LOD = 22.95	113.40 ± 58 30	<LOD = 180.00	<LOD = 330.00	<LOD = 315.00	4288.00 ± 929.60	<LOD = 4348.80	<LOD = 270.00
44		5/1/2002 09:10 46	<LOD = 17.10	<LOD = 9 00	38.60 ± 9.20	54.00 ± 21.50	<LOD = 54.75	<LOD = 40.80	<LOD = 21.75	<LOD = 72.75	<LOD = 165 00	<LOD = 300.00	<LOD = 270.00	3488.00 ± 810.00	<LOD = 3900.00	<LOD = 240.00
45		5/1/2002 09 14.42	<LOD = 25.20	<LOD = 14.55	62.70 ± 14.80	<LOD = 47.55	<LOD = 85.35	<LOD = 65.10	<LOD = 34 80	<LOD = 129.00	<LOD = 330 00	<LOD = 930.00	<LOD = 1215.00	51481.60 ± 4000.00	<LOD = 18000.00	<LOD = 975.00
46		5/1/2002 09 17 17	<LOD = 18 00	<LOD = 10 05	41 40 ± 9.90	<LOD = 32 40	<LOD = 58.50	<LOD = 43.80	<LOD = 23.40	<LOD = 79.20	<LOD = 165 00	<LOD = 285.00	<LOD = 270.00	1748.80 ± 750.00	<LOD = 3448 80	<LOD = 210.00
47		5/1/2002 09 19 57	<LOD = 18.45	10 60 ± 6 90	48 00 ± 10.50	65 50 ± 24.80	172.90 ± 48.00	<LOD = 54 60	<LOD = 28 35	119.60 ± 62.20	<LOD = 195.00	<LOD = 345.00	<LOD = 345.00	5017.60 ± 1000.00	<LOD = 4948.80	<LOD = 285.00
48		5/1/2002 09 22.41	<LOD = 13 05	15.80 ± 5 00	36 10 ± 6.90	25.70 ± 15 40	42.00 ± 27.50	<LOD = 31 80	<LOD = 17.10	<LOD = 58.05	<LOD = 127.80	<LOD = 255.00	<LOD = 270.00	6694.40 ± 829 60	<LOD = 3900.00	<LOD = 225.00
49		5/1/2002 10:04 48	149 70 ± 19.70	34.00 ± 11 00	35.60 ± 19.30	207 00 ± 50.70	6848.00 ± 240.00	<LOD = 240.00	165.20 ± 82 20	1979 20 ± 210.00	1449 60 ± 400 00	<LOD = 795.00	<LOD = 585 00	8486.40 ± 1699.20	9196.80 ± 5299 20	<LOD = 465.00
50		5/1/2002 10.07 30	24 40 ± 9 20	<LOD = 7 20	38 20 ± 7 20	47.80 ± 16.70	<LOD = 43.05	<LOD = 32 55	<LOD = 17.55	<LOD = 59 10	<LOD = 129.45	<LOD = 240.00	<LOD = 240.00	4160.00 ± 710 00	<LOD = 3448 80	<LOD = 210 00
51		5/1/2002 10.13 17	<LOD = 21 90	26.90 ± 8 70	27.10 ± 11.10	45.10 ± 26.20	<LOD = 70.65	<LOD = 55 35	<LOD = 30 60	<LOD = 108.30	<LOD = 240.00	<LOD = 465.00	526.00 ± 340.00	7244 80 ± 1500.00	6544.00 ± 4697 60	<LOD = 405 00
52		5/1/2002 10 16 33	20 10 ± 11 20	10 80 ± 6 00	40 80 ± 8 90	47.60 ± 20.40	<LOD = 52.65	<LOD = 39 45	<LOD = 20.40	<LOD = 68.85	<LOD = 150.00	<LOD = 285 00	<LOD = 285.00	4278.40 ± 860.00	<LOD = 4048.80	<LOD = 240 00
53		5/1/2002 10.25:27	<LOD = 40.20	<LOD = 22.35	55.50 ± 20.80	<LOD = 66.45	157.80 ± 90.50	<LOD = 107.70	<LOD = 60.15	<LOD = 225.00	<LOD = 585 00	<LOD = 1650.00	<LOD = 2250.00	85299.20 ± 7494.40	66969.60 ± 21990.40	<LOD = 1950.00
54		5/1/2002 10:27:57	19.50 ± 10.50	12 80 ± 5 70	36.60 ± 8.20	33 60 ± 18.50	<LOD = 49.05	<LOD = 37.20	<LOD = 20.40	<LOD = 64.95	<LOD = 146.40	<LOD = 270.00	<LOD = 270.00	3987.20 ± 800.00	<LOD = 3900.00	<LOD = 225.00
55		5/1/2002 10.43.22	<LOD = 30.30	29.00 ± 11.50	46.20 ± 15.50	64.40 ± 36.60	121 90 ± 68.60	<LOD = 79 95	<LOD = 40.65	151.00 ± 100.00	<LOD = 330.00	<LOD = 645.00	<LOD = 735.00	11296.00 ± 2200.00	13491.20 ± 7200.00	<LOD = 630.00
56		5/1/2002 10 46:26	<LOD = 12.60	16.30 ± 4 80	46.00 ± 6 90	36 90 ± 15.40	<LOD = 40 35	<LOD = 30 60	<LOD = 16 35	60.30 ± 38.40	<LOD = 128.10	<LOD = 285.00	337.80 ± 220.00	11097.60 ± 980.00	6348.80 ± 3000.00	<LOD = 255.00
57		5/1/2002 10.54.47	<LOD = 23.40	<LOD = 12.15	30.70 ± 11.90	56.50 ± 28.50	<LOD = 74.55	<LOD = 57.30	<LOD = 31.50	<LOD = 102.30	<LOD = 225.00	<LOD = 405.00	<LOD = 360.00	1969.60 ± 1000.00	<LOD = 5097.60	<LOD = 300.00
58	Shutter Cal 1	5/1/2002 12:40:14	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
59		5/1/2002 13:13:18	29.60 ± 19.00	25.20 ± 10.60	55 70 ± 14.70	<LOD = 45.00	130 00 ± 60.30	<LOD = 73 05	<LOD = 41.10	163.20 ± 99.30	<LOD = 375.00	<LOD = 1005.00	<LOD = 1274.40	55552.00 ± 4099.20	<LOD = 18000.00	1080.00 ± 650.00
60		5/1/2002 13:16:13	<LOD = 17.40	<LOD = 9.45	42.20 ± 9.70	<LOD = 32.40	<LOD = 56.85	<LOD = 41.70	<LOD = 22.20	<LOD = 72.45	<LOD = 150 00	<LOD = 270.00	<LOD = 240.00	1400.00 ± 680.00	<LOD = 3148.80	<LOD = 195.00
61		5/1/2002 13:18.40	<LOD = 21.75	<LOD = 11.55	50.90 ± 12.40	<LOD = 40.05	752.00 ± 74.40	<LOD = 90 60	<LOD = 45.75	354.80 ± 97.10	<LOD = 300.00	<LOD = 615.00	<LOD = 705.00	19891.20 ± 2099.20	<LOD = 9600.00	<LOD = 525.00
62		5/1/2002 13:21:30	<LOD = 16.95	10 10 ± 6.30	42.60 ± 9.30	<LOD = 30.45	<LOD = 51.75	<LOD = 39.45	<LOD = 21.30	<LOD = 79.95	<LOD = 165.00	<LOD = 330.00	<LOD = 330.00	5680.00 ± 989.60	<LOD = 4648.80	<LOD = 270.00
63		5/1/2002 13:24:48	<LOD = 22.50	21.50 ± 9.00	83 70 ± 14.00	<LOD = 43.95	92.90 ± 52.20	<LOD = 61 65	<LOD = 33.30	221.60 ± 84.70	<LOD = 270.00	<LOD = 555.00	<LOD = 645.00	16000.00 ± 2000.00	<LOD = 9000.00	<LOD = 495.00
64		5/1/2002 13:27:11	<LOD = 13.35	<LOD = 7.50	41.70 ± 7.50	41 70 ± 17.10	<LOD = 42.60	<LOD = 32.85	<LOD = 18.00	<LOD = 59.70	<LOD = 128.40	<LOD = 240.00	<LOD = 225.00	3068 80 ± 660.00	<LOD = 3148.80	<LOD = 180.00
65		5/1/2002 13:40:23	<LOD = 24.75	19.90 ± 10.60	165.00 ± 19.00	<LOD = 55.35	177.90 ± 65.40	<LOD = 77.25	<LOD = 42.15	716.40 ± 130.00	<LOD = 390.00	<LOD = 765.00	<LOD = 900.00	27699.20 ± 2800.00	<LOD = 12144.00	<LOD = 675.00
66		5/1/2002 13:42:48	<LOD = 20.10	19.70 ± 7.70	36.70 ± 10.60	41.30 ± 24.50	<LOD = 66.30	<LOD = 52.35	<LOD = 29.55	<LOD = 96.15	<LOD = 210.00	<LOD = 450.00	591.20 ± 330.00	8646.40 ± 1500.00	<LOD = 6748.80	<LOD = 375.00
67		5/1/2002 14:21:30	<LOD = 20.10	16.20 ± 7.70	62.30 ± 11.80	<LOD = 37.20	136.40 ± 47.40	<LOD = 55.65	<LOD = 30.15	195.20 ± 76.70	<LOD = 240.00	<LOD = 450.00	<LOD = 480.00	9049.60 ± 1400.00	<LOD = 6748.80	<LOD = 375.00
68		5/1/2002 14:23:58	<LOD = 13.80	<LOD = 7.35	39.50 ± 7 30	<LOD = 24.15	<LOD = 42.15	<LOD = 32.10	<LOD = 17.55	<LOD = 59.25	<LOD = 129.30	<LOD = 225.00	<LOD = 210.00	2040.00 ± 580.00	<LOD = 2700.00	<LOD = 165.00
69	Shutter Cal 1	5/3/2002 08:20:02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Serial #XL700-U976NR3354 Site: Date: 5/20/2002 to 5/21/2002

