TETRA TECH

November 26, 2008

Mr. Matthew Huyser
On-Scene Coordinator
U.S. Environmental Protection Agency, Region 4
61 Forsyth Street, SW, 11th Floor
Atlanta, GA 30303

Subject: **Final Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Removal Action Report**
Industrial Metal Alloys
Winston-Salem, Forsyth County, North Carolina
EPA Contract No. EP-W-05-054
TDD No. TTEMI-05-001-0039

Dear Mr. Huyser:

The Tetra Tech, Inc. (Tetra Tech) Superfund Technical Assessment and Response Team (START) is submitting the enclosed final removal action report for the Industrial Metal Alloys site in Winston-Salem, Forsyth County, North Carolina. The report summarizes field activities conducted at the site during the removal action from October 16 through February 21, 2008.

If you have any questions about the enclosed report, please call me at (678) 775-3095 or Andrew Johnson at (678) 775-3100.

Sincerely,

Didi Fung
START III Project Manager

Andrew F. Johnson
START III Program Manager

Enclosure

cc: Katrina Jones, EPA Project Officer
Angel Reed, START III Document Control Coordinator

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FINAL

CERCLA REMOVAL ACTION REPORT
INDUSTRIAL METAL ALLOYS
WINSTON-SALEM, FORSYTH COUNTY, NORTH CAROLINA
EPA CONTRACT NO. EP-W-05-054
TDD NO. TTEMI-05-001-0039

Revision 0

Prepared for

U.S. ENVIRONMENTAL PROTECTION AGENCY
Region 4, Emergency Response and Removal Branch
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TDD No.	:	TTEMI-05-001-0039
Date Prepared	:	November 26, 2008
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CONTENTS

Section **Page**

Appendix

Attachment

FIGURES

Figure **Page**

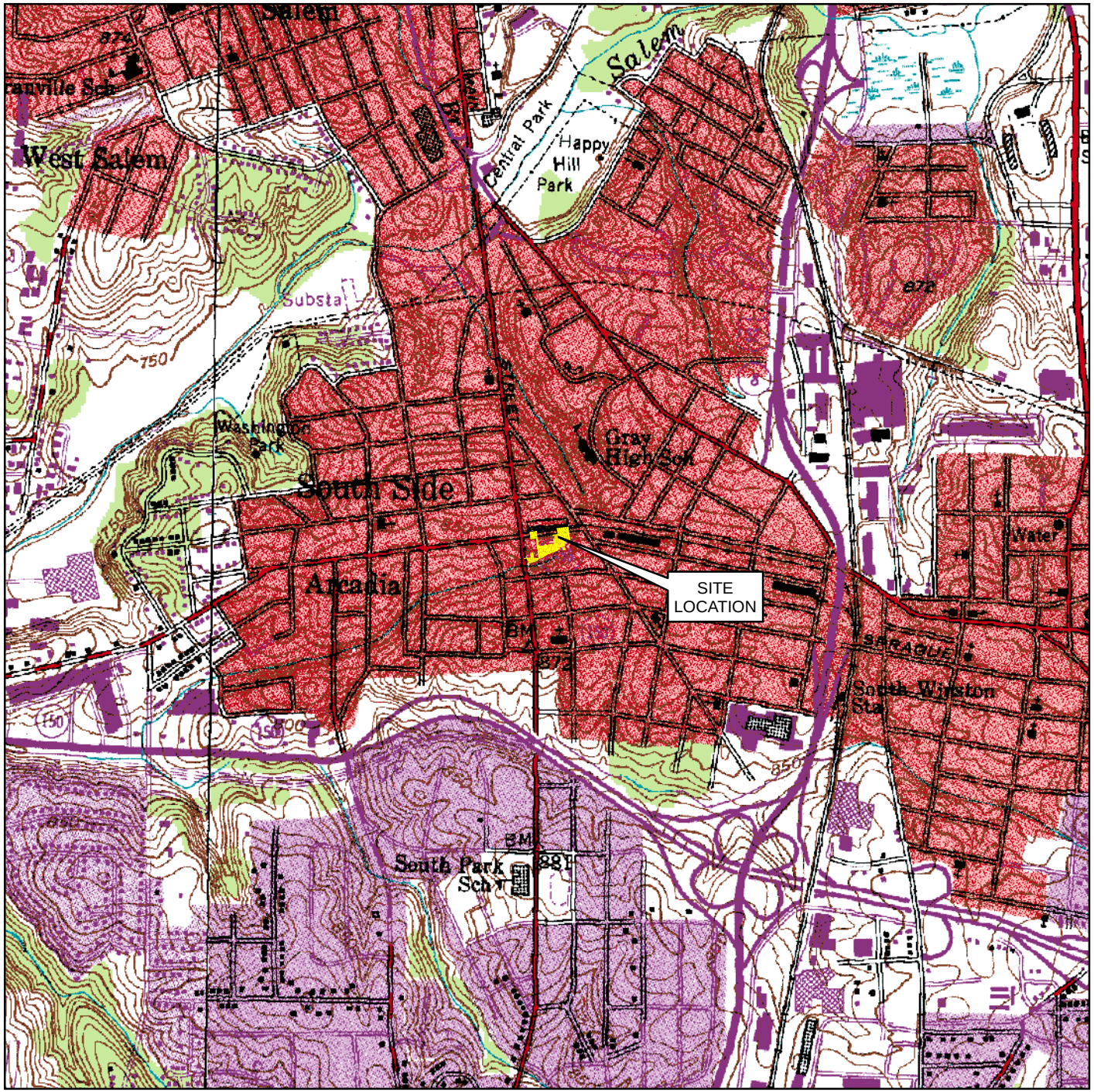
1.0 INTRODUCTION

This report has been prepared under the provisions of Technical Direction Document (TDD) No. TTEMI-05-001-0039, which the U.S. Environmental Protection Agency (EPA) Region 4 assigned to the Tetra Tech, Inc. (Tetra Tech) Superfund Technical Assessment and Response Team (START) under Contract No. EP-W-05-054. The overall scope of this TDD, which is monitored by On-Scene Coordinator (OSC) Matthew Huyser, was to provide oversight of the potentially responsible party (PRP) contractors and to conduct split sampling activities during the time-critical removal action at the Industrial Metal Alloys (IMACO) site in Winston-Salem, Forsyth, North Carolina. Specific elements of this TDD included providing equipment and personnel necessary to document on-site conditions and activities with logbook notes and photographs, conducting split soil confirmation sampling, conducting split soil stockpile sampling for waste characterization determination by analysis, providing data analysis and management, providing community outreach support, and preparing a final report.

This Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) removal action report discusses the site background (Section 2.0); removal action activities (Section 3.0); field screening, sample analytical and confirmation sample results (Section 4.0); and waste disposal (Section 5.0); and provides a summary and conclusions for the time-critical removal action (Section 6.0). Appendix A of this report provides three tables summarizing screening and laboratory analytical data generated during the removal action, Appendix B provides a copy of Tetra Tech's field notes, and Appendix C presents a photographic log of removal action activities and site conditions. Appendix D and E provides a full data validation report, Appendix F provides chain-of-custody forms for samples sent to the analytical laboratory, and Appendix G provides a table of witnesses to the removal action activities. In addition, this report also provides the diagrams for reference created by Brown and Caldwell (B&C) prior to the removal action. (Attachment 1).

2.0 SITE BACKGROUND

The IMACO site is located at 20 East Acadia Street in Winston Salem, Forsyth County, North Carolina (see Figure 1). Site-specific geographic coordinates for the site are 36.0722° north latitude and 80.2384° west longitude. The IMACO site occupies 1.06 acres in a commercial/industrial land use area. One cement block, brick- and metal-framed building with a metal roof is located at the site.



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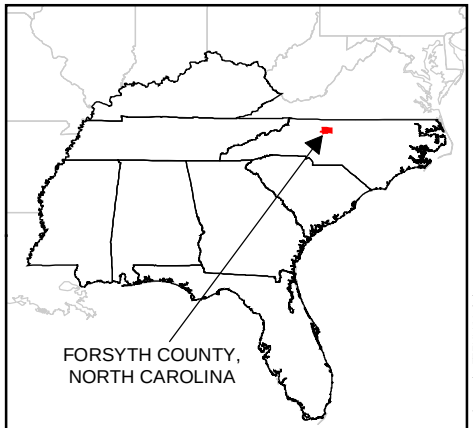
MAP SOURCE:
USGS, WINSTON-SALEM EAST, MS
TOPOGRAPHIC QUADRANGLE, 1991



United States Environmental Protection Agency

INDUSTRIAL METAL ALLOYS
WINSTON-SALEM,
FORSYTH COUNTY,
NORTH CAROLINA
TDD No.TTEMI-05-001-0039

FIGURE 1
SITE LOCATION

TETRA TECH

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The site was previously operated as a non-ferrous metal recovery facility from approximately 1950 to 1993. The property was owned by Milton and Vera Goldberg and operated under the name Industrial Metal Alloy Company. The Seitzinger's leased and operated the facility from 1973 to 1993 under the name of Taracorp, Inc. In January 2005, NK Holdings, LLC. was formed and became the corporate successor of Taracorp, Inc. The property was deeded to the North Carolina School of the Arts Foundation in 1995, which currently uses the building for storage. The site building is currently used to store files, films, lighting equipment, and other theater arts production materials for the North Carolina School of the Arts.

The North Carolina Department of Environment and Natural Resources (NCDENR) Superfund Section conducted preliminary assessment activities at the IMACO property in August and November of 2004. The reconnaissance revealed metal debris piles, 55-gallon drums, and a "slag pile." The slag pile measured approximately 30 feet by 30 feet and was approximately 10 feet high. The pile reportedly consisted of mainly soil and slag boulders. Properties surrounding the site were identified as residential, commercial, and light industrial.

A follow-up sampling investigation was conducted at the IMACO property on December 14, 2004 by NCDENR. During the investigation, surface soil was screened with an X-ray fluorescence (XRF) spectrometry unit to detect inorganic constituents. In addition, a total of three surface soil samples and two sediment samples were collected from the site and submitted for laboratory analysis. Two surface soil samples were obtained from the "slag pile" and one from the overland flow area in the backyard of the residence located south of the site. The sediment samples were collected from the small creek existing along the southern property boundary of the site. Analytical results of the soil samples indicated 113,821 milligrams per kilogram (mg/kg) lead, 68 mg/kg arsenic, 151 mg/kg chromium and 10,181 mg/kg copper. Analytical results of sediment samples indicated 1,291 mg/kg lead, 16 mg/kg arsenic, 106 mg/kg chromium and 3,317 mg/kg copper. Based on the assessment results, NCDENR concluded that the former smelting operations at the IMACO facility heavily affected the backyard areas of residences west and south of the site and recommended that the facility be added to Comprehensive Environmental Response, Compensation, and Liability Information System (called CERCLIS) for further assessment under EPA review.

In July 2005, START conducted a removal assessment at the IMACO site. Samples were collected from the surface soil (0 to 6 inches below ground surface [bgs]), subsurface soil (1 to 3 feet bgs), stream

sediment (0 to 6 inches bgs) and from the "slag pile" (5-point composite). All samples were analyzed for Target Analyte List (TAL) metals. The composite sample collected from the slag pile was also analyzed using toxicity characteristic leaching procedure (TCLP) for metals. Analytical results indicated that antimony, arsenic, iron, and lead were present in surface soil at concentrations above the Region 9 preliminary remediation goals (PRG) for industrial soil. Antimony and lead were also detected in subsurface soil at concentrations above the industrial PRGs. The composite soil sample collected from the slag pile resulted in detection of all TAL metals, but only cadmium was detected above the regulatory limit for TCLP. No constituents were detected above the PRGs in sediment samples.

In December 2005, EPA conducted an investigation on 13 residential properties surrounding the IMACO site. Five-point composite samples were collected at each property from a depth of 0 to 2 inches bgs and screened using an XRF unit. One surface water and one sediment sample were collected from the unnamed tributary existing along the southern property boundary of the IMACO site. Soil samples collected by EPA contained lead at concentrations ranging from 30 to 960 mg/kg. Arsenic, chromium, and copper were detected in surface soils but results for arsenic and chromium were below the screening levels established in the Settlement Agreement and Order on Consent for Removal Action between EPA and NK Holdings, LLC. Lead was not detected in the surface water sample. The sediment sample was inconclusive and rejected by EPA. Soil sampling locations are identified on Figure 2-6, EPA Off-Site Soil Sample Analytical Results, dated December 2005, prepared by B&C and presented in Attachment 1.

B&C conducted soil assessment activities at the IMACO site in March and April 2006. Assessment activities were conducted on the east and south yard adjacent to the building at the site and the Colter Electric Yard. Soil assessment locations are identified on Figure 2-2, Soil Assessment – March and April 2006, prepared by B&C and presented in Attachment 1.

The IMACO east yard was identified in the B&C assessment as the property located between the IMACO building and the fenced Colter Electric Yard. The assessment consisted of the collection of three surface soil samples at locations identified as S-003, S-004, and S-005. Sampling locations were screened for inorganics using an XRF unit. One soil sample was also collected and submitted for laboratory analysis of total lead, arsenic, and cadmium by EPA Method 6010B and TCLP. Results of the analyses indicated concentrations of 10,700 mg/kg lead, 18.1 mg/kg arsenic, and 6.1 mg/kg cadmium. The TCLP results exceeded the regulatory limit for lead (5 milligrams per liter [mg/L]) only.

The IMACO south yard was identified in the B&C assessment as the property located south of the site building extending from the western wall of the building to approximately 20 feet east of the eastern wall of the building. The sampling area was subdivided into 23 grids, and sample screening was conducted in situ with the XRF unit at random locations within each grid. Three soil samples (S-010, S-019, and S-024) were collected and analyzed for total lead, arsenic, and cadmium by EPA Method 6010B and TCLP. All samples contained measurable levels of lead, arsenic, and cadmium but were below regulatory levels. Analytical results for the sample collected from location S-019 exceeded the regulatory TCLP limit for lead.

The Colter Electric yard was identified in the B&C assessment as the (previously) fenced area located east of and adjacent to the IMACO property. This area begins approximately 2 feet east of the northeast corner of the large concrete slab located at the northeast corner of the IMACO building. The unpaved area was divided into eight grids. Surface soil samples were collected from each grid at random locations. Soil samples from each grid were analyzed for total lead, arsenic, and cadmium by EPA Method 6010. Two soils samples identified as S-029 and S-030 were also analyzed for TCLP lead, arsenic, and cadmium. Analytical results indicated five of the eight samples contained lead above 400 mg/kg and the sample identified as S-029 contained a TCLP lead concentration that exceeded the regulatory limit of 5 mg/L.

On November 6, 2006, B&C collected sediment samples from the unnamed stream tributary. Sediment samples were obtained from natural depositional areas in the stream. Twelve sampling locations were identified and documented using a portable global positioning system (GPS). Sediment samples were collected at depth intervals of 0 to 3 inches bgs and 3 to 6 inches bgs as practical. Samples were submitted for laboratory analysis of total lead by EPA Method 6010. Analytical results indicated that all samples with the exception of one, was below the PRG level of 400 mg/kg. The sample identified as IMA-SED11 contained 1,140 mg/kg of lead on a dry weight basis. Samples from two locations that exhibited the highest lead concentrations were reanalyzed for antimony, arsenic, chromium, and copper. Results indicated the additional constituents were below the applicable screening concentrations. Sediment sampling locations are identified on Figure 2-3, Stream Sampling Results (November 2006), prepared by B&C and presented in Attachment 1.

On December 8, 2006, B&C conducted a second sediment sampling event. To provide additional data and further characterize the extent of contamination in the area of sediment sample IMA-SED11, two

additional locations were sampled at an equal distance east and west of IMA-SED11 and the next sampling points (IMA-SED10 and IMA-SED12). Analytical results from the sample identified as IMA-SED17 were 723 mg/kg lead at 0 to 3 inches bgs, exceeding the PRG level. Sediment sampling locations are identified on Figure 2-3, Stream Sampling Results (December 2006), prepared by B&C and presented in Attachment 1.

Based on the findings of the numerous studies at the IMACO property, on-site lead soil contamination and off-site residential soil contamination existed above the PRG level of 400 mg/kg. In addition, sediment samples obtained from the unnamed stream on the southern border of the property exhibited analytical results above 400 mg/kg. Excavation, on-site stabilization, off-site transportation, and disposal at a Resource Conservation Recovery Act (RCRA) Subtitle D (non-hazardous) treatment and disposal facility were selected as the remedial alternatives.

3.0 REMOVAL ACTION ACTIVITIES

As requested by EPA, the Tetra Tech START provided technical assistance during a removal action at the IMACO site from October 16, 2007 through February 21, 2008. Hepaco, the PRP's contractor, conducted the removal action activities, which included clearing and grubbing the site; excavation of contaminated soil; mixing trisodium phosphate (TSP) with soil; separation of solid waste, woody debris and slag pieces larger than 15 inches in diameter; stockpiling material for disposal; loading stockpile material for transportation to the disposal facility; site restoration; and demobilization. Tetra Tech provided oversight of the PRP contractor activities to ensure that they were conducted in accordance with the Settlement Agreement and Order on Consent for Removal Action between the EPA and NK Holdings, LLC., and the Removal Action Work Plan for the Former Industrial Metal Alloy Site prepared for NK Holdings, LLC., by B&C. START documented on-site conditions and activities with logbook notes (Appendix B) and photographs (Appendix C), conducted split confirmation sampling of subsurface soil, provided data analysis and management, and provided community outreach support. All sampling techniques were conducted in accordance with the EPA Region 4 Science and Ecosystems Support Division's "Environmental Investigations Standard Operating Procedures and Quality Assurance Manual" (EISOPQAM) (November 2001, revised). START members included Didi Fung, Brian Malone, and Shanna Davis.

3.1 EXCAVATION AND SAMPLING ACTIVITIES

This section provides a summary of excavation and sampling activities conducted at the IMACO site, including removal oversight and split sampling conducted by START. Figure 2 provides additional information regarding removal areas and grid locations.

Generally, excavation at each grid location was conducted by Hepaco in 6-inch lifts, as described in their Removal Action Work Plan. Where necessary, Hepaco placed visqueen over previously completed excavations to minimize the potential for cross-contamination. Based on field conditions, soil was excavated from the corner of the grid furthest from the operator and pulled toward the equipment into a temporary stockpile. The temporary stockpile was relocated behind the excavator in lifts as TSP was added using a skidsteer. Depending on specific field conditions, TSP was sometimes spread over the grid location prior to initiation of excavation activities to facilitate soil treatment activities. After the entire pile of excavated soil was removed from the grid location and treated, excavation was initiated at the next grid location while the skidsteer transported the treated soil to the designated stockpile area for further mixing and consolidation. The final excavation depth in each grid was verified by a surveyor.

At the completion of each 6-inch lift, Hepaco collected a five-point composite sample from the bottom of the excavation at each grid location for ex situ XRF screening. When XRF screening results indicated lead concentrations above the site-specific cleanup standard (SSCS) of 400 mg/kg or visible pieces of slag were observed, additional 6-inch lifts were excavated to remove the contaminated materials until XRF screening results indicated lead concentrations below the SSCS, and no evidence of slag was observed. When XRF screening results indicated lead concentrations below the SSCS, excavation was considered complete and five-point confirmation samples were collected for fixed-laboratory analysis. In accordance with the Settlement Agreement and Order on Consent between EPA and NK Holdings, LLC., excavations at the site did not exceed 2 feet bgs with the exception of test pits and areas of buried solid waste and kettle bottoms near the southeast corner of the IMACO building. Additional information regarding XRF screening conducted during removal action activities is provided in Section 3.2. Table 1 in Appendix A provides a summary of XRF screening results obtained during this removal action.

As directed by the OSC Huyser, START obtained split confirmation samples for all grid locations on residential properties as well as for approximately 25 percent of randomly selected grid locations on the

EAST ACADIA AVENUE

Residence

Vacant Building

IMACO

Garage

V's Treasures

GMAC

LEGEND

Grid Excavation Depths (inches bgs)

- 0
- 6
- 12
- 18
- 24

Grids containing snow fencing and contamination left in place

Underground Concrete Vault

Buildings

Boundaries

Roads

Creek

Concrete/ Pavement

0 20 40 Feet

1:480

SURVEY DATA PROVIDED BY STANTEC, 2008

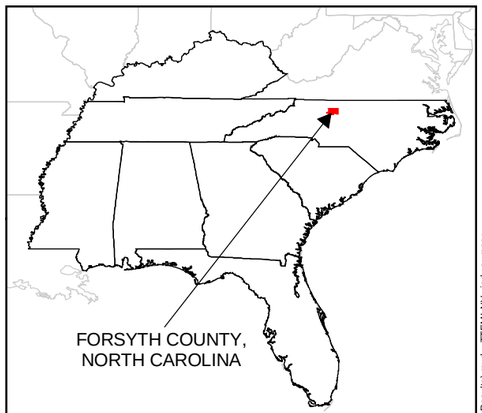

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FIGURE 2
FINAL DEPTHS OF EXCAVATION

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IMACO property. In addition, START obtained split samples from Hepaco for two stockpiles at the site, stockpiles 2 and 3. Additional information regarding split sampling activities is provided in Section 3.3. Tables 2 and 3 in Appendix A provide a summary of analytical results for confirmation samples obtained from the grid locations and stockpiles; respectively, involved in this removal action.

The following paragraphs provide a brief chronological summary of removal oversight activities conducted by Tetra Tech START, including a description of excavation activities conducted by Hepaco as well as the collection of XRF screening and split confirmation sampling activities conducted by START.

October 16 through October 17, 2007

START member Didi Fung mobilized to the IMACO site on October 16, 2007 to conduct confirmatory soil sampling of grid locations that had been previously sampled by B&C on residential properties surrounding the site. Grids were identified for sampling using survey markers located at each grid node. START conducted surface sampling of approximately one third of the grids previously sampled by B&C for comparison and confirmation of analytical results. Nineteen surface soil samples (0 to 3 inches bgs) were collected, each consisting of a five-point composite sample, except for samples IMA-SS-I21-017 and IMA-SS-I21-DUP-020, which were four-point composites. In addition, one sample (IMA-EB-021) was an equipment rinsate sample. After each sample homogenization, ex-situ XRF screening was conducted by EPA and START on each sample sent for analysis. Tables 1 and 2 in Appendix A provide a summary of XRF screening and confirmation sample results. START demobilized from the site on October 17, 2007.

November 6 through November 30, 2008

Activities during this period included the excavation of grid rows 1 through 14a. Grid row 14 was split in half from west (14a) to east (14b) based on analytical data that required different initial excavation lifts from 6 inches bgs to 12 inches bgs in portions of this grid row. Hepaco also completed the initial excavation of grid rows 24 and 25 as well as the excavation and screening of grids A20 through A23, B20, and C22-23 after START demobilized at the end of this reporting period. Figure 2 provides additional information regarding areas of excavation as well as maximum depths of excavation achieved for each grid location.

Excavation of grid rows 1 through 14a and the northern portion of grid rows 20 through 25 was completed in 6-inch lifts as provided in the Removal Action Work Plan. Excavation of these areas was initiated at grid location A9 and proceeded to the south and west toward the paved loading dock entrance of the IMACO building. Excavation then proceeded south along grid row 9 until reaching grid location N9. Excavation resumed at the residential property identified as grid locations L5 and M5, and then moved to grid location N1 proceeding east. When excavation reached the eastern extent of grid row 14, activities were relocated to the western extent of the proposed excavation to facilitate equipment mobility on the site. After START demobilized at the request of OSC Huyser, Hepaco began excavation at grid A25 and proceeded in a north to south pattern as practical until a grid row was completed.

January 9 through January 11, 2008

Excavation activities during this reporting period included the excavation of grid rows 17 and 18, which contained approximately 10 feet of construction debris, kettle bottoms, and soil. To determine the vertical extent of contamination, test pits were excavated in grid locations F17, F18, and F19; and XRF screening was conducted by Hepaco at depths of 2.5 and 3 feet bgs in each test pit. Table 1 in Appendix A provides the XRF screening results obtained by Hepaco for these test pits.

In addition, soil stockpiles 7 and 8 were sampled and the field team was awaiting analytical results prior to transportation and disposal. At the direction of OSC Huyser, split confirmation sampling was not conducted during this reporting period.

January 15 through January 16, 2008

Removal action activities conducted during this reporting period include the de-watering of the stream for sediment removal, discovery and excavation of a concrete pit in grid location I20, sampling of the contents of the concrete pit, and surveying of the concrete pit location. A soil sample and water sample were collected from the contents of the concrete pit and submitted by B&C for laboratory analysis. Analytical results confirmed the contents of the concrete pit were non-hazardous and the pit was filled with dirt and left in place.

In addition, START and OSC Huyser conducted community outreach activities in the immediate vicinity of the site on January 16, 2008. These activities are discussed in more detail in Section 3.4.

February 21, 2008

On February 21, 2008, START member Shana Davis and OSC Huyser conducted a final walkthrough of the site with Hepaco representatives. START documented the progress of site restoration activities, which are discussed in Section 3.5.

3.2 XRF FIELD SCREENING TECHNIQUES

XRF field screening was conducted by Hepaco in excavated grid locations prior to confirmation sampling to obtain preliminary data regarding the concentration of lead in soil at the extent of excavation. Field screening was generally conducted ex-situ by collecting a five-point composite sample from each grid location. Soil was collected using a trowel at each of the four corners and the approximate center of the grid location, and placed in a stainless steel disposable pan or stainless steel bowl. The soil was then screened into a second disposable pan or decontaminated stainless steel bowl using a 3/8-inch sieve to remove any large pebbles, organic material, or slag that was collected in the sample. The sample was thoroughly homogenized and a portion of the sample was then placed in a plastic zip-lock bag for XRF field screening. Bagged samples were screened on a flat surface by Hepaco for 1 minute using an Innovex® XRF unit. Field screening results for each sample were recorded in log books by Hepaco and START. If lead concentrations obtained from the XRF field screening were below the SSCS, confirmation samples were collected from the remaining homogenized and screened soil and transferred into sample jars for laboratory analysis. If lead concentrations obtained from the XRF field screening indicated levels were above the SSCS, Hepaco conducted additional excavation as discussed in Section 3.1 until XRF screening results indicated lead concentrations in the bottom of the excavation were below the SSCS.

Hepaco also conducted in-situ XRF field screening on grid locations east of the IMACO building to expedite the removal process and to check the progress of excavation there. In-situ XRF field screening was conducted by placing a plastic zip-lock bag on the surface of the excavated grid location and obtaining a direct reading from the bottom of the excavated grid location using the XRF to screen soil through the zip-lock bag. As described with ex situ XRF field screening, if in situ XRF field screening results indicated lead concentrations below the SSCS, a five-point composite sample was collected for further screening and laboratory analysis. Confirmation sampling is discussed further in Section 3.3.

XRF calibration was conducted daily at the initiation of work activities by Hepaco. Calibration was conducted by first using the manufacturer provided stabilization clip. Once standardized, the XRF was used to screen soil standards of a known concentration. If readings indicated the results from the standards were within the allowable tolerance limits, the XRF unit calibration was completed and documented in a calibration log. If results of the calibration were outside the allowable tolerance limits, the XRF unit was re-calibrated until verification of results within the allowable tolerance limits was achieved.

3.3 CONFIRMATION SAMPLING TECHNIQUES

Confirmation sampling at the IMACO property was conducted by collecting five-point composite samples from each completed and surveyed grid location. Using a trowel, representative aliquots of soil were collected by Hepaco from each of the four corners and the approximate center of the grid location, and placing the soil into a disposable pan or stainless steel bowl. The soil was then screened into a second disposable pan or stainless steel bowl using a 3/8-inch sieve to remove any large pebbles, organic material, or slag that was collected in the sample. The sample was thoroughly homogenized and a portion of the sample was collected in a plastic zip-lock bag for ex situ XRF field screening. If XRF field screening results indicated lead concentrations below the SSCS, the remaining homogenized soil was transferred into pre-cleaned, laboratory-supplied sampling container, labeled, and placed in a refrigerator or on ice for future laboratory analysis.

As directed by OSC Huyser, START obtained split confirmation samples for all grid locations on residential properties as well as approximately 25 percent of randomly selected grid locations on the IMACO property. Split soil sampling was conducted following EPA Region IV EISOPQAM procedures for surface and subsurface soils. Split samples were collected by obtaining approximately half of the sample volume originally obtained by Hepaco, placing it into a decontaminated stainless steel bowl. The sample was further homogenized using a stainless steel spoon and transferred into a pre-cleaned, laboratory-supplied sample jar in sufficient quantity as required for the analysis. For samples collected by START, sample jars were labeled, sealed with a custody seal, documented in the log book and on the chain-of-custody form, placed on ice in a cooler, and shipped to Shealy Environmental Services, Inc. in West Columbia, South Carolina for total lead analyses. Samples were shipped by START using Federal Express and following chain-of-custody procedures.