	Cor1	Date/Time	Mo ± Prec	Zr ± Prec	Sr ± Prec	Rb ± Prec	Pb ± Prec	As ± Prec	Hg ± Prec	Zn ± Prec	Cu ± Prec	Ni ± Prec	Co ± Prec	Fe ± Prec	Mn ± Prec	Cr ± Prec
	Shutter Cal 1	5/20/2002 07:48:40	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		5/20/2002 07:57:19	<LOD = 54.60	251.00 ± 59.60	121.30 ± 45.10	<LOD = 106.05	<LOD = 180.00	<LOD = 135.60	<LOD = 60.45	<LOD = 315.00	<LOD = 465.00	<LOD = 1230.00	<LOD = 3900.00	61286.40 ± 6694.40	<LOD = 10646.40	<LOD = 3000.00
		5/20/2002 08:20:53	<LOD = 12.30	<LOD = 13.20	68.20 ± 11.70	44.80 ± 23.90	<LOD = 43.50	<LOD = 30.60	<LOD = 13.65	<LOD = 61.05	<LOD = 104.70	<LOD = 165.00	<LOD = 270.00	1569.60 ± 320.00	<LOD = 720.00	<LOD = 240.00
		5/20/2002 08:27:10	<LOD = 14.10	<LOD = 13.95	56.70 ± 11.60	37.40 ± 24.00	<LOD = 50.55	<LOD = 38.10	<LOD = 17.85	<LOD = 71.10	<LOD = 119.10	<LOD = 210.00	<LOD = 435.00	4089.60 ± 520.00	<LOD = 1050.00	<LOD = 315.00
		5/20/2002 08:36:04	<LOD = 13.35	<LOD = 14.40	53.30 ± 11.40	56.40 ± 25.60	<LOD = 51.90	<LOD = 38.40	<LOD = 18.00	<LOD = 67.80	<LOD = 108.60	<LOD = 180.00	<LOD = 345.00	2529.60 ± 410.00	<LOD = 840.00	<LOD = 270.00
		5/20/2002 08:38:24	<LOD = 12.90	<LOD = 13.65	70.50 ± 12.30	60.50 ± 26.10	<LOD = 41.85	<LOD = 32.25	<LOD = 14.25	<LOD = 61.95	<LOD = 102.75	<LOD = 165.00	<LOD = 270.00	1280.00 ± 310.00	<LOD = 690.00	<LOD = 225.00
		5/20/2002 08:42:53	<LOD = 12.00	<LOD = 12.75	49.00 ± 10.80	56.00 ± 24.50	85.60 ± 36.70	<LOD = 41.85	<LOD = 18.15	104.50 ± 48.60	<LOD = 110.10	<LOD = 180.00	<LOD = 390.00	3600.00 ± 460.00	<LOD = 900.00	<LOD = 285.00
		5/20/2002 08:49:43	<LOD = 15.00	<LOD = 15.15	50.70 ± 11.90	59.20 ± 27.10	<LOD = 55.80	<LOD = 42.15	<LOD = 18.00	79.90 ± 52.00	<LOD = 130.20	<LOD = 270.00	<LOD = 690.00	10694.40 ± 849.60	<LOD = 1500.00	<LOD = 405.00
		5/20/2002 08:52:55	<LOD = 12.75	<LOD = 13.80	62.00 ± 11.40	77.10 ± 26.30	<LOD = 46.35	<LOD = 33.60	<LOD = 16.05	<LOD = 55.80	<LOD = 103.20	<LOD = 180.00	<LOD = 390.00	3667.20 ± 460.00	<LOD = 945.00	<LOD = 285.00
		5/20/2002 08:55:13	<LOD = 13.95	<LOD = 14.25	72.20 ± 12.80	59.30 ± 27.00	<LOD = 49.80	<LOD = 35.70	<LOD = 16.95	<LOD = 64.35	<LOD = 110.10	<LOD = 180.00	<LOD = 330.00	1979.20 ± 380.00	<LOD = 780.00	<LOD = 270.00
		5/20/2002 09:10:56	<LOD = 12.00	<LOD = 12.00	44.30 ± 10.00	35.50 ± 21.50	<LOD = 43.20	<LOD = 31.95	<LOD = 13.95	<LOD = 61.65	<LOD = 99.45	<LOD = 165.00	<LOD = 315.00	1720.00 ± 340.00	<LOD = 720.00	<LOD = 240.00
		5/20/2002 09:14:40	<LOD = 17.40	<LOD = 19.65	90.50 ± 17.80	91.30 ± 38.00	1659.20 ± 130.00	<LOD = 138.90	<LOD = 48.15	924.80 ± 130.00	<LOD = 255.00	<LOD = 360.00	<LOD = 780.00	10496.00 ± 949.60	<LOD = 1950.00	<LOD = 540.00
		5/20/2002 09:20:37	<LOD = 13.20	<LOD = 14.40	71.00 ± 12.80	39.00 ± 25.20	414.00 ± 56.90	<LOD = 67.65	<LOD = 27.45	592.80 ± 87.10	<LOD = 165.00	<LOD = 240.00	<LOD = 525.00	6707.20 ± 640.00	<LOD = 1260.00	<LOD = 360.00
		5/20/2002 09:49:03	<LOD = 13.80	<LOD = 14.55	66.00 ± 12.70	<LOD = 37.35	232.60 ± 48.40	<LOD = 56.40	<LOD = 23.70	229.00 ± 65.30	<LOD = 144.00	<LOD = 225.00	<LOD = 450.00	4217.60 ± 540.00	<LOD = 1140.00	<LOD = 345.00
		5/20/2002 09:53:51	<LOD = 12.15	<LOD = 13.20	55.00 ± 10.90	61.30 ± 24.50	139.30 ± 39.30	<LOD = 46.35	<LOD = 18.90	187.50 ± 55.80	<LOD = 127.35	<LOD = 225.00	<LOD = 540.00	8729.60 ± 680.00	<LOD = 1244.40	<LOD = 345.00
		5/20/2002 09:56:12	<LOD = 11.85	<LOD = 11.10	38.20 ± 8.90	35.40 ± 19.60	<LOD = 39.90	<LOD = 31.20	<LOD = 14.40	<LOD = 53.85	<LOD = 93.30	<LOD = 165.00	<LOD = 375.00	3817.60 ± 440.00	<LOD = 870.00	<LOD = 255.00
		5/20/2002 10:07:18	<LOD = 13.35	<LOD = 15.45	67.00 ± 12.60	75.00 ± 28.20	56.80 ± 37.80	<LOD = 41.85	<LOD = 18.60	153.90 ± 55.90	<LOD = 122.55	<LOD = 210.00	<LOD = 495.00	5638.40 ± 600.00	<LOD = 1140.00	<LOD = 330.00
		5/20/2002 10:10:18	<LOD = 10.80	<LOD = 10.95	43.90 ± 8.60	49.10 ± 19.40	<LOD = 40.50	<LOD = 30.15	<LOD = 14.25	70.20 ± 37.30	<LOD = 93.00	<LOD = 210.00	<LOD = 570.00	13094.40 ± 730.00	<LOD = 1320.00	<LOD = 345.00
		5/20/2002 10:13:13	<LOD = 13.95	<LOD = 15.75	67.20 ± 13.20	48.60 ± 27.40	<LOD = 55.50	<LOD = 40.05	<LOD = 17.55	<LOD = 74.70	<LOD = 124.05	<LOD = 225.00	<LOD = 465.00	3968.00 ± 540.00	<LOD = 1095.00	<LOD = 360.00
		5/20/2002 10:21:39	<LOD = 14.10	<LOD = 14.85	44.10 ± 11.50	<LOD = 37.50	140.30 ± 43.60	<LOD = 48.90	<LOD = 22.05	310.80 ± 73.60	<LOD = 150.00	<LOD = 225.00	<LOD = 540.00	5638.40 ± 640.00	<LOD = 1290.00	<LOD = 375.00
		5/20/2002 10:24:45	<LOD = 19.50	<LOD = 20.10	94.90 ± 19.60	<LOD = 55.20	146.60 ± 60.20	<LOD = 69.30	<LOD = 27.45	<LOD = 112.20	<LOD = 195.00	<LOD = 330.00	<LOD = 705.00	5689.60 ± 829.60	<LOD = 1650.00	<LOD = 525.00
		5/20/2002 10:26:56	<LOD = 14.10	<LOD = 15.30	75.20 ± 13.40	59.40 ± 28.00	<LOD = 51.00	<LOD = 38.85	<LOD = 18.15	<LOD = 63.75	<LOD = 110.10	<LOD = 180.00	<LOD = 330.00	1988.80 ± 390.00	<LOD = 870.00	<LOD = 300.00
		5/20/2002 10:32:14	<LOD = 15.75	<LOD = 18.00	79.20 ± 16.70	<LOD = 49.20	361.20 ± 68.80	<LOD = 76.65	<LOD = 26.40	195.00 ± 77.80	<LOD = 180.00	<LOD = 285.00	<LOD = 645.00	6240.00 ± 780.00	<LOD = 1500.00	<LOD = 435.00
		5/20/2002 10:43:58	<LOD = 11.10	<LOD = 11.70	37.40 ± 9.20	36.10 ± 20.30	78.20 ± 32.20	<LOD = 36.45	<LOD = 17.25	74.70 ± 43.30	<LOD = 107.55	<LOD = 165.00	<LOD = 360.00	3929.60 ± 440.00	<LOD = 870.00	<LOD = 255.00
		5/20/2002 10:46:44	<LOD = 12.45	<LOD = 12.45	66.90 ± 11.60	87.60 ± 27.00	<LOD = 50.25	<LOD = 36.15	<LOD = 17.85	<LOD = 63.90	<LOD = 102.45	<LOD = 195.00	<LOD = 495.00	6995.20 ± 620.00	<LOD = 1215.00	<LOD = 330.00
		5/20/2002 10:49:26	<LOD = 12.00	<LOD = 12.75	53.40 ± 10.40	52.30 ± 23.10	<LOD = 46.35	<LOD = 35.25	24.20 ± 13.20	<LOD = 125.55	<LOD = 375.00	14592.00 ± 660.00	<LOD = 720.00	4108.80 ± 510.00	<LOD = 1005.00	479.60 ± 240.00
		5/20/2002 11:01:21	<LOD = 13.50	<LOD = 15.00	64.90 ± 12.50	59.20 ± 26.90	<LOD = 52.95	<LOD = 38.10	<LOD = 16.50	<LOD = 67.80	<LOD = 113.10	<LOD = 195.00	<LOD = 390.00	3049.60 ± 470.00	<LOD = 1035.00	<LOD = 330.00
		5/20/2002 11:04:24	<LOD = 12.60	<LOD = 13.05	40.60 ± 10.40	38.50 ± 23.10	<LOD = 49.80	<LOD = 36.30	<LOD = 17.25	<LOD = 68.25	<LOD = 113.10	<LOD = 210.00	<LOD = 510.00	5968.00 ± 610.00	<LOD = 1170.00	<LOD = 345.00
		5/20/2002 11:06:54	<LOD = 13.35	<LOD = 13.95	54.10 ± 11.70	43.40 ± 25.00	<LOD = 47.40	<LOD = 35.70	<LOD = 16.05	<LOD = 64.50	<LOD = 120.00	<LOD = 180.00	<LOD = 360.00	2619.20 ± 430.00	<LOD = 870.00	<LOD = 270.00
	Shutter Cal 1	5/20/2002 12:27:28	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		5/20/2002 12:38:02	<LOD = 14.25	<LOD = 15.60	65.30 ± 13.10	55.80 ± 28.00	<LOD = 51.75	<LOD = 40.35	<LOD = 17.55	<LOD = 70.20	<LOD = 144.15	393.80 ± 180.00	<LOD = 450.00	3468.80 ± 510.00	<LOD = 990.00	<LOD = 330.00
		5/20/2002 12:41:37	<LOD = 14.10	<LOD = 15.00	68.80 ± 13.60	48.30 ± 28.00	<LOD = 54.75	<LOD = 42.60	<LOD = 19.05	<LOD = 76.50	<LOD = 120.75	<LOD = 225.00	<LOD = 510.00	5107.20 ± 620.00	<LOD = 1215.00	<LOD = 360.00
		5/20/2002 12:44:07	<LOD = 11.55	<LOD = 10.35	35.70 ± 8.80	<LOD = 28.05	<LOD = 40.05	<LOD = 31.50	<LOD = 14.25	147.90 ± 46.20	<LOD = 99.75	<LOD = 195.00	<LOD = 450.00	5699.20 ± 530.00	<LOD = 1035.00	<LOD = 285.00
		5/20/2002 13:05:50	<LOD = 14.40	<LOD = 15.90	57.00 ± 12.80	51.20 ± 27.80	82.90 ± 41.60	<LOD = 48.00	<LOD = 20.25	<LOD = 76.80	<LOD = 120.15	<LOD = 270.00	<LOD = 735.00	11296.00 ± 909.60	<LOD = 1650.00	<LOD = 465.00
		5/20/2002 13:12:26	<LOD = 17.70	<LOD = 17.40	56.10 ± 14.30	<LOD = 44.25	<LOD = 63.15	<LOD = 47.40	<LOD = 21.15	<LOD = 82.50	<LOD = 150.00	<LOD = 270.00	<LOD = 540.00	5027.20 ± 680.00	<LOD = 1394.40	<LOD = 435.00
		5/20/2002 13:17:06	<LOD = 15.45	<LOD = 16.20	70.40 ± 14.20	<LOD = 40.20	<LOD = 50.55	<LOD = 39.60	<LOD = 19.80	<LOD = 81.90	<LOD = 129.75	<LOD = 225.00	<LOD = 480.00	3539.20 ± 550.00	<LOD = 1140.00	<LOD = 360.00
		5/20/2002 13:27:44	<LOD = 20.10	<LOD = 21.75	74.70 ± 18.40	<LOD = 52.95	<LOD = 79.65	<LOD = 55.20	<LOD = 24.00	<LOD = 87.15	<LOD = 165.00	<LOD = 270.00	<LOD = 555.00	3840.00 ± 700.00	<LOD = 1454.40	<LOD = 465.00
		5/20/2002 13:54:20	<LOD = 16.65	<LOD = 18.30	53.80 ± 14.40	59.20 ± 32.10	749.20 ± 85.70	<LOD = 91.50	<LOD = 31.35	682.40 ± 110.00	<LOD = 225.00	<LOD = 405.00	<LOD = 1035.00	20390.40 ± 1300.00	<LOD = 2400.00	<LOD = 630.00
		5/20/2002 13:56:42	<LOD = 19.50	39.80 ± 16.80	142.80 ± 22.10	104.60 ± 44.10	243.40 ± 69.20	<LOD = 82.80	<LOD = 37.80	1140.00 ± 150.00	<LOD = 300.00	<LOD = 570.00	<LOD = 1650.00	45491.20 ± 2499.20	<LOD = 3748.80	<LOD = 945.00
		5/20/2002 14:01:52	<LOD = 15.15	<LOD = 15.75	48.80 ± 11.90	64.60 ± 27.90	<LOD = 54.60	75.40 ± 32.00	<LOD = 21.75	221.40 ± 68.70	<LOD = 165.00	<LOD = 360.00	<LOD = 975.00	22988.80 ± 1300.00	<LOD = 2250.00	<LOD = 600.00
		5/20/2002 14:04:21	<LOD = 15.30	<LOD = 17.70	47.40 ± 12.50	<LOD = 40.65	70.70 ± 41.90	<LOD = 48.00	<LOD = 21.60	243.60 ± 73.80	<LOD = 180.00	<LOD = 480.00	<LOD = 1410.00	44288.00 ± 2099.20	<LOD = 3300.00	<LOD = 825.00
		5/20/2002 14:19:29	<LOD = 13.50	<LOD = 13.20	70.40 ± 12.40	60.20 ± 26.40	95.10 ± 38.80	<LOD = 44.10	<LOD = 18.30	156.20 ± 55.40	<LOD = 125.85	<LOD = 225.00	<LOD = 540.00	7385.60 ± 660.00	<LOD = 1215.00	<LOD = 360.00
		5/20/2002 14:22:08	<LOD = 12.15	<LOD = 12.45	58.80 ± 10.80	49.90 ± 23.10	51.20 ± 32.20	<LOD = 33.90	<LOD = 14.10	<LOD = 62.55	<LOD = 100.35	<LOD = 180.00	<LOD = 420.00	4547.20 ± 500.00	<LOD = 990.00	<LOD = 285.00
		5/20/2002 14:24:32	<LOD = 13.65	<LOD = 14.55	63.80 ± 12.50	40.10 ± 25.40	<LOD = 46.95	<LOD = 36.60	<LOD = 17.40	<LOD = 61.95	<LOD = 115.35	<LOD = 195.00	<LOD = 375.00	2529.60 ± 430.00	<LOD = 840.00	<LOD = 270.00
	Shutter Cal 1	5/21/2002 07:16:19	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Shutter Cal 1	5/21/2002 07:29:32	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		5/21/2002 07:36:11	<LOD = 19.35	<LOD = 22.20	101.40 ± 19.30	<LOD = 51.45	134.10 ± 56.20	<LOD = 64.05	<LOD = 27.15	203.60 ± 86.50	<LOD = 210.00	<LOD = 435.00	<LOD = 1170.00	21094.40 ± 1600.00	<LOD = 2848.80	<LOD = 750.00
		5/21/2002 07:38:54	<LOD = 14.55	48.30 ± 12.70	60.80 ± 12.50	77.10 ± 29.00	103.40 ± 42.80	<LOD = 49.65	<LOD = 21.60	223.40 ± 66.10	<LOD = 150.00	<LOD = 315.00	<LOD = 840.00	17292.80 ± 1100.00	<LOD = 1950.00	<LOD = 510.00
		5/21/2002 07:42:53	<LOD = 18.75	<LOD = 19.95	67.30 ± 17.30	<LOD = 48.60	180.70 ± 61.80	<LOD = 70.80	<LOD = 38.55	4188.80 ± 310.00	<LOD = 480.00	<LOD = 750.00	<LOD = 2100.00	72857.60 ± 3600.00	<LOD = 4948.80	<LOD = 1230.00
		5/21/2002 07:45:46	<LOD = 15.45	<LOD = 16.50	67.20 ± 13.50	54.60 ± 28.60	<LOD = 56.10	<LOD = 39.90	<LOD = 17.85	<LOD = 73.50	<LOD = 131.55	<LOD = 210.00	<LOD = 465.00	3408.00 ± 520.00	<LOD = 1080.00	<LOD = 345.00
		5/21/2002 08:28:00	<LOD = 16.95	<LOD = 18.75	76.10 ± 15.60	<LOD = 44.40	80.20 ± 45.60	<LOD = 54.15	<LOD = 25.05	121.40 ± 70.30	<LOD = 180.00	<LOD = 345.00	<LOD = 855.00	13299.20 ± 1100.00	<LOD = 1950.00	<LOD = 540.00
		5/21/2002 08:31:02	<LOD = 16.50	<LOD = 18.30	108.90 ± 16.70	75.90 ± 33.80	150.80 ± 51.60	<LOD = 57.45	<LOD = 25.20	142.70 ± 70.10	<LOD = 195.00	<LOD = 615.00	<LOD = 1950.00	83456.00 ± 3200.00	<LOD = 4348.80	<LOD = 1080.00
		5/21/2002 08:34:29	<LOD = 14.70	<LOD = 17.70	105.50 ± 15.80	54.30 ± 29.90	68.00 ± 40.90	<LOD = 47.10	<LOD = 20.40	180.10 ± 63.80	<LOD = 143.85	<LOD = 285.00	<LOD = 750.00	12998.40 ± 969.60	<LOD = 1800.00	<LOD = 465.00
	Shutter Cal 1	5/21/2002 12:50:02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		5/21/2002 12:51:45	<LOD = 18.15	22.10 ± 14.10	93.00 ± 17.80	<LOD = 50.70	793.20 ± 91.90	<LOD = 104.40	<LOD = 39.45	438.00 ± 98.80	<LOD = 210.00	<LOD = 390.00	<LOD = 990.00	16000.00 ± 1200.00	<LOD = 2400.00	<LOD = 615.00
		5/21/2002 12:54:31	<LOD = 30.30	<LOD = 38.40	192.40 ± 36.00	<LOD = 83.10	<LOD = 122.70	<LOD = 92.55	<LOD = 42.30	<LOD = 180.00	<LOD = 270.00	<LOD = 390.00	<LOD = 735.00	1469.60 ± 750.00	<LOD = 1800.00	<LOD = 675.00
		5/21/2002 12:56:49	43.00 ± 16.60	<LOD = 26.25	135.80 ± 26.90	118.90 ± 55.10	4288.00 ± 260.00	<LOD = 255.00	<LOD = 88.05	2179.20 ± 240.00	1280.00 ± 330.00	<LOD = 585.00	<LOD = 1095.00	16793.60 ± 1400.00	<LOD = 2700.00	<LOD = 780.00
		5/21/2002 12:59:28	<LOD = 15.15	20.80 ± 11.60	62.00 ± 12.80	47.10 ± 27.00	<LOD = 48.30	<LOD = 38.55	<LOD = 18.60	<LOD = 66.75	<LOD = 121.80	<LOD = 225.00	<LOD = 420.00	3478.40 ± 500.00	<LOD = 990.00	<LOD = 300.00
		5/21/2002 13:25:54	<LOD = 17.70	<LOD = 19.65	69.20 ± 15.70	56.90 ± 33.30	660.80 ± 83.30	<LOD = 93.60	<LOD = 34.50	661.20 ± 110.00	<LOD = 225.00	<LOD = 315.00	<LOD = 750.00	9619.20 ± 909.60	<LOD = 1650.00	<LOD = 480.00
		5/21/2002 13:28:20	40.80 ± 17.10	45.50 ± 20.50	125.70 ± 29.60	121.00 ± 61.20	8057.60 ± 400.00	<LOD = 345.00	<LOD = 114.75	4089.60 ± 330.00	1129.60 ± 380.00	<LOD = 660.00	<LOD = 1424.40	27776.00 ± 1899.20	<LOD = 3300.00	1440.00 ± 640.00
		5/21/2002 13:30:57	<LOD = 17.85	<LOD = 19.20	71.30 ± 15.30	<LOD = 46.20	<LOD = 60.30	<LOD = 43.65	<LOD = 23.25	<LOD = 116.55	<LOD = 285.00	4000.00 ± 450.00	<LOD = 750.00	6307.20 ± 770.00	<LOD = 1500.00	<LOD = 450.00
		5/21/2002 13:35:59	<LOD = 15.60	<LOD = 17.70	72.00 ± 14.10	43.70 ± 28.30	<LOD = 57.60	<LOD = 43.05	<LOD = 18.75	<LOD = 75.15	<LOD = 122.70	<LOD = 225.00	<LOD = 495.00	4387.20 ± 580.00	<LOD = 1110.00	<LOD = 330.00
		5/21/2002 13:38:36	<LOD = 14.25	<LOD = 14.70	49.40 ± 11.60	<LOD = 37.05	<LOD = 48.30	<LOD = 37.35	<LOD = 17.40	<LOD = 59.55	<LOD = 119.55	<LOD = 195.00	<LOD = 405.00	3080.00 ± 470.00	<LOD = 945.00	<LOD = 285.00
		5/21/2002 13:41:09	<LOD = 16.95	<LOD = 18.60	72.80 ± 15.00	54.50 ± 31.30	<LOD = 56.70	<LOD = 42.90	<LOD = 18.45	<LOD = 75.60	<LOD = 140.10	<LOD = 240.00	<LOD = 465.00	3587.20 ± 560.00	<LOD = 1095.00	<LOD = 330.00
		5/21/2002 14:02:58	<LOD = 15.15	<LOD = 18.30	65.40 ± 14.60	62.40 ± 31.40	795.20 ± 84.30	<LOD = 94.95	<LOD = 33.75	616.40 ± 100.00	<LOD = 210.00	<LOD = 315.00	<LOD = 750.00	12499.20 ± 969.60	<LOD = 1650.00	637.20 ± 330.00
		5/21/2002 14:05:28	<LOD = 32.40	96.60 ± 26.70	80.10 ± 26.10	<LOD = 80.70	1429.60 ± 170.00	<LOD = 195.00	<LOD = 75.60	560.80 ± 170.00	<LOD = 390.00	<LOD = 825.00	<LOD = 2400.00	58163.20 ± 3897.60	<LOD = 5697.60	<LOD = 1500.00
		5/21/2002 14:08:19	<LOD = 23.70	95.00 ± 20.60	97.10 ± 20.40	<LOD = 58.50	601.60 ± 92.90	<LOD = 105.75	<LOD = 40.35	335.40 ± 110.00	<LOD = 240.00	<LOD = 525.00	<LOD = 1410.00	29184.00 ± 2000.00	<LOD = 3300.00	<LOD = 870.00
		5/21/2002 14:10:26	<LOD = 13.35	<LOD = 15.45	69.40 ± 13.30	56.10 ± 28.00	<LOD = 55.20	<LOD = 40.35	<LOD = 19.65	<LOD = 64.05	<LOD = 116.10	<LOD = 210.00	<LOD = 375.00	2539.20 ± 440.00	<LOD = 915.00	<LOD = 300.00
		5/21/2002 14:17:04	43.30 ± 18.60	37.50 ± 20.10	134.30 ± 27.10	<LOD = 76.05	2560.00 ± 200.00	<LOD = 210.00	<LOD = 75.60	2800.00 ± 280.00	<LOD = 480.00	<LOD = 705.00	<LOD = 1800.00	39884.80 ± 2600.00	<LOD = 4200.00	<LOD = 1095.00
		5/21/2002 14:19:27	37.30 ± 14.50	<LOD = 21.30	148.00 ± 23.20	<LOD = 58.80	1840.00 ± 150.00	<LOD = 150.00	<LOD = 50.70	927.20 ± 140.00	<LOD = 270.00	<LOD = 345.00	<LOD = 765.00	7936.00 ± 900.00	<LOD = 1650.00	<LOD = 510.00
		5/21/2002 14:21:51	<LOD = 30.45	<LOD = 37.35	114.20 ± 35.40	<LOD = 94.50	7974.40 ± 490.00	<LOD = 420.00	<LOD = 165.00	30592.00 ± 1600.00	<LOD = 1454.40	<LOD = 1155.00	<LOD = 2250.00	40883.20 ± 3099.20	<LOD = 4948.80	<LOD = 1440.00
		5/21/2002 14:30:30	<LOD = 18.75	<LOD = 20.70	82.20 ± 18.30	<LOD = 54.90	1960.00 ± 140.00	<LOD = 150.00	<LOD = 52.80	1689.60 ± 180.00	<LOD = 330.00	<LOD = 480.00	<LOD = 1155.00	24691.20 ± 1600.00	<LOD = 2700.00	<LOD = 765.00
		5/21/2002 14:32:54	310.20 ± 31.80	<LOD = 26.25	78.10 ± 23.00	<LOD = 69.75	2689.60 ± 210.00	<LOD = 210.00	<LOD = 73.65	1260.00 ± 200.00	969.60 ± 300.00	<LOD = 810.00	<LOD = 2250.00	69888.00 ± 3699.20	<LOD = 5246.40	<LOD = 1320.00
		5/21/2002 14:35:14	<LOD = 13.65	<LOD = 15.15	74.50 ± 13.10	53.40 ± 27.00	<LOD = 51.45	<LOD = 35.85	<LOD = 16.80	<LOD = 70.05	<LOD = 118.05	<LOD = 195.00	<LOD = 420.00	4048.00 ± 510.00	<LOD = 1005.00	<LOD = 300.00
		5/21/2002 14:37:49	<LOD = 14.10	<LOD = 15.30	78.90 ± 14.10	45.30 ± 27.90	<LOD = 51.75	<LOD = 39.30	<LOD = 18.15	<LOD = 71.85	<LOD = 125.85	<LOD = 210.00	<LOD = 450.00	3099.20 ± 490.00	<LOD = 930.00	<LOD = 300.00
		5/21/2002 14:42:14	<LOD = 19.95	48.00 ± 16.20	72.50 ± 18.00	<LOD = 53.25	1840.00 ± 140.00	<LOD = 150.00	<LOD = 54.00	1329.60 ± 160.00	388.60 ± 220.00	<LOD = 585.00	<LOD = 1650.00	42777.60 ± 2299.20	<LOD = 3600.00	<LOD = 960.00
		5/21/2002 14:44:39	<LOD = 25.65	213.40 ± 28.70	110.90 ± 22.50	67.10 ± 44.40	291.80 ± 78.80	<LOD = 93.15	<LOD = 36.15	366.00 ± 120.00	<LOD = 270.00	<LOD = 615.00	<LOD = 1800.00	38579.20 ± 2499.20	<LOD = 3900.00	<LOD = 1005.00
		5/21/2002 14:47:11	<LOD = 14.25	<LOD = 16.05	47.40 ± 12.30	<LOD = 39.75	<LOD = 58.65	<LOD = 46.80	<LOD = 21.90	174.60 ± 66.50	<LOD = 165.00	<LOD = 360.00	<LOD = 1065.00	24192.00 ± 1400.00	<LOD = 2400.00	<LOD = 630.00
		5/21/2002 14:52:03	<LOD = 18.45	27.70 ± 14.00	72.90 ± 16.40	<LOD = 45.60	972.00 ± 98.40	<LOD = 112.35	<LOD = 41.55	687.20 ± 120.00	<LOD = 240.00	<LOD = 390.00	<LOD = 975.00	16896.00 ± 1300.00	<LOD = 2250.00	<LOD = 645.00
		5/21/2002 14:54:21	<LOD = 13.80	<LOD = 15.00	73.20 ± 13.50	52.20 ± 27.90	<LOD = 52.20	<LOD = 40.05	<LOD = 19.20	<LOD = 73.05	<LOD = 148.65	570.80 ± 200.00	<LOD = 495.00	4019.20 ± 550.00	<LOD = 1125.00	<LOD = 345.00
		5/21/2002 14:57:12	<LOD = 14.70	<LOD = 16.80	67.40 ± 14.10	55.20 ± 29.90	<LOD = 53.40	<LOD = 39.00	<LOD = 18.00	<LOD = 67.80	<LOD = 128.25	<LOD = 210.00	<LOD = 420.00	2979.20 ± 500.00	<LOD = 990.00	<LOD = 315.00
		5/21/2002 15:00:55	53.80 ± 28.40	47.80 ± 29.80	57.60 ± 33.60	<LOD = 118.05	3129.60 ± 340.00	<LOD = 345.00	<LOD = 119.10	3059.20 ± 440.00	<LOD = 795.00	<LOD = 1065.00	<LOD = 2700.00	37683.20 ± 3798.40	<LOD = 6148.80	<LOD = 1650.00
		5/21/2002 15:03:44	<LOD = 55.20	<LOD = 54.90	<LOD = 55.20	<LOD = 147.60	2308.80 ± 450.00	<LOD = 480.00	<LOD = 165.00	1209.60 ± 430.00	<LOD = 765.00	<LOD = 1065.00	<LOD = 2548.80	8825.60 ± 2699.20	<LOD = 5400.00	<LOD = 1650.00
		5/21/2002 15:04:21	<LOD = 73.35	<LOD = 74.25	<LOD = 90.60	<LOD = 180.00	1609.60 ± 460.00	<LOD = 495.00	<LOD = 180.00	1668.80 ± 640.00	<LOD = 1215.00	<LOD = 1500.00	<LOD = 3900.00	25190.40 ± 5600.00	<LOD = 8846.40	<LOD = 2548.80

Cor1	Date/Time	Mo ± Prec	Zr ± Prec	Sr ± Prec	Rb ± Prec	Pb ± Prec	As ± Prec	Hg ± Prec	Zn ± Prec	Cu ± Prec	Ni ± Prec	Co ± Prec	Fe ± Prec	Mn ± Prec	Cr ± Prec
Shutter Cal 1	5/21/2002 15:15:51	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/21/2002 15:15:54	<LOD = 14.40	<LOD = 16.35	86.50 ± 14.80	46.00 ± 28.70	179.70 ± 48.50	<LOD = 55.05	<LOD = 21.00	349.60 ± 77.80	<LOD = 165.00	<LOD = 285.00	<LOD = 705.00	10899.20 ± 889.60	<LOD = 1650.00	<LOD = 480.00
	5/21/2002 15:18:19	<LOD = 16.20	<LOD = 18.45	125.10 ± 19.40	<LOD = 51.00	302.40 ± 64.40	<LOD = 78.30	<LOD = 32.85	400.80 ± 95.10	<LOD = 195.00	<LOD = 375.00	<LOD = 1020.00	18598.40 ± 1300.00	<LOD = 2400.00	696.00 ± 460.00
	5/21/2002 15:20:38	<LOD = 17.40	33.20 ± 15.50	161.50 ± 21.60	<LOD = 51.90	269.00 ± 62.20	<LOD = 73.95	<LOD = 30.45	481.20 ± 100.00	<LOD = 210.00	<LOD = 390.00	<LOD = 1050.00	19699.20 ± 1400.00	<LOD = 2548.80	<LOD = 705.00

APPENDIX C

ANALYTICAL DATA

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ACE Technologies Inc.
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The Woodlands, TX 78130
Phone: (281) 363-2233
Fax : (281) 298-5784