If analytical results for lead concentrations obtained from confirmation sampling by Hepaco or START indicated levels that were above the SSCS, Hepaco conducted additional excavation as discussed in Section 3.1

3.4 COMMUNITY OUTREACH SUPPORT

On January 16 and 17, 2008, OSC Huyser and START member Didi Fung interviewed eight surrounding property owners and local organizations, including the following: four residential property owners, one business owner, one school representative, and two city officials. The interviews included questions to determine the interviewee's awareness of the IMACO site cleanup activities, any effect the site may have had on their operations, and their satisfaction with the cleanup. Each interview ended with a general question and answer session to address the interviewee's concerns regarding cleanup activities at the IMACO site. By request, EPA's 2008 Community Involvement Plan can be obtained for additional information.

3.5 SITE RESTORATION ACTIVITIES

As provided in their Removal Action Work Plan, restoration activities were conducted at the IMACO site by Hepaco to restore properties to their original state and condition to the extent reasonable and practical. Restoration activities included placement of verified "clean" fill material to backfill excavated areas; placement of topsoil; grading of the site; seeding topsoil to promote the growth of vegetation; placement of straw for erosion control; replacement of mulch, shrubs, plants and trees as requested; power washing impervious surfaces; replacement of damaged impervious surfaces; replacement of damaged utilities and drainage lines; and replacement of fencing or other permanent structures removed during removal activities.

Backfill material was sampled and analyzed by Hepaco to verify it was from a clean source prior to placement at the site. Backfill material was placed in lifts and compacted. Compaction tests were performed by Hepaco and compaction ratios obtained were compared to a site-specific modified proctor value. Backfill was placed within 6 inches of the original surface elevation. In grid locations where soil

was excavated to the maximum depth of 2 feet bgs and lead concentrations remained above the SSCS, a plastic orange snow fence was placed in the bottom of the excavation to mark the extent of excavation and covered with a minimum of 18 inches of compacted backfill material. Approximately 6 inches of topsoil was placed over all backfilled areas to encourage growth of vegetation. The site was graded to reduce the potential for off-site migration and to minimize erosion. Restored areas were seeded using a seed mix of grasses native to the area. Straw was placed on all seeded areas to promote growth and reduce the potential for erosion and removal of seeds by bird species. Sedimentation control measures, including straw, straw bales, and silt fencing were left in place at the site to minimize soil erosion and promote growth of vegetation until appropriate vegetative cover is in place.

On October 16, 2008 installation of the site perimeter security fencing, requested by the University of North Carolina School of the Arts (NCSA), was completed per the specifications.

4.0 XRF FIELD SCREENING AND SPLIT SAMPLE ANALYTICAL RESULTS

This section summarizes XRF field screening and split confirmation sample results obtained during removal action activities.

4.1 XRF FIELD SCREENING RESULTS

XRF field screening results for lead were reported in mg/kg and were compared to the SSCS of 400 mg/kg. Confirmation samples collected from grid locations with XRF field screening results below 400 mg/kg were submitted for laboratory analysis. It should be noted that Hepaco did not take into consideration the margin of error reported for the XRF unit when submitting samples for laboratory analysis. Therefore, if an XRF field screening result was below 400 mg/kg but the margin of error caused the XRF field screening result to exceed 400 mg/kg, the samples were still submitted for laboratory analysis. Table 1 in Appendix A provides a summary of XRF field screening results obtained during removal oversight activities conducted by START.

Comparison of XRF field screening results and laboratory analytical results for split confirmation samples obtained by START from Hepaco indicated that if lead concentrations ranged from 350 to 400 mg/kg in XRF field screening results without considering the margin of error reported by the XRF, 64 percent of

the laboratory analytical results indicated lead concentrations above 400 mg/kg. In addition, two XRF field screening results (grid locations C8 and H15) that indicated lead concentrations below 350 mg/kg despite the margin of error reported by the XRF also had laboratory analytical results for the corresponding confirmation samples that indicated lead concentrations above 400 mg/kg. It should also be noted that two XRF field screening results (grid locations G25 and H24) indicated lead concentrations above 400 mg/kg, when considering the margin of error reported by the XRF, but laboratory analytical data for the corresponding confirmation samples indicated lead concentrations below 400 mg/kg.

4.2 SPLIT SAMPLE ANALYTICAL RESULTS

Confirmation samples collected by Hepaco were submitted to Pace Analytical Services, Inc., of Huntersville, North Carolina for analysis while split confirmation samples obtained by START were submitted to Shealy Environmental Services, Inc. of West Columbia, South Carolina. Tables 2 and 3 in Appendix A provide a summary of the laboratory analytical results for split confirmation samples obtained during removal action activities and compares the results obtained by START to those obtained by Hepaco. Appendix D provides the data validation report and validated analytical results for split confirmation samples analyzed by Analytical Environmental Services. Appendix E provides the data validation report and validated analytical results for split confirmation samples analyzed by Shealy Environmental Services, Inc. Appendix F provides copies of the chain-of-custody forms for the split confirmation samples shipped to Analytical Environmental Services and Shealy Environmental Services, Inc.

In total, 34 split confirmation samples obtained from Hepaco for completed excavations at the site as well as 3 field duplicate samples and 3 equipment rinsate blank samples were analyzed by Shealy Environmental Services, Inc. for total lead using EPA Method 6010. In addition, two split confirmation samples obtained from Hepaco for stockpiles at the site were analyzed by Shealy Environmental Services, Inc. using the TCLP for metals by U.S. EPA Method 6010 and Method 7470 for mercury.

Generally, correlation between laboratory analytical results obtained by START and Hepaco were consistent. However, the following variances were identified during removal action activities:

- Analytical results for two split confirmation samples (grid location C8 at 6 inches bgs and grid location G9 at 6 inches bgs) obtained by START indicated lead concentrations below the SSCS while analytical results obtained by Hepaco indicated lead concentrations above the SSCS.
- Analytical results for four split confirmation samples (grid location K11 at 6 inches bgs, grid location L11 at 6 inches bgs, grid location H13 at 24 inches bgs and grid location H15 at 24 inches bgs) obtained by START indicated lead concentrations above the SSCS while analytical results obtained by Hepaco indicated lead concentrations below the SSCS.

In each of these instances, Hepaco conducted additional excavation to remove contamination identified by laboratory analytical data regardless of the source of the data.

5.0 WASTE DISPOSAL

Removal activities conducted at the IMACO property produced the following two distinct waste streams:

- Organic material produced during the clearing and grubbing activities at the site, including wood debris, trees, and stumps, was segregated and transported to Lowder Mulch and Material located at 2840 Griffith Road in Winston-Salem, North Carolina for recycling as mulch.
- Slag kettle bottoms were crushed and mixed with solid waste and contaminated soil at the site. Waste piles were treated with TSP and homogenized as practical using a soil mixer attached to a track-mounted excavator. Crushed slag, contaminated soil and solid waste were transported and disposed of as non-hazardous waste at the CMS Landfill located at 5105 Morehead Road, Concord, North Carolina.

All documentation was generated and will be maintained by the representative for the generator, NK Holdings Inc.

6.0 SUMMARY AND CONCLUSIONS

The IMACO site is located at 20 East Acadia Street in Winston Salem, Forsyth County, North Carolina. (see Figure 1). Site-specific geographic coordinates for the site are 36.0722 ° north latitude and 80.2384° west longitude. The site was previously operated as a non-ferrous metal recovery facility from approximately 1950 to 1993. The property was owned by Milton and Vera Goldberg and operated under

the name Industrial Metal Alloy Company. The Seitzinger's leased and operated the facility from 1973 to 1993 under the name of Taracorp, Inc. In January 2005, NK Holdings, LLC. was formed and is the corporate successor of Taracorp, Inc. The property was deeded to the North Carolina School of the Arts Foundation in 1995 who currently uses the building for storage.

Several environmental assessments were conducted at the site from 2004 to 2006 by NCDENR, EPA, and B&C. Assessment results indicated metals contamination of soil and sediment existed at the site, which affected surface soil, subsurface soil, and sediments. Excavation, on-site stabilization, off-site transportation and disposal at a RCRA Subtitle D (non-hazardous) treatment and disposal facility was the remedial alternative selected by the PRP identified for the site, NK Holdings, Inc. Remediation activities were conducted by Hepaco with oversight from the PRP consultant B&C. START provided oversight of the PRP contractors as directed by OSC Huyser of the EPA Region 4 Emergency Response and Removal Branch.

XRF field screening results, laboratory analytical data for confirmation samples and photographic documentation of remedial activities were conducted in accordance with the approved Removal Action Work Plan submitted by B&C. Visible slag, impacted soil, and sediment containing lead concentrations at or above the SSCS of 400 mg/kg for lead were excavated from the site and adjacent properties, treated with TSP to chemically stabilize the materials, and transported and disposed of at an approved RCRA Subtitle D landfill as non-hazardous waste. Solid waste buried at the site was also excavated, treated, and incorporated into soil stockpiles for disposal. Excavation at the site was conducted to a maximum depth of 2 feet bgs. In areas where the maximum depth of excavation was reached and laboratory analytical data for confirmation samples indicated lead concentration at or above the SSCS, an orange snow fence was placed to identify the bottom of the excavation in the following grid locations: B6, D9, D17, D18, E18, E19, F17 through F20, G9, G17 through G20, H13, H15 through H18, H19b, H20, I16, I20, I22, and J22.

APPENDIX A

TABLES

(12 Pages)

TABLE 1
SUMMARY OF FIELD SCREENING RESULTS

LOCATION	DATE	TIME	DEPTH (inches bgs)	RESULT (mg/kg)	MARGIN OF ERROR (+/- mg/kg)
*A9	11/6/2007	1257	6	211	7
*C8	11/6/2007	1300	6	254	8
*D6	11/6/2007	1302	6	297	9
*G9	11/6/2007	1310	18	395	10
*H9	11/6/2007	1312	12	398	10
*J9	11/6/2007	1319	18	45	4
*M5	11/6/2007	1340	6	91	5
*L5	11/6/2007	1030	6	91	5
N1	11/6/2007	1425	6	394	10
*N5	11/7/2007	0901	6	663	12
*N4	11/7/2007	1024	6	141	6
N5	11/7/2007	1255	12	210	7
O5	11/7/2007	1311	6	547	12
*O5	11/7/2007	1410	12	215	7
*N6	11/7/2007	1500	6	359	9
N7	11/7/2007	1515	6	112	5
N8	11/7/2007	1535	6	157	6
N9	11/7/2007	1550	6	132	6
J10	11/8/2007	0835	6	78	5
*I10	11/8/2007	850	12	113	5
*M10	11/8/2007	1005	6	383	9
*M10 DUP	11/8/2007	1005	6	383	9
K10	11/8/2007	0915	6	46	4
L10	11/8/2007	0934	6	98	5
N10	11/8/2007	1035	6	247	8
H11	11/8/2007	1100	6	1543	21

TABLE 1
SUMMARY OF FIELD SCREENING RESULTS

LOCATION	DATE	TIME	DEPTH (inches bgs)	RESULT (mg/kg)	MARGIN OF ERROR (+/- mg/kg)
M11	11/8/2007	1120	6	118	5
N11	11/8/2007	1145	6	265	8
H11	11/8/2007	1300	12	201	7
I11	11/8/2007	1335	6	564	12
J11	11/8/2007	1416	6	602	12
I11	11/8/2007	1430	12	132	6
J11	11/8/2007	1450	12	107	5
*K11	11/8/2007	1510	6	350	9
*L11	11/8/2007	1525	6	397	10
I12	11/9/2007	1315	18	26	3
H12	11/9/2007	1000	6	2,336	28
I12	11/9/2007	1020	6	1,828	23
H12	11/9/2007	1040	12	373	9
I12	11/9/2007	1200	12	936	16
J12	11/9/2007	1230	6	314	9
K12	11/9/2007	1245	6	476	11
K12	11/12/2007	1025	12	76	5
L12	11/12/2007	1425	12	289	8
M12	11/12/2007	1440	6	100	5
C8	11/12/2007	1455	12	232	8
G9	11/13/2007	0925	24	172	7
D10	11/13/2007	0900	12	75	5
H9	11/13/2007	0945	12	286	8
M13	11/13/2007	1045	12	338	9
L13	11/13/2007	1115	6	140	6
*H13	11/13/2007	1345	24	382	9

TABLE 1
SUMMARY OF FIELD SCREENING RESULTS

LOCATION	DATE	TIME	DEPTH (inches bgs)	RESULT (mg/kg)	MARGIN OF ERROR (+/- mg/kg)
K13	11/13/2007	1330	6	316	9
I13	11/14/2007	0915	6	938	15
I13	11/14/2007	0945	12	161	10
J13	11/14/2007	1030	6	806	14
J13	11/14/2007	1055	12	100	5
H14a	11/14/2007	1115	6	528	11
*L14a	11/14/2007	1155	6	276	8
M14a	11/14/2007	1215	6	671	15
M14a	11/14/2007	1315	12	130	6
H14a	11/14/2007	1335	12	571	12
K14a	11/14/2007	1345	6	102	5
K14b	11/14/2007	1415	12	90	5
L14b	11/14/2007	1425	12	213	7
M14b	11/14/2007	1425	12	289	8
H14a/b	11/14/2007	1550	18	325	9
I14a	11/15/2007	0900	6	682	12
I14b	11/15/2007	0900	12	762	13
I14a/b	11/15/2007	1015	18	47	4
J14a	11/15/2007	1015	6	228	7
*J14b	11/15/2007	1045	12	101	5
K15	11/15/2007	1300	12	37	4
L15	11/15/2007	1300	12	150	6
J15	11/15/2007	1400	12	164	6
L22	11/15/2007	1430	6	559	12
*L22	11/15/2007	1510	12	134	6
*K22	11/15/2007	1615	6	318	9

TABLE 1
SUMMARY OF FIELD SCREENING RESULTS

LOCATION	DATE	TIME	DEPTH (inches bgs)	RESULT (mg/kg)	MARGIN OF ERROR (+/- mg/kg)
H15	11/16/2007	0930	6	2,537	28
H15	11/16/2007	0950	18	443	10
*H15	11/16/2007	1005	24	286	8
*H15DUP	11/16/2007	1005	24	1,530	21
I15	11/16/2007	1040	12	1,643	22
I15	11/16/2007	1100	18	100	5
J12	11/19/2007	0940	6	165	6
*A25	11/19/2007	1040	6	243	8
A24	11/19/2007	1100	6	823	5
B24	11/19/2007	1120	6	96	6
C24	11/19/2007	1140	6	25	4
D24	11/19/2007	1140	6	46	5
*E24	11/19/2007	1250	6	334	9
B25	11/19/2007	1250	6	240	8
*C25	11/19/2007	1345	6	42	4
*K11	11/19/2007	0950	12	282	8
D25	11/19/2007	1345	6	124	6
E25	11/19/2007	1420	6	128	6
N1	11/20/2007	0840	12	89	5
N6	11/20/2007	0845	12	88	5
K11	11/20/2007	0950	12	282	8
L11	11/20/2007	1015	12	230	7
A24	11/26/2007	1125	12	143	6
A23	11/26/2007	1325	6	132	6
B23	11/26/2007	1335	6	48	4
C23	11/26/2007	1423	6	140	6

TABLE 1
SUMMARY OF FIELD SCREENING RESULTS

LOCATION	DATE	TIME	DEPTH (inches bgs)	RESULT (mg/kg)	MARGIN OF ERROR (+/- mg/kg)
H25	11/26/2007	1430	6	269	8
F25	11/26/2007	1510	6	243	8
*G25	11/26/2007	1525	6	399	10
F24	11/27/2007	0915	6	418	10
G24	11/27/2007	0925	6	386	10
J12	11/27/2007	1030	12	622	12
F24	11/27/2007	1110	12	153	7
*H24	11/27/2007	1325	6	396	10
A22	11/27/2007	1325	6	179	7
C22	11/27/2007	1430	6	206	8
*B22	11/27/2007	1330	6	220	7
A20	11/28/2007	0850	6	1,533	20
B20	11/28/2007	0855	6	911	15
A20	11/28/2007	0940	12	2,996	33
B20	11/28/2007	0945	12	589	12
J12	11/28/2007	1025	18	22	4
A20	11/28/2007	1025	18	79	5
B20	11/28/2007	1030	18	184	7
J12	11/28/2007	1125	18	22	4
M14b	11/28/2007	1130	18	57	4
A21	11/28/2007	1320	6	687	13
*B21	11/28/2007	1325	6	255	8
*B21DUP	11/28/2007	1325	6	255	8
A21	11/29/2007	1120	12	545	12
H21	11/29/2007	1125	6	291	8
D23	11/29/2007	1425	6	158	7

TABLE 1
SUMMARY OF FIELD SCREENING RESULTS

LOCATION	DATE	TIME	DEPTH (inches bgs)	RESULT (mg/kg)	MARGIN OF ERROR (+/- mg/kg)
E23	11/29/2007	1430	6	158	7
F23	11/29/2007	1520	6	177	7
D22	11/29/2007	1525	6	34	4
M15 In-situ (1)	11/30/2007	0917	0-3	1,123	6
M15 In-situ (2)	11/30/2007	0917	0-3	512	10
M15 In-situ (3)	11/30/2007	0917	0-3	440	9
M15 Ex-situ Composite	11/30/2007	0923	0-3	909	15
A21	11/30/2007	1015	18	25	4
E22	11/30/2007	1615	6	64	5
F18 Test Pit (1)	1/09/2007	0815	30	74	13
F18 Test Pit (2)	1/09/2007	0815	30	176	7
F18 Test Pit (3)	1/09/2007	0815	30	202	7
F17 Test Pit (1)	1/09/2007	0830	30	122	6
F17 Test Pit (2)	1/09/2007	0830	30	244	8
F17 Test Pit (3)	1/09/2007	0830	30	83	5
F17 Test Pit (1)	1/09/2007	0830	36	228	7
F17 Test Pit (2)	1/09/2007	0830	36	52	5
F17 Test Pit (3)	1/09/2007	0830	36	138	6
F19 Test Pit (1)	1/09/2007	0855	30	269	8
F19 Test Pit (2)	1/09/2007	0855	30	333	9
F19 Test Pit (3)	1/09/2007	0855	30	202	7
F19 Test Pit (1)	1/09/2007	0900	36	116	6
F19 Test Pit (2)	1/09/2007	0900	36	33	4
F19 Test Pit (3)	1/09/2007	0900	36	554	12
F19 Test Pit (4)	1/09/2007	0900	36	125	7

TABLE 1
SUMMARY OF FIELD SCREENING RESULTS

LOCATION	DATE	TIME	DEPTH (inches bgs)	RESULT (mg/kg)	MARGIN OF ERROR (+/- mg/kg)
H16 In-situ (1)	1/10/2007	1000	12	1,256	18
H16 In-situ (2)	1/10/2007	1000	12	849	14
H16 In-situ (1)	1/10/2007	1015	18	603	12
H16 In-situ (2)	1/10/2007	1015	18	780	13
H16 In-situ (1)	1/10/2007	1025	24	436	11
H16 In-situ (2)	1/10/2007	1025	24	361	10
L16 In-situ (1)	1/10/2007	1035	12	444	10
L16 In-situ (2)	1/10/2007	1035	12	320	9
L16 In-situ (1)	1/10/2007	1035	18	43	4
L16 In-situ (2)	1/10/2007	1005	12	540	61
L16 In-situ (1)	1/10/2007	1015	18	>10%	--
L16 In-situ (2)	1/10/2007	1015	18	21,722	254

Notes:
* = START split sample obtained by Hepaco for analytical confirmation.
bgs = Below ground surface
Grid = Analytical result exceeded the 400 ppm SSCS.
mg/kg = Milligrams per kilogram
Result = Screening result exceeded the SSCS. Additional excavation was required to a maximum depth of 24" if necessary.

TABLE 2
SUMMARY OF GRID LOCATION SPLIT SAMPLE ANALYTICAL RESULTS

GRID ID	SAMPLE ID	TOTAL DEPTH (inches bgs)	DATE OF SAMPLING	PRP SAMPLE INTERVAL (inches bgs)	PRP ANALYTICAL RESULT (mg/kg)	START SPLIT SAMPLE INTERVAL (inches bgs)	START ANALYTICAL RESULT (mg/kg)
A6	IMA-SS-A6-001	--	10/17/2007	NP	NP	3	319
A9	IMA-SS-A9-002	--	10/17/2007	NP	NP	3	1,040
C8	IMA-SS-C8-003	--	10/17/2007	NP	NP	3	2,190
D6	IMA-SS-D6-004	--	10/17/2007	NP	NP	3	470
D9	IMA-SS-D9-005	--	10/17/2007	NP	NP	3	1,510
F9	IMA-SS-F9-006	--	10/17/2007	NP	NP	3	968
H9	IMA-SS-H9-007	--	10/17/2007	NP	NP	3	1,280
J9	IMA-SS-J9-008	--	10/17/2007	NP	NP	3	1270
L9	IMA-SS-L9-009	--	10/17/2007	NP	NP	3	989
N9	IMA-SS-N9-010	--	10/17/2007	NP	NP	3	799
07	IMA-SS-O7-011	--	10/17/2007	NP	NP	3	327/355
O5	IMA-SS-O5-012	--	10/17/2007	NP	NP	3	358
N6	IMA-SS-N6-013	--	10/17/2007	NP	NP	3	682
N4	IMA-SS-N4-014	--	10/17/2007	NP	NP	3	1090
N3	IMA-SS-N3-015	--	10/17/2007	NP	NP	3	321
L5	IMA-SS-L5-016	--	10/17/2007	NP	NP	3	728
I21	IMA-SS-I21-017	--	10/17/2007	NP	NP	3	4,010

TABLE 2
SUMMARY OF GRID LOCATION SPLIT SAMPLE ANALYTICAL RESULTS

GRID ID	SAMPLE ID	TOTAL DEPTH (inches bgs)	DATE OF SAMPLING	PRP SAMPLE INTERVAL (inches bgs)	PRP ANALYTICAL RESULT (mg/kg)	START SPLIT SAMPLE INTERVAL (inches bgs)	START ANALYTICAL RESULT (mg/kg)
J22	IMA-SS-J22-018	--	10/17/2007	NP	NP	3	538
L22	IMA-SS-L22-019	--	10/17/2007	NP	NP	3	993
I21 DUP	IMA-SS-I21-020	--	10/17/2007	NP	NP	3	1,680
EB #1	IMA-EB-021	--	10/17/2007	--	--	3	ND
A9	IMA-CON-Q9-022	6	11/6/2007	6	189	6	120
C8	IMA-CON-C8-023	12	11/6/2007	6	403	6	270
				12	166	12	NA
D6	IMA-CON-D6-024	6	11/6/2007	6	208	6	240
G9	IMA-CON-G9-025	24	11/6/2007	18	1,580	18	330
				24	123	24	NA
H9	IMA-CON-H9-026	12	11/6/2007	6	459	6	580
				12	281	12	NA
J9	IMA-CON-J9-027	18	11/6/2007	18	47.5	18	36
M5	IMA-CON-M5-028	6	11/06/07	6	66.2	6	69
L5	IMA-CON-L5-030	6	11/6/2007	6	143	6	150
N1	IMA-CON-N1-029	12	11/6/2007	6	464	6	460
				12	87.4	12	NA
N4	IMA-CON-N4-031	6	11/7/2007	6	110	6	140
N5	IMA-CON-N5-032	12	11/7/2007	12	113	12	190
O5	IMA-CON-05-033	12	11/7/2007	12	159	12	260
N6	IMA-CON-N6-	12	11/7/2007	6	NA	6	400

TABLE 2
SUMMARY OF GRID LOCATION SPLIT SAMPLE ANALYTICAL RESULTS

GRID ID	SAMPLE ID	TOTAL DEPTH (inches bgs)	DATE OF SAMPLING	PRP SAMPLE INTERVAL (inches bgs)	PRP ANALYTICAL RESULT (mg/kg)	START SPLIT SAMPLE INTERVAL (inches bgs)	START ANALYTICAL RESULT (mg/kg)
	034			12	59.8	12	NA
I10	IMA-CON-I10-035	12	11/8/2007	12	78.5	12	75
M10	IMA-CON-M10-036	6	11/8/2007	6	231	6	330
M10DUP	IMA-CON-M10DUP-037	6	11/8/2007	6	NA	6	290
K11	IMA-CON-K11-038	12	11/8/2007	6	287	6	420
				12	261	12	240
L11	IMA-CON-L11-039	12	11/8/2007	6	220	6	430
				12	191	12	NA
EB # 2	IMA-QA-EB-040	--	11/9/2007	--	--	--	.010 U
I12	IMA-SB-I12-041	18	11/9/2007	18	29.7	18	67
L12	IMA-SF-L12-042	12	11/12/2007	12	193	12	220
D10	IMA-SF-D10-043	12	11/13/2007	6	466	6	NA
				12	67	12	7.3
M13	IMA-SB-M13-044	12	11/13/2007	12	101	12	100
H13	IMA-SB-H13-045	24	11/13/2007	24	309	24	440
L14a	IMA-SF-L14-046	6	11/14/2007	6	174	6	200
J14b	IMA-SF-J14-047	12	11/15/2007	12	92.2	12	100
L22	IMA-SF-L22-049	12	11/15/2007	12	160	12	200
K-22	IMA-SF-K22-048	6	11/15/2007	6	296	6	300
H15	IMA-SB-H15-049	24	11/16/2007	24	230	24	420

TABLE 2
SUMMARY OF GRID LOCATION SPLIT SAMPLE ANALYTICAL RESULTS

GRID ID	SAMPLE ID	TOTAL DEPTH (inches bgs)	DATE OF SAMPLING	PRP SAMPLE INTERVAL (inches bgs)	PRP ANALYTICAL RESULT (mg/kg)	START SPLIT SAMPLE INTERVAL (inches bgs)	START ANALYTICAL RESULT (mg/kg)
H15DUP	IMA-SB-H15DUP-050	24	11/16/2007	24	NA	24	250
EB # 3	IMA-QA-EB-051	--	11/16/2007	--	--	--	.010 U
A25	IMA-SF-A25-052	6	11/19/2007	6	170	6	190
E24	IMA-SF-E24-053	6	11/19/2007	6	270	6	250
C25	IMA-SF-C25-054	6	11/19/2007	6	38.5	6	39
EB # 4	IMA-QA-EB-057	--	11/21/2007	--	--	--	.010 U
G25	IMA-SF-G25-057	6	11/27/2007	6	256	6	330
B22	IMA-SF-B22-060	6	11/27/2007	6	222	6	180
H24	IMA-SF-H24-058	6	11/27/2007	6	307	6	340
B21	IMA-SF-B21-061	6	11/28/2007	6	199	6	260
B21DUP	IMA-SF-B21DUP-062	6	11/28/2007	6	NA	6	250
EB # 4	IMA-QA-EB		11/30/2007	--	--	--	.010 U

Notes:
bgs = Below ground surface
mg/kg = Milligrams per kilogram
NA = Confirmation sample not submitted for analysis.
NP = Result not provided by Hepaco. Samples were obtained by the PRP prior to START mobilizing to the Site. Results were not split samples with Hepaco.
U = The analyte was analyzed for, but was not detected at or above the associated value.

TABLE 3
SUMMARY OF SPLIT STOCKPILE SAMPLE ANALYTICAL RESULTS

Location	Constituent	Sample ID	Date	PRP Analytical Result (mg/L)	START Analytical Result (mg/L)	TCLP Regulatory Limit (mg/L)
Stockpile #2	Arsenic	IMA-WA-STK-055	11/19/2007	ND	.010 U	5
	Barium			.078	.25 U	100
	Cadmium			.016	.021	1
	Chromium			ND	.050 U	5
	Lead			.29	.30	5
	Mercury			ND	.0002 U	.2
	Selenium			ND	.10 U	1
	Silver			ND	.050 U	5
Stockpile #3	Arsenic	IMA-WA-STK3-059	11/28/2007	.052	.10 U	5
	Barium			.026	.25U	100
	Cadmium			.018	.020 U	1
	Chromium			ND	.050 U	5
	Lead			.11	.10 U	5
	Mercury			ND	.0002 U	.2
	Selenium			ND	.10 U	1
	Silver			ND	.050 U	5

Notes:
mg/L = Milligrams per liter
ND = Not detected above laboratory detection limits.
U = The analyte was analyzed for, but was not detected at or above the associated value.