Date: 5/16/02

Attn: Mr. Rick Mehl / Ms.Tonya Balla

VOLATILES

Project Name: Calumet Container

Episode #:		7827				
Lab Sample ID		1	2	3	4	8
Client Sample I D		CC (2-4)	CC (3-5)	CC (5-7)	CC (1-7)	Trip Blank
		Soil	Soil	Soil	Soil	Water
						ug/l
Date Sampled		5/1/02	5/1/02	5/1/02	5/1/02	5/1/02
Time Sampled		9:20	9:57	11:00	11:35	
	Units					
VOA 8260B						
1,1,1,2-Tetrachloroethane	ug/kg	<410	<16	<16	<15	<1.0
1,1,1-Trichloroethane	ug/kg	<410	<16	<16	<15	<1.0
1,1,2,2-Tetrachloroethane	ug/kg	<410	<16	<16	<15	<1.0
1,1,2-Trichloroethane	ug/kg	<410	<16	<16	<15	<1.0
1,1-Dichloroethane	ug/kg	<410	<16	<16	<15	<1.0
1,1-Dichloroethene	ug/kg	<410	<16	<16	<15	<1.0
1,1-Dichloropropene	ug/kg	<410	<16	<16	<15	<1.0
1,2,3-Trichlorobenzene	ug/kg	<410	<16	<16	<15	<1.0
1,2,3-Trichloropropane	ug/kg	<410	<16	<16	<15	<1.0
1,2,4-Trichlorobenzene	ug/kg	8000	<16	<16	20	<1.0
1,2,4-Trimethylbenzene	ug/kg	<410	19	88	300	<1.0
1,2-Dibromo-3-chloropropane	ug/kg	<410	<16	<16	<15	<1.0
1,2-Dibromoethane	ug/kg	<410	<16	<16	<15	<1.0
1,2-Dichlorobenzene	ug/kg	<410	<16	<16	<15	<1.0
1,2-Dichloroethane	ug/kg	<410	<16	<16	<15	<1.0
1,2-Dichloropropane	ug/kg	2600	<16	<16	<15	<1.0
1,3,5-Trimethylbenzene	ug/kg	<410	<16	24	100	<1.0
1,3-Dichlorobenzene	ug/kg	<410	<16	<16	<15	<1.0
1,3-Dichloropropane	ug/kg	<410	<16	<16	<15	<1.0
1,4-Dichlorobenzene	ug/kg	<410	<16	<16	<15	<1.0
1-Chlorohexane	ug/kg	<410	<16	<16	<15	<1.0
2,2-Dichloropropane	ug/kg	<410	<16	<16	<15	<1.0
2-Butanone	ug/kg	<2000	<80	<80	<75	<5.0
2-Chloroethyl vinyl ether	ug/kg	<410	<16	<16	<15	<1.0
2-Chlorotoluene	ug/kg	<410	<16	<16	<15	<1.0
2-Hexanone	ug/kg	<2000	<80	<80	<80	<5.0
4-Chlorotoluene	ug/kg	<410	<16	<16	<15	<1.0
4-Methyl-2-pentanone	ug/kg	<2000	<80	<80	<75	<5.0
Acetone	ug/kg	<2000	<80	<80	<75	<5.0
Acrylonitrile	ug/kg	<2000	<80	<80	<75	<5.0

Episode #:		7827				
Lab Sample ID		1	2	3	4	8
Client Sample I D		CC (2-4)	CC (3-5)	CC (5-7)	CC (1-7)	Trip Blank
Matrix		Soil	Soil	Soil	Soil	Water
						ug/l
Date Sampled		5/1/02	5/1/02	5/1/02	5/1/02	5/1/02
Dilution Factor		9:20	9:57	11:00	11:35	
	Units					
VOA 8260B(Contd...)						
Benzene	ug/kg	<410	<16	<16	19	<1.0
Bromobenzene	ug/kg	<410	<16	<16	<15	<1.0
Bromochloromethane	ug/kg	<410	<16	<16	<15	<1.0
Bromodichloromethane	ug/kg	<410	<16	<16	<15	<1.0
Bromoform	ug/kg	<410	<16	<16	<15	<1.0
Bromomethane	ug/kg	<410	<16	<16	<15	<1.0
Carbon disulfide	ug/kg	<410	<16	<16	<15	<1.0
Carbon tetrachloride	ug/kg	<410	<16	<16	<15	<1.0
Chlorobenzene	ug/kg	<410	<16	<16	<15	<1.0
Chloroethane	ug/kg	<410	<16	<16	<15	<1.0
Chloroform	ug/kg	<410	<16	<16	<15	<1.0
Chloromethane	ug/kg	<410	<16	<16	<15	<1.0
cis-1,2-Dichloroethene	ug/kg	<410	<16	<16	<15	<1.0
cis-1,3-Dichloropropene	ug/kg	<410	<16	<16	<15	<1.0
Dibromochloromethane	ug/kg	<410	<16	<16	<15	<1.0
Dibromomethane	ug/kg	<410	<16	<16	<15	<1.0
Dichlorodifluoromethane	ug/kg	<410	<16	<16	<15	<1.0
Ethyl benzene	ug/kg	1600	51	200	370	<1.0
Hexachlorobutadiene	ug/kg	<410	<16	<16	<15	<1.0
Iodomethane	ug/kg	<410	<16	<16	<15	<1.0
Isopropylbenzene	ug/kg	<410	<16	<16	24	<1.0
m/p-xylene	ug/kg	7600	180	640	1800	<2.0
Methyl t-Butylether	ug/kg	<410	<16	<16	<15	<1.0
Methylene chloride	ug/kg	<410	<16	<16	<15	<1.0
n-Butylbenzene	ug/kg	920	<16	<16	44	<1.0
n-Propylbenzene	ug/kg	700	<16	<16	39	<1.0
Naphthalene	ug/kg	1100 J	<16 J	29 J	40 J	<1.0 J
o-Xylene	ug/kg	3400	48	210	570	<1.0
p-Isopropyltoluene	ug/kg	510	<16	<16	<15	<1.0
sec-Butylbenzene	ug/kg	<410	<16	<16	<15	<1.0
Styrene	ug/kg	<410	<16	<16	16	<1.0
tert-Butylbenzene	ug/kg	<410	<16	<16	<15	<1.0
Tetrachloroethene	ug/kg	<410	<16	<16	17	<1.0
Toluene	ug/kg	940	240	850	1500	<1.0
trans-1,2-Dichloroethene	ug/kg	<410	<16	<16	<15	<1.0
trans-1,3-Dichloropropene	ug/kg	<410	<16	<16	<15	<1.0
Trichloroethene	ug/kg	<410	<16	<16	<15	<1.0
Trichlorofluoromethane	ug/kg	<410	<16	<16	<15	<1.0
Vinyl Acetate	ug/kg	<2000	<80	<80	<80	<5.0
Vinyl chloride	ug/kg	<410	<16	<16	<15	<1.0

000002

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Phone: (281) 363-2233
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Date: 5/16/02

Attn: Mr. Rick Mehl / Ms. Tonya Balla

SEMI VOLATILES

Project Name: Calumet Container

Episode #:		7827						
Lab Sample ID		1	2	3	4	9	10	11
Client Sample I D		CC (2-4)	CC (3-5)	CC (5-7)	CC (1-7)	CC (0-3)	CC (0-4)	CC (1-3)
		Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date Sampled		5/1/02	5/1/02	5/1/02	5/1/02	5/1/02	5/1/02	5/1/02
Time Sampled		9:20	9:57	11:00	11:35	16:30	16:45	17:00
	Units							
SVOA 8270C								
1,2,4-Trichlorobenzene	ug/kg	<2200	<2100	<2200	<2000	<2200	<2000	<2300
1,2-Dichlorobenzene	ug/kg	<2200	<2100	<2200	<2000	<2200	<2000	<2300
1,3-Dichlorobenzene	ug/kg	<2200	<2100	<2200	<2000	<2200	<2000	<2300
1,4-Dichlorobenzene	ug/kg	<2200	<2100	<2200	<2000	<2200	<2000	<2300
2,2'-oxybis (1-Chloropropane)	ug/kg	<2200	<2100	<2200	<2000	<2200	<2000	<2300
2,3,4,6-Tetrachlorophenol	ug/kg	<2200	<2100	<2200	<2000	<2200	<2000	<2300
2,4,5-Trichlorophenol	ug/kg	<5400	<5300	<5400	<2000	<5400	<5100	<5800
2,4,6-Trichlorophenol	ug/kg	<2200	<2100	<2200	<2000	<2200	<2000	<2300
2,4-Dichlorophenol	ug/kg	<2200	<2100	<2200	<2000	<2200	<2000	<2300
2,4-Dimethylphenol	ug/kg	<2200	<2100	<2200	<2000	<2200	<2000	<2300
2,4-Dinitrophenol	ug/kg	<5400	<5300	<5400	<5000	<5400	<5100	<5800
2,4-Dinitrotoluene	ug/kg	<2200	<2100	<2200	<2000	<2200	<2000	<2300
2,6-Dinitrotoluene	ug/kg	<2200	<2100	<2200	<2000	<2200	<2000	<2300
2-Chloronaphthalene	ug/kg	<2200	<2100	<2200	<2000	<2200	<2000	<2300
2-Chlorophenol	ug/kg	<2200	<2100	<2200	<2000	<2200	<2000	<2300
2-Methylnaphthalene	ug/kg	<2200	<2100	<2200	**4700**	<2200	<2000	<2300
2-Methylphenol	ug/kg	<2200	<2100	<2200	<2000	<2200	<2000	<2300
2-Nitroaniline	ug/kg	<5400	<5300	<5400	<2000	<5400	<5100	<5800
2-Nitrophenol	ug/kg	<2200	<2100	<2200	<2000	<2200	<2000	<2300
3,3'-Dichlorobenzidine	ug/kg	<2200	<2100	<2200	<2000	<2200	<2000	<2300
3-Nitroaniline	ug/kg	<5400	<5300	<5400	<5000	<5400	<5100	<5800
4,6-Dinitro-2-methylphenol	ug/kg	<5400	<5300	<5400	<5000	<5400	<5100	<5800
4-Bromophenyl phenyl ether	ug/kg	<2200	<2100	<2200	<2000	<2200	<2000	<2300
4-Chloro-3-methylphenol	ug/kg	<2200	<2100	<2200	<2000	<2200	<2000	<2300
4-Chloroaniline	ug/kg	<2200	<2100	<2200	<2000	<2200	<2000	<2300
4-Chlorophenyl phenyl ether	ug/kg	<2200	<2100	<2200	<2000	<2200	<2000	<2300
4-Methylphenol	ug/kg	<2200	<2100	<2200	<2000	<2200	<2000	<2300
4-Nitroaniline	ug/kg	<5400	<5300	<5400	<5000	<5400	<5100	<5800
4-Nitrophenol	ug/kg	<5400	<5300	<5400	<5000	<5400	<5100	<5800
Acenaphthene	ug/kg	<2200	<2100	<2200	<2000	<2200	<2000	<2300

Episode #:		7827						
Lab Sample ID		1	2	3	4	9	10	11
Client Sample I D		CC (2-4)	CC (3-5)	CC (5-7)	CC (1-7)	CC (0-3)	CC (0-4)	CC (1-3)
Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date Sampled		5/1/02	5/1/02	5/1/02	5/1/02	5/1/02	5/1/02	5/1/02
Dilution Factor		9:20	9:57	11:00	11:35	16:30	16:45	17:00
	Units							
SVOA 8270C								
Acenaphthylene	ug/kg	<2200	<2100	<2200	<2000	<2200	<2000	<2300
Aniline	ug/kg	<2200	<2100	<2200	<2000	<2200	<2000	<2300
Anthracene	ug/kg	<2200	<2100	<2200	<2000	<2200	<2000	<2300
Benzo(a)anthracene	ug/kg	<2200	<2100	<2200	<2000	<2200	<2000	<2300
Benzo(a)pyrene	ug/kg	<2200	<2100	<2200	<2000	<2200	<2000	<2300
Benzo(b)fluoranthene	ug/kg	<2200	<2100	<2200	<2000	<2200	<2000	<2300
Benzo(g,h,i)perylene	ug/kg	<2200	<2100	<2200	<2000	<2200	<2000	<2300
Benzo(k)fluoranthene	ug/kg	<2200	<2100	<2200	<2000	<2200	<2000	<2300
Benzoic acid	ug/kg	<5400	<5300	<5400	<5000	<5400	<5100	<5800
Benzyl alcohol	ug/kg	<5400	<5300	<5400	<5000	<5400	<5100	<5800
Bis(2-chloroethoxy)methane	ug/kg	<2200	<2100	<2200	<2000	<2200	<2000	<2300
Bis(2-chloroethyl)ether	ug/kg	<2200	<2100	<2200	<2000	<2200	<2000	<2300
Bis(2-chloroisopropyl) ether	ug/kg	<2200	<2100	<2200	<2000	<2200	<2000	<2300
Bis(2-ethylhexyl)phthalate	ug/kg	<2200	**7300**	<2200	**12000**	**14000**	**12000**	<2300
Butylbenzylphthalate	ug/kg	<2200	<2100	<2200	<2000	<2200	<2000	<2300
Carbazole	ug/kg	<2200	<2100	<2200	<2000	<2200	<2000	<2300
Chrysene	ug/kg	<2200	<2100	<2200	<2000	<2200	<2000	<2300
Di-n-butylphthalate	ug/kg	<2200	<2100	<2200	<2000	<2200	<2000	<2300
Di-n-octylphthalate	ug/kg	<2200	<2100	<2200	<2000	<2200	<2000	<2300
Dibenzo(a,h)anthracene	ug/kg	<2200	<2100	<2200	<2000	<2200	<2000	<2300
Dibenzofuran	ug/kg	<2200	<2100	<2200	<2000	<2200	<2000	<2300
Diethylphthalate	ug/kg	<2200	<2100	<2200	<2000	<2200	<2000	<2300
Dimethylphthalate	ug/kg	<2200	<2100	<2200	<2000	<2200	<2000	<2300
Fluoranthene	ug/kg	<2200	<2100	<2200	<2000	<2200	<2000	<2300
Fluorene	ug/kg	<2200	<2100	<2200	<2000	<2200	<2000	<2300
Hexachlorobenzene	ug/kg	<2200	<2100	<2200	<2000	<2200	<2000	<2300
Hexachlorobutadiene	ug/kg	<2200	<2100	<2200	<2000	<2200	<2000	<2300
Hexachlorocyclopentadiene	ug/kg	<2200	<2100	<2200	<2000	<2200	<2000	<2300
Hexachloroethane	ug/kg	<2200	<2100	<2200	<2000	<2200	<2000	<2300
Indeno(1,2,3-c,d)pyrene	ug/kg	<2200	<2100	<2200	<2000	<2200	<2000	<2300
Isophorone	ug/kg	<2200	<2100	<2200	<2000	<2200	<2000	<2300
N-Nitroso-di-n-propylamine	ug/kg	<2200	<2100	<2200	<2000	<2200	<2000	<2300
N-Nitrosodimethylamine	ug/kg	<2200	<2100	<2200	<2000	<2200	<2000	<2300
N-Nitrosodiphenylamine	ug/kg	<2200	<2100	<2200	<2000	<2200	<2000	<2300
Naphthalene	ug/kg	<2200	<2100	<2200	**8300**	<2200	<2000	<2300
Nitrobenzene	ug/kg	<2200	<2100	<2200	<2000	<2200	<2000	<2300
Pentachlorophenol	ug/kg	<5400	<5300	<5400	<5000	<5400	<5100	<5800
Phenanthrene	ug/kg	<2200	<2100	<2200	<2000	<5400	<5100	<2300
Phenol	ug/kg	<2200	<2100	<2200	<2000	<2200	<2000	<2300
Pyrene	ug/kg	<2200	<2100	<2200	<2000	<2200	<2000	<2300

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Fax: (847) 918-4055

CE Technologies Inc.
1680 Lake Front Circle, Ste. B
The Woodlands, TX 78130
Phone: (281) 363-2233
Fax : (281) 298-5784

Date: 5/16/02

Attn: Mr. Rick Mehl / Ms. Tonya Balla

Metals

Project Name: Calumet Container

Episode #:		7827		
Lab Sample ID		5	6	7
Client Sample I D		CC (3-7)	CC (4,7)	CC (3-8)
		Soil	Soil	Soil
Date Sampled		5/1/02	5/1/02	5/1/02
Time Sampled		11:30	11:15	14:24
	Units			
TAL Metals				
Aluminum	mg/kg	5600	2200	2000
Antimony	mg/kg	<45 J	<4.6 J	<4.6 J
Arsenic	mg/kg	64.9	6.51	14.4 J
Barium	mg/kg	71	28	160 J
Berryllium	mg/kg	<3.75	<0.38	0.345 J
Cadmium	mg/kg	<3.75 J	<0.38 J	2.64 J
Calcium	mg/kg	93000	12000	88000
Chromium	mg/kg	780	9.4	170 J
Cobalt	mg/kg	6.7	1.9	6.6
Copper	mg/kg	28 J	15 J	140 J
Iron	mg/kg	120000	8100	19000
Lead	mg/kg	133	30.5	805 J
Magnesium	mg/kg	37000	5100	49000
Manganese	mg/kg	25000	450	1800
Mercury	mg/kg	0.3	0.08	0.96 J
Nickel	mg/kg	<15 J	4.9 J	12 J
Potassim	mg/kg	<750	220	440
Selenium	mg/kg	<5.25	<0.53	<0.535 J
Silver	mg/kg	<3.7	<0.38	1.2
Sodium	mg/kg	<750	<76	160
Thalium	mg/kg	12.9	0.609	1.29 J
Vanadium	mg/kg	240	7.0	38 J
Zinc	mg/kg	38	62 J	260

000005

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A Technologies Inc.
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The Woodlands, TX 78130
Phone: (281) 363-2233
Fax : (281) 298-5784

Date: 5/16/02

Attn: Mr. Rick Mehl/ Ms. Tonya Balla

PESTICIDES

Project Name: Calumet Container

Episode #:		7827						
Lab Sample ID		1	2	3	4	9	10	11
Client Sample I D		CC (2-4)	CC (3-5)	CC (5-7)	CC (1-7)	CC (0-3)	CC (0-4)	CC (1-3)
		Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date Sampled		5/1/02	5/1/02	5/1/02	5/1/02	5/1/02	5/1/02	5/1/02
Time Sampled		9:20	9:57	11:00	11:35	16:30	16:45	17:00
	Units							
Pesticides								
4,4'-DDD	ug/kg	<8.6	<8.6	<8.7	<8.0	<8.7	<8.1	<9.2
4,4'-DDE	ug/kg	<8.6	<8.6	<8.7	<8.0	<8.7	<8.1	<9.2
4,4'-DDT	ug/kg	**38**	<8.6	**14**	**64**	**210**	**220**	**66**
Aldrin	ug/kg	<4.3	<4.3	<4.3	**25**	<4.3	<4.0	<4.6
alpha-BHC	ug/kg	<4.3	<4.3	<4.3	<4.0	<4.3	<4.0	<4.6
beta-BHC	ug/kg	<4.3	<4.3	<4.3	<4.0	<4.3	<4.0	<4.6
Chlordane(Technical)	ug/kg	**15**	**94**	**8.7**	<8.0	**75**	**84**	**41**
delta-BHC	ug/kg	<4.3	<4.3	<4.3	<4.0	<4.3	<4.0	<4.6
Dieldrin	ug/kg	<8.6	<8.6	<8.7	<8.0	<8.7	<8.1	<9.2
Endosulfan II	ug/kg	<8.6	<8.6	<8.7	<8.0	<8.7	<8.1	<9.2
Endosulfon Sulfate	ug/kg	<8.6	<8.6	<8.7	<8.0	<8.7	<8.1	<9.2
Endosulfon -1	ug/kg	<4.3	<4.3	<4.3	<4.0	<4.3	<4.0	<4.6
Endrin	ug/kg	<8.6	<8.6	<8.7	<8.0	<8.7	<8.1	<9.2
Endrin Aldehyde	ug/kg	<8.6	<8.6	<8.7	<8.0	<8.7	<8.1	<9.2
Endrin Ketone	ug/kg	<8.6	<8.6	<8.7	<8.0	<8.7	<8.1	<9.2
gamma-BHC	ug/kg	<4.3	<4.3	<4.3	<4.0	<4.3	<4.0	<4.6
Heptachlor	ug/kg	<4.3	<4.3	<4.3	<4.0	<4.3	<4.0	<4.6
Heptachlor Epoxide	ug/kg	<4.3	<4.3	<4.3	<4.0	<4.3	<4.0	<4.6
Methoxychlor	ug/kg	<43	<43	<44	<40	<44	<41	<46
Toxaphene	ug/kg	<86	<85	<87	<80	<87	<81	<92

000006

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ACE Technologies Inc.
1680 Lake Front Circle, Ste. B
The Woodlands, TX 78130
Phone: (281) 363-2233
Fax : (281) 298-5784

Date: 5/16/02

Attn: Mr. Rick Mehl/Tonya Balla

PCB's

Project Name: Calumet Container

Episode #:		7827						
Lab Sample ID		1	2	3	4	9	10	11
Client Sample I D		CC (2-4)	CC (3-5)	CC (5-7)	CC (1-7)	CC (0-3)	CC (0-4)	CC (1-3)
		Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date Sampled		5/1/02	5/1/02	5/1/02	5/1/02	5/1/02	5/1/02	5/1/02
Time Sampled		9:20	9:57	11:00	11:35	16:30	16:45	17:00
	Units							
PCB's								
Aroclor 1016	ug/kg	<86	<85	<87	<80	<87	<81	<92
Aroclor 1221	ug/kg	<86	<85	<87	<80	<87	<81	<92
Aroclor 1232	ug/kg	<86	<85	<87	<80	<87	<81	<92
Aroclor 1242	ug/kg	<86	<85	<87	<80	<87	<81	<92
Aroclor 1248	ug/kg	<86	<85	<87	<80	<87	<81	<92
Aroclor 1254	ug/kg	<86	<85	<87	<80	<87	<81	<92
Aroclor 1260	ug/kg	<86	<85	<87	<80	<87	<81	<92