APPENDIX B

LOGBOOK NOTES

(46 Pages)

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Industrial Metal Alloy
Winston-Salem, NC

"Rite in the Rain"®
ALL-WEATHER
JOURNAL
No. 391

TTEMI-05-001-0039

October 2007 - November 2057

1 of 2

"Rite in the Rain"®
ALL-WEATHER WRITING PAPER

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Forsyth County
TTEM1-05-001-0039
OSC: Matt Huyser
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CONTENTS

PAGE	REFERENCE	DATE

C 5 0

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10/16/07 Tuesday

1000 The weather was sunny and 67°F leaving Duluth, GA for the site in Winston-Salem, North Carolina. START Didi Fung mobilized to the site to perform soil sampling for ~~lead~~ total lead in ~~surface~~ surface soil grids. These grids were sampled recently by the PRP's consultant, Brown & Caldwell to determine if any further removal is needed in the residential properties surround the site. START was tasked to sample approximately ⅓ of the total samples collected by Brown & Caldwell's ~60 samples.

1500 START Fung arrives at the site. Chuck Bartholomew with HEPACO, the site supervisor, was met. The site health & safety plan was reviewed and signed. Chuck and START Fung walked the site and surrounding residential properties. Currently clearing & grubbing activities are continuing. Survey grids have been ~~lay~~ staked out ~~to~~ only in the residential properties surround the site. Blue ~~marked~~ markers, approximately 10" in length, show the grid intersections. START informed Chuck the surface soil sampling would begin tomorrow. START requested from Brown & Caldwell the grid #'s sampled by them.

Didi Fung

Tuesday 10/16/07

1630 START called James Kesler with HEPACO to determine ~~what~~ how the slag on site will be handled. The larger pieces ~15" in diameter will try and be recycled. The smaller pieces will be treated with the soils contaminated w/ Lead. HEPACO will mix the soil/slag with ~3% triple super phosphate (TSP) based on bench tests.

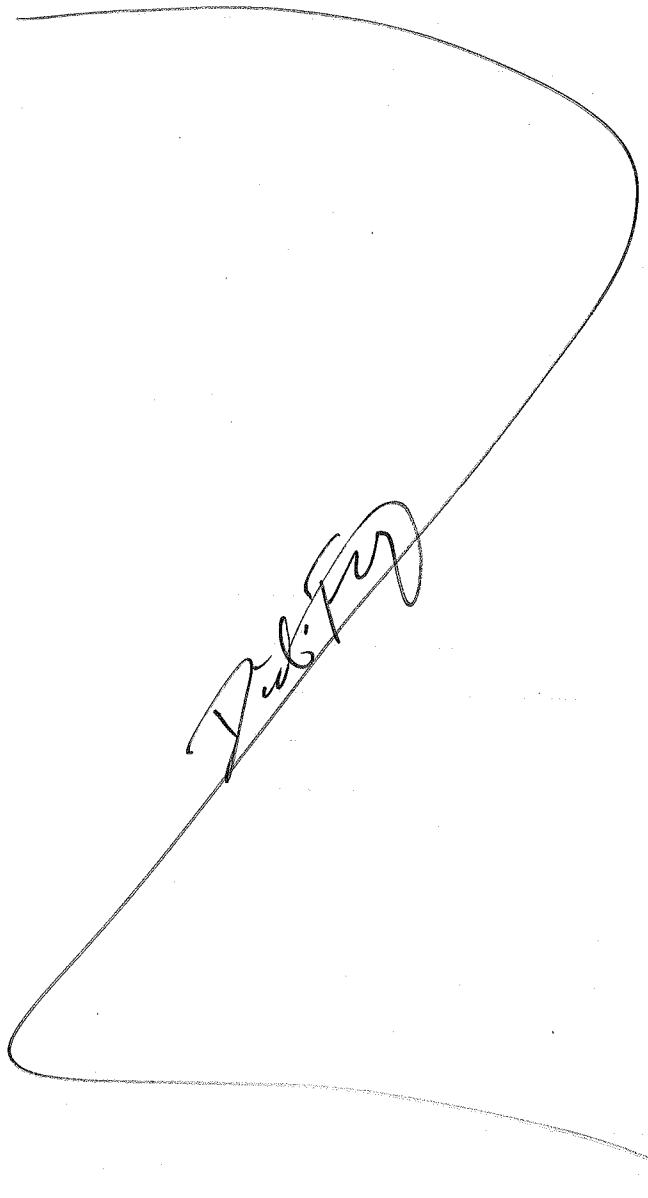
1700 START arrives at the Wingate Inn and ends the day. Matt Huyser was briefed on the days events. The OSC is in route to Winston-Salem, NC and will be at the site tomorrow at 0730.

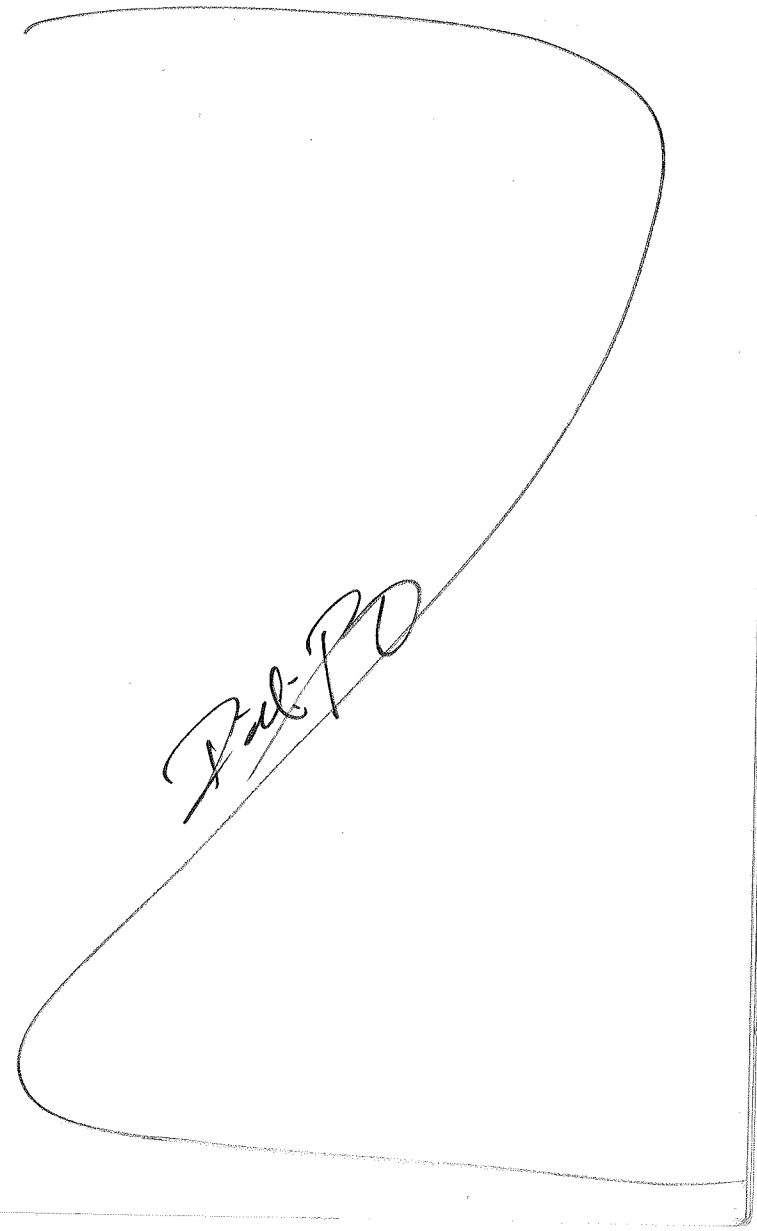
WEDNESDAY 10/17/07

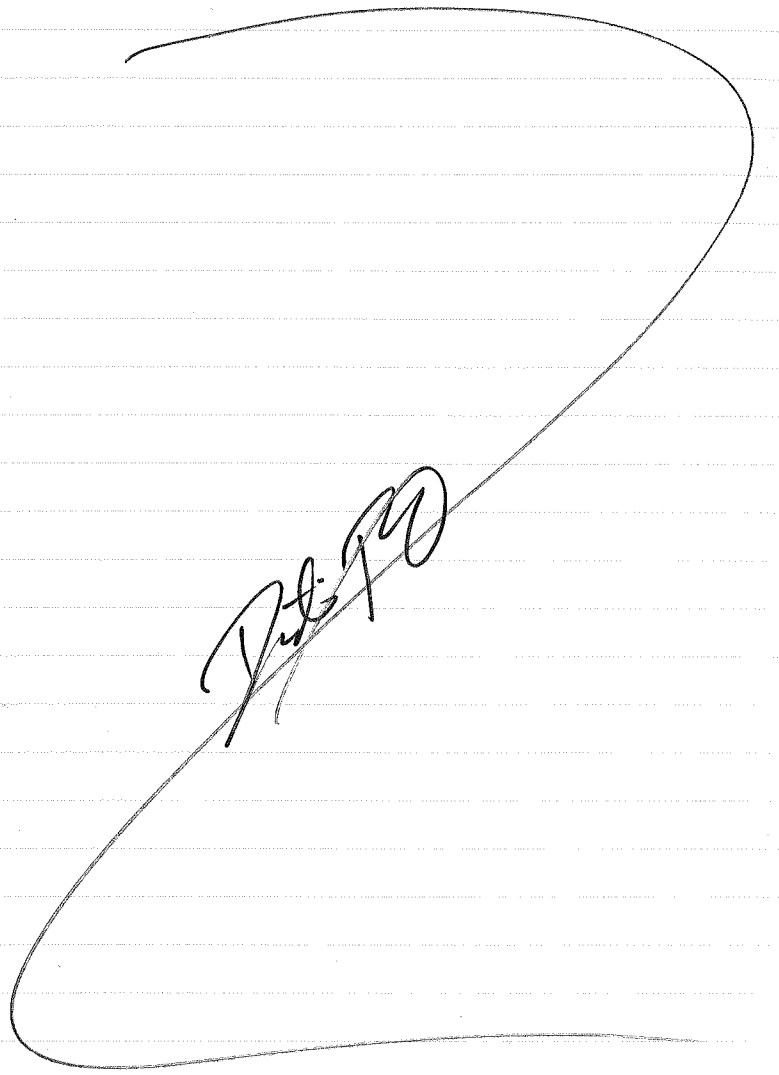
0730 START Fung & OSC Huyser arrive at the site. Matt was briefed on the H&S concerns and activity completed to date. No crews are working on site today. START Fung and OSC Huyser walked the site. The grids to be sampled were flagged. Site photos were taken. One slag (large) piece was noticed in the creek bordering the south property boundary. This was later pointed out to Chuck Bartholomew with HEPACO. Small pieces of slag were also noticed on the easement property bordering the west property boundary of the facility.

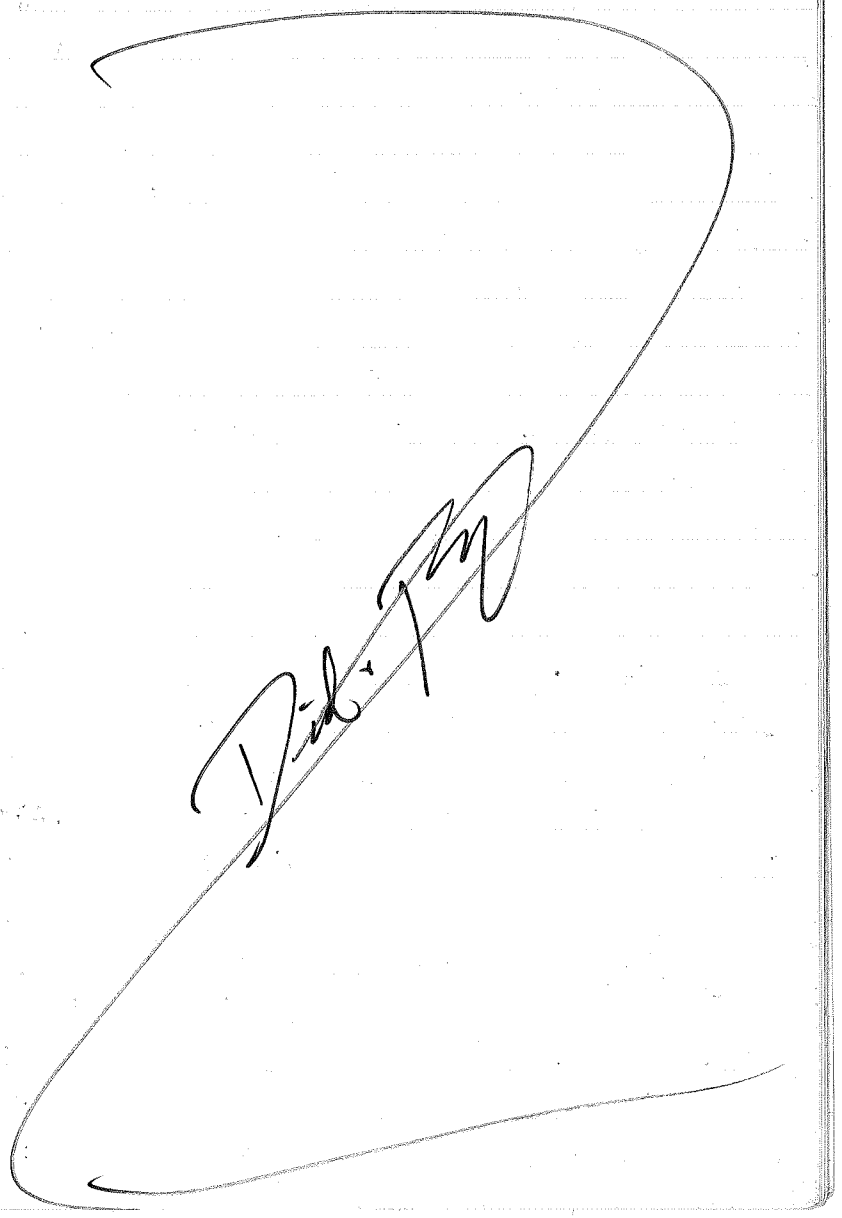
0920 START began collecting surface soil samples (20 including 1 dup)

Didi Fung









10/17/07 WEDNESDAY

0920 The following nomenclature was used to table the soil samples.

~~IMA~~ DP

— SITENAME - MATRIX - GRID - SEQ COUNT #

[IMA - SS - A6 - 001] example

The table below shows the grids sampled and the associated total ~~lead~~ DP lead results. Surface soil (0-3") was collected and if slag was detected, it was crushed before be homogenized with the sample. ~~Samples were~~ DP

SAMPLE NAME	SAMPLE TIME	HEPACO XRF UNIT (ppm)	FIXED LAB UNVALIDATED
IMA-SS-A6-001	0940	387 ± 10	319
IMA-SS-A9-002	1000	1157 ± 18	1040
IMA-SS-C8-003	1010	1054 ± 17	2190
IMA-SS-D6-004	1031	425 ± 11	470
IMA-SS-D9-005 *	1032	6953 ± 217	1510
IMA-SS-F9-006 *	1048	2494 ± 105	968
IMA-SS-H9-007 *	1051	1505 ± 20	1280
IMA-SS-J9-008 *	1120	1273 ± 19	1270
IMA-SS-L9-009	1150	640 ± 51	989
IMA-SS-N9-010	1207	1311 ± 67	799
IMA-SS-07-011	1229	2196 ± 82	327, 355
IMA-SS-05-012	1304	379 ± 11	358
IMA-SS-N6-013 *	1325	855 ± 15	682
IMA-SS-N4-014	1344	991 ± 16	1090

D. de Tr

WEDNESDAY 10/17/07

SAMPLE NAME	SAMPLE TIME	HEPACO XRF UNIT (ppm)	FIXED LAB UNVALIDATED
IMA-SS-N3-015	1412	388 ± 10	321
IMA-SS-L5-016	1437	912 ± 15	728
IMA-SS-I21-017 *	1549	3840 ± 40	4010
IMA-SS-J22-018	1510	525 ± 12	538
IMA-SS-L22-019	~~1512~~ DF 1520	998 ± 17	993
IMA-SS-I21 DUP-020 *	1557	1958 ± 25	1680
IMA-EB-021	1822	NA	Not detected

Notes: all soil samples were 5 point composite except IMA-SS-I21-017 & IMA-SS-I21DUP-020. IMA-EB-021 was an equipment rinsate ~~blank~~ DP sample.

1830 START Fury & OSC Huysar packed up and left the site. START samples were setup to go to Shealy labs, but equipment issues made it necessary to use AES in Atlanta, GA.

THURSDAY 10/18/07

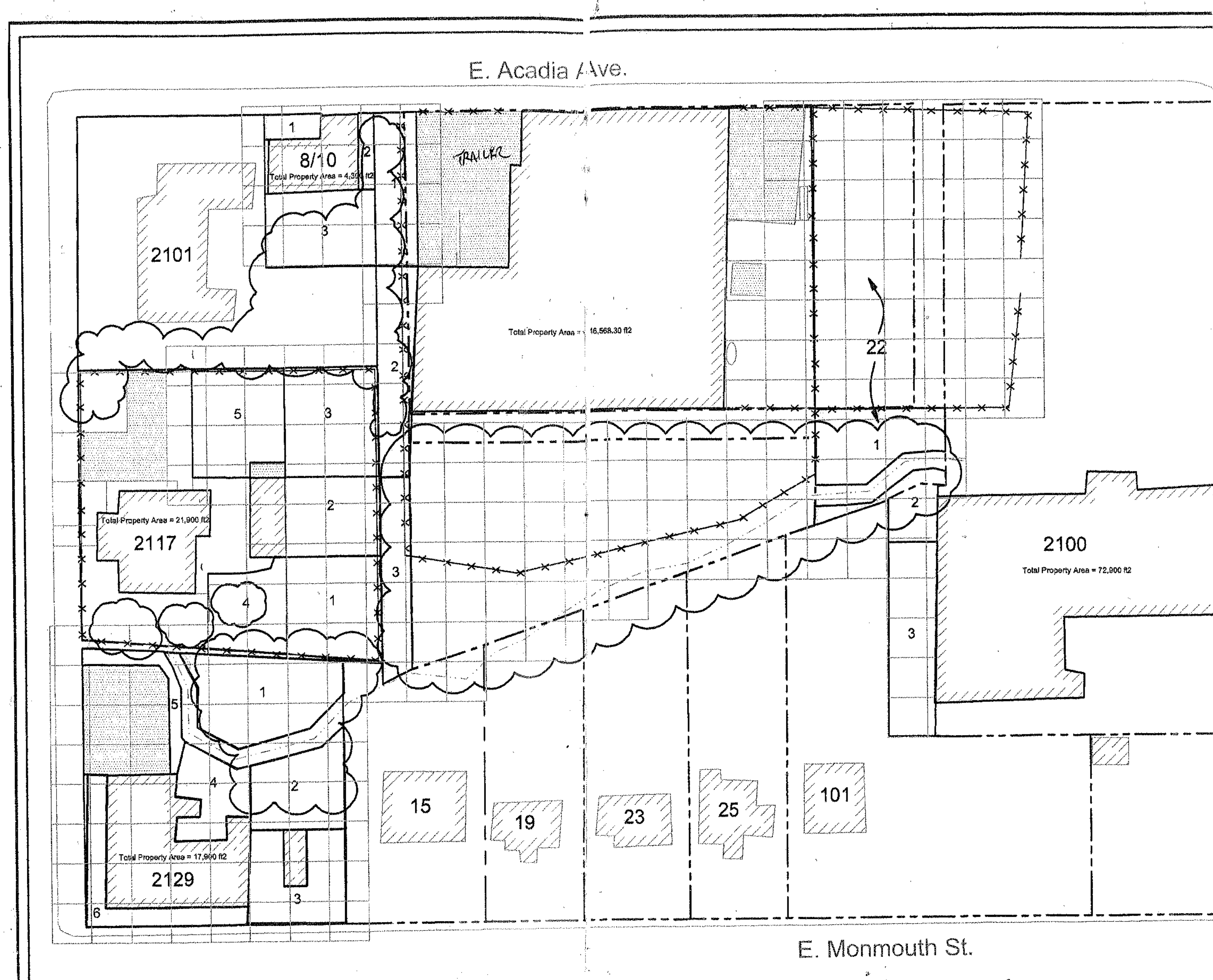
0800 Demobed, NC for Atlanta, GA.

1500 START Fury arrives at AES labs.

D. de Tr

10/18/07

10/18/07



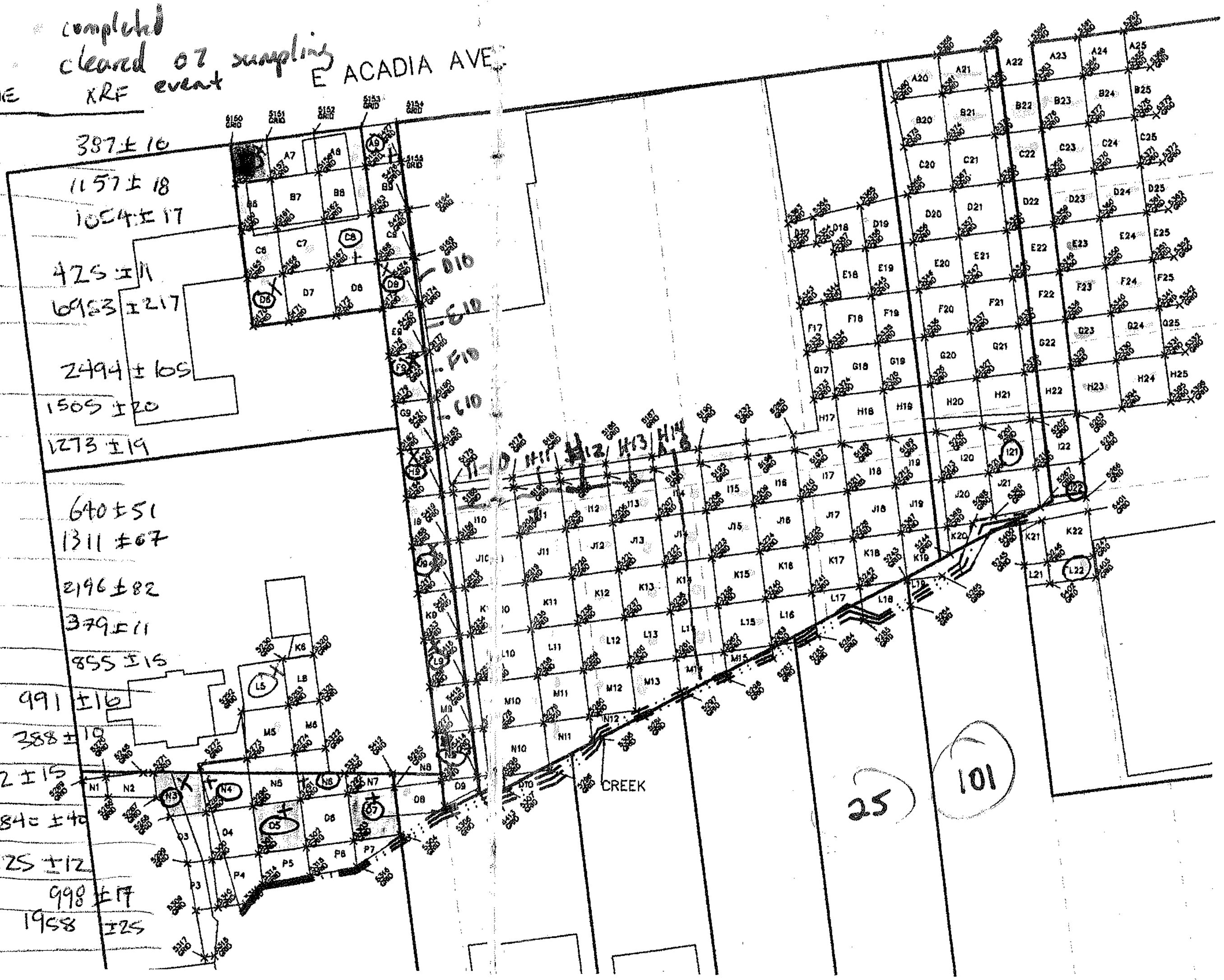
Del. Pg

Del. Pg

10/18/07

completed
cleared 07 sampling event

GRID	SAMPLE TIME	XRF
① A6	0940	387±16
② A9	1000	1157±18
③ C8	1010 ~~1053~~	1054±17
④ D6	1031	425±11
⑤ D9 (slag)	1032	6983±217
~~D6~~	~~1037~~	
⑥ F9 (slag)	1048	2494±105
⑦ H9 (slag)	1051	1505±20
⑧ J9 (slag)	1120	1273±19
⑨ L9	1150	640±51
⑩ N9	1207	1311±67
⑪ O7	1229	2196±82
⑫ O5	1304	379±11
⑬ N6 (slag)	1325	855±15
⑭ N4	1344	991±16
⑮ N3	1412	388±10
⑯ L5	1437	912±15
⑰ I21 (slag)	1549 4pt	384±40
⑱ J22	1510	525±12
⑲ L22	1520	998±17
⑳ I21 DUP (slag)	1554	1958±25



10/18/07

[signature] [signature]

11/6/07 Tuesday

0830 Tetra Tech Nelson and Fung onsite. Meet with Hepaco H&S officer. Review H&S plan, sign and review tailgate safety meeting. Review site map and go over excavation progress to date. ——BM

0930 At grid K6, most of grid is under concrete slab. Small area will be hand excavated, the remainder of the grid will be left under concrete. BM Photo #43 - grid K6, NW ——BM

0949 START Nelson and Fung shooting questionable material on bottom of excavation in grid C8. Result 103 ppm-Pb, Second shot 73 ppm-Pb ± 4. ——BM

0950 Piece of slag encloved in sidewall (west) of grid D9. START Fung screening with XRF: ND - Pb ——BM

Shoot point along drainage pipe, west side of building, 2' from west wall in grid E9, result = 3,918 for Pb. ——BM

1000 START Fung shooting additional point on southern line of grid E9, result = 3,000 Pb. GRID F9 centered E&W on northern line of GRID F9 = 244 Pb. ——BM

1010 GRID J9 XRF = 700, wipe surface clean and reshoot. Reshoot = 120 ppm. ——BM

11/6/07 Tuesday

1100 Set up Olivon station, review work plan

1255 Confirmation sampling

GRID	DATE	TIME	XRF
A9	11/6	1257	211 ± 7
C8	11/6	1300	254 ± 8
D6	11/6	1302	297 ± 9
G9	11/6	1310	395 ± 10
H9	11/6	1312	
J9	11/6	1319	45 ± 4
~~M9~~	11/6	~~1322~~	

BM Could not obtain sample due to excavation in grid to south. ——BM

1340 Hepaco obtain 5 point composite sample from grid M5 to split. BM

GRID	DATE	TIME	XRF
M5	11/6/07	1340	93 ± 5
N1	11/6/07	1425	394 ± 10

1456 Contractor reconnecting fence sections after excavation of grids ~~L5~~ from L5, partial M5. ——BM

Photo #44 - grids L5 and partial M5, N1.

1530 Complete sample processing ——BM

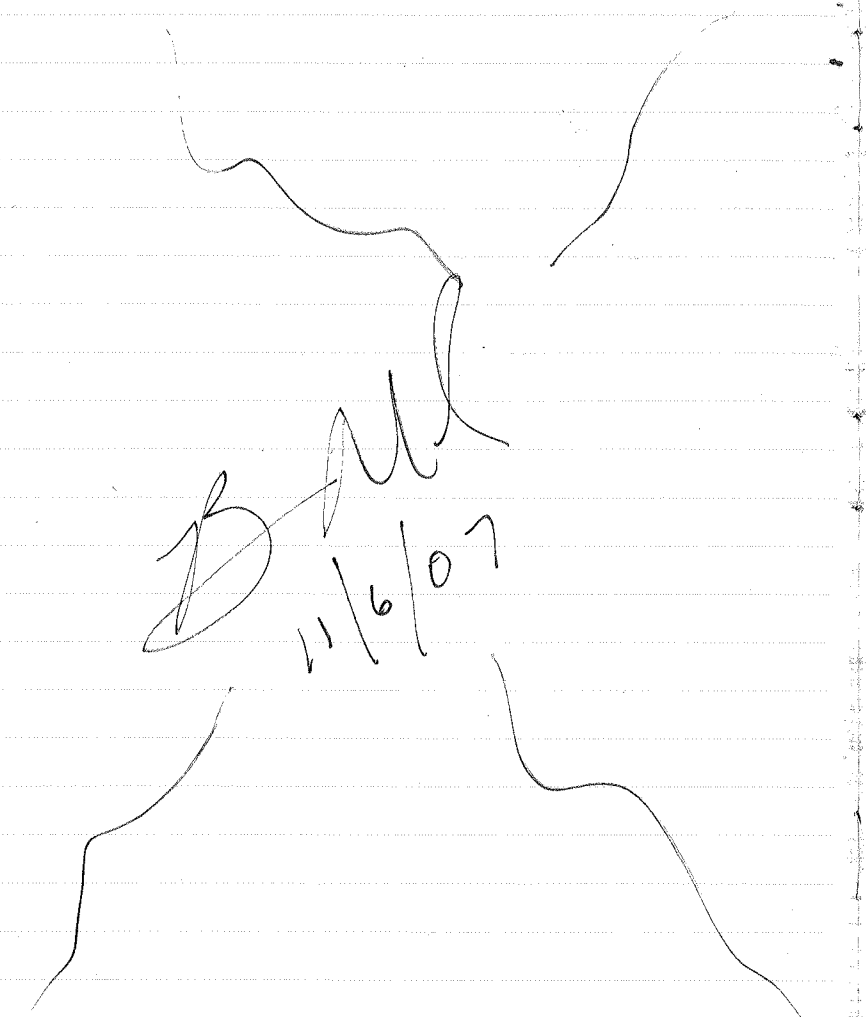
1635 Depart site to drop samples at fedex

1650 Samples dropped for Fed-Ex priority

11/6/07 Tuesday

shipping, return to site. —BM

1700 Depart site. —BM



11/7/07 Wednesday

0810 START NITRONZ onsite. Tailgate safety meeting review and sign off.

0850 Spoke with OSC Heyser about site activities. Would like samples split for all off-site properties. Onsite grids will be split in the frequency of 25%. Indicated if newspaper personell stop by to notify OSC Heyser and provide his office phone number. —BM

0900 Hepaco representative obtaining samples of grid N5. Sample will be split. BM

GRID	DATE	TIME	XRF	DEPTH
N5	11/7	0901	663 ± 12	6"

- GRID N5 will be re-scraped for XRF clearance. —BM

0953 Photo #45: Excavation of grid N4 (W) BM

1015 Photo #46: Excavation of grid N4 (W) BM

1024 Photo #47: Sampling of grid N4 (W) BM

1024	N4	11/7	1024	141 ± 6	6"

1100 Decontaminate sampling equipment.

1145 Break for lunch —BM

~~1245 BM~~ 1215 Return from lunch —BM

Hepaco sampling grid N-5 at ~~BM 6"~~ 6-12" after additional excavation.

N5	11/7	1255	210 ± 7	12"
O5	11/7	1331	547 ± 12	6"

11/7/07 Wednesday

1345 Grid O5 will be excavated to a depth of 12" and screened
Photo # 48 - Grid O5 excavated to 12", S.
49 - Grids N4, N5, O5 excavation, SW.
50 - Grids E9 - K9 south along west side of building, S. — BM
51 - Grids D6, C6, C7, C8, W. — BM
52 - Grids D9 - A-9, N. — BM

GRID	DATE	TIME	XRF	DEPTH
O5	11/7/07	1410	215 ± 7	12

1500 Contractor completed excavation of grid N6 to a depth of six inches. Hepaco obtained 5-point composite sample from the bottom of the excavation, depth 6".

N6	11/7/07	1500	359 ± 9	6"

1510 Excavation of grid N7 completed to a depth of 6". Sample 5-point comp from bottom of excavation. — BM

N7	11/7/07	1515	112 ± 5	6"
N8	11/7/07	1535	157 ± 6	6"

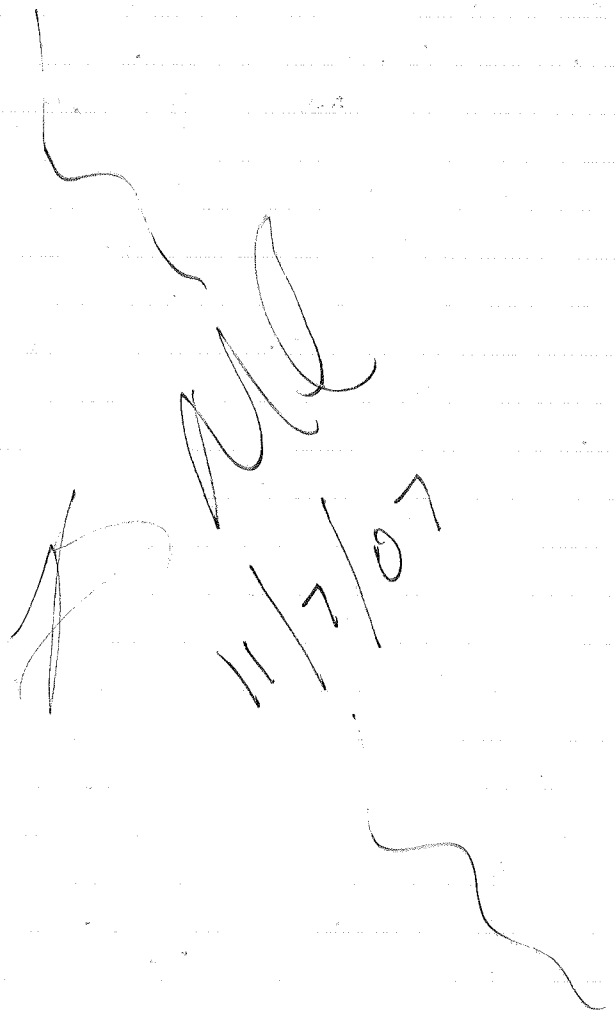
1545 Hepaco to grid N9 to obtain 5-point composite sample from bottom of excavation.

N9	11/7/07	1550	132 ± 6	6"

1610 Contractors discontinue excavation of grids and begin decon and wrap up. Will begin excavation of row 10 tomorrow.

11/7/07 Wednesday

1630 Depart site. — BM



11/8/07 Thursday

0815 START onsite. Contractor donning PPE and preparing to begin work. BM

0830 Hepaco collect 5-point composite sample from grid ~~J10~~ J10 which was completed 11/8/07

GRID	DATE	TIME	XRF	DEPTH "
~~J10~~ J10	11/8/07	0835	78 ± 5	6"
I10	11/8/07	0850	~~583~~ 113 ± 5	12"

0850 Contractor completed excavation of grid I10 to a depth of ~~6~~ 12" bgs. No slag visible in bottom of excavation. Hepaco collected 5-point composite sample from excavation bottom.

0915 Visually inspect grid K-10 and sample for slag. None identified. Contractor collected 5-point composite. BM

0935 Grid L10 completed, confirmation sampling conducted on bottom of excavation. BM

0940 Confirmation in-situ XRF shot, center of grid J10. Results = 266 ± 8 BM

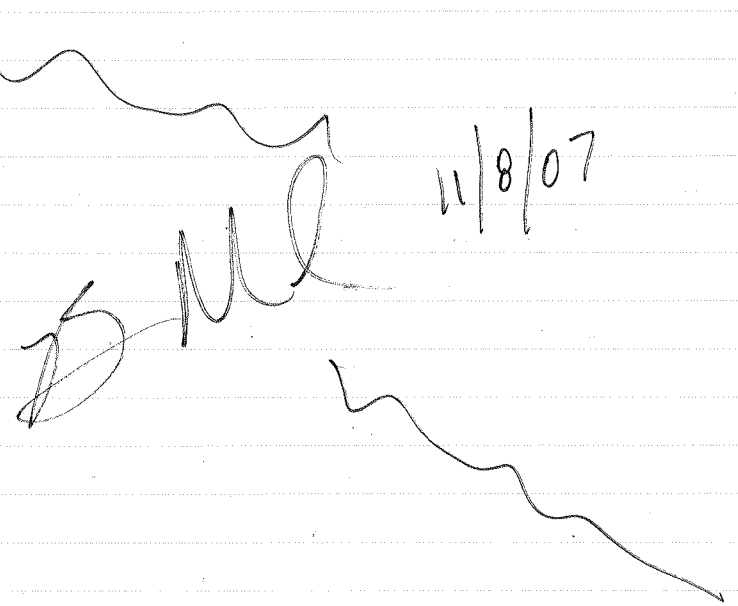
0945 Confirmation in-situ XRF shot, bottom of excavation, center of grid on high spot K10 results = 494 ± 11. BM

GRID	DATE	TIME	XRF	DEPTH
K10	11/8	0915	46 ± 4	6"
L10	11/8	0934	98 ± 5	6"

1002 Completed excavation of grid M10 to a depth of 6". BM

11/8/2007 Photo Log Thursday

#	Date	Time	Desc.	Dir
53	11/8	0820	Completed excavation J10.	SE
54	11/8	0850	Completed excavation I-10. 5-point composite sampling	NE
55	11/8	1002	Completed excavation K, M10. 5-point composite samples.	S
56	11/8	1135	Re-excavation grid H-11 to 12".	E
57	11/8	1355	Extent of excavation rows 10&11,	SE
58	11/8	1556	Contractor consolidating, grubbing and moving woody debris,	SE
59	11/8	1600	Contaminated soil stockpile,	NW



11/8/2007 Thursday

1005 No visible slag in bottom of excavation of 10 line of grids. Contractor will be moving to 11 line of grids. BM

GRID	DATE	TIME	XRF	Depth
M10	11/8	1005	383 ± 9	6"
N10	11/8	1035	247 ± 8	6"
H11	11/8	1100	1543 ± 21	6"
M11	11/8	1120	118 ± 5	6"

1015 START split sample with Hepaco for grid M10 and collect duplicate. BM

1016 Sample IMA-CON-M10-036 & IMA-CON-M10DUP-037

1030 Completed grid N10, Hepaco obtain 5 point composite sample from excavation at a depth of 6". BM

1050 Contractor moving to grid H11 to excavate. Small subgrid approximately 3' wide along south side of building. Hepaco obtained 5 point composite sample. BM

1126 Contractor obtaining XRF readings of grid M11, will excavate H11 to 12" when they complete 11 grid row. BM

1138 Hepaco completed grid N11 and re-excavated H11 to 12". Hepaco collecting 5-point composite sample from N11. BM

1145 Contractor breaking for lunch BM

11/8/2007 Thursday

GRID	DATE	TIME	XRF	DEPTH
N11	11/8	1145	265 ± 8	6"
H11	11/8	1300	~~388~~ 201 ± 7	12"

1300 Hepaco resume excavation of grids in 11 row. BM

1330 Hepaco obtain 5-point composite sample from grid I11 at 6" bgs. XRF screening:

GRID	DATE	TIME	XRF	DEPTH
I11	11/8	1335	564 ± 12	6"
J11	11/8	1416	602 ± 12	6"

1425 Hepaco re-sample grid I11. Excavated to a depth of 12" bgs BM

1430 Hepaco preparing for additional excavation at grid J11, adding tri-super phosphate.

GRID	DATE	TIME	XRF	DEPTH
I11	11/8/07	1430	132 ± 6	12
J11	11/8/07	1450	107 ± 5	12

1500 Hepaco sampling grid K11 from bottom of excavation at a depth of 6" bgs.

K11	11/8/07	1510	350 ± 9	6

START will split sample from grid K11.

1520 Hepaco sampling grid L11 from bottom of excavation at a depth of 6",

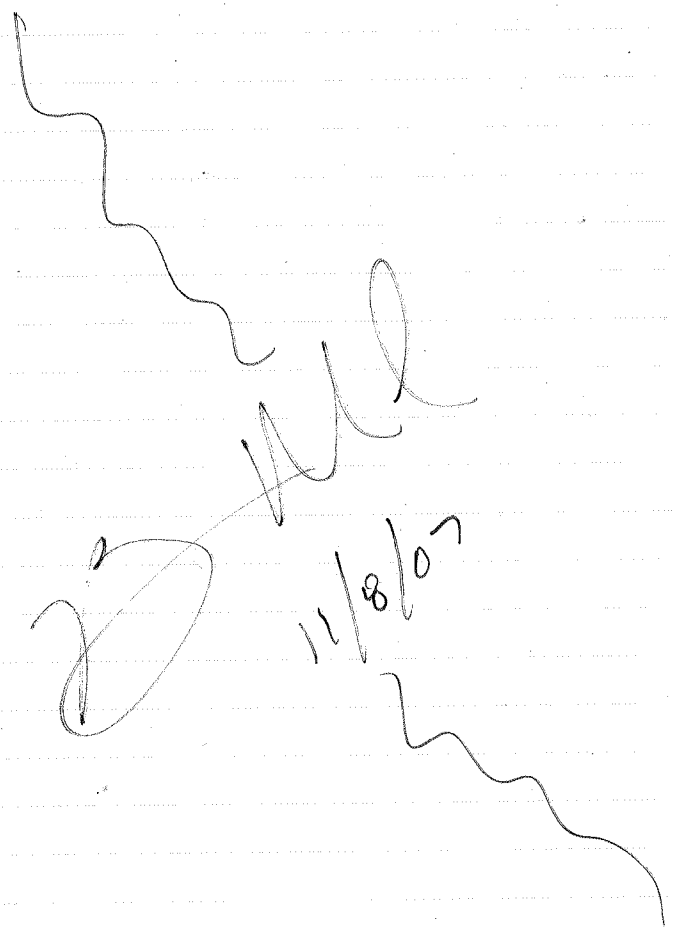
L11	11/8/07	1525	397 ± 10	6"

Hepaco will submit for analytical, START will split sample. BM

11/8/2007 Thursday

1645 Hepaco stop excavation for the day and decon - wrap up activities. BM

1700 START depart site for the day.



11/9/07 Friday

0745 Onsite. Hepaco having tailgate safety meeting. BM

0900 START processing samples for submission to laboratory for analysis. Samples submitted

IMA-CON-N1-029	11/6/07	1425
IMA-CON-N4-031	11/7/07	1024
IMA-CON-N5-032	11/7/07	1255
IMA-CON-O5-033	11/7/07	1410
IMA-CON-N6-034	11/7/07	1500
IMA-CON-I10-035	11/8/07	0850
IMA-CON-M10-036	11/8/07	1005
IMA-CON-M10DUP-037	11/8/07	1005
IMA-CON-K11-038	11/8/07	1510
IMA-CON-L11-039	11/8/07	1525
IMA-QA-EB-040	11/8/07	1050

1000 Hepaco collects sample from GRID H12, 5-point composite, bottom of excavation.

GRID	DATE	TIME	XRF	DEPTH	
H12	11/9	1000	2336 ± 28	6"	*
I12	11/9	1020	1828 ± 23	6"	*
H12	11/9	1040	373 ± 9	12"	

* Grids require additional excavation.

1130 Visual assessment of grids I12 & H12, NO slag visible at 12" depth. BM

11/9/07 Friday

Photolog

#	Date	Description	Direction
60	11/9/07	Grids I12 & H12 at 12" bgs	East
61	11/9/07	Close-up, soil conditions grid H12 — BM	Down, facing east

GRID	DATE	TIME	XRF	DEPTH
I12	11/9/07	1200	936 ± 16	12" *
J12	↓	1230	314 ± 9	+2 BM 6"
K12	↓	1245	476 ± 11	6" *

+BM 1145 Break for lunch, pick up ice — BM

1215 Return from lunch. — BM

1230 Split sample J12 with Hepaco, not submit for analytical. — BM

1500 Crew depart site. START to drop fed-ex and pick-up supplies.

11/9/07

* Additional excavation required for clearance.

Industrial Metal Alloy

11/12/07 Monday

0830 Onsite. Hepaco setting up for excavation.

GRID	DATE	TIME	XRF	DEPTH
I12	11/12	0930	96 ± 3	18

- I12 sample obtained 11/9 ② 1315

0930 Hepaco re-excavating grid C8, laboratory results came back above 400 ppm Pb. According to analytical grids C8, D10, G9 and H9 need additional excavation.

1010 Hepaco re-excavating grid C8. Photo 64.

1025 Hepaco sampling grid K-12 at 12" bgs.

1130 Contractor surveying in bottom of excavation of grid C8. XRF PDA charging, sampling will be conducted on grids L12, M12, N12 and C8 after lunch — BM

1145 Hepaco take lunch break — BM

1300 Hepaco begin re-excavation of grid D10 — BM

1333 Contractor shooting depths of excavation grid D10 +1m Hand excavating sidewalls — BM

Grid D10 excavated to a depth of 2' BSM 10 row was added started at northern line of grid D and is approximately 2' wide continuing to southern corner of building at H row. — BM

1400 Hepaco initiating re-excavation of grid G9. — BM

11/12/07 Monday

Photolog

#	Date	Description	Direction
62	11/12	Extent excavation I12 18"	E
63	11/12	Extent of excavation row 12	SE
64	11/12	Re-excavation of grid C8	W
65	11/12	Sampling K12 @ 12" 5-pt	E
66	11/12	Complete excavation at grid C8 to a depth 12"	W
67	11/12	Completed excavation grid D10 at a depth 2"	S
68	11/12	Completed excavation grids 69 to 24", H9 to 12"	N

BM

GRID	DATE	TIME	XRF	DEPTH
K12	11/12	1025	76±5	12"
L12	11/12	1425	289±8	6"
M12	11/12	1440	100±5	6"
C8	11/12	1455	232±8	12"

1410 Grid 69 to be excavated to a depth of 24" BM

1415 Resident: Christine Musgrave (336)764-5427 25 & 101 East Monmouth onsite to inquire about activities potentially affecting her properties. She was given a brief overview of site activities. She inquired about

11/12/07 Monday

sampling and results from her two properties. START informed her to contact OSC Matt Heyser to discuss and get specific information regarding her properties, sampling & excavation activities and analytical results. ——— BM

1450 START to split sample, 5-point composite from grid L12 at 6", bgs. GRID L12 result 311±9 at 1455. - BM

1510 START MASONE contacted START FUNL to determine if analytical results are available for properties located at 25 & 101 E. Monmouth St. No data points indicated on 2007 sampling maps and no excavation is planned on south side of creek on those properties.

1605 Grids 69 and H9 excavation completed. 69 excavated to 24" bgs and H9 excavated to a depth 12" bgs. ——— BM

1635 START depart site ——— BM

11/12/07

11/13/07 Tuesday

0800 START onsite. Hepaco conducting: H&S tailgate meeting. —BM

0900 Hepaco moving scrap pile and adding fertilizer to soil excavated 11/12/07. Hepaco collected samples from the bottom of excavation grids G9 & D10. START will split sample from grid D10. —BM

0945 Hepaco collected 5-point composite sample from bottom of excavation at 12" bgs.

0955 START informed Hepaco will be shipping samples out today specifically including grids C8, G9, D10 and H9 to expedite backfill process. START will ship samples out today as well. —BM

1015 Hepaco completed excavation of grid M13 to a depth of 12" bgs —BM
START will split sample M13 —BM
START re-screened split sample and obtained an XRF reading of 411 ± 10 compared to Hepaco's reading of 338 ± 9. Hepaco will take additional 6" lift from M13.

1020 Results - Laboratory

A9 - 120 C8 - 270 D6 - 240 G9 - 330
H9 - 580 J9 - 36 M5 - 69 L5 - 150

1050 Hepaco completed additional lift at grid M13 and obtained 5-point comp. sample.

11/13/07 Tuesday

Photolog

#	Date	Time	Description	Direction
69	11/13		Treated stockpile	West
70	11/13		Extent of excavation 0900 SW	
71	11/13		Small pieces of unknown material resembling slag on grid 69	Down
72	11/13		Completed excavation of grids M13 & L13	SE
73	11/13		Hepaco sieve sample prior to screening	SE
74	11/13		Hepaco obtaining 5-pt composite sample of grid H-13	E

Screening Results

GRID	DATE	TIME	XRF	DEPTH
69	11/13	0925	172 ± 7	24"
D10	11/13	0900	75 ± 5	12"
H9	11/13	0945	286 ± 8	12"
M13	11/13	1015	338 ± 9	6-12"
M13	11/13	1045	123 ± 6	12"
L13	11/13	1115	140 ± 6	6"
H13	11/13	1130	424 ± 10	6"
K13	11/13	1330	316 ± 9	6"
H13	11/13	1345	382 ± 9	24"

11/13/07 Tuesday

Initial excavation of grid M13, ranged from 6-12 inches. Grid was leveled to a even depth of 12" bgs ——— BM

1100 Contractor completed excavation of first 6" lift L13 and excavating grid ~~M13~~ H13.

1110 Itepaco obtaining 5-point composite sample from grid H13. ——— BM

1130 START obtain split sample from grid M13 at a depth of 12" ——— BM

1145 Contractor take lunch break ——— BM

1215 START break for lunch ——— BM

1245 Return to site to resume excavation activities ——— BM

1352 Contractor broke a storm drain located in grid J13. Will repair when excavation is completed. Itepaco obtain 5-point composite sample, bottom of excavation grid H13. No clay evidenced in bottom of excavation or sample. ——— BM

Relative elevation of grade will be adjusted because mounding of dirt around root system of tree stump was 1' higher in NE corner of grid compared to NW corner of grid. Initial elevations were shot as existing conditions. ie depth 12-18" at NE corner after 6" lift removed. ——— BM

11/13/07 Tuesday

1430 START begin processing samples for shipment. 48 hour TAT required on D10 to expedite results for backfill of NW grids the week of 11/19. ——— BM

1515 Contractor moving tree stumps and woody debris from eastern half of rows J, K and L. Debris is being shaken over large pile to isolate residual dirt within unexcavated grids. ——— BM

1517 Photo # 75: Tree stump and woody debris removal, SE

GRIDS SUBMITTED FOR ANALYSIS

IMA-SB-I12-041	11/9/07	1315
IMA-SF-L12-042	11/12/07	1425
IMA-SF-D10-043	11/13/07	0900
IMA-SB-M13-044	↓	1045
IMA-SB-H13-045	↓	1343

* All samples split from 5-point composites obtained by Itepaco ——— BM

1600 START depart site to drop samples at fed-ex for overnight delivery. BM

1630 Drop samples at fed-ex hand to hotel. ——— BM

11/13/07

11/14/07 Wednesday

0800 Onsite. H&S safety briefing — BM

0830 Hepaco continuing to clear and grub and move woody debris pile in preparation of sampling Row 14. — BM

0920 Hepaco obtaining sample at grid I13, 5 point composite sample at a depth of 6" bgs. — BM

0925 No oily evidenced in bottom of excavation.

0955 Grid I13 excavated to 12" bgs. Hepaco resampling grid. — BM

1040 Hepaco obtained sample from grid J13, sample above 400ppm will excavate additional 6" left.

1050 Hepaco completed excavation additional 6" grid J13. Obtain 5-point composite sample.

1130 14 row will be split, planned excavation depth on western half is 6" and 12" on eastern half. Seperate 5 point composites will be obtained from each. — BM

1320 Hepaco sampling grid M14. Grid split. to 6" on west side and 12" on east side. Clay pipe exists bisecting 14 row which connects to a cleanout in 13 row. Pipe damaged throughout run. — BM

1330 Hepaco asked about clay boulders in creek. Will have to be removed prior to

11/14/07 Photolog Wednesday

#	Date	Time am	Description	Direction
75	11/13/07		Contractor removing tree stumps and woody debris	E
76	11/14/07		Hepaco obtaining sample grid I13	E
77	11/14/07		Hepaco processing sample I13	SE
78	11/14/07		14 row, bisected with 2 beginning depths 6", & 12" E	N

Soil Screening

Date	Time	Grid	XRF	Depth
11/14	0915	I13	938 ± 15	6
11/14	0945	I13	161 ± 10	12
11/14	1030	J13	806 ± 14	6
11/14	1055	J13	100 ± 5	12
11/14	1115	H14A	528 ± 11	6
11/14	1155	L14A	276 ± 8	6
11/14	1215	M14	671 ± 15	6
11/14	1315	M14A	130 ± 6	12
11/14	1335	H14BA	571 ± 12	12
11/14	1345	K14A	102 ± 5	6
11/14	1415	K14B	90 ± 5	12
11/14	1425	L14B	213 ± 7	12

11/14/07 Wednesday

creek sediment excavation. Boulders "kettle bottoms" in fill pile will be segregated during excavation. BM

1335 Contractor sampling grid K14. Will re-excavate H14 to 18" in depth BM

1400 START asked Hepaco to obtain two discreet samples from row 14 (A,B) since they are starting excavation on the west side (A) at 6" and east side (B) at 12" to eliminate data gaps. Both sides of grid will be screened with the XRF unit. BM

1425 ~~1410~~ Samples obtained from grids L14B and M14B, K14B. PDA is down so samples will be screened on 11/15/07. BM

DATE	TIME	GRID	XRF	DEPTH
11/14	1425	M14B	298± 8	12

1500 M15 excavation completed to a depth of 12" bgs. BM

1523 Hepaco excavating grid L15. BM

DATE	TIME	GRID	XRF	DEPTH
11/14/07	1550	H14A/B	325±9	18
~~11/14/07~~		~~H14B~~		BM

1600 Sampling completed for the day. Excavation completed for the day. BM

1630 Depart site BM 11/14/07

11/15/07 Thursday

0830 Onsite. Hepaco suiting up to begin daily activities. H&S safety meeting. Hepaco to complete grids in row 14 and 15. Conditions very wet and muddy. BM

0900 START and Hepaco walk the silt fence to check for damage or breaks through. Fence is in good condition. One area near grid M13. Hepaco conducted repairs. BM

DATE	TIME	GRID	XRF	DEPTH
11/15	0900	I14	682±12	6
↓	0900	I14B	762± 13	12
11/15	1015	I14AB	BM 64 47±4	18
↓	1015	J14	228 ± 7	6
↓	1045	J14B	101 ± 5	12
11/15	1300	K15	37 ± 4	12
11/15	1300	L15	BM 150±6	12
11/15	1400	J15	164±6	12

1031 Hepaco resampled grid I14 at 18" and J14. Excavation of row 15 completed to grid J15. BM

1040 Excavation initiated at grid L22. Small 2" pipe uncovered 2" bgs. Line location service called to investigate BM

1045 Hepaco sampling grid J14B. BM

11/15/07 Thursday

Photolog

Date	#	Description	Direction
11/15	79	Silt fence along creek	East
	80	Silt fence along creek	West
	81	Hepaco repairing damage under silt fence	SE
	82	Small pipe located approximately 2" below ground surface, L22	S-SE
11/15/07			
11/15/07	83	Excavation of grid L22	S
	84	Piece of slag, numerous identified at southwest corner of site	E
	85	Location of slag chunks	E

1315 Hepaco collecting 5-point composite sample from grid K15 & L15. START split samples from grid L14 & J14.

1330 Representative to the city onsite at grid L22 to investigate pipe uncovered. The pipe is not gas or water line, suspect old fuel oil line feeding [illegible] building. Line will be exposed completely prior to excavation of grid. BM

1358 Hepaco excavating grid L22. BM

1448 Excavation continued to 12" at L22.

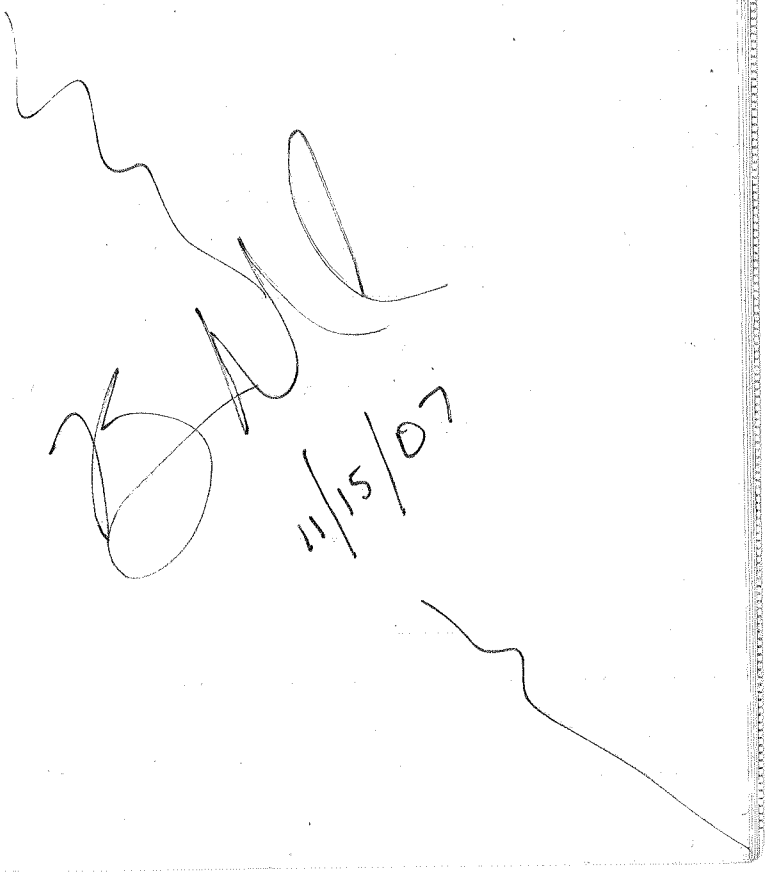
DATE	TIME	GRID	XRF	DEPTH
11/15	1430	L22	559 ± 12	6
11/15	1510	L22	134 ± 6	12
11/15	1615	K22	318 ± 9	6