AAL Certificate of Analysis Summary WO# 1943

Client Project Name: Calumet Container

Client Project #: 0222
Client Contact: Rick Mehl
Project Location:
Quote Number:
Email / Fax Number:

Date Received in Lab: 05/01/02 10:20
Report Date: 05/28/02 11:10
AAL Contact: Michael Trinidad
e-Mail: miket@accura.com

Analysis Requested	*Lab ID :*	1943-001		1943-002		1943-003		1943-004		1943-005		1943-006	
	Field ID :	CC (0-0)		CC (0-1)		CC (0-2)		CC (0-3)		CC (1-3)		CC (0-4)	
	Depth :												
	Matrix :	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled :	04/30/02 13:20		04/30/02 13:30		04/30/02 14:20		04/30/02 14:35		04/30/02 15:42		04/30/02 14:50	
Percent Solids by CLP	*Prep Date:*												
	Analyzed:	05/17/02 13:00		05/17/02 13:00		05/17/02 13:00		05/17/02 13:00		05/17/02 13:00		05/17/02 13:00	
	Units:	%		%		%		%		%		%	
		Results	RL	Results	RL	Results	RL	Results	RL	Results	RL	Results	RL
Percent Solids		75.0	1.00	83.0	1.00	87.0	1.00	87.0	1.00	79.0	1.00	85.0	1.00

<RL = Less Than Reporting Limit

AAL Certificate of Analysis Summary WO# 1943

Client : Roy F. Weston, Inc.- Illinois, Vernon Hills, IL

Client Project Name: Calumet Container

Client Project #: 0222
Client Contact: Rick Mehl
Project Location:
Quote Number:
Email / Fax Number:

Date Received in Lab: 05/01/02 10:20
Report Date: 05/28/02 11:10
AAL Contact: Michael Trinidad
e-Mail: miket@accura.com

Analysis Requested	*Lab ID :*	1943-001		1943-002		1943-003		1943-004		1943-005		1943-006	
	Field ID :	CC (0-0)		CC (0-1)		CC (0-2)		CC (0-3)		CC (1-3)		CC (0-4)	
	Depth :												
	Matrix :	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled :	04/30/02 13:20		04/30/02 13:30		04/30/02 14:20		04/30/02 14:35		04/30/02 15:42		04/30/02 14:50	
VOCs by SW8260B	*Prep Date:*	05/03/02 11:23		05/03/02 11:23		05/03/02 11:23		05/03/02 11:23		05/03/02 11:23		05/03/02 11:23	
	Analyzed:	05/03/02 14:18		05/03/02 15:22		05/03/02 15:52		05/03/02 20:08		05/03/02 20:35		05/03/02 19:41	
	Units:	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
		Results	RL	Results	RL	Results	RL	Results	RL	Results	RL	Results	RL
1,1,1-Trichloroethane		<RL	3300	<RL	30000	<RL	29000	<RL	14000	<RL	6300	<RL	2900
1,1,2,2-Tetrachloroethane		<RL	3300	<RL	30000	<RL	29000	<RL	14000	<RL	6300	<RL	2900
1,1,2-Trichloroethane		<RL	3300	<RL	30000	<RL	29000	<RL	14000	<RL	6300	<RL	2900
1,1-Dichloroethane		<RL	3300	<RL	30000	<RL	29000	<RL	14000	<RL	6300	<RL	2900
1,1-Dichloroethene		<RL	3300	<RL	30000	<RL	29000	<RL	14000	<RL	6300	<RL	2900
1,2-Dichloroethane		<RL	3300	<RL	30000	<RL	29000	<RL	14000	<RL	6300	<RL	2900
1,2-Dichloropropane		<RL	3300	<RL	30000	<RL	29000	<RL	14000	<RL	6300	<RL	2900
2-Butanone		<RL	33000	<RL	300000	<RL	290000	<RL	140000	<RL	63000	<RL	29000
2-Hexanone		<RL	33000	<RL	300000	<RL	290000	<RL	140000	<RL	63000	<RL	29000
4-Methyl-2-Pentanone		<RL	33000	<RL	300000	<RL	290000	<RL	140000	<RL	63000	<RL	29000
Acetone		<RL	33000	<RL	300000	<RL	290000	<RL	140000	<RL	63000	<RL	29000
Benzene		<RL	3300	<RL	30000	<RL	29000	<RL	14000	<RL	6300	<RL	2900
Bromodichloromethane		<RL	3300	<RL	30000	<RL	29000	<RL	14000	<RL	6300	<RL	2900
Bromoform		<RL	3300	<RL	30000	<RL	29000	<RL	14000	<RL	6300	<RL	2900
Bromomethane		<RL	3300	<RL	30000	<RL	29000	<RL	14000	<RL	6300	<RL	2900
Carbon Disulfide		<RL	3300	<RL	30000	<RL	29000	<RL	14000	<RL	6300	<RL	2900

<RL = Less Than Reporting Limit

AAL Certificate of Analysis Summary WO# 1943

Client Project Name: Calumet Container

Client Project #: 0222
Client Contact: Rick Mehl
Project Location:
Quote Number:
Email / Fax Number:

Date Received in Lab: 05/01/02 10:20
Report Date: 05/28/02 11:10
AAL Contact: Michael Trinidad
e-Mail: miket@accura.com

Analysis Requested	*Lab ID :*	1943-001		1943-002		1943-003		1943-004		1943-005		1943-006	
	Field ID :	CC (0-0)		CC (0-1)		CC (0-2)		CC (0-3)		CC (1-3)		CC (0-4)	
	Depth :												
	Matrix :	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled :	04/30/02 13:20		04/30/02 13:30		04/30/02 14:20		04/30/02 14:35		04/30/02 15:42		04/30/02 14:50	
VOCs by SW8260B	*Prep Date:*	05/03/02 11:23		05/03/02 11:23		05/03/02 11:23		05/03/02 11:23		05/03/02 11:23		05/03/02 11:23	
	Analyzed:	05/03/02 14:18		05/03/02 15:22		05/03/02 15:52		05/03/02 20:08		05/03/02 20:35		05/03/02 19:41	
	Units:	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
		Results	RL	Results	RL	Results	RL	Results	RL	Results	RL	Results	RL
Carbon Tetrachloride		<RL	3300	<RL	30000	<RL	29000	<RL	14000	<RL	6300	<RL	2900
Chlorobenzene		<RL	3300	<RL	30000	<RL	29000	<RL	14000	<RL	6300	<RL	2900
Chloroethane		<RL	3300	<RL	30000	<RL	29000	<RL	14000	<RL	6300	<RL	2900
Chloroform		<RL	3300	<RL	30000	<RL	29000	<RL	14000	<RL	6300	<RL	2900
Chloromethane		<RL	3300	<RL	30000	<RL	29000	<RL	14000	<RL	6300	<RL	2900
cis-1,2-Dichloroethene		<RL	3300	<RL	30000	<RL	29000	<RL	14000	<RL	6300	<RL	2900
cis-1,3-Dichloropropene		<RL	3300	<RL	30000	<RL	29000	<RL	14000	<RL	6300	<RL	2900
Dibromochloromethane		<RL	3300	<RL	30000	<RL	29000	<RL	14000	<RL	6300	<RL	2900
Ethylbenzene		51000	3300	750000	30000	620000	29000	390000	14000	59000	6300	<RL	2900
Methylene Chloride		<RL	6700	<RL	60000	<RL	57000	<RL	29000	<RL	13000	<RL	5900
Styrene		<RL	3300	<RL	30000	<RL	29000	<RL	14000	<RL	6300	<RL	2900
Tetrachloroethene		<RL	3300	<RL	30000	<RL	29000	<RL	14000	<RL	6300	<RL	2900
Toluene		<RL	3300	8400000	750000	3600000	140000	22000	14000	<RL	6300	<RL	2900
trans-1,2-Dichloroethene		<RL	3300	<RL	30000	<RL	29000	<RL	14000	<RL	6300	<RL	2900
trans-1,3-Dichloropropene		<RL	3300	<RL	30000	<RL	29000	<RL	14000	<RL	6300	<RL	2900
Trichloroethene		<RL	3300	<RL	30000	<RL	29000	<RL	14000	<RL	6300	<RL	2900

<RL = Less Than Reporting Limit

AAL Certificate of Analysis Summary WO# 1943

Client : Roy F. Weston, Inc.- Illinois, Vernon Hills, IL

Client Project Name: Calumet Container

Client Project #: 0222
Client Contact: Rick Mehl
Project Location:
Quote Number:
Email / Fax Number:

Date Received in Lab: 05/01/02 10:20
Report Date: 05/28/02 11:10
AAL Contact: Michael Trinidad
e-Mail: miket@accura.com

Analysis Requested	*Lab ID :*	1943-001		1943-002		1943-003		1943-004		1943-005		1943-006	
	Field ID :	CC (0-0)		CC (0-1)		CC (0-2)		CC (0-3)		CC (1-3)		CC (0-4)	
	Depth :												
	Matrix :	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled :	04/30/02 13:20		04/30/02 13:30		04/30/02 14:20		04/30/02 14:35		04/30/02 15:42		04/30/02 14:50	
VOCs by SW8260B	*Prep Date:*	05/03/02 11:23		05/03/02 11:23		05/03/02 11:23		05/03/02 11:23		05/03/02 11:23		05/03/02 11:23	
	Analyzed:	05/03/02 14:18		05/03/02 15:22		05/03/02 15:52		05/03/02 20:08		05/03/02 20:35		05/03/02 19:41	
	Units:	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
		Results	RL	Results	RL	Results	RL	Results	RL	Results	RL	Results	RL
Trichlorofluoromethane		<RL	3300	<RL	30000	<RL	29000	<RL	14000	<RL	6300	<RL	2900
Vinyl Acetate		<RL	67000	<RL	600000	<RL	570000	<RL	290000	<RL	130000	<RL	59000
Vinyl Chloride		<RL	3300	<RL	30000	<RL	29000	<RL	14000	<RL	6300	<RL	2900
Xylenes, Total		240000	10000	4200000	450000	2300000	86000	1700000	43000	87000	19000	16000	8800

<RL = Less Than Reporting Limit

AAL Certificate of Analysis Summary WO# 1943

Ros[illegible] Illinois Vernon Hills, IL

Client Project [illegible] alumi[illegible] [illegible]ance

Client Project #: 0222
Client Contact: Rick Mehl
Project Location:
Quote Number:
Email / Fax Number:

Date Received in Lab: 05/01/02 10:20
Report Date: 05/28/02 11:10
AAL Contact: Michael Trinidad
e-Mail: miket@accura.com

Analysis Requested	*Lab ID :*	1943-007		1943-008					
	Field ID :	CC (2-3)		CC (1-5)					
	Depth :								
	Matrix :	SOIL		SOIL					
	Sampled :	04/30/02 16:03		04/30/02 16:32					
Percent Solids by CLP	*Prep Date:*								
	Analyzed:	05/17/02 13:00		05/10/02 10:30					
	Units:	%		%					
		Results	RL	Results	RL				
Percent Solids		91.0	1.00	78	1.0				

<RL = Less Than Reporting Limit

AAL Certificate of Analysis Summary WO# 1943

Client : Roy F. Weston, Inc.- Illinois, Vernon Hills, IL

Client Project Name: Calumet Container

Client Project #: 0222
Client Contact: Rick Mehl
Project Location:
Quote Number:
Email / Fax Number:

Date Received in Lab: 05/01/02 10:20
Report Date: 05/28/02 11:10
AAL Contact: Michael Trinidad
e-Mail: miket@accura.com

Analysis Requested	*Lab ID :*	1943-007		1943-008					
	Field ID :	CC (2-3)		CC (1-5)					
	Depth :								
	Matrix :	SOIL		SOIL					
	Sampled :	04/30/02 16:03		04/30/02 16:32					
VOCs by SW8260B	*Prep Date:*	05/03/02 11:23		05/03/02 11:23					
	Analyzed:	05/03/02 17:48		05/03/02 18:15					
	Units:	ug/kg		ug/kg					
		Results	RL	Results	RL				
1,1,1-Trichloroethane		<RL	2700	<RL	32000				
1,1,2,2-Tetrachloroethane		<RL	2700	<RL	32000				
1,1,2-Trichloroethane		<RL	2700	<RL	32000				
1,1-Dichloroethane		<RL	2700	<RL	32000				
1,1-Dichloroethene		<RL	2700	<RL	32000				
1,2-Dichloroethane		<RL	2700	<RL	32000				
1,2-Dichloropropane		<RL	2700	<RL	32000				
2-Butanone		<RL	27000	<RL	320000				
2-Hexanone		<RL	27000	<RL	320000				
4-Methyl-2-Pentanone		<RL	27000	<RL	320000				
Acetone		<RL	27000	<RL	320000				
Benzene		<RL	2700	<RL	32000				
Bromodichloromethane		<RL	2700	<RL	32000				
Bromoform		<RL	2700	<RL	32000				
Bromomethane		<RL	2700	<RL	32000				
Carbon Disulfide		<RL	2700	<RL	32000				

<RL = Less Than Reporting Limit

AAL Certificate of Analysis Summary WO# 1943

Client : Roy F. Weston, Inc.- Illinois, Vernon Hills, IL

Client Project Name: Calumet Container

Client Project #: 0222
Client Contact: Rick Mehl
Project Location:
Quote Number:
Email / Fax Number:

Date Received in Lab: 05/01/02 10:20
Report Date: 05/28/02 11:10
AAL Contact: Michael Trinidad
e-Mail: miket@accura.com

Analysis Requested	*Lab ID :*	1943-007		1943-008					
	Field ID :	CC (2-3)		CC (1-5)					
	Depth :								
	Matrix :	SOIL		SOIL					
	Sampled :	04/30/02 16:03		04/30/02 16:32					
VOCs by SW8260B	*Prep Date:*	05/03/02 11:23		05/03/02 11:23					
	Analyzed:	05/03/02 17:48		05/03/02 18:15					
	Units:	ug/kg		ug/kg					
		Results	RL	Results	RL				
Carbon Tetrachloride		<RL	2700	<RL	32000				
Chlorobenzene		<RL	2700	<RL	32000				
Chloroethane		<RL	2700	<RL	32000				
Chloroform		<RL	2700	<RL	32000				
Chloromethane		<RL	2700	<RL	32000				
cis-1,2-Dichloroethene		<RL	2700	<RL	32000				
cis-1,3-Dichloropropene		<RL	2700	<RL	32000				
Dibromochloromethane		<RL	2700	<RL	32000				
Ethylbenzene		21000	2700	970000	32000				
Methylene Chloride		<RL	5500	<RL	64000				
Styrene		<RL	2700	<RL	32000				
Tetrachloroethene		<RL	2700	<RL	32000				
Toluene		6900	2700	1200000	32000				
trans-1,2-Dichloroethene		<RL	2700	<RL	32000				
trans-1,3-Dichloropropene		<RL	2700	<RL	32000				
Trichloroethene		<RL	2700	<RL	32000				

<RL = Less Than Reporting Limit

AAL Certificate of Analysis Summary WO# 1943

Client : Roy F. Weston, Inc.- Illinois, Vernon Hills, IL

Client Project Name: Calumet Container

Client Project #: 0222
Client Contact: Rick Mehl
Project Location:
Quote Number:
Email / Fax Number:

Date Received in Lab: 05/01/02 10:20
Report Date: 05/28/02 11:10
AAL Contact: Michael Trinidad
e-Mail: miket@accura.com

Analysis Requested	*Lab ID :*	1943-007		1943-008					
	Field ID :	CC (2-3)		CC (1-5)					
	Depth :								
	Matrix :	SOIL		SOIL					
	Sampled :	04/30/02 16:03		04/30/02 16:32					
VOCs by SW8260B	*Prep Date:*	05/03/02 11:23		05/03/02 11:23					
	Analyzed:	05/03/02 17:48		05/03/02 18:15					
	Units:	ug/kg		ug/kg					
		Results	RL	Results	RL				
Trichlorofluoromethane		<RL	2700	<RL	32000				
Vinyl Acetate		<RL	55000	<RL	640000				
Vinyl Chloride		<RL	2700	<RL	32000				
Xylenes, Total		66000	8200	3200000	96000				

<RL = Less Than Reporting Limit

Chain of Custody Record

W.O. # 1943

PDP Analytical Services
1680 Lake Front Circle, Suite B ▪ The Woodlands, Texas 77380 ▪ Phone (281) 363-2233 ▪ Fax (281) 298-5784

Client Name / Address: Roy F. Weston, Inc. 750 East Bunker Court Vernon Hills, IL 60061

Send Report to: Rick Mehl

Client Phone #: 847-918-4041

Client Fax #: 847-918-4055

Project Number: 0222

Project Name: Calumet Container

Samplers (Signature): [signature]

P.O. Number:

Sample Identification	Date	Time	Comp.	Grab	Number of Containers	Matrix	VOC (40ml)	TAL Metals (402)					Remarks
CC (0,0)	4-30-02	1320		X	1	Soil	X						* All samples preseved with ice, water samples with HCl.
CC (0,1)	4-30-02	1330		X	1	Soil	X						
CC (0,2)		1420			1		X						
CC (0,3)		1435			1		X						
CC (1,3)		1542			1		X						
CC (0,4)		1450			1		X						
CC (2,3)		1603			1		X						
CC (1,5)	4-30-02	1632		X	2	Soil	X	X					
Trip Blank					1	Water	X						
Temperature Blank					1	Water							

AAL ID
1943-001
-002
-003
-004
-005
-006
-007
-008
-009

Relinquished by (Signature)	Date / Time	Received by (Signature)	Date / Time
[signature]	4-30-02 1800		
Relinquished by (Signature)	Date / Time	Received by (Signature)	Date / Time
Fedex	5/1/02 10:20	[signature]	5/1/02 10:20
Relinquished by (Signature)	Date / Time	Received for Laboratory by (Signature)	Date / Time

Remarks:

Method of Shipment: Federal Express

PDP Quote Number:

Distribution: Original accompanies shipment. Copy to coordinator and field files.