11/15/07 Thursday

1600 Hepaco excavating grid K22. sampled 5 point composite at 1615, 6" depth.

1610 Excavation discontinued for the day. Split sample with Hepaco from grid K22. BM

1700 Depart site. BM



Friday 11/16/07

0745 START onsite. Conduct H&S briefing - Hepaco.

0815 Contractor to complete excavation on row 15. ——— BM

0920 Hepaco completed excavation of grid H15, waiting on XRF results. ——— BM

0945 Grid H12 requires additional excavation

DATE	TIME	GRID	XRF	DEPTH
11/16/07	0930	H15	2537 ± 28	6"
11/16/07	0950	H15	443 ± 10	18"
11/16/07	1005	H15	286 ± 8	24"
11/16/07	1005	H15 split	1529 ± 21	24"
11/16/07	1040	I15	1643 ± 22	12"
11/16/07	1100	I15	100 ± 5	18"

Photology

Date	#	Description	Direction
11/16/07	86	Hepaco sampling grid H15 at 24"	E

1015 Hepaco excavating grid I15. ——— BM

1020 START split sample H15 at 24" and collect duplicate ——— BM

1050 START inquired with Hepaco representative Barthomew about import material. Environmental and geo-technical analysis has been completed. Compaction to 95% proctor value required for excavation replacement beyond 6" bgs. ——— BM

1115 Excavation of row 15 completed. Hepaco to relocate to grid A24, survey, and begin excavation. ——— BM

1300 Begin excavation at grid A25. ——— BM

1330 Grids A25, 24, B25, 24 excavated awaiting sampling and XRF results ——— BM

1430 Hepaco completed excavation of Grids A25-E25 and A24-E24 to a depth of 6". Sampling will be conducted on 11/19/07. Spoke with OSC Huyser regarding manifesting waste. Brown and Caldwell will be required to obtain signatures from the responsible party. ——— BM

1445 Spoke with Jessica Vickers Tt, D&L. Sample D10 analytical result = 7.3 ppm

1450 Excavation completed for the day. Will process samples and send via fed ex # 8635 0881 9696 for Saturday delivery. ——— BM

1500 Submitting samples IMA-SF-L14-046, SF-J14-047, SF-L22-049, SF-K22-048, SB-H15-049, SB-H15DUP-044, IMA-QA-EB-051. ——— BM

Monday 11/19/07

0800 START onsite. Daily tailgate safety meeting. Spoke with Chuck B., Hepaco. Analytical results of TCLP analysis on stockpile has not been received. Will not haul contaminated stockpile offsite today. Hepaco will complete site maintenance activities, debris loading and sampling grids A25-D25, A24-E24. Tetra Tal will split samples. ——— BM

0856 First truck backfill material onsite, boulder Mulch and Topsoil ——— BM

1000 N1 - 460 N4 - 140 N5 - 190
05 - 260 N6 - 400 I10 - 75
M10 - 330 M10DUP - 290 K11 - 420
L11 - 430 EQ. BLANK - ND

1255 Hepaco continuing to backfill northeast of the building and along the west side of the building. ——— BM

Date	Time	Grid	XRF	depth
11/19/07	0940	J12	160±6	6
	1040	A25	243±8	6
	1100	A24	823±5	6
	1120	B24	96±6	6
	1140	C24	25±4	6
	1140	D24	46±5	6
	1250	E24	334±9	6
11/19/07	1250	B25	240±8	6

Monday 11/19/07

1300 START to split sample from A25.

1400 START and Hepaco rep. Bartholomew go to stockpile area to obtain composite sample for TCLP analysis. ——— BM
Stockpile sample obtained from eight distinct locations dug to 2 feet deep and sampled. Sample will be sieved, crushed and composited. ——— BM

1430 Slag identified in sample crushed by START and added to composite.

1445 START split stockpile composite sample with HEPACO. IMA-WA-STK-053, TCLP, RCRA Metal, ph. ——— BM

DATE	TIME	GRID	XRF	DEPTH
11/19	1345	C25	42±4	6
11/19	1345	D25	124±6	6
11/19	1420	E25	128±6	6

1530 START processing samples for shipment.

1600 START depart site to drop samples at fed ex location ——— BM

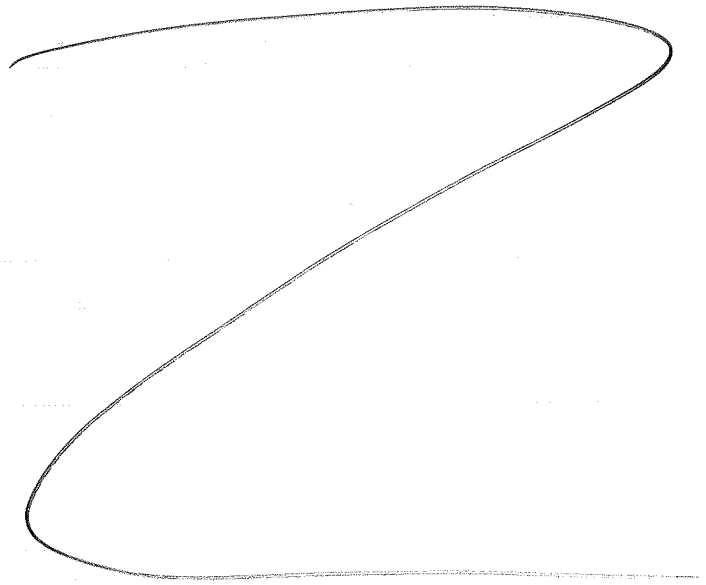
1635 Samples shipped via fed ex, depart.

BM 11/19/07

Monday 11/19/07

Photology

90	11/19/07	Backfill of grids A9-F9 prior to compaction	N
91	11/19/07	Re-excavation of grid N6 to a depth of 12"	W
92	11/20/07	Pieces of slag near SW corner GMAC building	E, down
93	" "	Close-up of desc. above	" "
94	" "	" "	" "
95	" "	" "	" "
96	11/20/07	Test pit, SW corner GMAC bldg.	" "



Tuesday 11/20/07

0800 START onsite. H&S tailgate safety meeting. BM

0830 Hepaco begin backfilling topsoil in northern grids south of residence. Sampling of N1 & N6 to be conducted and excavation of grids L11 & K11 when backfill is completed BM

0850 Hepaco excavating grid K11. Sampling conducted at grids N1 and N6. Five point composite samples BM

GRID	DATE	TIME	XRF	DEPTH
N1	11/20	0840	89 ± 5	12"
N6	11/20	0845	88 ± 5	12"
K11	11/20	0950	282 ± 8	12"
L11	11/20	1015	230 ± 7	12"

BM

1015 START split sample K11 with Hepaco. BM

1100 Hepaco waiting on additional backfill material. Truck onsite BM

1315 START obtain photos of slag near SW corner GMAC building. Obtain XRF readings.

Tuesday 11/20/07

Shot #

1 - slag boulder 25±5
2 - " " ND
3 - " " 98±10
4 - Soil near slag boulders 145±6
5 - Soil along south side bldg. (6MAC) 143±6
6. Large metallic chunk at SW corner 446±2
7 - Soil from test pit at 6" deep 363±10
Photo #96
8 - Small surface scrape of soil 2' SW of SW corner 6MAC building @ 2" 266±9
9 - 5' east of SW corner, 2' from foundation, surface shot. 321±13

1340 START dig test pit to 6". Combined rock and slag throughout depth.
10 - 10' east of SW corner, 2' from foundation surface shot 172±8.
11 - 15' east of SW corner, 2' from found. surface shot 257±8. BM

1500 Backfill activities complete on northwest residential grids and rows 9&10 along west side of site building. Seeding and straw placed on grids A7, M5 & L5. BM

1600 START depart site to drop samples at fed-ex. BM

Wednesday 11/21/07

0830 START onsite. Final truck departing site. 14 truckloads of soil were loaded and hauled to Concord - BFI landfill. Hepaco completing sample preparation for shipment BM

0915 START prep sample IMA-SB-K11-056.

0950 BM 1030 Hepaco awaiting return of second round of trucks from landfill, Manifests # 13609-13632, approximated quantity of 17 yds. each load. Kerns Trucking.

1045 Geotechnical contractor onsite to conduct proctor testing and compaction testing.

1105 Geotech contractor indicated compaction test above 95%. BM

1145 Loading second round of trucks ~~getting~~. BM

1200 START depart site for fed ex to ship samples IMA-SB-K11-056 & IMA-DA-ED-057. BM

1235 Depart fed ex to demobe for Thanksgiving break. BM

BM 11/21/07

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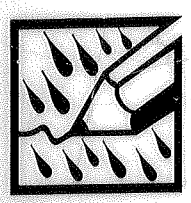

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CONTENTS

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HORIZONTAL LINE BOOK

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Industrial Metal Alloy

11/26/07 Monday

0800 Onsite. H&S briefing, discuss daily activities. Will grid areas south of rows 24,25 completed to date. Will begin excavation. —BM

1030 Hepaco completing re-excavation of grid A24 to a depth of 12", due to analytical results indicating grid remained above cleanup level. —BM

1100 Hepaco completed excavation of A-C23 to a depth of 6". —BM

1115 Spoke with Chuck B. from Hepaco, total of 29 trucks loaded and transported soil to disposal facility ending Friday 11/21/07

GRID	TIME	DATE	Result	Depth
A24	1125	11/26	143±6	12
A23	1325	↓	132±6	6"
B23	1335	↓	48±4	6
C23	1423	↓	140±6	↓
H25	1430	↓	269±8	↓
F25	1510	↓	243±8	↓
G25	1525	↓	399±10	↓

1300 I12-67 L12-220 M13-100
H13-440

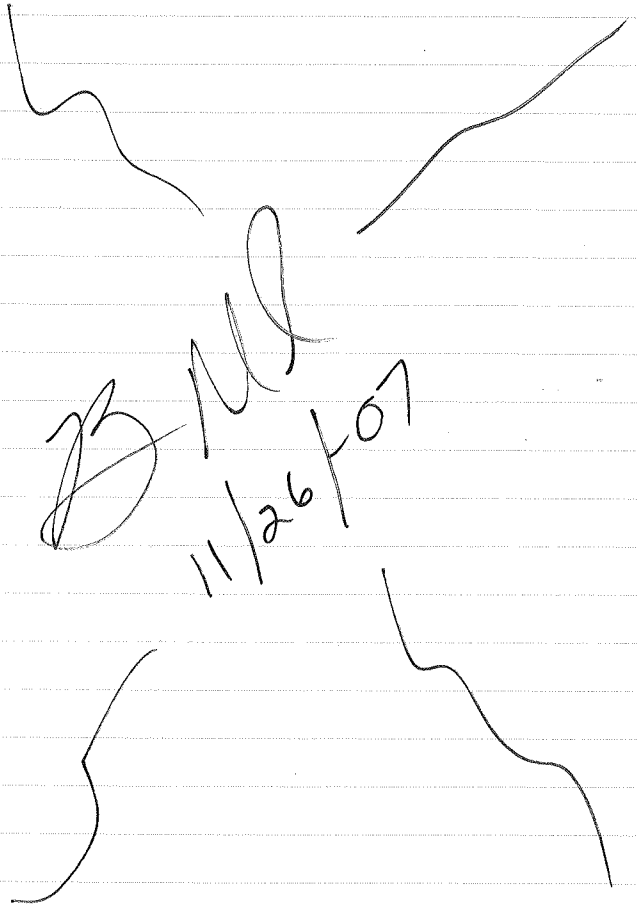
1320 Repair company onsite to work on soil mixing attachment. Equipment inoperable until repaired —BM

1600 Repair continuing on soil mixer.

11/26/07 Monday

Rows 24 & 25 excavated through grid H. —BM

1615 START depart site. —BM



Industrial Metal Alloy

11/27/07 Tuesday

0800 START onsite. H&S briefing. Informed grid J12 analytical results above 12,000 mg/kg, grid will be re-excavated to 12". —BM

0900 Hepaco re-excavating grid J12. In order not to contaminate cleared grids with contaminated soil, ~~exim~~ excavator is placing soil in bucket of bobcat for transfer to unclear grid for stockpiling. —BM

1100 Contacted by Hepaco excavator. In areas of G24 & 25 excavation uncovered soil with solvent like odor. START investigated area and identified two concrete structures and numerous steel lines similar to product lines in the area. Odor was strong in area of excavation. Area was evacuated and excavator moved to area of grid A23. Contacted O2C Aryzer to discuss findings and recommended contacting property owner and getting PID/FID onsite to conduct H2S level screening at a minimum.

GRID	DATE	TIME	XRF	DEPTH
F24	11/27	0915	~~386 ± 10~~ 418 ± 10	6"
G24	↓	0925	386 ± 10	6"
J12		1030	622 ± 12	12"
F24		1110	153 ± 7	12"
H24		1325	396 ± 10	6"

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Photolog

#	Date	Time	Description	DIR
105	11/26	0930	Remaining stockpile	SW
106	↓	0932	Extent of excavation	SW
107	↓	0945	" "	S
108	11/27/07	0915	Initial scrape J12a to 12"	E
109		0925	Transfer of material J12 to bobcat.	SE
110		1045	Pipe entering site from east in area of odor	SE
111		1050	Wounded areas (concrete structures) & Hepaco soil sampling in area of odor	S

L14 = 200 J14 = 100 L22 = 200

K22 = 300 H15 = 420 H150UP = 250

E24 = 250

GRID	DATE	TIME	XRF	DEPTH
A22	11/27	~~1796375~~	179 ± 7	6"
B24 C22	↓	1430 206 ± 8		6"
C24				
A24				
E24				

1440 Excavation completed to grid D23 —BM

1445 Hepaco surveying bottom of excavation grids A, B, C, D 23. Utilities company onsite conducting metal detection survey.

1500 START split samples H24 and

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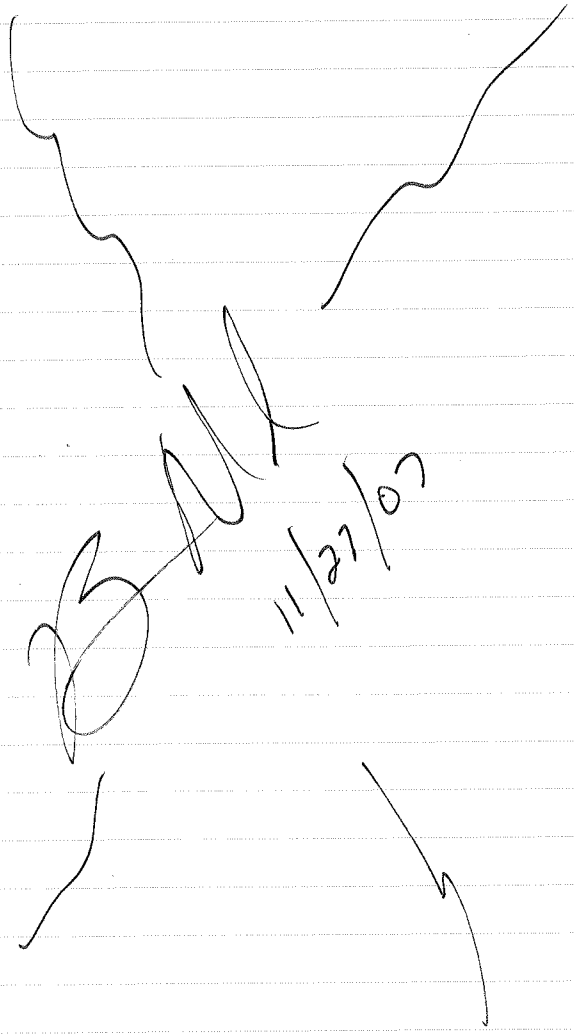
625 from Hepaco. ——— BM
1630 START depart site ——— BM



Industrial Metal Alloy

11/28/07 Wednesday
0800 START onsite. H&S briefing — BM
0850 Federal Express arrive with TVA-1000 and Draeger tubes. START to conduct screening of area where odors were identified
11/27/07 ——— BM
0930 Complete calibration of PID/FID with 100 ppm isobutylene, 95 ppm methane & zero air.
0935 Will survey area of odors.

TIME	FID	PID	LOCATION
0940	6.13	- .15	Near excavation w/ triple phosphate
0942	3.94	- .15	Breathing zone area of concrete structures
1000	20.14	.05	Excavated stockpile

Avg. 4.20 FID -.15 PID

0950 Collect samples from six distinct locations in area where excavator had the strongest olfactory evidence of contamination. Excavator turned soil at sample locations and soil was bagged for testing by heated headspace method. Bags placed in car to heat to approximately 70° F. ——— BM

Industrial Metal Alloy

11/28/07 Wednesday

1040 FID/PID Screening Soil

#	FID	PID
1	4.53	.05
2	4.90	.07
3	9.09	-.05
4	10.20	-.05
5	9.05	-.09
6	9.02	-.09

7-stockpile small 42 ppm 1.52

pH test on #7 stockpile small near excavation of 624 = 6

Draeger Test on bag from #7 sample
- Petroleum hydrocarbons 10a = 10ppm (10 pumps)
- Benzene test - no color change indicated

1215 Return from lunch ——— BM

1245 OSC Hyzer onsite. Discuss activities and odor area, screening results and updates. ——— BM

GRID	DATE	TIME	XRF	DEPTH
B22	11/28	1330	220±7	6
C22	↓	1430	206±8	6
A20	11/28	0850 ~~1535~~ BM	1533±20	6
B20		0854 BM	911±15	6
A20		0940	2996±33	12
B20		0945	589±12	12
J12	↓	1025	22±4	18

Industrial Metal Alloy

11/28/07 Wednesday

GRID	DATE	TIME	XRF	DEPTH
A20	11/28	1025	79±5	18
B20	↓	1030	184±7	18

1300 Hepaco excavating grid A21 and surveying bottom of excavation. ——— BM

1330 Showed OSC Hyzer location of bag on southwest corner of GMAC building. He indicated we should remove what is practical without compromising the integrity of the building. ——— BM

1335 Worker from Coulter Electric Company stopped us to provide information on property owner. Will provide OSC Hyzer name and address of owner. BM

GRID	DATE	TIME	XRF	DEPTH
J12	11/28/07	1125	22±4	18"
M14B	↓	1130	57±4	18"
A21	↓	1320	687±13	6"
B21	11/28/07	1325	255±8	6"

1400 Check with Hepaco about if they identified a recycler. Check with resident Valerie Couch about fence condition & yard per OSC Hyzer. ——— BM

Check with Hepaco about tree at grid 5277.

1500 Excavation completed to row E7D

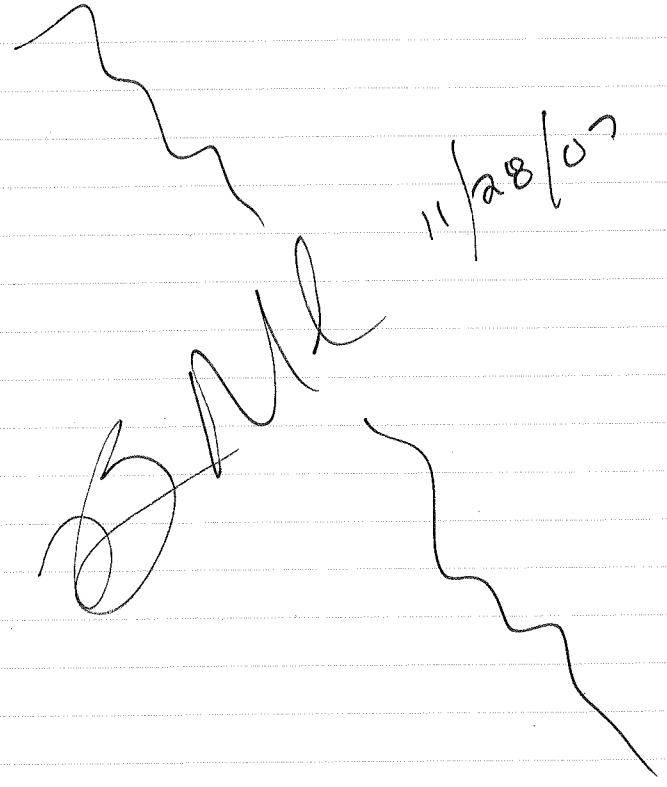
Industrial Metal Alloy

11/28/07 Wednesday

1400 Hepaco excavating grid A21 to a depth of 12" bgs. ——— BM

1556 Spoke with Hepaco about scheduling. 25, 24, 23 ext. grids will not be backfilled for at least a week. START will hold all samples for shipment on Friday 11/30.

1645 Depart site. ——— BM



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11/29/07 Thursday

0730 START onsite. Hts 5 briefing. Planned activities for the day include load-out of stockpile #2, receipt and distribution of backfill material and excavation of additional grids. ——— BM

0800 10 trucks onsite for transportation of contaminated soil to landfill. BM

0845 Meeting with Chuck B. Teranetta drain line will be replaced. Fence on residence will be repaired at the end of project. Tree at corner of grid N8 not sure if it will be removed. Excavation along creek will be backfilled to pre-work grade. Hepaco has not identified a recycler for the kettle bottoms. Recyclers contacted do not want because of lead content. OSC Huyser requested exploratory pits on pile at SW corner of GMAC building. B&C to contact tenants and property owners. B&C sampled area of odor and will submit for analytical. OSC Huyser to talk with B&C and Hepaco and on PM's to discuss lowering tolerable range from 300 XRF as an automatic trigger to re-dig grids.

Industrial Metal Alloy

11/29/07 Thursday

0920 Hepaco continuing load out of stockpile. Physically decontaminating trailer by brushing off trucks with broom prior to departing site. —BM

1250 Last dump departs site. 20 trucks total loaded and hauled ~~start~~ to landfill.

1300 Hepaco moving stockpile #3 to previous location of stockpile # 2. —BM

1320 Hepaco continuing backfill of grids on western half of site to row 15.

GRID	DATE	TIME	XRF	DEPTH
A21	11/29	1120	545 ± 12	12"
H21	↓	1125	291 ± 10	6"
D23	11/29	1425	158 ± 7	6"
E23	↓	1430	158 ± 7	6"
F23	↓	1520	177 ± 7	6"
D22	↓	1525	34 ± 4	6"

1630 9 total truckloads of backfill hauled to the site today —BM

1645 START depart site —BM

11/29/07

Industrial Metal Alloy

11/30/07 Friday

1030 START onsite. Hepaco continuing to spread backfill on grids western portion of site.

GRID	DATE	TIME	RESULT	DEPTH
M15 In-situ (1)	11/30	0917	1123 ± 6	Surface
M15 (2)		↓	512 ± 10	Surface
M15 (3)		↓	440 ± 9	Surface
M15 bagged composite		0923	909 ± 15	
A21	11/30	1015	25 ± 4	18"
E22	11/29	1615	64 ± 5	6"

1100 Backfill grids I-10, I-11, I-12. —BM

1200 Hepaco backfilling, workers rotating to medical facility for lead testing. —BM

1400 START to submit samples IMA-SF-625-057, B22-060, H24-058, B21-061 for total metals analysis. IMA-WIA-STK3-059 will be submitted for TCLP, pH, RCRA. Submit IMA-QA-EB (rinsate blank) for QA/QC and IMA-SF-B21DUP-062 for total metals. —BM

1415 START depart site to drop samples at federal express.

11/30/07

Industrial Metal Alloy

1/9/08 Wednesday

0 0800 Onsite. Meet with Brown and Caldwell rep. Abbey R and Hepaco Chuck B. Currently excavating grids D17 - D19, E18 and E19 and F17 - F19. Current depths in grids 2' bgs. Screening results indicated soil Pb concentrations above 400 ppm. Digging test pits to determine vertical extent of contamination.

0915 Hepaco excavating construction debris from grid/pm rows 17 & 18. Debris mostly plastic and roofing material. —BM

1215 Hepaco continuing to treat and stockpile material excavated from grid/pm rows 17&18 at location of landfilled material. —BM

1240 B&C attorney discussing results from test pits at grids F17, F18 and F19 at depths of 2.5 and 3'. —BM

XRF Screening Results

TIME	GRID	Depth	Result ppm
0815	F-18	2.5	74 ± 13
		2.5	176 ± 7
		2.5	202 ± 7
0830	F-17	2.5	122 ± 6
	↓	↓	244 ± 8
			83 ± 5
		3.0	228 ± 7

Industrial Metal Alloy

1/9/08 Photolog Wednesday

#117 1/9 Hepaco screening bottom of excavation
#118 1/9 in test pit grid F19. - S-
#119 East side of site SE.
#120 Current stockpile area - West-
#121 Grid rows #9 - S-
#122 Grid rows #8, 7, 6 - W-
#123 Completed grid rows 10-16 - E-
#124 Excavator relocating buried material to treat and stockpile - E-
#125 Completed grid rows #9-1 - W-
#126 Sewer line cleanout of replaced line broken by Hepaco. - SE-

XRF Screening Results

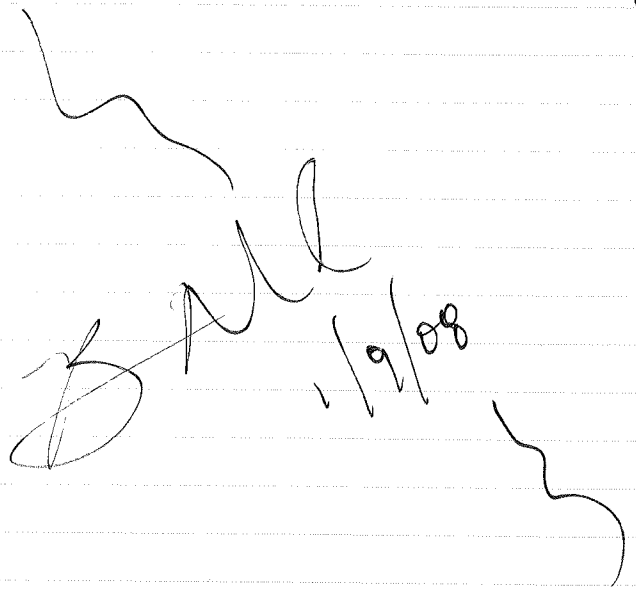
TIME	GRID	DEPTH	Result ppm
0830	F17	3	52 ± 5
↓	F17	3	138 ± 6
0855	F19	2.5	269 ± 8
↓	↓	↓	333 ± 9
			202 ± 7
0900	F19	3	116 ± 6
↓	↓	↓	33 ± 4
			554 ± 12
			125 ± 7

1245 Chuck Hepaco indicated they will continue stockpiling and treating material ex-situ for stockpiles #7, #8 ~~#BM~~ bgm. Due to space requirements material for

Industrial Metal Alloy

1/9/08 Wednesday

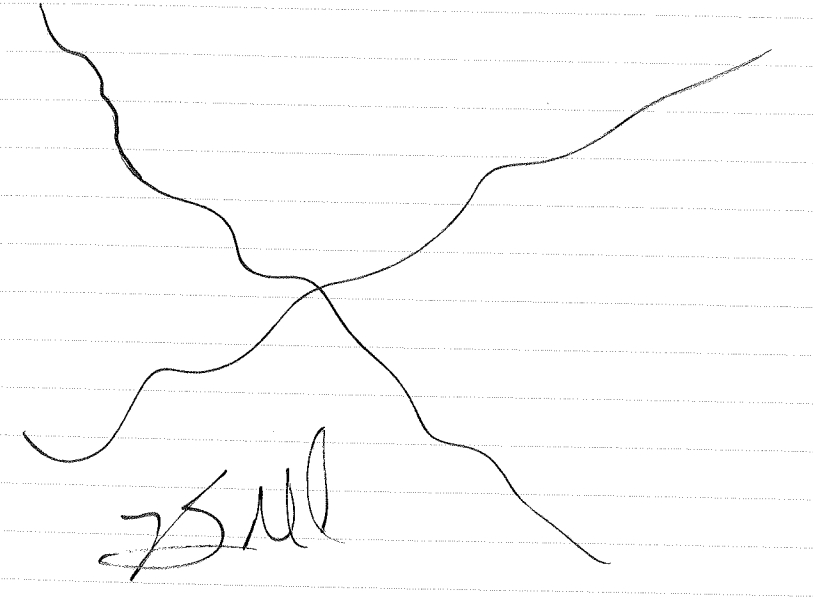
8 stockpiles #9 & 10 will be treated and mixed in situ and will be relocated to staging area after piles 7&8 have been transported for disposal.
1 Piles will exceed area of visqueen so surface scrape will be required of area prior to final clearance.
1400 Hepaco relocating debris and soil, treating and mixing before placement in stockpile.
1630 Excavation activities completed for the day. BM
1645 START depart site for the day.