Roy F Weston, Inc.
750 E Bunker Ct, Suite 500
Vernon Hills, IL 60061
Tel: (847) 918-4041
Fax: (847) 918-4055

ACE Technologies, Inc.
1680 Lake Front Circle, Ste. B
The Woodlands, TX 78130
Phone: (281) 363-2233
Fax : (281) 298-5784

Date: 6/5/02

Attn: Mr. Rick Mehl/ Ms. Tonya Balla

Volatiles

Project Name: Calumet Container

Episode #:			7913										7916			
Lab Sample ID			1	2	3	4	5	6	7	8	9	10	1	2	3	4
Weaton Sample ID			6, 7	SD-02	5, 6	0, 10	0, 10	2,8	1,9	1,9	2, 8	1, 8	3, 10	1, 2	0.5, 2.5	0.5, 2.5
			(3'-4')		(0-6")	(3'-4')	(3'-4')DUP	(0-6")	(3'-4')	(3'-4')DUP	(2'-4')	(3'-4')	(0-2')	(2-3')	(1'-2')	(3'-4')
Date Sampled			5/20/02	5/20/02	5/20/02	5/20/02	5/20/02	5/20/02	5/20/02	5/20/02	5/20/02	5/20/02	5/21/02	5/21/02	5/21/02	5/21/02
Dilution			1000								125		1			
	Units	RL														
VOA8260B																
1,1,1,2-Tetrachloroethane	ug/kg	5	<1300								<170		<7.3			
1,1,1-Trichloroethane	ug/kg	5	<1300								<170		<7.3			
1,1,2,2-Tetrachloroethane	ug/kg	5	<1300								<170		<7.3			
1,1,2-Trichloroethane	ug/kg	5	<1300								<170		<7.3			
1,1-Dichloroethane	ug/kg	5	<1300								<170		<7.3			
1,1-Dichloroethene	ug/kg	5	<1300								<170		<7.3			
1,1-Dichloropropene	ug/kg	5	<1300								<170		<7.3			
1,2,3-Trichlorobenzene	ug/kg	5	<1300								<170		<7.3			
1,2,3-Trichloropropane	ug/kg	5	<1300								<170		<7.3			
1,2,4-Trichlorobenzene	ug/kg	5	<1300								<170		<7.3			
1,2,4-Trimethylbenzene	ug/kg	5	**18000**								**670**		**17**			
1,2-Dibromo-3-chloropropane	ug/kg	5	<1300								<170		<7.3			
1,2-Dibromoethane	ug/kg	5	<1300								<170		<7.3			
1,2-Dichlorobenzene	ug/kg	5	<1300								<170		<7.3			
1,2-Dichloroethane	ug/kg	5	<1300								<170		<7.3			
1,2-Dichloropropane	ug/kg	5	<1300								<170		<7.3			
1,3,5-Trimethylbenzene	ug/kg	5	**5600**								**200**		**32**			
1,3-Dichlorobenzene	ug/kg	5	<1300								<170		<7.3			
1,3-Dichloropropane	ug/kg	5	<1300								<170		<7.3			
1,4-Dichlorobenzene	ug/kg	5	<1300								<170		<7.3			
1-Chlorohexane	ug/kg	5	<1300								<170		<7.3			
2,2-Dichloropropane	ug/kg	5	<1300								<170		<7.3			
2-Butanone	ug/kg	25	<6500								<870		**140**			
2-Chloroethyl vinyl ether	ug/kg	5	<1300								<170		<7.3			
2-Chlorotoluene	ug/kg	5	<1300								<170		<7.3			
2-Hexanone	ug/kg	25	<6500								<870		<36			
4-Chlorotoluene	ug/kg	5	<1300								<170		<7.3			
4-Methyl-2-pentanone	ug/kg	25	<6500								<870		<36			
Acetone	ug/kg	25	<6500								<870		**180**			
Acrylonitrile	ug/kg	25	<6500								<870		<36			
Benzene	ug/kg	5	<1300								<170		<7.3			

Episode #:			7913										7916			
Lab Sample ID			1	2	3	4	5	6	7	8	9	10	1	2	3	4
Calumet Sample ID			6, 7	SD-02	5, 6	0, 10	0, 10	2,8	1,9	1,9	2, 8	1, 8	3, 10	1, 2	0.5, 2.5	0.5, 2.5
			(3'-4')		(0-6")	(3'-4')	(3'-4')DUP	(0-6")	(3'-4')	(3'-4')DUP	(2'-4')	(3'-4')	(0-2')	(2-3')	(1'-2')	(3'-4')
Date Sampled			5/20/02	5/20/02	5/20/02	5/20/02	5/20/02	5/20/02	5/20/02	5/20/02	5/20/02	5/20/02	5/21/02	5/21/02	5/21/02	5/21/02
Dilution			1000								125		1			
	Units	RL														
VOA8260B(Contd....)																
Bromobenzene	ug/kg	5	<1300								<170		<7.3			
Bromochloromethane	ug/kg	5	<1300								<170		<7.3			
Bromodichloromethane	ug/kg	5	<1300								<170		<7.3			
Bromoform	ug/kg	5	<1300								<170		<7.3			
Bromomethane	ug/kg	5	<1300								<170		<7.3			
Carbon disulfide	ug/kg	5	<1300								<170		<7.3			
Carbon tetrachloride	ug/kg	5	<1300								<170		<7.3			
Chlorobenzene	ug/kg	5	<1300								<170		<7.3			
Chloroethane	ug/kg	5	<1300								<170		<7.3			
Chloroform	ug/kg	5	<1300								<170		<7.3			
Chloromethane	ug/kg	5	<1300								<170		<7.3			
cis-1,2-Dichloroethene	ug/kg	5	<1300								<170		<7.3			
cis-1,3-Dichloropropene	ug/kg	5	<1300								<170		<7.3			
Dibromochloromethane	ug/kg	5	<1300								<170		<7.3			
Dibromomethane	ug/kg	5	<1300								<170		<7.3			
Dichlorodifluoromethane	ug/kg	5	<1300								<170		<7.3			
Ethyl benzene	ug/kg	5	**14000**								**550**		<7.3			
Hexachlorobutadiene	ug/kg	5	<1300								<170		<7.3			
Iodomethane	ug/kg	5	<1300								<170		<7.3			
Isopropylbenzene	ug/kg	5	**1100**								<170		<7.3			
m/p-xylene	ug/kg	10	**57000**								**2200**		**71**			
Methyl t-Butylether	ug/kg	5	<1300								<170		<7.3			
Methylene chloride	ug/kg	5	<1300								<170		<7.3			
n-Butylbenzene	ug/kg	5	**2400**								**220**		<7.3			
n-Propylbenzene	ug/kg	5	**2000**								<170		<7.3			
Naphthalene	ug/kg	5	**8600**								**580**		**12**			
o-Xylene	ug/kg	5	**18000**								**740**		**52**			
p-Isopropyltoluene	ug/kg	5	**1300**								<170		<7.3			
sec-Butylbenzene	ug/kg	5	<1300								<170		<7.3			
Styrene	ug/kg	5	<1300								<170		<7.3			
tert-Butylbenzene	ug/kg	5	<1300								<170		<7.3			
Tetrachloroethene	ug/kg	5	<1300								<170		<7.3			
Toluene	ug/kg	5	**1200**								<170		<7.3			
trans-1,2-Dichloroethene	ug/kg	5	<1300								<170		<7.3			
trans-1,3-Dichloropropene	ug/kg	5	<1300								<170		<7.3			
Trichloroethene	ug/kg	5	<1300								<170		<7.3			
Trichlorofluoromethane	ug/kg	5	<1300								<170		<7.3			
Vinyl Acetate	ug/kg	25	<33000								<4300		<36			
Vinyl chloride	ug/kg	5	<1300								<170		<7.3			

Roy F Weston, Inc.
750 E Bunker Ct, Suite 500
Vernon Hills, IL 60061
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Fax: (847) 918-4055

ACE Technologies, Inc.
1680 Lake Front Circle, Ste. B
The Woodlands, TX 78130
Phone: (281) 363-2233
Fax : (281) 298-5784

Date: 6/5/02

Attn: Mr. Rick Mehl/ Ms. Tonya Balla

BTEX

Project Name: Calumet Container

Episode #:			7913										7916			
Lab Sample ID			1	2	3	4	5	6	7	8	9	10	1	2	3	4
Weaton Sample ID			6, 7	SD-02	5, 6	0, 10	0, 10	2,8	1,9	1,9	2, 8	1, 8	3, 10	1, 2	0.5, 2.5	0.5, 2.5
			(3'-4')		(0-6")	(3'-4')	(3'-4')DUP	(0-6")	(3'-4')	(3'-4')DUP	(2'-4')	(3'-4')	(0-2')	(2-3')	(1'-2')	(3'-4')
Date Sampled			5/20/02	5/20/02	5/20/02	5/20/02	5/20/02	5/20/02	5/20/02	5/20/02	5/20/02	5/20/02	5/21/02	5/21/02	5/21/02	5/21/02
Dilution														1000		1000
	Units	RL												(Medium		(Medium
B-Tex														Level)		Level)
Benzene	ug/kg	1250												<1200		<1100
Ethyl benzene	ug/kg	1250												**45000**		**56000**
Toluene	ug/kg	1250												**12000**		**1700**
Xylene (total)	ug/kg	1250												<1200		<1100

Roy F Weston, Inc.
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Vernon Hills, IL 60061
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1680 Lake Front Circle, Ste. B
The Woodlands, TX 78130
Phone: (281) 363-2233
Fax : (281) 298-5784

PESTICIDED & PCB'S

Date: 6/5/02

Attn: Mr. Rick Mehl/ Ms. Tonya Balla

Project Name: Calumet Container

Episode #:			7913										7916			
Lab Sample ID			1	2	3	4	5	6	7	8	9	10	1	2	3	4
Weaton Sample ID			6, 7	SD-02	5, 6	0, 10	0, 10	2,8	1,9	1,9	2, 8	1, 8	3, 10	1, 2	0.5, 2.5	0.5, 2.5
			(3'-4')		(0-6")	(3'-4')	(3'-4')DUP	(0-6")	(3'-4')	(3'-4')DUP	(2'-4')	(3'-4')	(0-2')	(2-3')	(1'-2')	(3'-4')
Date Sampled			5/20/02	5/20/02	5/20/02	5/20/02	5/20/02	5/20/02	5/20/02	5/20/02	5/20/02	5/20/02	5/21/02	5/21/02	5/21/02	5/21/02
	Units	RL														
Pesticides																
4,4`-DDD	ug/kg	3.3	<4.3								<4.6		<4.3			
4,4`-DDE	ug/kg	3.3	<4.3								50		<4.3			
4,4`-DDT	ug/kg	3.3	61								78		<4.3			
Aldrin	ug/kg	1.7	<2.2								<2.3		<2.2			
alpha-BHC	ug/kg	1.7	<2.2								<2.3		<2.2			
beta-BHC	ug/kg	1.7	<2.2								<2.3		<2.2			
Chlordane (Technical)	ug/kg	3.3	80								<4.6		17			
delta-BHC	ug/kg	1.7	<2.2								<2.3		<2.2			
Dieldrin	ug/kg	3.3	<4.3								<4.6		2.3			
Endosulfan II	ug/kg	3.3	<4.3								<4.6		<4.3			
Endosulfan sulfate	ug/kg	3.3	<4.3								<4.6		<4.3			
Endosulfan-I	ug/kg	1.7	26								<2.3		15			
Endrin	ug/kg	3.3	<4.3								<4.6		<4.3			
Endrin aldehyde	ug/kg	3.3	<4.3								<4.6		<4.3			
Endrin ketone	ug/kg	3.3	<4.3								<4.6		<4.3			
gamma-BHC	ug/kg	1.7	<2.2								<2.3		<2.2			
Heptachlor	ug/kg	1.7	<2.2								<2.3		<2.2			
Heptachlor epoxide	ug/kg	1.7	<2.2								<2.3		<2.2			
Methoxychlor	ug/kg	17	<22								<23		<22			
Toxaphene	ug/kg	33	<43								<46		<43			
PCB's																
Aroclor 1016	ug/kg	33	<43								<46		<43			
Aroclor 1221	ug/kg	33	<43								<46		<43			
Aroclor 1232	ug/kg	33	<43								<46		<43			
Aroclor 1242	ug/kg	33	<43								<46		<43			
Aroclor 1248	ug/kg	33	<43								<46		<43			
Aroclor 1254	ug/kg	33	<43								<46		<43			
Aroclor 1260	ug/kg	33	<43								<46		<43			

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ACE Technologies, Inc.
1680 Lake Front Circle, Ste. B
The Woodlands, TX 78130
Phone: (281) 363-2233
Fax : (281) 298-5784

Date: 6/5/02

Attn: Mr. Rick Mehl/ Ms. Tonya Balla

Semi Volatiles

Project Name: Calumet Container

Episode #:			7913										7916			
Lab Sample ID			1	2	3	4	5	6	7	8	9	10	1	2	3	4
Weaton Sample ID			6, 7	SD-02	5, 6	0, 10	0, 10	2,8	1,9	1,9	2, 8	1, 8	3, 10	1, 2	0.5, 2.5	0.5, 2.5
			(3'-4')		(0-6")	(3'-4')	(3'-4')DUP	(0-6")	(3'-4')	(3'-4')DUP	(2'-4')	(3'-4')	(0-2')	(2-3')	(1'-2')	(3'-4')
Date Sampled			5/20/02	5/20/02	5/20/02	5/20/02	5/20/02	5/20/02	5/20/02	5/20/02	5/20/02	5/20/02	5/21/02	5/21/02	5/21/02	5/21/02
Dilution			20								20		20			
	Units	RL														
SVOA 8270C																
1,2,4-Trichlorobenzene	UG/L	330	<8700								<9200		<8700			
1,2-Dichlorobenzene	UG/L	330	<8700								<9200		<8700			
1,3-Dichlorobenzene	UG/L	330	<8700								<9200		<8700			
1,4-Dichlorobenzene	UG/L	330	<8700								<9200		<8700			
2,2`-oxybis (1-Chloropropane)	UG/L	330	<8700								<9200		<8700			
2,4,5-Trichlorophenol	UG/L	830	<22000								<23000		<22000			
2,4,6-Trichlorophenol	UG/L	330	<8700								<9200		<8700			
2,4-Dichlorophenol	UG/L	330	<8700								<9200		<8700			
2,4-Dimethylphenol	UG/L	330	<8700								<9200		<8700			
2,4-Dinitrophenol	UG/L	830	<22000								<23000		<22000			
2,4-Dinitrotoluene	UG/L	330	<8700								<9200		<8700			
2,6-Dinitrotoluene	UG/L	330	<8700								<9200		<8700			
2-Chloronaphthalene	UG/L	330	<8700								<9200		<8700			
2-Chlorophenol	UG/L	330	<8700								<9200		<8700			
2-Methylnaphthalene	UG/L	330	<8700								<9200		<8700			
2-Methylphenol	UG/L	330	<8700								<9200		<8700			
2-Nitroaniline	UG/L	830	<22000								<23000		<22000			
2-Nitrophenol	UG/L	330	<8700								<9200		<8700			
3,3`-Dichlorobenzidine	UG/L	330	<8700								<9200		<8700			
3-Nitroaniline	UG/L	830	<22000								<23000		<22000			
4,6-Dinitro-2-methylphenol	UG/L	830	<22000								<23000		<22000			
4-Bromophenyl phenyl ether	UG/L	330	<8700								<9200		<8700			
4-Chloro-3-methylphenol	UG/L	330	<8700								<9200		<8700			
4-Chloroaniline	UG/L	330	<8700								<9200		<8700			
4-Chlorophenyl phenyl ether	UG/L	330	<8700								<9200		<8700			
4-Methylphenol	UG/L	330	<8700								<9200		<8700			
4-Nitroaniline	UG/L	830	<22000								<23000		<22000			
4-Nitrophenol	UG/L	830	<22000								<23000		<22000			
Acenaphthene	UG/L	330	<8700								<9200		<8700			
Acenaphthylene	UG/L	330	<8700								<9200		<8700			
Anthracene	UG/L	330	<8700								<9200		<8700			

Episode #:			7913										7916			
Lab Sample ID			1	2	3	4	5	6	7	8	9	10	1	2	3	4
Weaton Sample ID			6, 7	SD-02	5, 6	0, 10	0, 10	2,8	1,9	1,9	2, 8	1, 8	3, 10	1, 2	0.5, 2.5	0.5, 2.5
			(3'-4')		(0-6")	(3'-4')	(3'-4')DUP	(0-6")	(3'-4')	(3'-4')DUP	(2'-4')	(3'-4')	(0-2')	(2-3')	(1'-2')	(3'-4')
Date Sampled			5/20/02	5/20/02	5/20/02	5/20/02	5/20/02	5/20/02	5/20/02	5/20/02	5/20/02	5/20/02	5/21/02	5/21/02	5/21/02	5/21/02
Dilution			20								20		20			
	Units	RL														
SVOA 8270C(Contd....)																
Benzo(a)anthracene	UG/L	330	<8700								<9200		<8700			
Benzo(a)pyrene	UG/L	330	<8700								<9200		<8700			
Benzo(b)fluoranthene	UG/L	330	<8700								<9200		<8700			
Benzo(g,h,i)perylene	UG/L	330	<8700								<9200		<8700			
Benzo(k)fluoranthene	UG/L	330	<8700								<9200		<8700			
Benzoic acid	UG/L	830	<22000								<23000		<22000			
Benzyl alcohol	UG/L	830	<22000								<23000		<22000			
Bis(2-chloroethoxy)methane	UG/L	330	<8700								<9200		<8700			
Bis(2-chloroethyl)ether	UG/L	330	<8700								<9200		<8700			
Bis(2-chloroisopropyl) ether	UG/L	330	<8700								<9200		<8700			
Bis(2-ethylhexyl)phthalate	UG/L	330	<8700								<9200		<8700			
Butylbenzylphthalate	UG/L	330	<8700								<9200		<8700			
Carbazole	UG/L	330	<8700								<9200		<8700			
Chrysene	UG/L	330	<8700								<9200		<8700			
Di-n-butylphthalate	UG/L	330	<8700								<9200		<8700			
Di-n-octylphthalate	UG/L	330	<8700								<9200		<8700			
Dibenzo(a,h)anthracene	UG/L	330	<8700								<9200		<8700			
Dibenzofuran	UG/L	330	<8700								<9200		<8700			
Diethylphthalate	UG/L	330	<8700								<9200		<8700			
Dimethylphthalate	UG/L	330	<8700								<9200		<8700			
Fluoranthene	UG/L	330	<8700								<9200		<8700			
Fluorene	UG/L	330	<8700								<9200		<8700			
Hexachlorobenzene	UG/L	330	<8700								<9200		<8700			
Hexachlorobutadiene	UG/L	330	<8700								<9200		<8700			
Hexachlorocyclopentadiene	UG/L	330	<8700								<9200		<8700			
Hexachloroethane	UG/L	330	<8700								<9200		<8700			
Indeno(1,2,3-c,d)pyrene	UG/L	330	<8700								<9200		<8700			
Isophorone	UG/L	330	<8700								<9200		<8700			
N-Nitroso-di-n-propylamine	UG/L	330	<8700								<9200		<8700			
N-Nitrosodimethylamine	UG/L	330	<8700								<9200		<8700			
N-Nitrosodiphenylamine	UG/L	330	<8700								<9200		<8700			
Naphthalene	UG/L	330	<8700								<9200		<8700			
Nitrobenzene	UG/L	330	<8700								<9200		<8700			
Pentachlorophenol	UG/L	830	<22000								<23000		<22000			
Phenanthrene	UG/L	330	<8700								<9200		<8700			
Phenol	UG/L	330	<8700								<9200		<8700			
Pyrene	UG/L	330	<8700								<9200		<8700			

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Phone: (281) 363-2233
Fax : (281) 298-5784

Date: 6/5/02

Attn: Mr. Rick Mehl/ Ms. Tonya Balla

Metals

Project Name: Calumet Container

Episode #:			7913										7916			
Lab Sample ID			1	2	3	4	5	6	7	8	9	10	1	2	3	4
Weaton Sample ID			6, 7	SD-02	5, 6	0, 10	0, 10	2,8	1,9	1,9	2, 8	1, 8	3, 10	1, 2	0.5, 2.5	0.5, 2.5
			(3'-4')		(0-6")	(3'-4')	(3'-4')DUP	(0-6")	(3'-4')	(3'-4')DUP	(2'-4')	(3'-4')	(0-2')	(2-3')	(1'-2')	(3'-4')
Date Sampled			5/20/02	5/20/02	5/20/02	5/20/02	5/20/02	5/20/02	5/20/02	5/20/02	5/20/02	5/20/02	5/21/02	5/21/02	5/21/02	5/21/02
	Units	RL														
TAL Metals									640	660	1500	900	3400			
Aluminum,Total	mg/kg	6.7	5200						<3.9	<4	<4	<3.9	<4			
Antimony, Total	mg/kg	4	8.6						2.11	2.06	21.5	4.36	13.5			
Arsenic, Total	mg/kg	0.667	6.86						3.9	3.8	45	14	280			
Barium, Total	mg/kg	0.67	610						<0.329	<0.333	<0.331	<0.329	0.38			
Beryllium, Total	mg/kg	0.333	1.06						<0.329	<0.333	0.662	<0.329	0.637			
Cadmium, Total	mg/kg	0.333	4.12						21000	22000	6300	2000	27000			
Calcium, Total	mg/kg	67	32000						2.7	2.9	4.5	3.1	20			
Chromium, Total	mg/kg	0.67	210						1.5	1.4	2.1	1	3.5			
Cobalt, Total	mg/kg	0.67	9.4						2.2	2.4	37	4.8	27			
Copper, Total	mg/kg	1.3	190						2000	2100	12000	2800	19000			
Iron, Total	mg/kg	6.7	8200						3.73	3.36	51.8	5.85	161			
Lead, Total	mg/kg	0.667	1320	47.7	280	2.8	3.15	155	13000	13000	1400	680	4300	1490	6520	
Magnesium, Total	mg/kg	67	9400						91	93	91	20	1300			
Manganese, Total	mg/kg	0.67	840						<0.03	<0.03	0.06	<0.03	0.11			
Mercury, Total	mg/kg	0.03	.58						2.8	2.9	9	3.3	14			
Nickel, Total	mg/kg	1.3	9.8						130	130	160	120	350			
Potassium, Total	mg/kg	67	640						<0.461	<0.467	0.559	<0.461	<.467			
Selenium, Total	mg/kg	0.467	<0.464						<0.33	<0.33	<0.33	<0.33	<.33			
Silver, Total	mg/kg	0.33	1.6						75	72	<66	<66	190			
Sodium, Total	mg/kg	67	400						<0.329	<0.333	1.09	<0.329	2.16			
Thallium, Total	mg/kg	0.333	<0.331						2.9	2.8	7.1	4.3	13			
Vanadium, Total	mg/kg	0.67	10						10	9.8	160	16	530			
Zinc, Total	mg/kg	1.3	680													

Chain of Custody Record

PDP Analytical Services
1680 Lake Front Circle, Suite B ▪ The Woodlands, Texas 77380 ▪ Phone (281) 363-2233 ▪ Fax (281) 298-5784

Client Name / Address: WESTON, Inc., 750 E Bunker Ct, Suite 500, Vernon Hills, IL 60061

Send Report to: RICK MEHL / LINDA KOROBKA

Client Phone #: 847-918-4041

Client Fax #: 847-918-4055

Project Number: ~~12634~~ HS 0222

Project Name: Calumet Container

Samplers (Signature): [illegible]

P.O. Number:

Sample Identification	Date	Time	Comp.	Grab	Number of Containers	Matrix	Total Lead	TAL Metals	PCB/PEST	SVOC	VOC	Soil Moisture	Remarks
~~6,7~~ HS	~~5/20/02~~ HS			~~X~~		~~Soil~~ HS							
6,7 (3'-4')	5/20/02	10:10		X	5	Soil		✓	✓	✓	✓	✓	7913.001
SD-02	5/20/02	09:20		X	1	Soil	✓						.002
5,6 (0-6")	5/20/02	11:20		X	1	Soil	✓						.003
0,10 (3'-4')	5/20/02	11:50		X	1	Soil	✓						.004
0,10 (3'-4') DUP	5/20/02	11:50		X	1	Soil	✓						.005
2.8 (0-6")	5/20/02	14:45		X	1	Soil	✓						.006
1,9 (3'-4')	5/20/02	11:35		X	1	Soil		✓					.007
1,9 (3'-4') DUP	5/20/02	11:35		X	1	Soil		✓					.008
2.8 (2'-4')	5/20/02	14:45		X	5	Soil		✓	✓	✓	✓	✓	.009
1.8 (3'-4')	5/20/02	1500		X	1	Soil		✓					.010