Industrial Metal Alloys

1/10/08 Thursday

0815 START onsite. B&C representative inquired about slag material endorsed by START at southwest corner of Grace building in October. OSC Heyser had indicated at the time he wanted material ~~that~~ removed from area. Usual material could be removed by non-intrusive means and a surface scrape conducted.
0835 Hepaco continuing to move landfilled/buried materials and stockpile while treating and mixing. Kettle bottoms and large construction debris is being seperated. BM

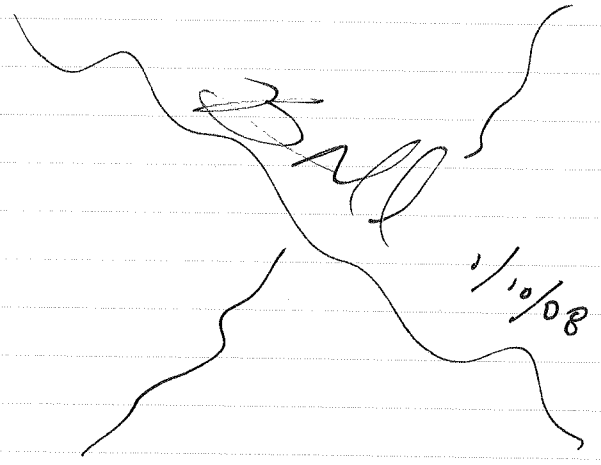


Continued p. 19

Industrial Metal Alloys

1/10/08 Thursday

#	Date	Photolog : Desc	Direction
127	1/9	Completed grid rows #14-9	NW
128	1/9	Construction debris buried in areas of grid rows #16-20; being excavated.	NE
129	1/9	Excavation of buried construction material	NE
130	1/9	Buried construction material remaining in sidewall at grid I17 & I18.	-N-
131	1/9	Excavation of buried material	-NE-
132	1/10	Contractor continuing to excavate buried materials, stockpile, treat and mix	-V-
133	1/10	Chemical addition to material for mixing and stockpile	-NW
134	1/10	Stockpile #708	-S.
135	1/10	Soil screening and depth measurment	-N-



Industrial Metal Alloys

1/10/08 Thursday

0930 Hepaco begin excavating grid rows 16 to a depth of 1' bgs.
0950 Hepaco obtain XRF in-situ screening result bottom of excavation at 12".
1010 Excavated an additional 12" from grid H16 to a depth of 24" bgs.
1030 Hepaco obtaining XRF screening results from grid K16 at a depth of 12" bgs.
1035 Grid row #16 excavation completed to a depth of 12" bgs. BM
1120 Work suspended due to rain.
1200 Return to site. Continuing rain, work still on stand-by BM
1300 Excavation activities resume. Will continue stockpiling treating and mixing excavated soil.
1400 Work on 1/11 will be dependant upon weather conditions and availability of chemical for stabilization. Additional chemical required for additional treatment and supplier is currently out. Supply to arrive 1/11 or 1/13. BM
1620 START depart site BM

BM 1/10/08

Industrial Metal Alloy

1/10/08 Thursday

XRF Screening

TIME	GRID	DEPTH	RESULT (ppm)
1000	H16 #1	6/12	1256 ± 18
1000	H16 #2	6/12	849 ± 14
1015	H16 #1	12/18	603 ± 12
1015	H16 #2	12/18	780 ± 13
1025	H16 #1	18/24	436 ± 11
↓	#2	↓	361 ± 10
1035	L16 #1	6/12	444 ± 10
	L16 #2	6/12	320 ± 9
↓	L16 #1	12/18	43 ± 4
1005	H16 #3	6/12	540 ± 61
1015	H16 #3	12/18	>10%
↓	H16 #4	12/18	21,272 ± 254

1700 START contacted OSC Hayser to discuss site activities. Provided tentative schedule as provided by Hepaco. Concern identified were: 1) Notifying tenants of activities around GMAC building for general awareness, access has already been granted 2) stream excavation schedule, 3) general restoration and topography – drainage, 4) placement of physical IN areas that contamination above 400 ppm is to be left at 2' bgs or below. ——BM

Industrial Metal Alloy

1/11/08 Friday

0815 START onsite. No intrusive work to be conducted today. Meet with Chuck B. (Hepaco) and Abbey R. (B&C) to discuss scheduling and issues or concerns raised by OSC Hayser. Item 4 physical barrier will be placed at areas where contamination exists above 400 ppm at depths of two feet (24") or below. ——BM

- SW corner and southside of GMAC building has been hand picked and visible slag removed per HEPACO.
- Stream work will be conducted on Tuesday 1/15. ——BM

0900 START documented conditions on SW corner GMAC building and south side of building. Visible slag still evidenced and photographed. Additional removal will be need conducted. ——BM

0915 Hepaco notified slag is still present and additional removal is required.

0920 Hepaco obtained stockpile samples from stockpile #8. ——BM

0930 No additional onsite activities scheduled today. Next week schedule: Mon: stream set-up, Tue: stream excavations,

Industrial Metal Alloys

1/11/08 Friday

Wed: stream restoration and receipt of stockpile results, Thur. load and transport stockpiles, Fri: complete load out and stockpile transport. ——— BM

Photolog

#	Date	Description	Direction
136	1/11/08	Slag remaining at SW corner GMAC building	E
137		Slag on south side of GMAC building	N
138		Site progression, stockpile #8 and excavation extent	N
139		Completed grids from row 15 - 9.	NW
140		Hepaco obtaining composite sample from stockpile #8	S

1000 START report HEPACO site for de-mob

Brad 1/11/08

TUESDAY Sunny 37.8 °F 1/15/08

0830 START arrives on site and sign health & saftey tailgate log. Contractor (HEPACO) & consultant (B&C) one on site planning out the stream based excavation (testing wet material w/ XRF, depth intervals, dewatering, turbidity testing sample turn around time). ———

0900 START & HEPACO finish site walk. Looked at stream area to be excavated. Crews are dewatering section ~~in dam~~ including area where kettle bottom are (4-count). Kettle bottoms will be removed in addition to the excavation. HEPACO stated that the two other areas of the strem came back w/ test results below 400ppm.

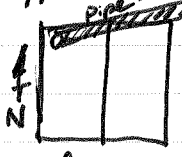
#	DATE	DESCRIPTION
141	1/15/08	creek dam in place to help dewater excavation area (EAST)
142	1/15/08	creek area to be excavated delineated by pink flags. (EAST)
143	1/15/08	Stockpile #7 & #8 & kettle bottoms (WEST)
144	1/15/08	creek prior to excavation (WEST)
145	1/15/08	concrete pit (west)

Did Fuay

1/15/08 TUESDAY

1010 HEPACO begin 1st lift of stream area excavation City stop @ spotters were present to insure the safety of the sewer line running parallel to the stream.

1118 HEPACO set up the dewatering pump with a low & high float switch. to keep as much water from entering the open excavation while the sample is sent to the lab for analysis. (24-hr turn around time)

1500 HEPACO came across a burried concrete pit approximate 15' by 15' with 1 divider wall 

and a pipe that 90° down at the NW corner. The pit had an odor and the left or west side was filled will stained soil. The east side was filled with soil not stained. A sample (soil & water) sample was collected by B&C for analysis. The location was surveyed for final record reports The pit was found in I 20 grid.

1630 START & EPA left site for the day.

WEDNESDAY 30.4°F Sunny 1/16/08

0900 START on-site.

0915 START & EPA begin canvasing neighborhood to get questionaires filled out from the community.

0923 At 119 Monmouth St. left questionaire to fill out and pick up later.

0933 At 124 Monmouth St., will return later to get questionaire filled out

0953 Center Stage Apt. (900 Center Stage Court) to talk w/ Steve Holland (manager) & Ramona (administrator) No one at the complex has had any impact during the remediation. They were with the north carolina school of the arts.

1029 Back at 124 Monmouth St. to conduct questionaire Lynn Enscore (resident) 336-724-0794, Completed.

1111 V's Treasures at 2117 Main St to get Valerie to answer the questionaire. Questionaire completed.

1304 meeting Chris Boyd & George with School of the Arts facility managers. Picked up questionaire at 119 Monmouth St. (see above). They seem confident that the exterior area will be cleaned up effectively. Main concern is about the inside of the building. Chris would like to do a walk through at the end of the site walk through.

1/16/08 WEDNESDAY

1412 Meeting Arlen Sedevist (District Ch. ef)
Mr. Sechrist new about the buried drums and okyed the GC/MS to be mobilized to the site to help identify unknown substance. Completed

1509 Meeting Greg Turner, P.E. city manager.
Questinaire completed. OSC has the completed questinaire

1550 START & EPA back at the site.

1600 START demobes to Duluth, GA.

2130 START arrives at Duluth Office.

1/25/08 Friday

1330 Contacted Chuck Bartholomew of Hepaco to discuss site activities. No activity this week. Hepaco to return to site the week of 1/28 to crush kettle bottoms to powder and add to current stockpiles onsite #9, 10 & 11. Will retreat stockpiles with (otp) and resample. If analytical is below TCLP regulatory level will transport for disposal.

1400 START phone plued call to OSC Hyser to verify acceptence of approach and update site activities. Left message for OSC Hyser.

1/25/08

1/30/08 Wednesday

0850 Contacted OSC Huyser to discuss INMACO site activities. OSC Huyser indicated he had spoken with Hepaco and B&C and the analytical results of the waste identified in the concrete vault were all non-detect except for PCB result which required re-analysis due to equipment failure. Analysis of split indicated PCB were non-detect as well. OSC Huyser also authorized the crushing of kettle bottoms in lieu of recycling as recycling facility could not be identified. Stockpiles would be mixed with crushed material, re-sampled, analyzed and shipped as previous waste soil requirements. OSC Huyser indicated START would document final site restoration activities and de-mobe as previously discussed.

1/30/08

Winston-Salem

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A PASSIONATE PREFERENCE

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www.cityofws.org/fire

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District Chief

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Fire Department
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Winston-Salem, NC 27102
Tel 336.773.7950
Fax 336.773.7974
arlins@cityofwsfire.org

START

2/21/08

0645 START Shanna Davis departs Duluth, GA for Winston-Salem, NC (Industrial Metals)

1215 START Davis arrives at the site and meets with Hepaco Ron and is briefed on health and safety issues, Davis also meets Ron.

1235 START Davis takes pictures of the backyard at 2117 Main Street. Area is seeded and grass is growing.

START Davis then takes pictures of the west side yard at 119 Monmouth Street. The truck ruts have been smoothed out at this location.

START Davis takes pictures of the restored creek area. The sewer pipe can be seen and there is a sheen on the water. Hepaco thinks that the sewer pipe is backed

SDavis

START 2/21/08

up again. The backfilled area has been seeded but not strawed as yet. At 1320 Hepaco received one more truck load of backfill for the area. ~~They~~ SD then they are going to place straw on the backfilled area. Hepaco says this should be finished this afternoon.

1300 START Davis called OSC Huyser to see if there was anything else he needed and to get his estimated time of arrival. OSC Huyser asked me to get electronic sampling data from Hepaco as well as locate the grids that had concentrations greater than the site specific removal criteria. START Davis spoke with Anthony of Hepaco. He said for OSC Huyser to contact James Kestler with Hepaco to get a copy of the analytical results.

SDavis

2/21/08 START

Anthony and Ron showed me the locations of the grids that had concentrations exceeding the site specific removal criteria at 2 feet. START Davis took pictures of these areas.

Hepaco also stated that a tree fell onto the site and the tree will be removed this afternoon.

1330 The tree that had fallen onto the property was removed and Hepaco began laying straw on the backfill area

1400 OSC Huyser arrives on site and we meet with Brown and Caldwell Scott Baranowski as well. All members conduct a site walk.

Hepaco states that the silt fence will be removed once grass grows in the backfilled area. Hepaco also states

SDavis

START 2/21/08

that the fence located in the gravel parking lot area is not going back up. It was noted that there are several water ~~e~~ SD spouts located on the back of the building but the only one that works is the white plastic one. OSC Huyser would like it mentioned in the report about areas which were excavated to 2 feet and still contained ~~elevated~~ SD concentrations exceeding the site specific removal level.

OSC Huyse also had contact information for the following individuals:

Chris Boyd - School Facilities Manager
(336) 770-3322

Ray Collins - Property owner
(276) 251-8114

Lee Garrity - City Manager
(336) 747-75SD7380

1515 START Davis departs

SDavis

2/21/08 START

Site for Duluth, GA

2015 START Davis arrives at Duluth, GA

Late Note

On-site Hepaco notified the city of the backed up sewer pipe. While on-site the city was adressing the issue. SD

SD

SD

Photographic Log

Photo #146 (File name 100_0819) taken on 2/21/08 facing north of the backyard of 2117 Main Street (V Treasures)

Photo #147 (File name 100_0823) taken on 2/21/08 facing north of the west side yard of the GMAC building

Photo # 148 (File name 100_0833) taken on 2/21/08 facing east of the creek located south of the site, sewer pipe can be seen

Photo #149 (File name 100_0843) taken on 2/21/08 facing west

SDavis

2/21/08 START

of the back portion of the site.

Photo # 150 (File name 100_0845) taken on 2/21/08 facing northeast showing gravel parking lot

Photo #151 (File name 100_0852) taken on 2/21/08 facing northeast showing eastern most portion of excavation. In this area ERRS went down to 2 feet and analytical results showed concentrations exceeding the site specific removal level

Photo # 152 (File name 100_0855) taken on 2/21/08 facing north showing east side of building

Photo # 153 (File name 100_0858) taken on 2/21/08 facing northeast showing recently layed seed and straw on the back side of the site.

Photo # 154 (File name 100_0861) taken on 2/21/08 facing northwest showing back of building. The white pipe on the outside of

SDavis

START 2/21/08

the building is the only water spout that works.

Photo #155 (File name 100_0870) taken on 2/21/08 facing west showing eastern portion of site. The soil located near the southeast corner of the building contained concentrations exceeding the site specific removal level at 2 feet.

Photo #156 (File name 100_0874) taken on 2/21/08 facing west showing western portion of site and the backyard at 2117 Main Street

Photo #157 (File name 100_0876) taken on 2/21/08 facing northeast showing southern portion of site

Photo #158 (File name 100_0877) taken on 2/21/08 facing north showing ~~eastern SD portion~~ western portion of site

Photo #159 (File name 100_0879) taken on 2/21/08 facing west

SDavis

2/21/08 START

showing ERRS crew laying straw on the property to the north of the site

SDavis

APPENDIX C

PHOTOGRAPHIC LOG

(68 Pages)

OFFICIAL PHOTOGRAPH NO. 1
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	North	**Date:**	November 6, 2007
Photographer:	Brian Malone, Tetra Tech	**Witness:**	None
Subject:	Pre-existing conditions of grid L5 prior to excavation activities at 2117 Main Street (V's Treasures).		

OFFICIAL PHOTOGRAPH NO. 2
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	North	**Date:**	November 6, 2007
Photographer:	Brian Malone, Tetra Tech	**Witness:**	HEPACO
Subject:	Completed excavation of grids L5 and M5 at a depth of 6 inches below ground surface (bgs).		

OFFICIAL PHOTOGRAPH NO. 3
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	West	**Date:**	November 7, 2007
Photographer:	Brian Malone, Tetra Tech	**Witness:**	None
Subject:	HEPACO excavating grid N4 to a depth of 6 inches bgs.		

OFFICIAL PHOTOGRAPH NO. 4
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	West	**Date:**	November 7, 2007
Photographer:	Brian Malone, Tetra Tech	**Witness:**	HEPACO
Subject:	HEPACO obtaining composite sample of grid N4 at a depth of 6 inches.		

OFFICIAL PHOTOGRAPH NO. 5
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	South	**Date:**	November 7, 2007
Photographer:	Brian Malone, Tetra Tech	**Witness:**	None
Subject:	Completed excavation of grid O5 at a depth of 12 inches bgs.		

OFFICIAL PHOTOGRAPH NO. 6
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	South	**Date:**	November 7, 2007
Photographer:	Brian Malone, Tetra Tech	**Witness:**	None
Subject:	Completed excavation of grids E9-K9 respectively, prior to the receipt of confirmation analytical results.		

OFFICIAL PHOTOGRAPH NO. 7
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	West	**Date:**	November 7, 2007
Photographer:	Brian Malone, Tetra Tech	**Witness:**	None
Subject:	Completed excavation of grids C8, C7, C6 and D6.		

OFFICIAL PHOTOGRAPH NO. 8
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	North	**Date:**	November 7, 2007
Photographer:	Brian Malone, Tetra Tech	**Witness:**	None
Subject:	Completed excavation of grids D9-A9 respectively.		

OFFICIAL PHOTOGRAPH NO. 9
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	Northeast	**Date:**	November 8, 2007
Photographer:	Brian Malone, Tetra Tech	**Witness:**	HEPACO
Subject:	HEPACO obtaining composite sample of grid I10 at a depth of 12 inches.		

OFFICIAL PHOTOGRAPH NO. 10
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	Southeast	**Date:**	November 8, 2007
Photographer:	Brian Malone, Tetra Tech	**Witness:**	HEPACO
Subject:	HEPACO obtaining composite samples of grids K10 and M10 at a depth of 6 inches bgs.		

OFFICIAL PHOTOGRAPH NO. 11
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	East	**Date:**	November 8, 2007
Photographer:	Brian Malone, Tetra Tech	**Witness:**	None
Subject:	Excavation of H grids.		

OFFICIAL PHOTOGRAPH NO. 12
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	Southeast	**Date:**	November 8, 2007
Photographer:	Brian Malone, Tetra Tech	**Witness:**	None
Subject:	Excavation of grid rows 10 and 11.		

OFFICIAL PHOTOGRAPH NO. 13
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	West	**Date:**	November 8, 2007
Photographer:	Brian Malone, Tetra Tech	**Witness:**	None

Subject: Contaminated soil stockpile located on the east side of the building.

OFFICIAL PHOTOGRAPH NO. 14
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	East	**Date:**	November 9, 2007
Photographer:	Brian Malone, Tetra Tech	**Witness:**	None
Subject:	Extent of excavation in grids I12, H12 at 12 inches bgs.		

OFFICIAL PHOTOGRAPH NO. 15
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	West	**Date:**	November 12, 2007
Photographer:	Brian Malone, Tetra Tech	**Witness:**	None
Subject:	Extent of excavation in grid I12.		

OFFICIAL PHOTOGRAPH NO. 16
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	Southeast	**Date:**	November 12, 2007
Photographer:	Brian Malone, Tetra Tech	**Witness:**	None
Subject:	Extent of excavation in row 12.		

OFFICIAL PHOTOGRAPH NO. 17
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	West	**Date:**	November 12, 2007
Photographer:	Brian Malone, Tetra Tech	**Witness:**	None

Subject: Additional excavation of grid C8 required due to analytical results above the SSCS.

OFFICIAL PHOTOGRAPH NO. 18
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	Southeast	**Date:**	November 12, 2007
Photographer:	Brian Malone, Tetra Tech	**Witness:**	HEPACO

Subject: HEPACO obtaining five point composite sample from grid K12 at 12 inches bgs.

OFFICIAL PHOTOGRAPH NO. 19
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	Southeast	**Date:**	November 13, 2007
Photographer:	Brian Malone, Tetra Tech	**Witness:**	None
Subject:	Extent of excavation in grids L13 and M13.		

OFFICIAL PHOTOGRAPH NO. 20
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	South	**Date:**	November 13, 2007
Photographer:	Brian Malone, Tetra Tech	**Witness:**	HEPACO

Subject: HEPACO processing composite sample for XRF screening.

OFFICIAL PHOTOGRAPH NO. 21
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	East	**Date:**	November 13, 2007
Photographer:	Brian Malone, Tetra Tech	**Witness:**	HEPACO

Subject: HEPACO obtaining five point composite sample from grid H13.

OFFICIAL PHOTOGRAPH NO. 22
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	East	**Date:**	November 13, 2007
Photographer:	Brian Malone, Tetra Tech	**Witness:**	None
Subject:	HEPACO segregating woody debris and soil with excavator.		

OFFICIAL PHOTOGRAPH NO. 23
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	North	**Date:**	November 14, 2007
Photographer:	Brian Malone, Tetra Tech	**Witness:**	None
Subject:	Extent of excavation in grid row 14. Row was separated into a and b grids with beginning depths of 6 inches and 12 inches respectively.		

OFFICIAL PHOTOGRAPH NO. 24
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	East	**Date:**	November 15, 2007
Photographer:	Brian Malone, Tetra Tech	**Witness:**	None
Subject:	Silt fence condition during storm event.		

OFFICIAL PHOTOGRAPH NO. 25
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	West	**Date:**	November 15, 2007
Photographer:	Brian Malone, Tetra Tech	**Witness:**	None

Subject: Silt fence condition during storm event. Small area of breakthrough in foreground.

OFFICIAL PHOTOGRAPH NO. 26
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	East	**Date:**	November 15, 2007
Photographer:	Brian Malone, Tetra Tech	**Witness:**	HEPACO

Subject: HEPACO repairing the silt fence where breakthrough occurred.

OFFICIAL PHOTOGRAPH NO. 27
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	South	**Date:**	November 15, 2007
Photographer:	Brian Malone, Tetra Tech	**Witness:**	HEPACO
Subject:	Excavation of grids L22 and M22.		

OFFICIAL PHOTOGRAPH NO. 28
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	East, downward	**Date:**	November 15, 2007
Photographer:	Brian Malone, Tetra Tech	**Witness:**	None
Subject:	Slag observed at southwest corner of neighboring GMAC building.		

OFFICIAL PHOTOGRAPH NO. 29
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	West	**Date:**	November 15, 2007
Photographer:	Brian Malone, Tetra Tech	**Witness:**	None
Subject:	Location of visible slag along the south side and southwest corner of the GMAC building.		

OFFICIAL PHOTOGRAPH NO. 30
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	South	**Date:**	November 16, 2007
Photographer:	Brian Malone, Tetra Tech	**Witness:**	None
Subject:	Initial excavation of grid rows 24 and 25.		

OFFICIAL PHOTOGRAPH NO. 31
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	North	**Date:**	November 19, 2007
Photographer:	Brian Malone, Tetra Tech	**Witness:**	None
Subject:	Initial lifts of backfill placed in grid row 9.		

OFFICIAL PHOTOGRAPH NO. 32
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	West, downward	**Date:**	November 20, 2007
Photographer:	Brian Malone, Tetra Tech	**Witness:**	None

Subject: Pieces of slag observed at southwest corner of neighboring GMAC building.

OFFICIAL PHOTOGRAPH NO. 33
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	West	**Date:**	November 20, 2007
Photographer:	Brian Malone, Tetra Tech	**Witness:**	None
Subject:	Test pit hand excavated near the southwest corner of neighboring GMAC building to determine vertical extent of slag.		

OFFICIAL PHOTOGRAPH NO. 34
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	North	**Date:**	November 20, 2007
Photographer:	Brian Malone, Tetra Tech	**Witness:**	None
Subject:	Site restoration completed at neighboring residential property (2117 Main Street) to the west of IMACO site.		

OFFICIAL PHOTOGRAPH NO. 35
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	North	**Date:**	November 20, 2007
Photographer:	Brian Malone, Tetra Tech	**Witness:**	None

Subject: Completed compaction of backfill material in grid row 9, prior to placement of topsoil

OFFICIAL PHOTOGRAPH NO. 36
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	East	**Date:**	November 20, 2007
Photographer:	Brian Malone, Tetra Tech	**Witness:**	HEPACO
Subject:	HEPACO seeding grid B6.		

OFFICIAL PHOTOGRAPH NO. 36
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	South	**Date:**	November 21, 2007
Photographer:	Brian Malone, Tetra Tech	**Witness:**	None

Subject: Loading of stockpile material for transport to disposal facility.

OFFICIAL PHOTOGRAPH NO. 37
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	South	**Date:**	November 21, 2007
Photographer:	Brian Malone, Tetra Tech	**Witness:**	HEPACO

Subject: Geo-technical representative at Site to conduct testing to determine moisture density proctor value and conduct compaction testing with Troxler nuclear gauge.

OFFICIAL PHOTOGRAPH NO. 38
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	South	**Date:**	November 26, 2007
Photographer:	Brian Malone, Tetra Tech	**Witness:**	None
Subject:	Extent of excavation in the northeast portion of the site.		

OFFICIAL PHOTOGRAPH NO. 39
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	West	**Date:**	November 27, 2007
Photographer:	Brian Malone, Tetra Tech	**Witness:**	None
Subject:	HEPACO conducting additional excavation of grid J12 due to analytical results above the SSCS.		

OFFICIAL PHOTOGRAPH NO. 40
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	South	**Date:**	November 27, 2007
Photographer:	Brian Malone, Tetra Tech	**Witness:**	HEPACO
Subject:	Pipe observed running east and west in the Colter storage yard.		

OFFICIAL PHOTOGRAPH NO. 41
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	South	**Date:**	November 27, 2007
Photographer:	Brian Malone, Tetra Tech	**Witness:**	HEPACO
Subject:	HEPACO obtaining soil samples in area where a concrete slab and old foundation was uncovered.		

OFFICIAL PHOTOGRAPH NO. 42
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	North	**Date:**	November 27, 2007
Photographer:	Brian Malone, Tetra Tech	**Witness:**	None
Subject:	Concrete and brick below ground structure similar to small building footer and slab were uncovered during the excavation of grid G24/25 and F24/25.		

OFFICIAL PHOTOGRAPH NO. 43
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	South, downward	**Date:**	November 27, 2007
Photographer:	Brian Malone, Tetra Tech	**Witness:**	None

Subject: Close up view of concrete and brick below ground structure similar to small building footer and slab uncovered during excavation of grid G24/25 and F24/25.

OFFICIAL PHOTOGRAPH NO. 44
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	South	**Date:**	January 9, 2008
Photographer:	Brian Malone, Tetra Tech	**Witness:**	HEPACO

Subject: HEPACO obtaining XRF results from the bottom of a test pit in grid F19.

OFFICIAL PHOTOGRAPH NO. 45
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	East	**Date:**	January 9, 2008
Photographer:	Brian Malone, Tetra Tech	**Witness:**	None
Subject:	Completed backfill and compaction of grid rows 25, 24 and portions of 23 and 22.		

OFFICIAL PHOTOGRAPH NO. 46
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	South	**Date:**	January 9, 2008
Photographer:	Brian Malone, Tetra Tech	**Witness:**	None
Subject:	Topsoil placement completed in grid row 9.		

OFFICIAL PHOTOGRAPH NO. 47
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	East	**Date:**	January 9, 2008
Photographer:	Brian Malone, Tetra Tech	**Witness:**	None
Subject:	Topsoil placement completed in grid rows 10,11,12,13 and 14.		

OFFICIAL PHOTOGRAPH NO. 48
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	East	**Date:**	January 9, 2008
Photographer:	Brian Malone, Tetra Tech	**Witness:**	None
Subject:	Excavating buried solid waste and soil in pre-existing debris pile area. This material is being transported to the stockpile area for treatment with triple super phosphate.		

OFFICIAL PHOTOGRAPH NO. 49
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	Southeast	**Date:**	January 9, 2008
Photographer:	Brian Malone, Tetra Tech	**Witness:**	None
Subject:	Repaired sewer drain line damaged during excavation with a clean out located in grid M14.		

OFFICIAL PHOTOGRAPH NO. 50
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	North	**Date:**	January 9, 2008
Photographer:	Brian Malone, Tetra Tech	**Witness:**	HEPACO
Subject:	Buried material remaining in subsurface layers near the southern boundary of grid H17.		

OFFICIAL PHOTOGRAPH NO. 51
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	South	**Date:**	January 10, 2008
Photographer:	Brian Malone, Tetra Tech	**Witness:**	None
Subject:	Stockpiles #7 and #8.		

OFFICIAL PHOTOGRAPH NO. 52
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	Southeast	**Date:**	January 11, 2008
Photographer:	Brian Malone, Tetra Tech	**Witness:**	None
Subject:	Extent of excavation at the IMACO site.		

OFFICIAL PHOTOGRAPH NO. 53
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	West	**Date:**	January 15, 2008
Photographer:	Didi Fung, Tetra Tech	**Witness:**	HEPACO

Subject: Dam constructed to hold back water during sediment excavation activities in the surface water stream on the south side of the site. Notice the active sewer line exposed in the left slope.

OFFICIAL PHOTOGRAPH NO. 54
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	Southwest	**Date:**	January 15, 2008
Photographer:	Didi Fung, Tetra Tech	**Witness:**	HEPACO

Subject: Uncovered buried concrete two chamber vault located in grid I20. Samples were collected of the material found in the vault to determine the characteristics. The material was determined to be non-hazardous and will be backfilled with 2 feet of cover.