Relinquished by (Signature)	Date / Time	Received by (Signature)	Date / Time
[illegible]	5-20-02 16:30		
Relinquished by (Signature)	Date / Time	Received by (Signature)	Date / Time
Relinquished by (Signature)	Date / Time	Received for Laboratory by (Signature)	Date / Time
		[illegible]	5/21/02 17:00

Remarks:

Method of Shipment:

PDP Quote Number:

Distribution: Original accompanies shipment; Copy to coordinator and field files

Chain of Custody Record

PDP Analytical Services
1680 Lake Front Circle, Suite B ▪ The Woodlands, Texas 77380 ▪ Phone (281) 363-2233 ▪ Fax (281) 298-5784

Client Name / Address: Roy F WESTON, Inc. 750 E Bunker Ct, Suite 500 Vernon Hills IL 60061

Send Report to: Rick Mehl / Linda Korobka

Client Phone #: 847 / 918 - 4000

Client Fax #: 847 / 918 - 4055

Project Number: ~~0220~~ 0222

Project Name: Calumet Container

Samplers (Signature):

P.O. Number:

Sample Identification	Date	Time	Comp.	Grab	Number of Containers	Matrix	VOC	SVOC	TAL Metals	PCB/PEST	Total Pb	BTEX	Remarks
3, 10 (0-2')	5/21/02	0815		X	1	soil	X	X	X	X			7916.001
1, 2 (2'-3')	↓	1345		↓	4	↓					X	X	002
0.5, 2.5 (1'-2')	↓	1400		↓	1	↓					X		003
0.5, 2.5 (3'-4')	↓	1400		↓	3	↓						X	004

Relinquished by (Signature)	Date / Time	Received by (Signature)	Date / Time
	5/21/02 16:45		5/22/02 0245
Relinquished by (Signature)	Date / Time	Received by (Signature)	Date / Time
Relinquished by (Signature)	Date / Time	Received for Laboratory by (Signature)	Date / Time

Remarks:

Method of Shipment:

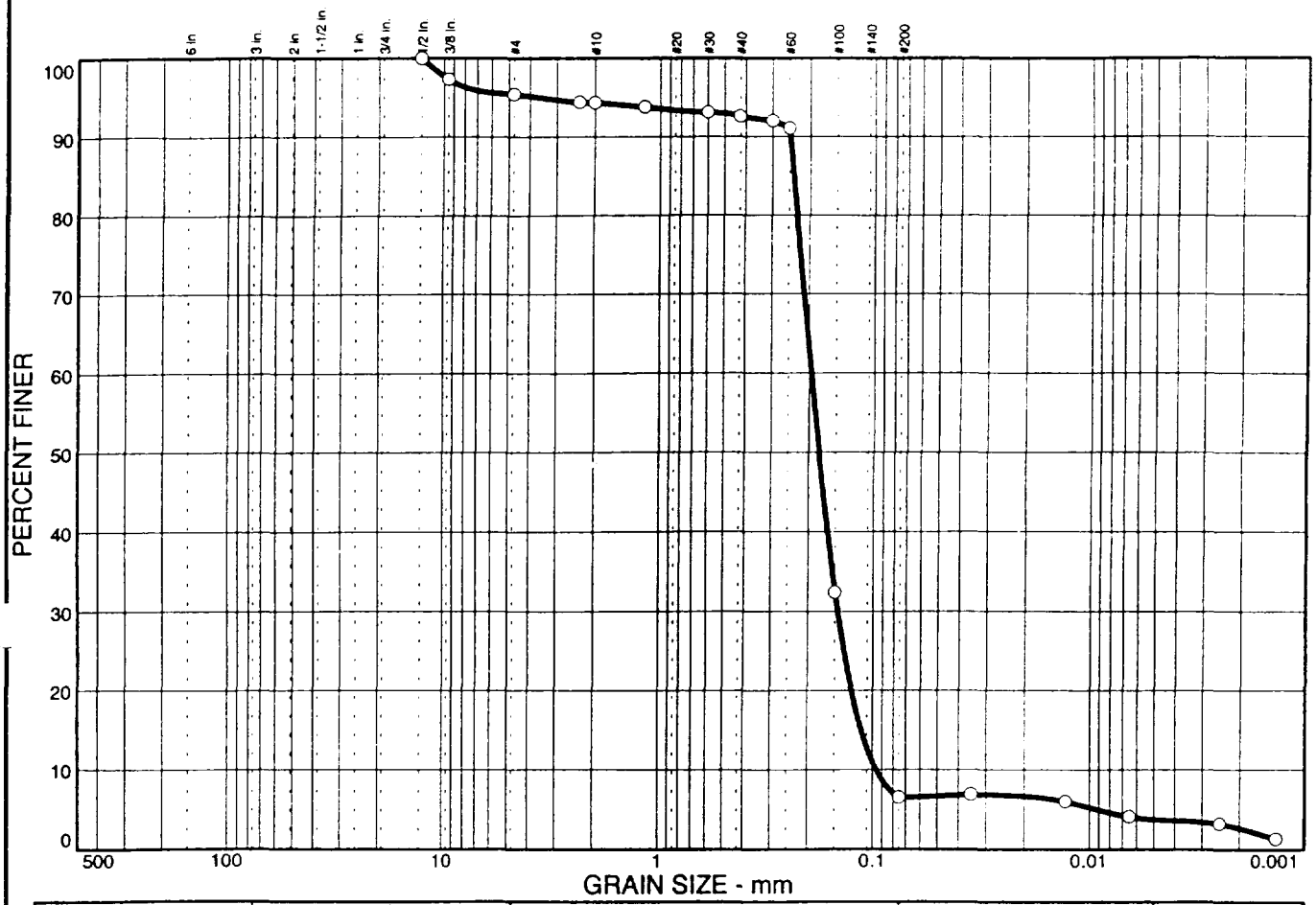
PDP Quote Number:

Distribution: Original accompanies shipment; Copy to coordinator and field files

APPENDIX D

GEOTECH SAMPLE DATA RESULTS

PARTICLE SIZE DISTRIBUTION TEST REPORT



% + 3"	% GRAVEL	% SAND	% SILT	% CLAY
0.0	4.6	88.9	2.7	3.8

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1/2 in.	100.0		
3/8 in.	97.3		
#4	95.4		
#8	94.4		
#10	94.3		
#16	93.8		
#30	93.1		
#40	92.6		
#50	92.0		
#60	91.1		
#100	32.4		
#200	6.5		

* (no specification provided)

Soil Description

Brown Fine to Coarse SAND & GRAVEL, Trace Silt

Atterberg Limits

PL= --- LL= --- PI= ---

Coefficients

D_{85}= 0.238 D_{60}= 0.195 D_{50}= 0.179
D_{30}= 0.146 D_{15}= 0.113 D_{10}= 0.0960
C_u= 2.04 C_c= 1.13

Classification

USCS= SP-SM AASHTO= A-3

Remarks

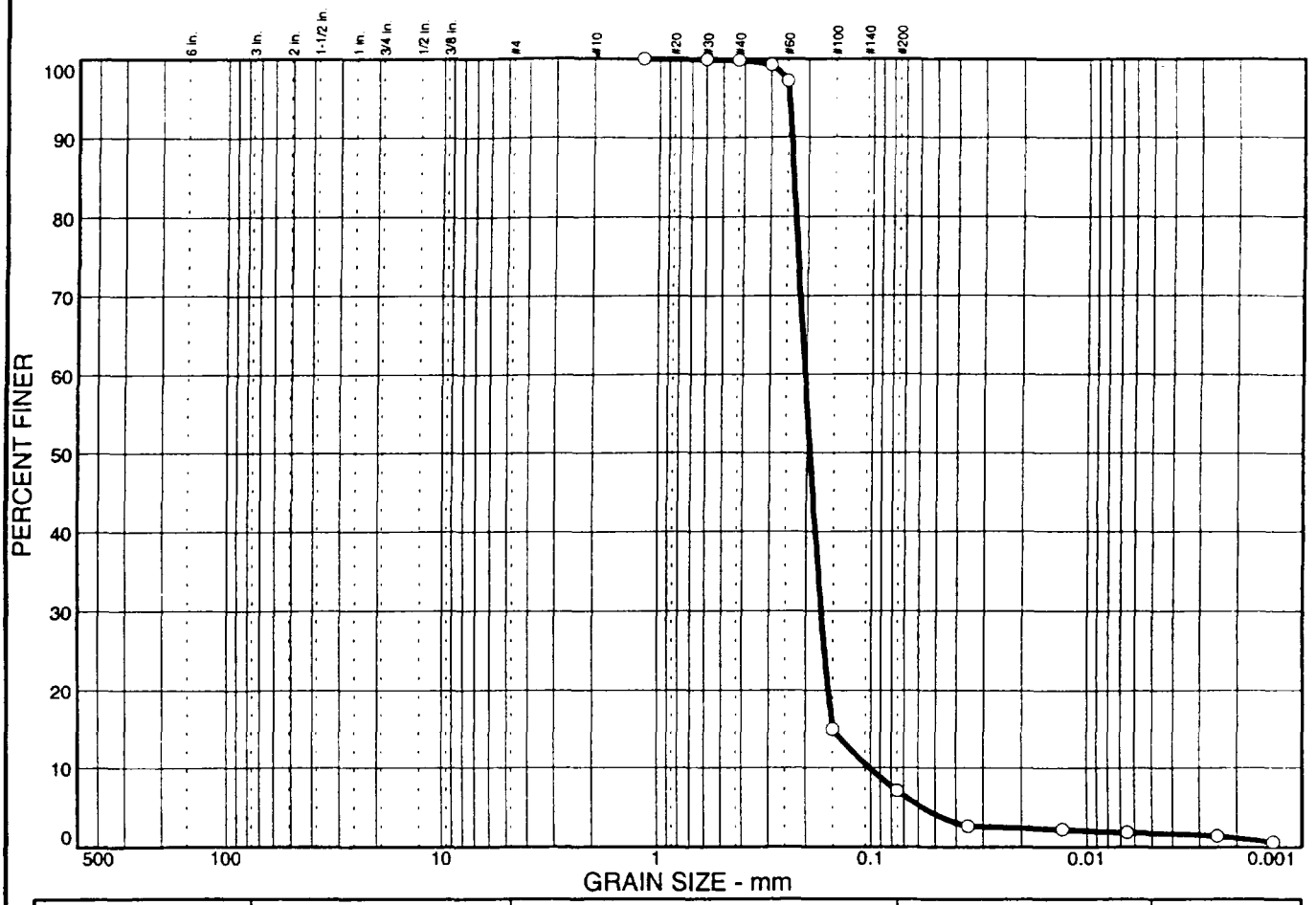
Tests by: D. Arenander
Checked by: M. Schultz

Sample No.: 3" ST: 1 to 10 ft **Source of Sample:** Shelby Tube **Date:** 6/5/02
Location: --- **Elev./Depth:** ---

CGC, Inc.

Client: Roy F. Weston
Project: Calumet Container
Job #0222
Project No: C02038-4 **Plate**

PARTICLE SIZE DISTRIBUTION TEST REPORT



% + 3"	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	92.9	5.4	1.7

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#16	100.0		
#30	99.9		
#40	99.8		
#50	99.2		
#60	97.2		
#100	14.9		
#200	7.1		

* (no specification provided)

Soil Description

Brown Fine SAND, Little Silt, Trace Clay

Atterberg Limits

PL= --- LL= --- PI= ---

Coefficients

D_{85}= 0.234 D_{60}= 0.205 D_{50}= 0.194
D_{30}= 0.170 D_{15}= 0.150 D_{10}= 0.101
C_u= 2.03 C_c= 1.40

Classification

USCS= SP-SM AASHTO= A-3

Remarks

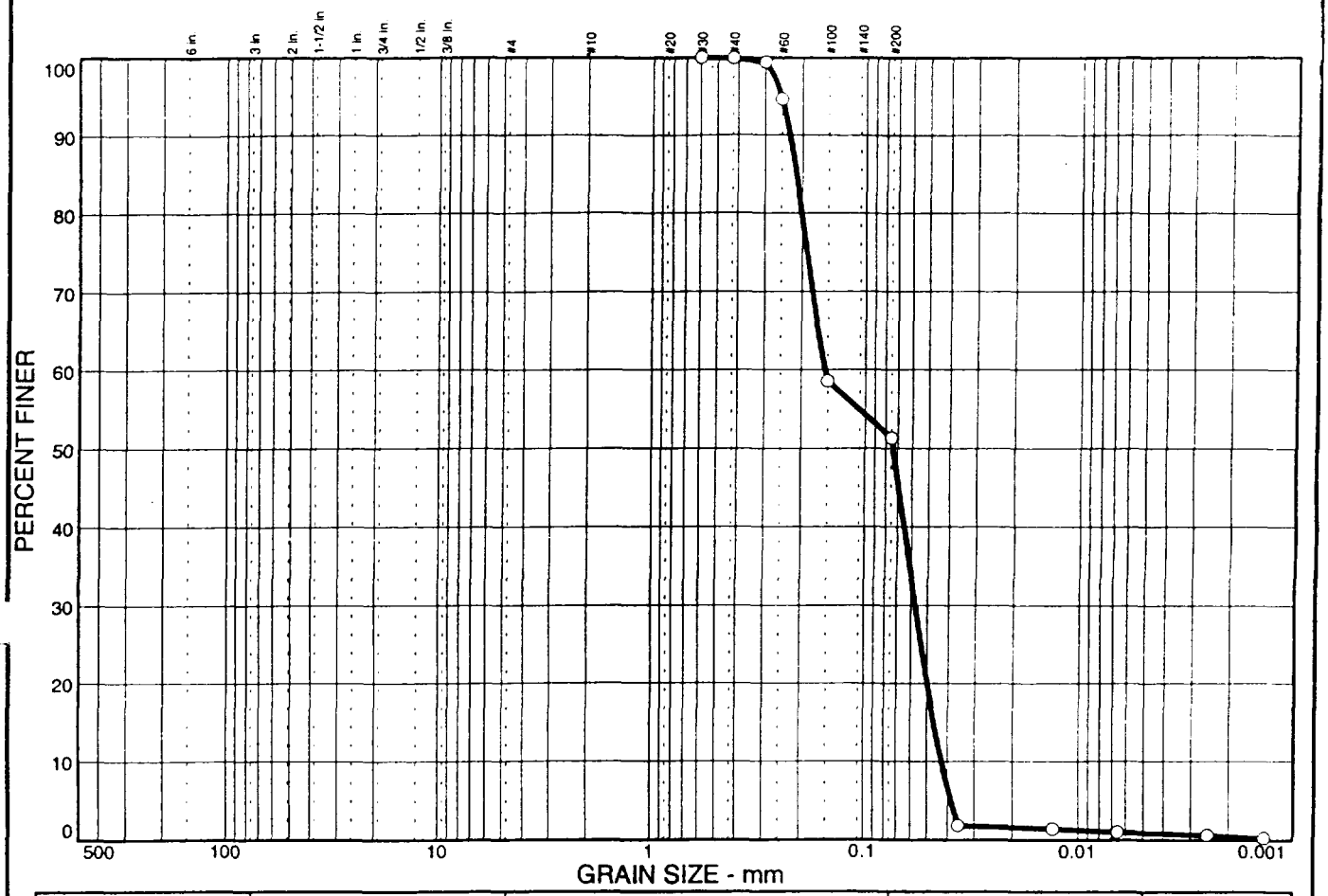
Tests by: D. Arenander
Checked by: M. Schultz

Sample No.: 3" ST: 1 to 8 ft **Source of Sample:** Shelby Tube **Date:** 6/5/02
Location: --- **Elev./Depth:** ---

CGC, Inc.

Client: Roy F. Weston
Project: Calumet Container
Job #0222
Project No: C02038-4 **Plate**

PARTICLE SIZE DISTRIBUTION TEST REPORT



% + 3"	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	48.7	50.4	0.9

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#30	100.0		
#40	99.9		
#50	99.4		
#60	94.6		
#100	58.5		
#200	51.3		

* (no specification provided)

Soil Description

Brown Fine SAND, Little Silt, Trace Clay

Atterberg Limits

PL= --- LL= --- PI= ---

Coefficients

D_{85}= 0.214 D_{60}= 0.154 D_{50}= 0.0738
D_{30}= 0.0575 D_{15}= 0.0464 D_{10}= 0.0426
C_u= 3.62 C_c= 0.50

Classification

USCS= ML AASHTO= A-4(0)

Remarks

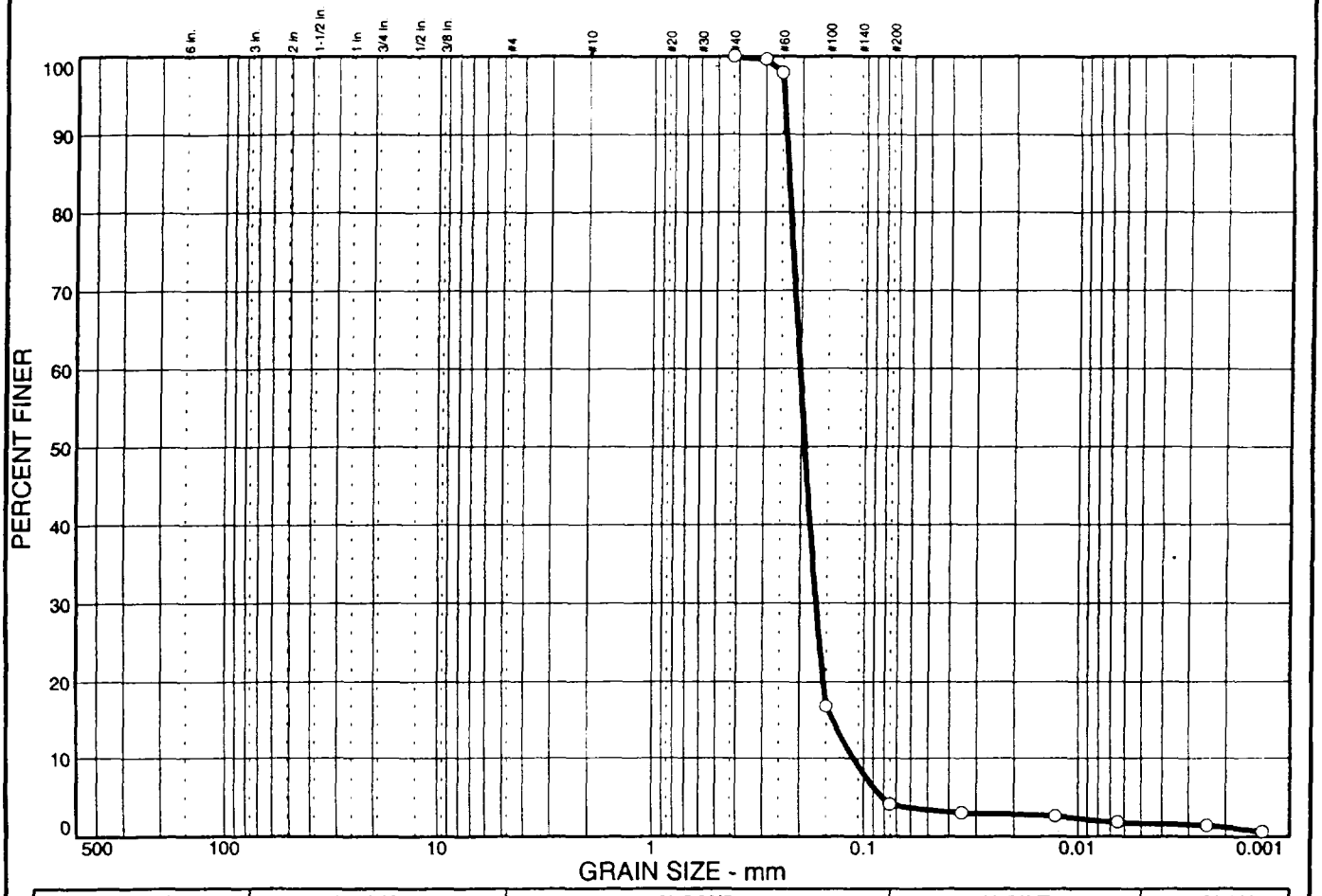
Tests by: D. Arenander
Checked by: M. Schultz

Sample No.: 3" ST: 1 to 6 ft **Source of Sample:** Shelby Tube **Date:** 6/5/02
Location: --- **Elev./Depth:** ---

CGC, Inc.