OFFICIAL PHOTOGRAPH NO. 55
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	North	**Date:**	February 21, 2008
Photographer:	Shana Davis, Tetra Tech	**Witness:**	HEPACO
Subject:	Restored condition of grid L5 located at 2117 Main Street (V's Treasures) .		

OFFICIAL PHOTOGRAPH NO. 56
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	North	**Date:**	February 21, 2008
Photographer:	Shana Davis, Tetra Tech	**Witness:**	HEPACO
Subject:	Restored condition of grid L22 and K22, south of the GMAC building.		

OFFICIAL PHOTOGRAPH NO. 57
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	East	**Date:**	February 21, 2008
Photographer:	Shana Davis, Tetra Tech	**Witness:**	HEPACO
Subject:	Final restoration of small surface water stream existing on the southern property boundary of the Site.		

OFFICIAL PHOTOGRAPH NO. 58
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	Southwest	**Date:**	February 21, 2008
Photographer:	Shana Davis, Tetra Tech	**Witness:**	HEPACO
Subject:	HEPACO conducting restoration of grids southeast of the IMACO building.		

OFFICIAL PHOTOGRAPH NO. 59
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	Northeast	**Date:**	February 21, 2008 (Incorrect Date Stamp)
Photographer:	Shana Davis, Tetra Tech	**Witness:**	HEPACO

Subject: Final restoration of grids located on the northeast portion of the IMACO Site.

OFFICIAL PHOTOGRAPH NO. 60
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	Northwest	**Date:**	February 21, 2002 (Incorrect Date Stamp)
Photographer:	Shana Davis, Tetra Tech	**Witness:**	HEPACO
Subject:	HEPACO completing restoration of grids located southeast of the IMACO building. Area was completed with a covering of straw.		

OFFICIAL PHOTOGRAPH NO. 61
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	Northwest	**Date:**	February 21, 2008 (Incorrect Date Stamp)
Photographer:	Shana Davis, Tetra Tech	**Witness:**	HEPACO
Subject:	Final restoration of grids N1-N6 located at the southwest corner of the IMACO Site.		

OFFICIAL PHOTOGRAPH NO. 62
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	Northeast	**Date:**	February 21, 2008 (Incorrect Date Stamp)
Photographer:	Shana Davis, Tetra Tech	**Witness:**	HEPACO
Subject:	Final restoration of grids south of the IMACO building.		

OFFICIAL PHOTOGRAPH NO. 63
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	Northwest	**Date:**	February 21, 2008 (Incorrect Date Stamp)
Photographer:	Shana Davis, Tetra Tech	**Witness:**	HEPACO

Subject: Final restoration of property north of the IMACO Site across E. Acadia Ave.

OFFICIAL PHOTOGRAPH NO. 64
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	North	**Date:**	February 21, 2008 (Incorrect Date Stamp)
Photographer:	Shana Davis, Tetra Tech	**Witness:**	HEPACO

Subject: Final restoration of grids along the western property boundary of the IMACO Site.

OFFICIAL PHOTOGRAPH NO. 66
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	East	**Date:**	October 16, 2008
Photographer:	James Kessler, HEPACO	**Witness:**	Fencing contractor
Subject:	Installation of site perimeter security fencing; northwest gate.		

OFFICIAL PHOTOGRAPH NO. 67
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	South	**Date:**	October 16, 2008
Photographer:	James Kessler, HEPACO	**Witness:**	Fencing contractor
Subject:	Western side of property with installed perimeter security fencing.		

OFFICIAL PHOTOGRAPH NO. 68
U.S. ENVIRONMENTAL PROTECTION AGENCY

TDD Number:	TTEMI-05-001-0039	**Location:**	Industrial Metal Alloys
Orientation:	Southwest	**Date:**	October 16, 2008
Photographer:	James Kessler, HEPACO	**Witness:**	Fencing contractor
Subject:	Southern side of property with installed perimeter security fencing.		

APPENDIX D

FULL DATA VALIDATION REPORT

FOR

ANALYTICAL ENVIRONMENTAL SERVICES REPORT NOS.

0710A41 AND 0710C25

(28 Pages)

TETRA TECH

March 17, 2008

Mr. Matthew Huyser
On-Scene Coordinator
U.S. Environmental Protection Agency, Region 4
61 Forsyth Street, SW, 11th Floor
Atlanta, GA 30303

Subject: **Industrial Metal Alloys Site**
Technical Direction Document Number TTEMI-05-001-0039
Contract No. EP-W-05-054 (START III Region 4)
Cursory Data Validation Report
Analytical Environmental Services Report Nos. 0710A41 and 0710C25
Analytical Parameter: Lead

Laboratory Report No.	0710A41 and 0710C25
Samples	IMA-SS-A6-001; IMA-SS-A9-002; IMA-SS-C8-003; IMA-SS-D6-004; IMA-SS-D9-005; IMA-SS-F9-006; IMA-SS-H9-007; IMA-SS-J9-008; IMA-SS-L9-009; IMA-SS-N9-010; IMA-SS-O7-011; IMA-SS-O5-012; IMA-SS-N6-013; IMA-SS-N4-014; IMA-SS-N3-015; IMA-SS-L5-016; IMA-SS-I21-017; IMA-SS-J22-018; IMA-SS-I21DUP-020; and IMA-EB-021
Field Duplicate Pairs	IMA-SS-I21-017 and IMA-SS-I21DUP-020
Field Blanks	IMA-EB-021

Dear Mr. Huyser:

The Tetra Tech Superfund Technical Assessment and Response Team (START) conducted a cursory data validation of the analytical results for 18 soil samples, one field duplicate sample, and one equipment blank sample that were collected at the Industrial Metal Alloys site in Winston-Salem, North Carolina on October 17, 2007. The samples were analyzed under Laboratory Report No. 0710A41 by Analytical Environmental Services, Inc. (AES) of Atlanta, Georgia. Sample IMA-SS-O7-011 was re-digested and reanalyzed per client request under Laboratory Report No. 0710C25 by AES of Atlanta, Georgia. The samples were analyzed for lead by SW-846 Method 6010B.

Analytical data were evaluated in general accordance with all applicable data validation guidance documents, including the following: the U.S. Environmental Protection Agency (EPA) Contract Laboratory Program National Functional Guidelines (NFG) for Inorganic Data Review (October 2004). The analytical method used by AES during this project provides guidance on procedures and method acceptance criteria that, in some areas, differ from the NFG. Where the method and the NFG differ, the data validators followed the acceptance criteria in the method. In addition, if laboratory-derived acceptance criteria were presented in the AES data package, then these criteria were used to evaluate the data, unless the criteria were considered inadequate.

Data were evaluated based on the following criteria:

- Data Completeness *
- Sample Preservation, Sample Receipt, and Holding Times *
- Laboratory and Field Blanks *

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www.tetratech.com

- Matrix Spike/Matrix Spike Duplicates (MS/MSD)
- Field Duplicate Sample Analysis
- Laboratory Control Samples (LCS)*
- Dilution and Reported Detection Limits

* All QC criteria were met for this evaluated parameter. Those criteria without an asterisk (*) displayed a deficiency that will be discussed later in this report.

The following efficient and effective data validation approach for providing a cursory assessment of the quality of the set of data was used. Data evaluation consisted of a review of the data with a focus on the available review parameters present in the summary data package (which typically does not include the raw data). This review likely revealed the presence of any serious analytical problems. This review, however, was not necessarily a complete assessment of all possible quality control parameters or even of each quality control parameter that was reviewed. The review, rather, was intended to efficiently identify and focus on those problems and quality control deficiencies that could be readily identified from the summary data package. Because of the nature of this approach, some problems and deficiencies may not have been identified; as such, this approach may not support some critical uses and required limits on decision-making uncertainty for the data.

Enclosure 1 presents copies of the sample results sheets from the laboratory data packages, with hand-entered qualifications from the data validation effort. Enclosure 2 presents the same data validation-qualified analytical results in table format.

DATA REVIEW RESULTS

The following sections discuss the data packages and provide an overall assessment of the data. This discussion concentrates on the irregularities associated with the various parameters as indicated above.

MATRIX SPIKE/MATRIX SPIKE DUPLICATES

The MS/MSD analyses associated with Laboratory Report Nos. 0710A41 and 0710C25 were not evaluated. The MS/MSD for batch 92466 (in Laboratory Report No. 0710A41) and for Laboratory Report No. 0710C25 were performed on samples collected from another site; therefore, the reviewer has no way to confirm that the matrix chosen is representative of samples collected from the Industrial Metal Alloys site. The sample results for the spiked sample for batch 92485 (in Laboratory Report No. 0710A41) were greater than four times the associated spike concentrations; therefore, control limits were not applied. No qualifications were warranted because of these data omissions.

FIELD DUPLICATE SAMPLE ANALYSIS

The field sample IMA-SS-I21-017 and its duplicate IMA-SS-I21DUP-020 displayed poor precision; the relative percent difference was 81.9 percent. The lead results for both samples were considered estimated and flagged “J”. Sample results are not typically qualified based on field duplicate results; however, MS/MSD analyses were not evaluated as discussed above.

DILUTIONS AND REPORTED DETECTION LIMITS

A ten-fold dilution was required for sample IMA-SS-I21-017 to place the result within the calibration range. Although the sample produced a positive result, the reporting limit was adjusted accordingly.

OVERALL ASSESSMENT OF DATA

The overall quality of this data package was acceptable. The lead results for samples IMA-SS-I21-017 and IMA-SS-I21DUP-020 were qualified as estimated (flagged "J") due to poor field duplicate precision. All data can be used as qualified for any purpose.

Please call me at (678) 775-3104 if you have any questions regarding this data validation report.

Sincerely,

Jessica Vickers
START III Quality Assurance Manager

Enclosures (2)

cc: Katrina Jones, EPA Project Officer
Darryl Walker, EPA Alternate Project Officer
Angel Reed, Tetra Tech START III Document Control Coordinator

ENCLOSURE 1

**FIXED LABORATORY ANALYTICAL RESULTS SHEETS
WITH HAND-ENTERED DATA VALIDATION QUALIFIERS
FOR ANALYTICAL ENVIRONMENTAL SERVICES, INC. REPORT NOS. 0710A41
AND 0710C25**

(22 Pages)

Analytical Environmental Services, Inc.

Date: *19-Oct-07*

CLIENT: Tetra Tech EM Inc.
Lab Order: 0710A41
Project: Industrial Metal Alloy
Lab ID: 0710A41-001

Client Sample ID: IMA-SS-A6-001
Collection Date: 10/17/2007 9:40:00 AM
Matrix: SOIL

Analyses	Result	Qual	MDL	Rpt. Limit	Units	BatchID	DF	Date Analyzed
METALS, TOTAL			**SW6010B**	**(SW3050B)**			Analyst: **TF**	
Lead	319		0.499	4.38	mg/Kg-dry	92485	1	10/18/2007 7:13:28 P
PERCENT MOISTURE			**D2216**				Analyst: **ZA**	
Percent Moisture	7.66		0	0	wt%		1	10/18/2007

10/29/07

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	N	Analyte not NELAC certified
P	NELAC analyte certification pending	Rpt Limit	Reporting Limit
S	Spike Recovery outside accepted recovery limits	BRL	Not detected at MDL

Analytical Environmental Services, Inc.

Date: *19-Oct-07*

CLIENT: Tetra Tech EM Inc.
Lab Order: 0710A41
Project: Industrial Metal Alloy
Lab ID: 0710A41-002

Client Sample ID: IMA-SS-A9-002
Collection Date: 10/17/2007 10:00:00 AM
Matrix: SOIL

Analyses	Result	Qual	MDL	Rpt. Limit	Units	BatchID	DF	Date Analyzed
METALS, TOTAL			**SW6010B**	**(SW3050B)**			Analyst: **TF**	
Lead	1040		0.488	4.28	mg/Kg-dry	92485	1	10/18/2007 7:24:28 P
PERCENT MOISTURE			**D2216**				Analyst: **ZA**	
Percent Moisture	10.8		0	0	wt%		1	10/18/2007

qaw
10/29/07

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	N	Analyte not NELAC certified
P	NELAC analyte certification pending	Rpt Limit	Reporting Limit
S	Spike Recovery outside accepted recovery limits	BRL	Not detected at MDL

Analytical Environmental Services, Inc.

Date: *19-Oct-07*

CLIENT: Tetra Tech EM Inc.
Lab Order: 0710A41
Project: Industrial Metal Alloy
Lab ID: 0710A41-003

Client Sample ID: IMA-SS-C8-003
Collection Date: 10/17/2007 10:10:00 AM
Matrix: SOIL

Analyses	Result	Qual	MDL	Rpt. Limit	Units	BatchID	DF	Date Analyzed
METALS, TOTAL			**SW6010B**	**(SW3050B)**			Analyst: **TF**	
Lead	2190		0.586	5.14	mg/Kg-dry	92485	1	10/18/2007 7:26:30 P
PERCENT MOISTURE			**D2216**				Analyst: **ZA**	
Percent Moisture	8.88		0	0	wt%		1	10/18/2007

10/29/07

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	N	Analyte not NELAC certified
P	NELAC analyte certification pending	Rpt Limit	Reporting Limit
S	Spike Recovery outside accepted recovery limits	BRL	Not detected at MDL

Analytical Environmental Services, Inc.

Date: *19-Oct-07*

CLIENT: Tetra Tech EM Inc.
Lab Order: 0710A41
Project: Industrial Metal Alloy
Lab ID: 0710A41-004

Client Sample ID: IMA-SS-D6-004
Collection Date: 10/17/2007 10:31:00 AM
Matrix: SOIL

Analyses	Result	Qual	MDL	Rpt. Limit	Units	BatchID	DF	Date Analyzed
METALS, TOTAL			**SW6010B**	**(SW3050B)**			Analyst: **TF**	
Lead	470		0.536	4.70	mg/Kg-dry	92485	1	10/18/2007 7:28:30 P
PERCENT MOISTURE			**D2216**				Analyst: **ZA**	
Percent Moisture	12.6		0	0	wt%		1	10/18/2007

gaw
10/29/07

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	N	Analyte not NELAC certified
P	NELAC analyte certification pending	Rpt Limit	Reporting Limit
S	Spike Recovery outside accepted recovery limits	BRL	Not detected at MDL

Analytical Environmental Services, Inc.

Date: *19-Oct-07*

CLIENT: Tetra Tech EM Inc.
Lab Order: 0710A41
Project: Industrial Metal Alloy
Lab ID: 0710A41-005

Client Sample ID: IMA-SS-D9-005
Collection Date: 10/17/2007 10:32:00 AM
Matrix: SOIL

Analyses	Result	Qual	MDL	Rpt. Limit	Units	BatchID	DF	Date Analyzed
METALS, TOTAL			**SW6010B**	**(SW3050B)**			Analyst: **TF**	
Lead	1510		0.620	5.44	mg/Kg-dry	92485	1	10/18/2007 7:30:31 P
PERCENT MOISTURE			**D2216**				Analyst: **ZA**	
Percent Moisture	13.1		0	0	wt%		1	10/18/2007

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10/29/07

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	N	Analyte not NELAC certified
P	NELAC analyte certification pending	Rpt Limit	Reporting Limit
S	Spike Recovery outside accepted recovery limits	BRL	Not detected at MDL

Analytical Environmental Services, Inc.

Date: *19-Oct-07*

CLIENT: Tetra Tech EM Inc.
Lab Order: 0710A41
Project: Industrial Metal Alloy
Lab ID: 0710A41-006

Client Sample ID: IMA-SS-F9-006
Collection Date: 10/17/2007 10:48:00 AM
Matrix: SOIL

Analyses	Result	Qual	MDL	Rpt. Limit	Units	BatchID	DF	Date Analyzed
METALS, TOTAL			**SW6010B**	**(SW3050B)**			Analyst: **TF**	
Lead	968		0.587	5.15	mg/Kg-dry	92485	1	10/18/2007 7:32:32 P
PERCENT MOISTURE			**D2216**				Analyst: **ZA**	
Percent Moisture	15.4		0	0	wt%		1	10/18/2007

10/29/07

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	N	Analyte not NELAC certified
P	NELAC analyte certification pending	Rpt Limit	Reporting Limit
S	Spike Recovery outside accepted recovery limits	BRL	Not detected at MDL

Analytical Environmental Services, Inc.

Date: *19-Oct-07*

CLIENT: Tetra Tech EM Inc.
Lab Order: 0710A41
Project: Industrial Metal Alloy
Lab ID: 0710A41-007

Client Sample ID: IMA-SS-H9-007
Collection Date: 10/17/2007 10:51:00 AM
Matrix: SOIL

Analyses	Result	Qual	MDL	Rpt. Limit	Units	BatchID	DF	Date Analyzed
METALS, TOTAL			**SW6010B**	**(SW3050B)**			Analyst: **TF**	
Lead	1280		0.559	4.90	mg/Kg-dry	92485	1	10/18/2007 7:41:25 P
PERCENT MOISTURE			**D2216**				Analyst: **ZA**	
Percent Moisture	14.3		0	0	wt%		1	10/18/2007

10/29/07

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	N	Analyte not NELAC certified
P	NELAC analyte certification pending	Rpt Limit	Reporting Limit
S	Spike Recovery outside accepted recovery limits	BRL	Not detected at MDL

Analytical Environmental Services, Inc.

Date: *19-Oct-07*

CLIENT: Tetra Tech EM Inc.
Lab Order: 0710A41
Project: Industrial Metal Alloy
Lab ID: 0710A41-017

Client Sample ID: IMA-SS-I21-017
Collection Date: 10/17/2007 3:49:00 PM
Matrix: SOIL

Analyses	Result	Qual	MDL	Rpt. Limit	Units	BatchID	DF	Date Analyzed
METALS, TOTAL			**SW6010B**	**(SW3050B)**			Analyst: **TF**	
Lead	4010	J	5.90	51.8	mg/Kg-dry	92485	10	10/19/2007 11:37:29 A
PERCENT MOISTURE			**D2216**				Analyst: **ZA**	
Percent Moisture	9.18		0	0	wt%		1	10/18/2007

10/29/07

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	N	Analyte not NELAC certified
P	NELAC analyte certification pending	Rpt Limit	Reporting Limit
S	Spike Recovery outside accepted recovery limits	BRL	Not detected at MDL

Analytical Environmental Services, Inc.

Date: *19-Oct-07*

CLIENT: Tetra Tech EM Inc.
Lab Order: 0710A41
Project: Industrial Metal Alloy
Lab ID: 0710A41-020

Client Sample ID: IMA-SS-I21DUP-020
Collection Date: 10/17/2007 3:57:00 PM
Matrix: SOIL

Analyses	Result	Qual	MDL	Rpt. Limit	Units	BatchID	DF	Date Analyzed
METALS, TOTAL			**SW6010B**	**(SW3050B)**			Analyst: **TF**	
Lead	1680	J	0.574	5.03	mg/Kg-dry	92485	1	10/18/2007 8:17:34 P
PERCENT MOISTURE			**D2216**				Analyst: **ZA**	
Percent Moisture	10.6		0	0	wt%		1	10/18/2007

10/29/07

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	N	Analyte not NELAC certified
P	NELAC analyte certification pending	Rpt Limit	Reporting Limit
S	Spike Recovery outside accepted recovery limits	BRL	Not detected at MDL

Analytical Environmental Services, Inc.

Date: *19-Oct-07*

CLIENT: Tetra Tech EM Inc.
Lab Order: 0710A41
Project: Industrial Metal Alloy
Lab ID: 0710A41-008

Client Sample ID: IMA-SS-J9-008
Collection Date: 10/17/2007 11:20:00 AM
Matrix: SOIL

Analyses	Result	Qual	MDL	Rpt. Limit	Units	BatchID	DF	Date Analyzed
METALS, TOTAL			**SW6010B**	**(SW3050B)**			Analyst: TF	
Lead	1270		0.481	4.21	mg/Kg-dry	92485	1	10/18/2007 7:43:27 P
PERCENT MOISTURE			**D2216**				Analyst: ZA	
Percent Moisture	10.6		0	0	wt%		1	10/18/2007

10/29/07

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	N	Analyte not NELAC certified
P	NELAC analyte certification pending	Rpt Limit	Reporting Limit
S	Spike Recovery outside accepted recovery limits	BRL	Not detected at MDL

Analytical Environmental Services, Inc.

Date: *19-Oct-07*

CLIENT: Tetra Tech EM Inc.
Lab Order: 0710A41
Project: Industrial Metal Alloy
Lab ID: 0710A41-018

Client Sample ID: IMA-SS-J22-018
Collection Date: 10/17/2007 3:10:00 PM
Matrix: SOIL

Analyses	Result	Qual	MDL	Rpt. Limit	Units	BatchID	DF	Date Analyzed
METALS, TOTAL			**SW6010B**	**(SW3050B)**				Analyst: TF
Lead	538		0.425	3.73	mg/Kg-dry	92485	1	10/18/2007 8:13:29 P
PERCENT MOISTURE			**D2216**					Analyst: ZA
Percent Moisture	7.07		0	0	wt%		1	10/18/2007

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10/29/07

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	N	Analyte not NELAC certified
P	NELAC analyte certification pending	Rpt Limit	Reporting Limit
S	Spike Recovery outside accepted recovery limits	BRL	Not detected at MDL

Analytical Environmental Services, Inc.

Date: *19-Oct-07*

CLIENT: Tetra Tech EM Inc.
Lab Order: 0710A41
Project: Industrial Metal Alloy
Lab ID: 0710A41-016

Client Sample ID: IMA-SS-L5-016
Collection Date: 10/17/2007 2:37:00 PM
Matrix: SOIL

Analyses	Result	Qual	MDL	Rpt. Limit	Units	BatchID	DF	Date Analyzed
METALS, TOTAL			**SW6010B**	**(SW3050B)**			Analyst: TF	
Lead	728		0.500	4.39	mg/Kg-dry	92485	1	10/18/2007 8:02:31 P
PERCENT MOISTURE			**D2216**				Analyst: ZA	
Percent Moisture	9.14		0	0	wt%		1	10/18/2007

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10/29/07

Qualifiers:					
	*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	N	Analyte not NELAC certified
	P	NELAC analyte certification pending	Rpt Limit	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	BRL	Not detected at MDL

Analytical Environmental Services, Inc.

Date: *19-Oct-07*

CLIENT: Tetra Tech EM Inc.
Lab Order: 0710A41
Project: Industrial Metal Alloy
Lab ID: 0710A41-009

Client Sample ID: IMA-SS-L9-009
Collection Date: 10/17/2007 11:50:00 AM
Matrix: SOIL

Analyses	Result	Qual	MDL	Rpt. Limit	Units	BatchID	DF	Date Analyzed
METALS, TOTAL			**SW6010B**	**(SW3050B)**			Analyst: TF	
Lead	989		0.511	4.48	mg/Kg-dry	92485	1	10/18/2007 7:46:27 P
PERCENT MOISTURE			**D2216**				Analyst: ZA	
Percent Moisture	7.19		0	0	wt%		1	10/18/2007

10/29/07

Qualifiers:					
	*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	N	Analyte not NELAC certified
	P	NELAC analyte certification pending	Rpt Limit	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	BRL	Not detected at MDL

Analytical Environmental Services, Inc.

Date: *19-Oct-07*

CLIENT: Tetra Tech EM Inc.
Lab Order: 0710A41
Project: Industrial Metal Alloy
Lab ID: 0710A41-019

Client Sample ID: IMA-SS-L22-019
Collection Date: 10/17/2007 3:20:00 PM
Matrix: SOIL

Analyses	Result	Qual	MDL	Rpt. Limit	Units	BatchID	DF	Date Analyzed
METALS, TOTAL			**SW6010B**	**(SW3050B)**			Analyst: **TF**	
Lead	993		0.554	4.86	mg/Kg-dry	92485	1	10/18/2007 8:15:30 P
PERCENT MOISTURE			**D2216**				Analyst: **ZA**	
Percent Moisture	14.2		0	0	wt%		1	10/18/2007

10/29/07

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	N	Analyte not NELAC certified
P	NELAC analyte certification pending	Rpt Limit	Reporting Limit
S	Spike Recovery outside accepted recovery limits	BRL	Not detected at MDL

Analytical Environmental Services, Inc.

Date: *19-Oct-07*

CLIENT: Tetra Tech EM Inc.
Lab Order: 0710A41
Project: Industrial Metal Alloy
Lab ID: 0710A41-015

Client Sample ID: IMA-SS-N3-015
Collection Date: 10/17/2007 2:12:00 PM
Matrix: SOIL

Analyses	Result	Qual	MDL	Rpt. Limit	Units	BatchID	DF	Date Analyzed
METALS, TOTAL			**SW6010B**	**(SW3050B)**			Analyst: TF	
Lead	321		0.456	4.00	mg/Kg-dry	92485	1	10/18/2007 7:59:32 P
PERCENT MOISTURE			**D2216**				Analyst: ZA	
Percent Moisture	10.2		0	0	wt%		1	10/18/2007

10/29/07

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	N	Analyte not NELAC certified
P	NELAC analyte certification pending	Rpt Limit	Reporting Limit
S	Spike Recovery outside accepted recovery limits	BRL	Not detected at MDL

Analytical Environmental Services, Inc.

Date: *19-Oct-07*

CLIENT: Tetra Tech EM Inc.
Lab Order: 0710A41
Project: Industrial Metal Alloy
Lab ID: 0710A41-014

Client Sample ID: IMA-SS-N4-014
Collection Date: 10/17/2007 1:44:00 PM
Matrix: SOIL

Analyses	Result	Qual	MDL	Rpt. Limit	Units	BatchID	DF	Date Analyzed
METALS, TOTAL			**SW6010B**	**(SW3050B)**			Analyst: **TF**	
Lead	1090		0.591	5.19	mg/Kg-dry	92485	1	10/18/2007 7:57:32 P
PERCENT MOISTURE			**D2216**				Analyst: **ZA**	
Percent Moisture	18.4		0	0	wt%		1	10/18/2007

10/29/07

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	N	Analyte not NELAC certified
P	NELAC analyte certification pending	Rpt Limit	Reporting Limit
S	Spike Recovery outside accepted recovery limits	BRL	Not detected at MDL

Analytical Environmental Services, Inc.

Date: *19-Oct-07*

CLIENT: Tetra Tech EM Inc.
Lab Order: 0710A41
Project: Industrial Metal Alloy
Lab ID: 0710A41-013

Client Sample ID: IMA-SS-N6-013
Collection Date: 10/17/2007 1:25:00 PM
Matrix: SOIL

Analyses	Result	Qual	MDL	Rpt. Limit	Units	BatchID	DF	Date Analyzed
METALS, TOTAL			**SW6010B**	**(SW3050B)**			Analyst: **TF**	
Lead	682		0.612	5.37	mg/Kg-dry	92485	1	10/18/2007 7:55:29 P
PERCENT MOISTURE			**D2216**				Analyst: **ZA**	
Percent Moisture	13.0		0	0	wt%		1	10/18/2007

gaw
10/29/07

Qualifiers:

*	Value exceeds Maximum Contaminant Level
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	NELAC analyte certification pending
S	Spike Recovery outside accepted recovery limits
B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
N	Analyte not NELAC certified
Rpt Limit	Reporting Limit
BRL	Not detected at MDL

Analytical Environmental Services, Inc.

Date: *19-Oct-07*

CLIENT: Tetra Tech EM Inc.
Lab Order: 0710A41
Project: Industrial Metal Alloy
Lab ID: 0710A41-010

Client Sample ID: IMA-SS-N9-010
Collection Date: 10/17/2007 12:07:00 PM
Matrix: SOIL

Analyses	Result	Qual	MDL	Rpt. Limit	Units	BatchID	DF	Date Analyzed
METALS, TOTAL			**SW6010B**	**(SW3050B)**			Analyst: **TF**	
Lead	799		0.601	5.27	mg/Kg-dry	92485	1	10/18/2007 7:49:24 P
PERCENT MOISTURE			**D2216**				Analyst: **ZA**	
Percent Moisture	9.46		0	0	wt%		1	10/18/2007

10/29/07

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	N	Analyte not NELAC certified
P	NELAC analyte certification pending	Rpt Limit	Reporting Limit
S	Spike Recovery outside accepted recovery limits	BRL	Not detected at MDL

Analytical Environmental Services, Inc.