Client: Roy F. Weston
Project: Calumet Container
Job #0222
Project No: C02038-4 **Plate**

PARTICLE SIZE DISTRIBUTION TEST REPORT



% + 3"	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	95.9	2.5	1.6

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#40	100.0		
#50	99.6		
#60	97.9		
#100	16.8		
#200	4.1		

* (no specification provided)

Soil Description

Brown Fine SAND, Trace Silt

Atterberg Limits

PL= --- LL= --- PI= ---

Coefficients

D_{85}= 0.234 D_{60}= 0.204 D_{50}= 0.192
D_{30}= 0.168 D_{15}= 0.140 D_{10}= 0.111
C_u= 1.83 C_c= 1.24

Classification

USCS= SP AASHTO= A-3

Remarks

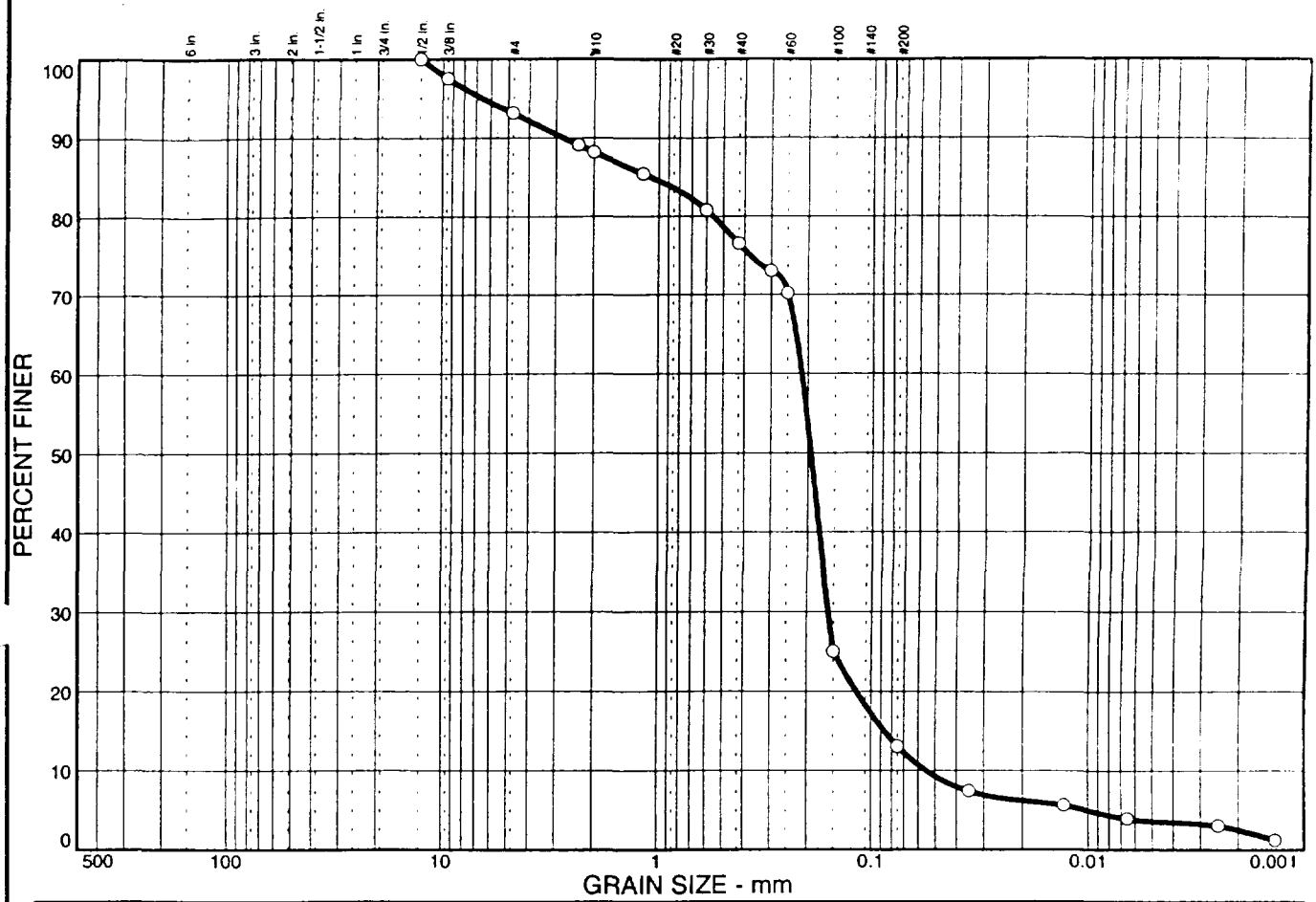
Tests by: D. Arenander
Checked by: M. Schultz

Sample No.: 3" ST: 1 to 5 ft **Source of Sample:** Shelby Tube **Date:** 6/5/02
Location: --- **Elev./Depth:** ---

CGC, Inc.

Client: Roy F. Weston
Project: Calumet Container
Job #0222
Project No: C02038-4 **Plate**

PARTICLE SIZE DISTRIBUTION TEST REPORT



% + 3"	% GRAVEL	% SAND	% SILT	% CLAY
0.0	6.9	80.0	9.5	3.6

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1/2 in.	100.0		
3/8 in.	97.5		
#4	93.1		
#8	89.1		
#10	88.2		
#16	85.4		
#30	80.8		
#40	76.5		
#50	73.0		
#60	70.2		
#100	25.0		
#200	13.1		

* (no specification provided)

Soil Description

Brown Fine to Coarse SAND, Little Silt & Gravel, Trace Clay

Atterberg Limits

PL= --- LL= --- PI= ---

Coefficients

D_{85}= 1.09 D_{60}= 0.215 D_{50}= 0.194
D_{30}= 0.159 D_{15}= 0.0863 D_{10}= 0.0549
C_u= 3.91 C_c= 2.15

Classification

USCS= SM AASHTO= A-2-4(0)

Remarks

Tests by: D. Arenander
Checked by: M. Schultz

Sample No.: 3" ST: 1.5 to 3.5 ft **Source of Sample:** Shelby Tube **Date:** 6/5/02
Location: --- **Elev./Depth:** ---

CGC, Inc.

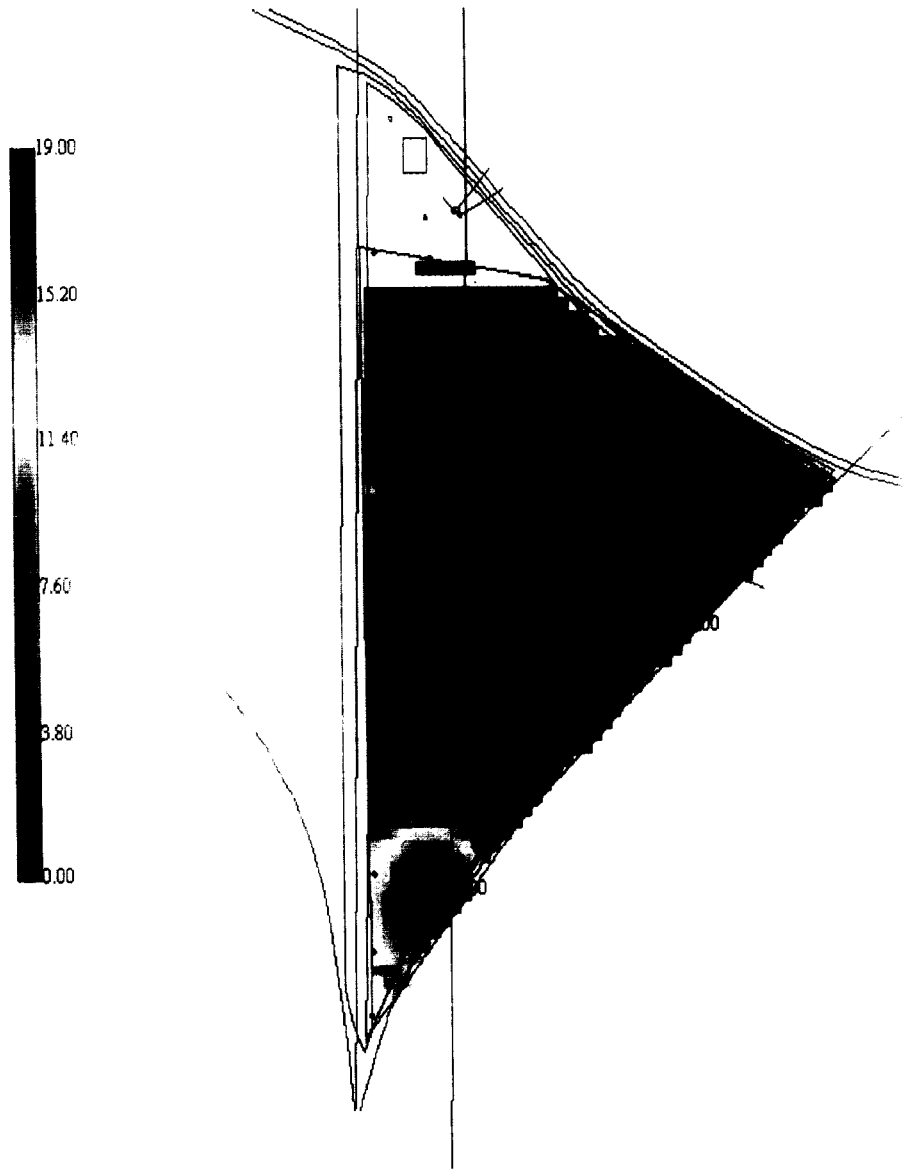
Client: Roy F. Weston
Project: Calumet Container
Job #0222
Project No: C02038-4 **Plate**

APPENDIX E

SADA EXTENT OF CONTAMINATION PLOTS

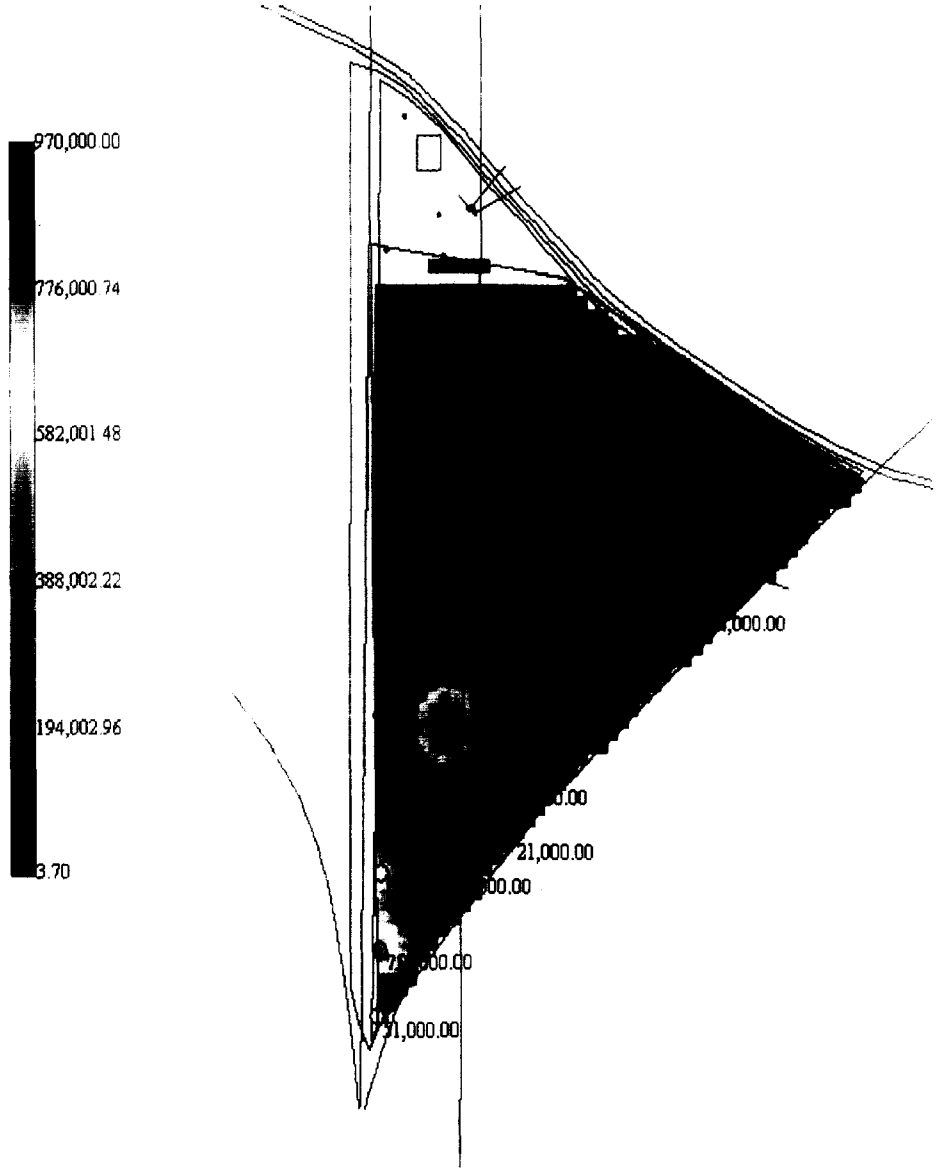
Calumet Container Site
SADA Plot
Extent of Contamination:

Benzene (ug/kg)



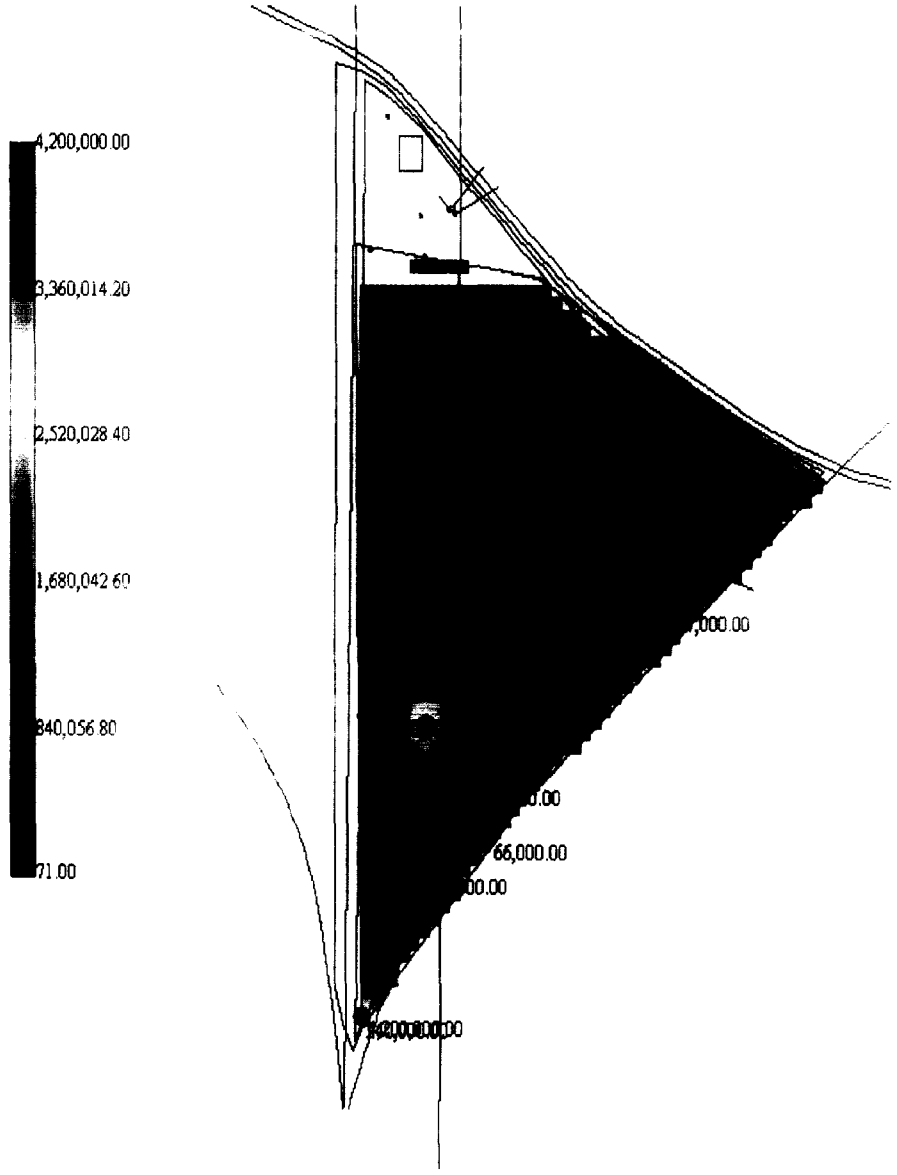
Calumet Container Site
SADA Plot
Extent of Contamination

Ethylbenzene (ug/kg)



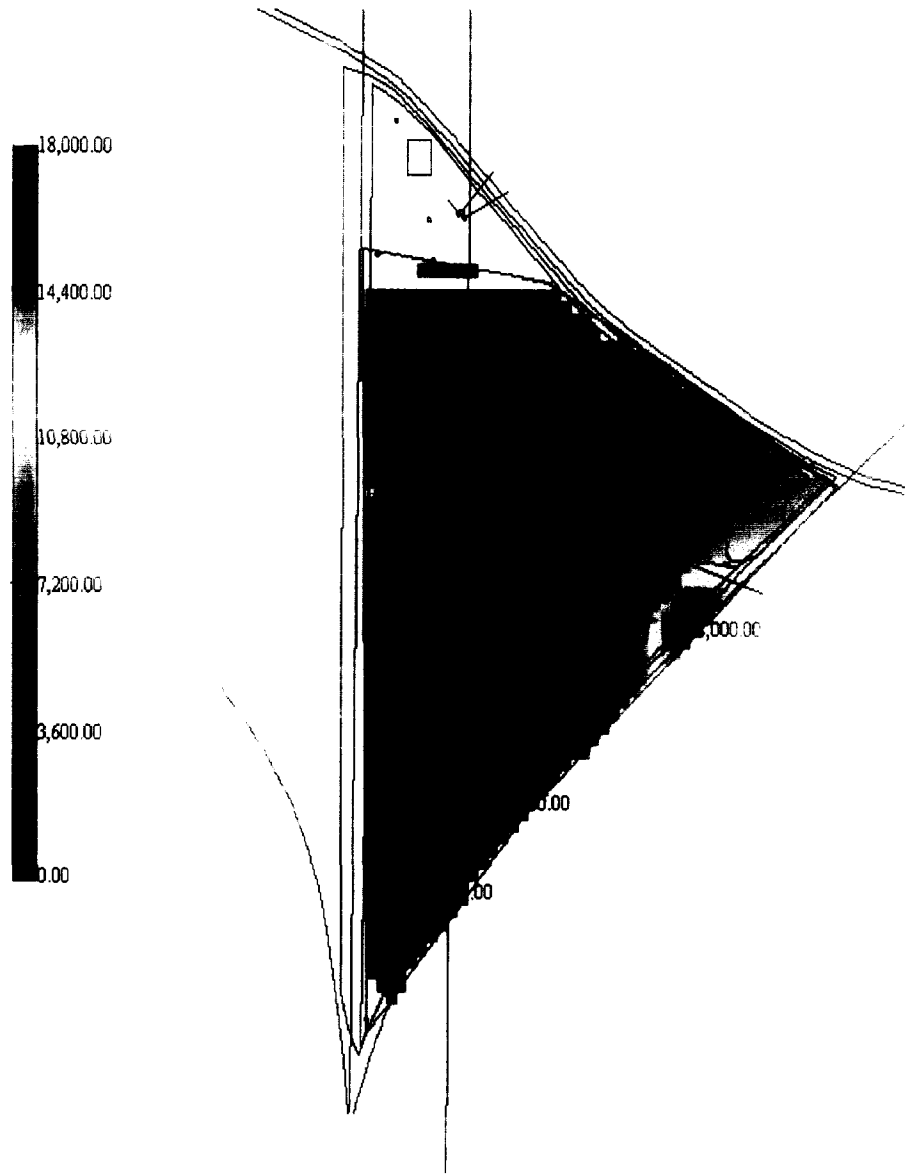
Calumet Container Site
SADA Plot
Extent of Contamination:

m-p Xylene (ug/kg)



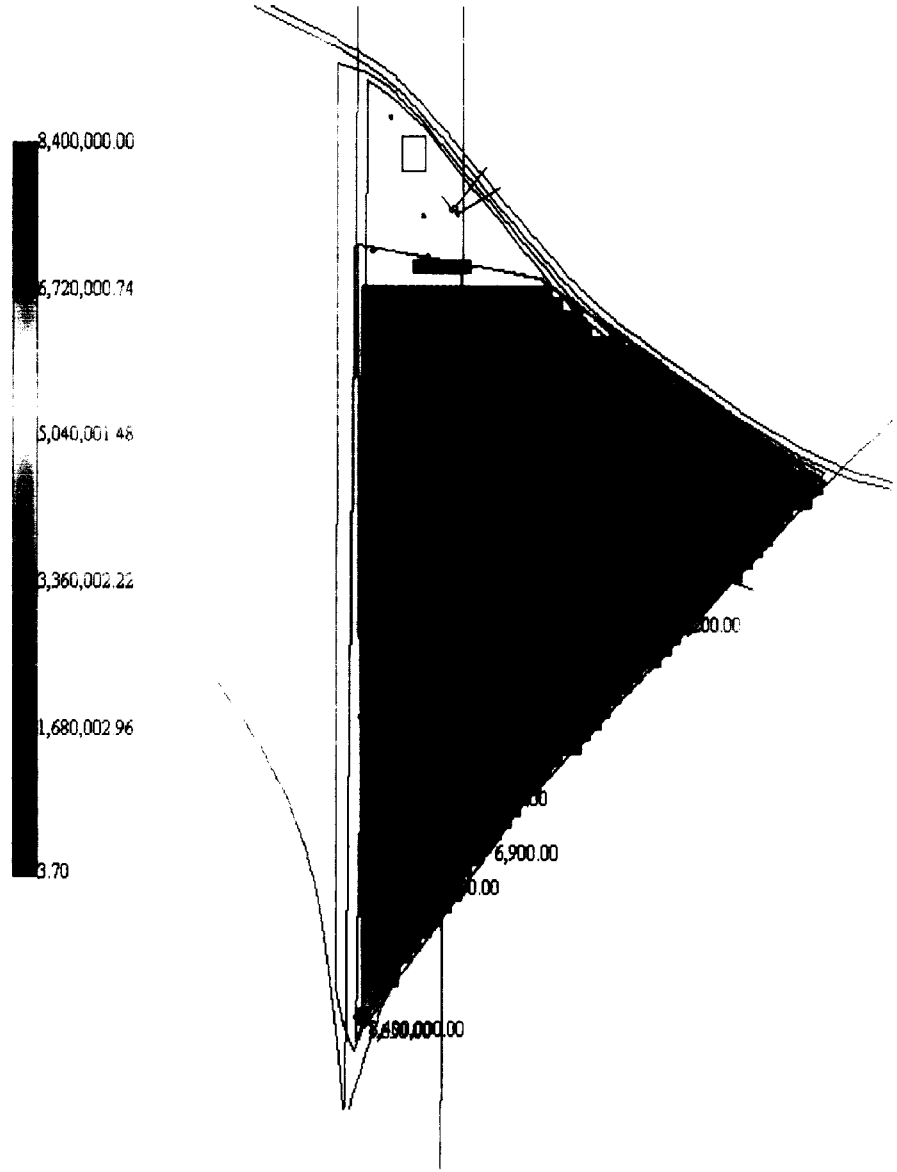
Calumet Container Site
SADA Plot
Extent of Contamination:

o-Xylene (ug/kg)



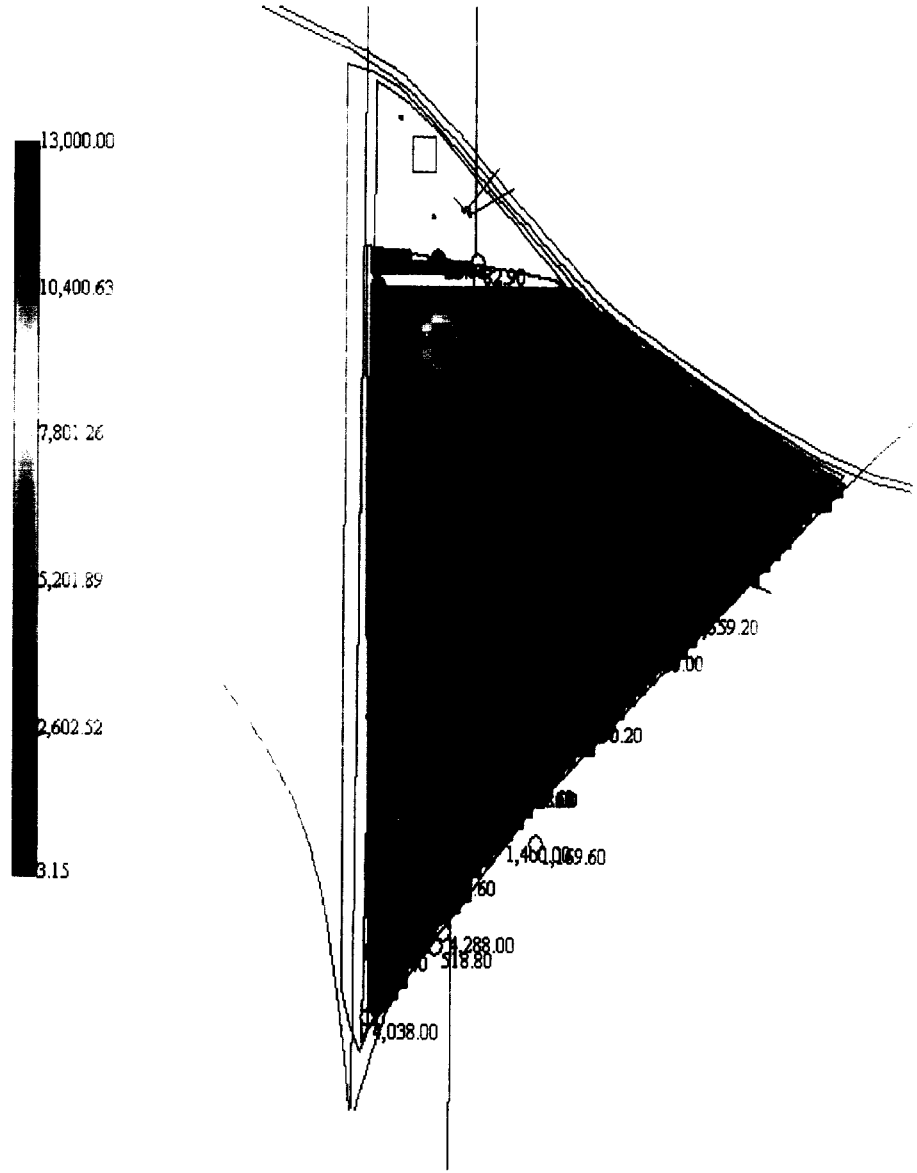
Calumet Container Site
SADA Plot
Extent of Contamination:

Toluene (ug/kg)



Calumet Container Site
SADA Plot
Extent of Contamination:

Lead (mg/kg)

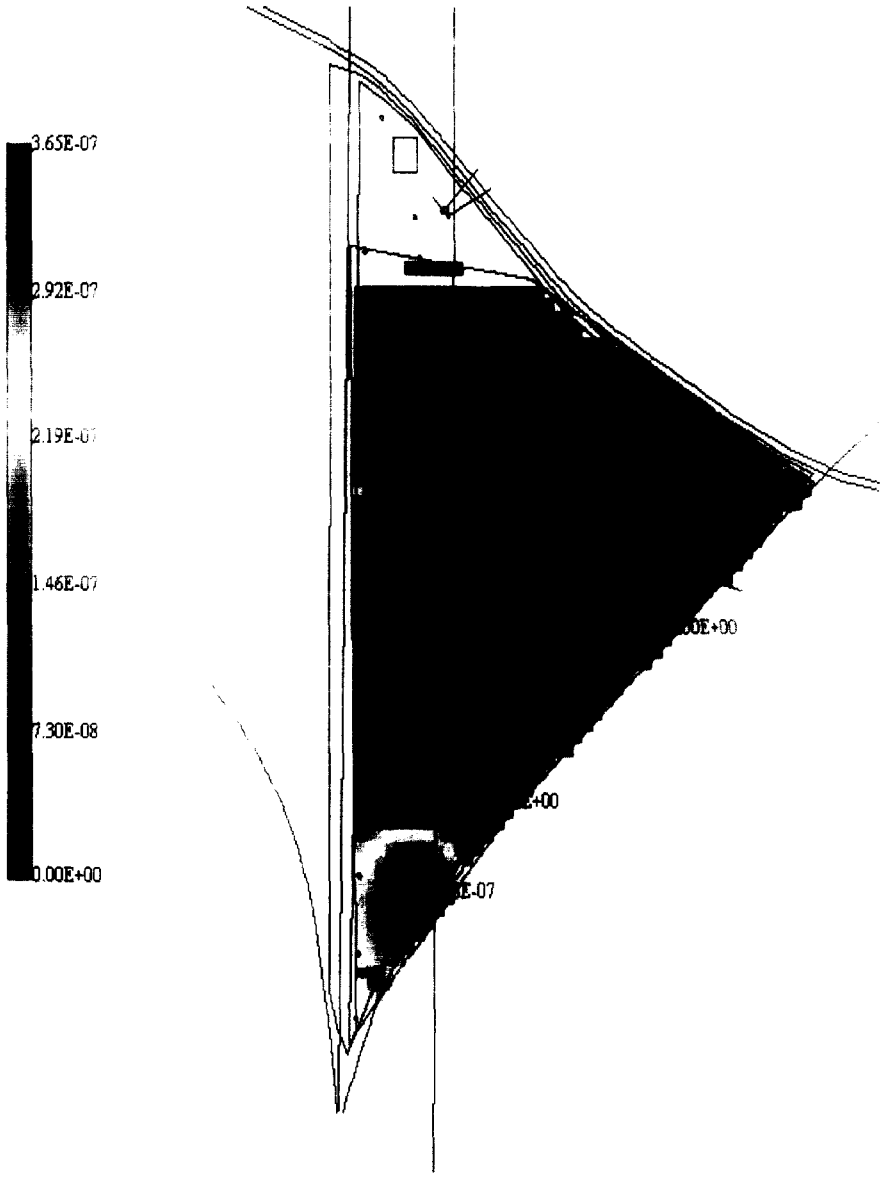


APPENDIX F

SADA HUMAN HEALTH RISK PLOTS

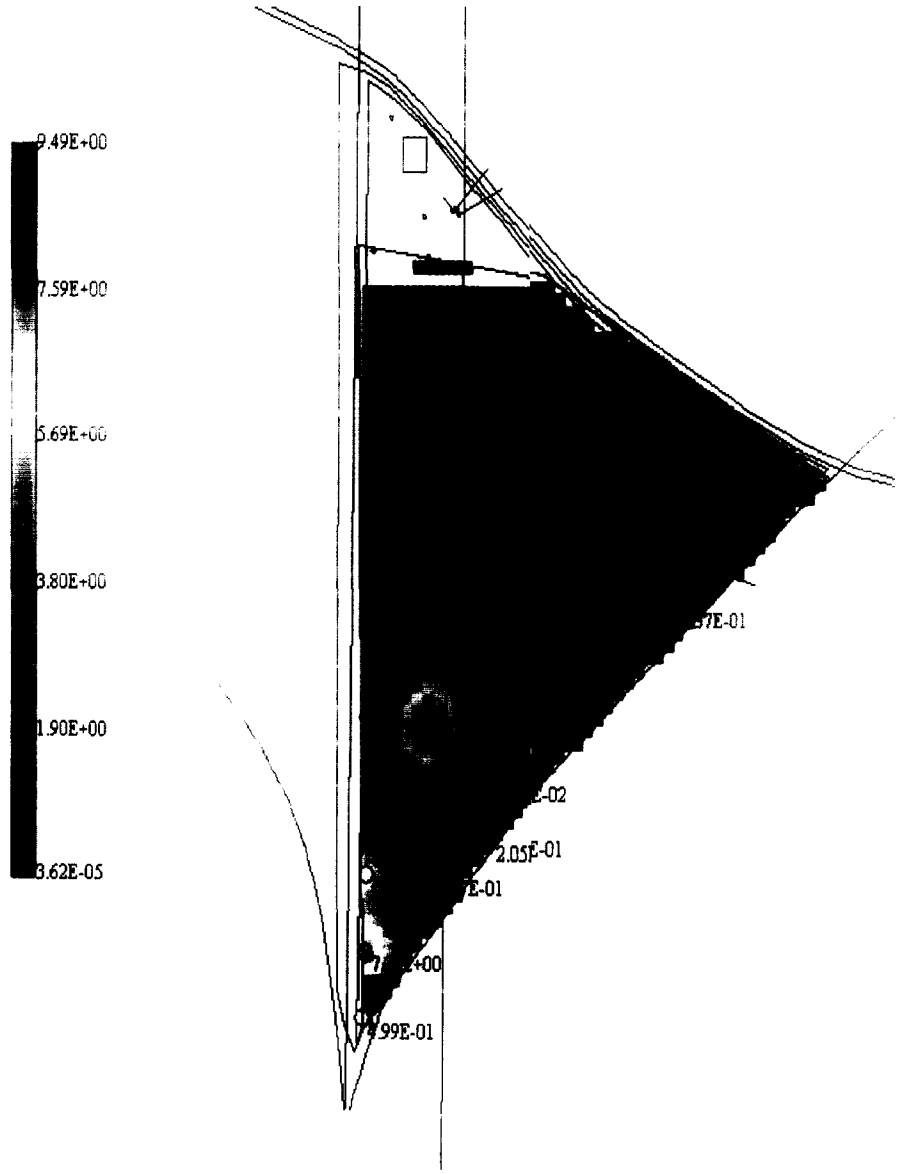
Calumet Continer Site
SADA Plot
Human Health Risk:

Benzene (risk index)



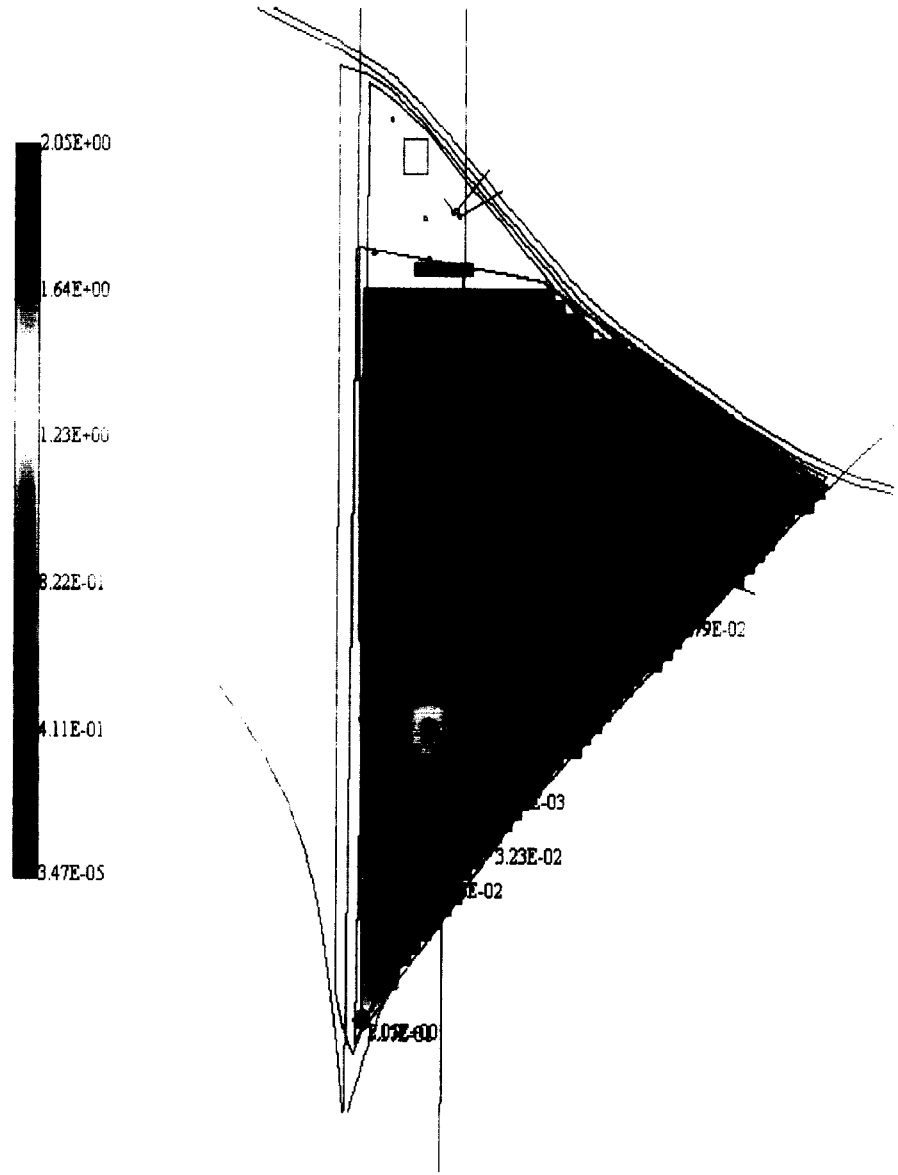
Calumet Continer Site
SADA Plot
Human Health Risk:

Ethylbenzene (risk index)



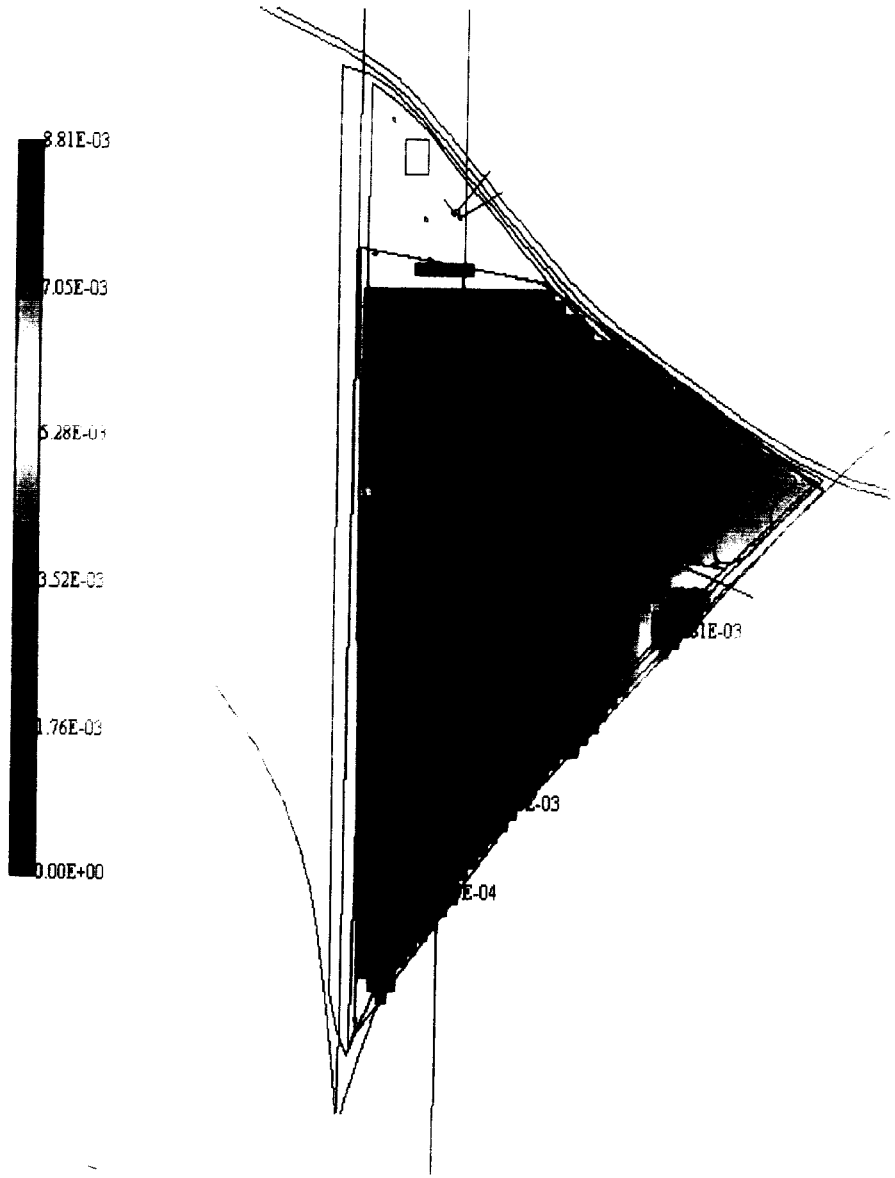
Calumet Continer Site
SADA Plot
Human Health Risk:

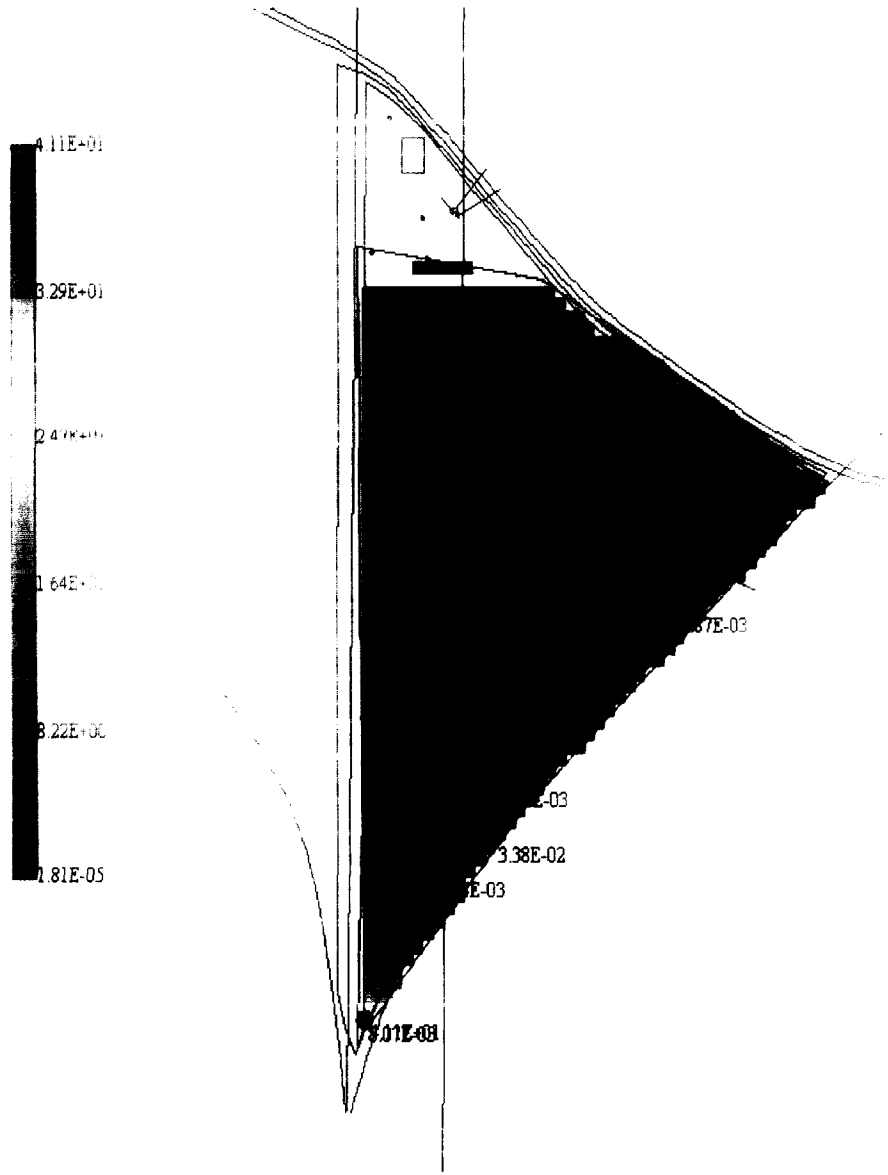
m-p Xylene (risk index)



Calumet Continer Site
SADA Plot
Human Health Risk:

o-Xylene (risk index)



Calumet Continer Site
SADA Plot
Human Health Risk

Toluene (risk index)