Date: *19-Oct-07*

CLIENT: Tetra Tech EM Inc.
Lab Order: 0710A41
Project: Industrial Metal Alloy
Lab ID: 0710A41-012

Client Sample ID: IMA-SS-O5-012
Collection Date: 10/17/2007 1:04:00 PM
Matrix: SOIL

Analyses	Result	Qual	MDL	Rpt. Limit	Units	BatchID	DF	Date Analyzed
METALS, TOTAL			**SW6010B**	**(SW3050B)**			Analyst: **TF**	
Lead	358		0.647	5.68	mg/Kg-dry	92485	1	10/18/2007 7:53:27 P
PERCENT MOISTURE			**D2216**				Analyst: **ZA**	
Percent Moisture	19.2		0	0	wt%		1	10/18/2007

gaw
10/29/07

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	N	Analyte not NELAC certified
P	NELAC analyte certification pending	Rpt Limit	Reporting Limit
S	Spike Recovery outside accepted recovery limits	BRL	Not detected at MDL

Analytical Environmental Services, Inc.

Date: *19-Oct-07*

CLIENT: Tetra Tech EM Inc.
Lab Order: 0710A41
Project: Industrial Metal Alloy
Lab ID: 0710A41-011

Client Sample ID: IMA-SS-O7-011
Collection Date: 10/17/2007 12:29:00 PM
Matrix: SOIL

Analyses	Result	Qual	MDL	Rpt. Limit	Units	BatchID	DF	Date Analyzed
METALS, TOTAL			**SW6010B**	**(SW3050B)**			Analyst: **TF**	
Lead	327		0.608	5.34	mg/Kg-dry	92485	1	10/18/2007 7:51:25 P
PERCENT MOISTURE			**D2216**				Analyst: **ZA**	
Percent Moisture	17.9		0	0	wt%		1	10/18/2007

10/29/07

Qualifiers:					
	*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	N	Analyte not NELAC certified
	P	NELAC analyte certification pending	Rpt Limit	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	BRL	Not detected at MDL

Analytical Environmental Services, Inc.

Date: *23-Oct-07*

CLIENT: Tetra Tech EM Inc.
Lab Order: 0710C25
Project: Industrial Metal Alloy
Lab ID: 0710C25-001

Client Sample ID: IMA-SS-O7-011
Collection Date: 10/17/2007 12:29:00 PM
Matrix: SOIL

Analyses	Result	Qual	MDL	Rpt. Limit	Units	BatchID	DF	Date Analyzed
METALS, TOTAL			**SW6010B**	**(SW3050B)**			Analyst: **TF**	
Lead	355		0.660	5.79	mg/Kg-dry	92589	1	10/23/2007 4:36:41 P
PERCENT MOISTURE			**D2216**				Analyst: **ZA**	
Percent Moisture	19.3		0	0	wt%		1	10/23/2007

gaw
10/31/07

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	N	Analyte not NELAC certified
P	NELAC analyte certification pending	Rpt Limit	Reporting Limit
S	Spike Recovery outside accepted recovery limits	BRL	Not detected at MDL

Analytical Environmental Services, Inc.

Date: *19-Oct-07*

CLIENT: Tetra Tech EM Inc.
Lab Order: 0710A41
Project: Industrial Metal Alloy
Lab ID: 0710A41-021

Client Sample ID: IMA-EB-021
Collection Date: 10/17/2007 6:22:00 PM
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Rpt. Limit	Units	BatchID	DF	Date Analyzed
METALS, TOTAL			**SW6010B**	**(SW3010A)**			Analyst: TF	
Lead	BRL	U	0.0036	0.0100	mg/L	92466	1	10/18/2007 4:49:44 P

gaw
10/29/07

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	N	Analyte not NELAC certified
P	NELAC analyte certification pending	Rpt Limit	Reporting Limit
S	Spike Recovery outside accepted recovery limits	BRL	Not detected at MDL

ENCLOSURE 2

DATA VALIDATION-QUALIFIED FIXED LABORATORY ANALYTICAL RESULTS FOR ANALYTICAL ENVIRONMENTAL SERVICES, INC. REPORT NOS. 0710A41 AND 0710C25

(1 Page)

DATA VALIDATION-QUALIFIED FIXED LABORATORY ANALYTICAL RESULTS
FOR ANALYTICAL ENVIRONMENTAL SERVICES, INC. REPORT NO. 0710A41

Sample Designation:	IMA-SS-A6-001	IMA-SS-A9-002	IMA-SS-C8-003	IMA-SS-D6-004	IMA-SS-D9-005	IMA-SS-F9-006	IMA-SS-H9-007
Sample Collection Date:	10/17/2007	10/17/2007	10/17/2007	10/17/2007	10/17/2007	10/17/2007	10/17/2007
Field Quality Control:							
Percent Solids	%	%	%	%	%	%	%
Percent Soilds	7.66	10.8	8.88	12.6	13.1	15.4	14.3
Metals	mg/kg, dry weight	mg/kg, dry weight	mg/kg, dry weight	mg/kg, dry weight	mg/kg, dry weight	mg/kg, dry weight	mg/kg, dry weight
Lead	319	1040	2190	470	1510	968	1280

Sample Designation:	IMA-SS-I21-017	IMA-SS-I21DUP-020	IMA-SS-J9-008	IMA-SS-J22-018	IMA-SS-L5-016	IMA-SS-L9-009	IMA-SS-L22-019
Sample Collection Date:	10/17/2007	10/17/2007	10/17/2007	10/17/2007	10/17/2007	10/17/2007	10/17/2007
Field Quality Control:		Field Duplicate					
Percent Solids	%	%	%	%	%	%	%
Percent Soilds	9.18	10.6	10.6	7.07	9.14	7.19	14.2
Metals	mg/kg, dry weight	mg/kg, dry weight	mg/kg, dry weight	mg/kg, dry weight	mg/kg, dry weight	mg/kg, dry weight	mg/kg, dry weight
Lead	4010 J	1680 J	1270	538	728	989	993

Sample Designation:	IMA-SS-N3-015	IMA-SS-N4-014	IMA-SS-N6-013	IMA-SS-N9-010	IMA-SS-O5-012	IMA-SS-O7-011[a]	IMA-EB-021
Sample Collection Date:	10/17/2007	10/17/2007	10/17/2007	10/17/2007	10/17/2007	10/17/2007	10/17/2007
Field Quality Control:							
Percent Solids	%	%	%	%	%	%	
Percent Soilds	10.2	18.4	13.0	9.46	19.2	17.9, 19.3	NA
Metals	mg/kg, dry weight	mg/kg, dry weight	mg/kg, dry weight	mg/kg, dry weight	mg/kg, dry weight	mg/kg, dry weight	mg/L
Lead	321	1090	682	799	358	327, 355	0.0100 U

Notes:

[a] = This sample was redigested and reanalyzed.
mg/kg = Milligrams per kilogram
mg/L = Milligrams per liter
J = The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample.
U = The analyte was analyzed for, but was not detected at or above the associated value.
NA = Not analyzed

APPENDIX E

FULL DATA VALIDATION REPORT

FOR

SHEALY ENVIRONMENTAL SERVICES INC., REPORT NOS.

IK07015, IK12001, IK14002, IK14003, IK19001, IK20004, IK20005, IK20006, IK23006, IK23007, IL01018 AND IL01019

(56 Pages)

March 17, 2008

Mr. Matthew Huyser
On-Scene Coordinator
U.S. Environmental Protection Agency, Region 4
61 Forsyth Street SW, 11th Floor
Atlanta, Georgia 30303

Subject: **Industrial Metal Alloys Site**
Technical Direction Document Number (No.) TTEMI-05-001-0039
Contract No. EP-W-05-054 (START III Region 4)
Full Data Validation Report
Shealy Environmental Services, Inc. Report Nos. IK07015, IK12001, IK14002, IK14003, IK19001, IK20004, IK20005, IK20006, IK23006, IK23007, IL01018, and IL01019
Analytical Parameters: Lead, pH, and Toxicity Characteristic Leaching Procedure (TCLP) Metals

Laboratory Report Nos.	IK07015, IK12001, IK14002, IK14003, IK19001, IK20004, IK20005, IK20006, IK23006, IK23007, IL01018, and IL01019
Samples	IMA-CON-A9-022, IMA-CON-C8-023, IMA-CON-D6-024, IMA-CON-G9-025, IMA-CON-H9-026, IMA-CON-J9-027, IMA-CON-M5-028, IMA-CON-N1-029, IMA-CON-L5-030, IMA-CON-N4-031, IMA-CON-N5-032, IMA-CON-N5-033, IMA-CON-N6-034, IMA-CON-I10-035, IMA-CON-M10-036, IMA-M10DUP-037, IMA-CON-K11-038, IMA-CON-L11-039, IMA-QA-EB-040, IMA-SB-I12-041, IMA-SF-L12-042, IMA-SF-D10-043, IMA-SB-M13-044, IMA-SB-H13-045, IMA-SF-L14-046, IMA-SF-J14-047, IMA-SF-K22-048, IMA-SB-H15-049, IMA-SF-L22-049, IMA-SB-H15DUP-050, IMA-QA-EB-051, IMA-SF-A25-052, IMA-SF-E24-053, IMA-SF-C25-054, IMA-WA-STK-055, IMA-SB-K11-056, IMA-SF-G25-057, IMA-QA-EB-057, IMA-SF-H24-058, IMA-WA-STK3-059, IMA-SF-B22-060, IMA-SF-B21-061, IMA-SF-B21DUP-062, and IMA-QA-EB
Field Duplicate Pairs	IMA-CON-M10-036/IMA-M10DUP-037, IMA-SB-H15-049/ IMA-SB-H15DUP-050, and IMA-SF-B21-061/IMA-SF-B21DUP-062
Field Blanks	IMA-QA-EB-040, IMA-QA-EB-051, IMA-QA-EB-057, and IMA-QA-EB

Dear Mr. Huyser:

The Tetra Tech Superfund Technical Assessment and Response Team (START) conducted full data validation of the analytical results for 37 soil samples, three field duplicate samples, and four equipment blank samples that were collected at the Industrial Metal Alloy site in Winston-Salem, North Carolina, on November 6 through 30, 2007. The soil samples were analyzed under laboratory report Nos. IK07015, IK12001, IK14002, IK14003, IK19001, IK20004, IK20005, IK20006, IK23006, IK23007, IL01018, and IL01019 by Shealy Environmental Services, Inc. (Shealy), of West Columbia, South Carolina. With the exception of samples IMA-WA-STK-055 and IMA-WA-STK3-059, these samples were analyzed for lead by SW-846 Method 6010B. Samples IMA-WA-STK-055 and IMA-WA-STK3-059 were analyzed for pH by SW-846 Method 9045C and TCLP metals by SW-846 Methods 1311/6010B/7470A.

Analytical data were evaluated in general accordance with all applicable data validation guidance documents, including the following: the U.S. Environmental Protection Agency (EPA) Contract Laboratory Program National Functional Guidelines (NFG) for Inorganic Data Review (October 2004). The analytical methods used by the fixed laboratories during this project provide guidance on procedures and method acceptance criteria that, in some areas, differ from the NFGs. Where the methods and the NFGs differ, the data validators followed the acceptance criteria in the methods. In addition, if laboratory-derived acceptance criteria were presented in the fixed laboratory data package, then these criteria were used to evaluate the data unless the criteria were considered inadequate.

Data were evaluated based on the following criteria:

- Data Completeness
- Sample Preservation, Sample Receipt, and Holding Times
- Instrument Stability
- Initial Calibration
- Continuing Calibration
- Calibration Verification
- Initial and Continuing Calibration Verification
- Field and Laboratory Blanks
- Inductively Coupled Plasma – Interference Check Samples (ICP – ICS)
- Matrix Spike/Matrix Spike Duplicates (MS/MSD)
- Laboratory Duplicate Sample Analysis
- Spike Sample Analysis
- ICP Serial Dilution
- Field Duplicates
- Laboratory Control Samples (LCS) and Laboratory Control Sample Duplicates (LCSD)
- Dilution by Addition of Solvent
- Dilution by Re-extraction and Reanalysis
- Target Analyte Identification
- Analyte Quantitation and Reported Detection Limits
- System Performance

The following data validation approach was used; it should meet the needs of most data uses and requirements for limits on uncertainty for decision-making using the data. This approach consisted of a review of all of the data elements, including the raw data. This data validation effort constituted a full validation of the data and involved a 100 percent check against applicable acceptance criteria of all quality control (QC) parameter data, including the parameters listed above. In addition, all data that pertain to analyte identification, such as chromatograms and mass spectra, were checked completely (100 percent) to evaluate the accuracy of analyte identification. This effort involved an in-depth quantitative check of a fraction of the data; this check involved recalculation of QC results (such as percent recoveries [%R] and relative percent difference [RPD] values) and target analyte results from the raw data. Results were recalculated at a frequency of 10 percent for the data that had been transcribed and generated by hand. Results for data calculated by software were recalculated at varying frequencies and to the extent necessary to confirm the adequacy of the software. If errors or discrepancies were encountered when any data were recalculated and checked, the extent of the data check was expanded, as necessary, to identify the full extent of the problem.

Enclosure 1 presents copies of the sample results sheets from the laboratory data packages, with hand-entered qualifications from the data validation effort. Enclosure 2 presents the same data validation-qualified analytical results in table format.

The following sections discuss the data package and provide an overall assessment of the data. This discussion concentrates on the irregularities associated with the various parameters.

DATA COMPLETENESS

The data packages for these laboratory reports were complete.

SAMPLE PRESERVATION, SAMPLE RECEIPT, AND HOLDING TIMES

The holding times were met for all sample analyses, with one exception. The pH analysis for sample IMA-WA-STK-059 was performed three days after laboratory receipt, while the method states that analysis should be performed "as soon as possible". No qualification was deemed necessary for this exceedance. The temperatures of the samples were within the QC limit of 4 ± 2 degrees Celsius when they arrived at the laboratory.

INSTRUMENT STABILITY

Analytical systems were judged to have been within control and stable during the analyses.

INITIAL CALIBRATION

The initial calibrations were analyzed at the proper frequencies and concentrations and met all requirements.

CONTINUING CALIBRATION

The continuing calibrations were analyzed at the proper frequencies and concentrations and met all requirements.

CALIBRATION VERIFICATION

The Contract-Required Quantitation Limit (CRQL) Check Standard (CRI) for the metals analyses was analyzed at the proper frequencies and concentrations and met all requirements.

INITIAL AND CONTINUING CALIBRATION VERIFICATION

The initial and continuing calibration verifications for the metals analyses were analyzed at the proper frequencies and concentrations and met all requirements.

FIELD AND LABORATORY BLANKS

Method blanks and equipment rinsate blanks were free of target analytes, with the following exceptions. Several of the laboratory blanks contained low concentrations of lead. No qualifications were warranted because all field sample results were greater than five times the highest blank concentration and all equipment rinsate results were non-detect.

INDUCTIVELY COUPLED PLASMA – INTERFERENCE CHECK SAMPLES (ICP – ICS)

All ICP-ICS data were within the QC limits.

MATRIX SPIKE/MATRIX SPIKE DUPLICATES

MS/MSD recoveries and RPD results for laboratory report Nos. IK07015, IK19001, IK20005, IK23007, and IL01018, and the MS recoveries for laboratory report Nos. IK12001 and IK20006 were within the specified control limits. No MS/MSD analyses were included for laboratory report Nos. IK14002, IK14003, IK20004, IK23006, and IL01019. The LCS/LCSD results included for these laboratory reports and the MS/MSD results from the other data packages provided adequate information on accuracy and precision.

LABORATORY DUPLICATE SAMPLE ANALYSIS

A laboratory duplicate analysis for pH gave an acceptable result. For the other analyses, the MS/MSD analyses and LCS/LSCD analyses provided information on precision. All results were within specified QC limits.

SPIKE SAMPLE ANALYSIS

No post digestion spikes were analyzed. Because MS/MSD recoveries were acceptable, post digestion spikes were not required.

ICP SERIAL DILUTION

An aqueous ICP serial dilution was performed and all results were within QC limits. Additional ICP serial dilutions were not performed. EPA Method 6010B does not require ICP serial dilution analyses.

FIELD DUPLICATES

The field duplicate results were similar for samples IMA-CON-M10-036/IMA-M10DUP-037 and IMA-SF-B21-061/IMA-SF-B21DUP-062; the RPD for lead were 13 percent and 4 percent, respectively

The field duplicate results were somewhat similar for sample IMA-SB-H15-049 and IMA-SB-H15DUP-050; the RPD for lead was 51 percent. This may indicate heterogeneity within the soil. No qualifications are made on the basis of field duplicate results.

LABORATORY CONTROL SAMPLES AND LABORATORY CONTROL SAMPLE DUPLICATES

All LCS and LCSD results were within the QC limits.

DILUTION BY ADDITION OF SOLVENT

Several samples were analyzed at 2- to 10-fold dilutions to bring the lead results within the calibration range of the instrument.

DILUTION BY RE-EXTRACTION AND REANALYSIS

Re-extractions were neither required nor performed.

TARGET ANALYTE IDENTIFICATION

Target analyte identification is not an issue for Method 6010B analyses.

ANALYTE QUANTITATION AND REPORTED DETECTION LIMITS

Sample results were checked for proper dilution factors, volumes, masses, and adjustments for moisture content. Sample results and reporting limits were correctly calculated.

SYSTEM PERFORMANCE

No signs of degraded instrument performance were observed. Analytical systems were judged to have been within control and stable during the analyses.

OVERALL ASSESSMENT OF DATA

The overall quality of this data package was good. No results were qualified. All data can be used as reported for any purpose.

Please call me at (678) 775-3104 if you have any questions regarding this data validation report.

Sincerely,

Jessica A. Vickers

Jessica Vickers
START III Quality Assurance Manager

Enclosures (2)

cc: Katrina Jones, EPA Project Officer
Darryl Walker, EPA Alternate Project Officer
Angel Reed, Tetra Tech START III Document Control Coordinator

ENCLOSURE 1

**FIXED LABORATORY ANALYTICAL RESULTS SHEETS
WITH HAND-ENTERED DATA VALIDATION QUALIFIERS
FOR SHEALY ENVIRONMENTAL SERVICES, INC. REPORT NOS. IK07015, IK12001, IK14002, IK14003, IK19001, IK20004, IK20005, IK20006, IK23006, IK23007, IL01018, AND IL01019**

(46 Pages)

RCRA Metals

Client: **Tetra Tech EM Inc.**
Description: **IMA-CON-A9-022**
Date Sampled: **11/06/2007 1257**
Date Received: **11/07/2007**

Laboratory ID: **IK07015-001**
Matrix: **Solid**
% Solids: **94.7** **11/07/2007 2137**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010B	10	11/12/2007 1611	KJC	11/07/2007 1450	67370

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Lead	**7439-92-1**	**6010B**	**120**		**5.3**	**mg/kg**	**1**

01/03/08

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL

E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria

RCRA Metals

Client: **Tetra Tech EM Inc.**
Description: **IMA-CON-C8-023**
Date Sampled: **11/06/2007 1300**
Date Received: **11/07/2007**

Laboratory ID: **IK07015-002**
Matrix: **Solid**
% Solids: **86.5** **11/07/2007 2137**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010B	10	11/12/2007 1617	KJC	11/07/2007 1450	67370

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Lead	**7439-92-1**	**6010B**	**270**		**5.8**	**mg/kg**	**1**

01/03/08

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL

E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria

RCRA Metals

Client: **Tetra Tech EM Inc.**
Description: **IMA-CON-D6-024**
Date Sampled: **11/06/2007 1302**
Date Received: **11/07/2007**

Laboratory ID: **IK07015-003**
Matrix: **Solid**
% Solids: **88.0** **11/07/2007 2137**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010B	10	11/12/2007 1643	KJC	11/07/2007 1450	67370

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Lead	**7439-92-1**	**6010B**	**240**		**5.7**	**mg/kg**	**1**

01/03/08

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL

E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria

RCRA Metals

Client: **Tetra Tech EM Inc.**
Description: **IMA-CON-G9-025**
Date Sampled: **11/06/2007 1310**
Date Received: **11/07/2007**

Laboratory ID: **IK07015-004**
Matrix: **Solid**
% Solids: **84.3** **11/07/2007 2137**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010B	10	11/12/2007 1649	KJC	11/07/2007 1450	67370

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Lead	**7439-92-1**	**6010B**	**330**		**5.9**	**mg/kg**	**1**

01/03/08

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL

E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria

RCRA Metals

Client: **Tetra Tech EM Inc.**
Description: **IMA-CON-H9-026**
Date Sampled: **11/06/2007 1312**
Date Received: **11/07/2007**

Laboratory ID: **IK07015-005**
Matrix: **Solid**
% Solids: **90.4** **11/07/2007 2137**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010B	10	11/12/2007 1708	KJC	11/07/2007 1450	67370

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Lead	**7439-92-1**	**6010B**	**580**		**5.5**	**mg/kg**	**1**

01/03/08

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL

E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
N = *Recovery is out of criteria*

RCRA Metals

Client: **Tetra Tech EM Inc.**
Description: **IMA-CON-J9-027**
Date Sampled: **11/06/2007 1319**
Date Received: **11/07/2007**

Laboratory ID: **IK07015-006**
Matrix: **Solid**
% Solids: **88.8** **11/07/2007 2137**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010B	10	11/12/2007 1721	KJC	11/07/2007 1450	67370

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Lead	**7439-92-1**	**6010B**	**36**		**5.6**	**mg/kg**	**1**

01/03/08

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL

E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria

RCRA Metals

Client: **Tetra Tech EM Inc.**
Description: **IMA-CON-M5-028**
Date Sampled: **11/06/2007 1340**
Date Received: **11/07/2007**

Laboratory ID: **IK07015-007**
Matrix: **Solid**
% Solids: **89.0** **11/07/2007 2137**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010B	2	11/12/2007 1727	KJC	11/07/2007 1450	67370

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Lead	**7439-92-1**	**6010B**	**69**		**1.1**	**mg/kg**	**1**

qaw
01/03/08

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL

E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria

RCRA Metals

Client: **Tetra Tech EM Inc.**
Description: **IMA-CON-NI-029**
Date Sampled: **11/06/2007 1425**
Date Received: **11/10/2007**

Laboratory ID: **IK12001-001**
Matrix: **Solid**
% Solids: **83.3** **11/12/2007 2146**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010B	10	11/16/2007 1846	KJC	11/12/2007 1651	67669

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Lead	**7439-92-1**	**6010B**	**460**		**6.0**	**mg/kg**	**1**

01/03/08

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL

E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria

RCRA Metals

Client: **Tetra Tech EM Inc.**
Description: **IMA-CON-L5-030**
Date Sampled: **11/06/2007 1030**
Date Received: **11/07/2007**

Laboratory ID: **IK07015-008**
Matrix: **Solid**
% Solids: **87.0** **11/07/2007 2137**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010B	5	11/12/2007 1733	KJC	11/07/2007 1450	67370

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Lead	**7439-92-1**	**6010B**	**150**		**2.9**	**mg/kg**	**1**

01/03/08

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL

E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria

RCRA Metals

Client: **Tetra Tech EM Inc.**
Description: **IMA-CON-N4-031**
Date Sampled: **11/07/2007 1024**
Date Received: **11/10/2007**

Laboratory ID: **IK12001-002**
Matrix: **Solid**
% Solids: **81.7** **11/12/2007 2146**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010B	10	11/16/2007 1858	KJC	11/12/2007 1651	67669

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Lead	**7439-92-1**	**6010B**	**140**		**6.1**	**mg/kg**	**1**

01/03/08

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL

E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria

RCRA Metals

Client: **Tetra Tech EM Inc.**
Description: **IMA-CON-N5-032**
Date Sampled: **11/07/2007 1255**
Date Received: **11/10/2007**

Laboratory ID: **IK12001-003**
Matrix: **Solid**
% Solids: **83.8** **11/12/2007 2146**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010B	10	11/16/2007 1904	KJC	11/12/2007 1651	67669

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Lead	**7439-92-1**	**6010B**	**190**		**6.0**	**mg/kg**	**1**

01/03/08

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL

E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria

RCRA Metals

Client: **Tetra Tech EM Inc.**
Description: **IMA-CON-05-033**
Date Sampled: **11/07/2007 1410**
Date Received: **11/10/2007**

Laboratory ID: **IK12001-004**
Matrix: **Solid**
% Solids: **83.4** **11/12/2007 2146**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010B	10	11/16/2007 1910	KJC	11/12/2007 1651	67669

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Lead	**7439-92-1**	**6010B**	**260**		**6.0**	**mg/kg**	**1**

01/03/08

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL

E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria

RCRA Metals

Client: **Tetra Tech EM Inc.**
Description: **IMA-CON-N6-034**
Date Sampled: **11/07/2007 1500**
Date Received: **11/10/2007**

Laboratory ID: **IK12001-005**
Matrix: **Solid**
% Solids: **87.6** **11/12/2007 2146**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010B	10	11/16/2007 1916	KJC	11/12/2007 1651	67669

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Lead	**7439-92-1**	**6010B**	**400**		**5.7**	**mg/kg**	**1**

01/03/08

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL

E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria

RCRA Metals

Client: **Tetra Tech EM Inc.**
Description: **IMA-CON-I10-035**
Date Sampled: **11/08/2007 0850**
Date Received: **11/10/2007**

Laboratory ID: **IK12001-006**
Matrix: **Solid**
% Solids: **86.5** **11/12/2007 2146**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010B	10	11/16/2007 1922	KJC	11/12/2007 1651	67669

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Lead	**7439-92-1**	**6010B**	**75**		**5.8**	**mg/kg**	**1**

01/03/08

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL

E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria

RCRA Metals

Client: **Tetra Tech EM Inc.**
Description: **IMA-CON-M10-036**
Date Sampled: **11/08/2007 1005**
Date Received: **11/10/2007**

Laboratory ID: **IK12001-007**
Matrix: **Solid**
% Solids: **86.4** **11/12/2007 2146**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010B	10	11/16/2007 1940	KJC	11/12/2007 1651	67669

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Lead	**7439-92-1**	**6010B**	**330**		**5.8**	**mg/kg**	**1**

gaw
01/03/08

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL

E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria

RCRA Metals

Client: **Tetra Tech EM Inc.**
Description: **IMA-CON-MIODUP-037**
Date Sampled: **11/08/2007 1005**
Date Received: **11/10/2007**

Laboratory ID: **IK12001-008**
Matrix: **Solid**
% Solids: **86.0** **11/12/2007 2146**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010B	10	11/16/2007 1947	KJC	11/12/2007 1651	67669

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Lead	**7439-92-1**	**6010B**	**290**		**5.8**	**mg/kg**	**1**

01/03/08

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL

E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria

RCRA Metals

Client: **Tetra Tech EM Inc.**
Description: **IMA-CON-K11-038**
Date Sampled: **11/08/2007 1510**
Date Received: **11/10/2007**

Laboratory ID: **IK12001-009**
Matrix: **Solid**
% Solids: **85.2** **11/12/2007 2146**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010B	10	11/16/2007 1953	KJC	11/12/2007 1651	67669

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Lead	**7439-92-1**	**6010B**	**420**		**5.9**	**mg/kg**	**1**

gaw
01/03/08

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

RCRA Metals

Client: **Tetra Tech EM Inc.**
Description: **IMA-CON-L11-039**
Date Sampled: **11/08/2007 1525**
Date Received: **11/10/2007**

Laboratory ID: **IK12001-010**
Matrix: **Solid**
% Solids: **86.5** **11/12/2007 2146**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010B	10	11/16/2007 1959	KJC	11/12/2007 1651	67669

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Lead	**7439-92-1**	**6010B**	**430**		**5.8**	**mg/kg**	**1**

JAW
01/03/08

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL

E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria

RCRA Metals

Client: **Tetra Tech EM Inc.**
Description: **IMA-QA-EB-040**
Date Sampled: **11/09/2007 1050**
Date Received: **11/10/2007**

Laboratory ID: **IK12001-011**
Matrix: **Aqueous**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6010B	1	11/13/2007 1908	KJC	11/12/2007 1550	67658

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Lead	7439-92-1	6010B	ND		0.010	mg/L	1

01/03/08

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL

E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria

RCRA Metals

Client: **Tetra Tech EM Inc.**
Description: **IMA-SB-I12-041**
Date Sampled: **11/09/2007 1315**
Date Received: **11/14/2007**

Laboratory ID: **IK14003-001**
Matrix: **Solid**
% Solids: **88.8** **11/14/2007 1726**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010B	10	11/24/2007 0257	KJC	11/14/2007 1412	67805

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Lead	**7439-92-1**	**6010B**	**67**		**5.6**	**mg/kg**	**1**

01/03/08

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL

E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria

RCRA Metals

Client: **Tetra Tech EM Inc.**
Description: **IMA-SF-L12-042**
Date Sampled: **11/12/2007 1425**
Date Received: **11/14/2007**

Laboratory ID: **IK14003-002**
Matrix: **Solid**
% Solids: **88.8** **11/14/2007 1726**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010B	10	11/24/2007 0316	KJC	11/14/2007 1412	67805

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Lead	**7439-92-1**	**6010B**	**220**		**5.6**	**mg/kg**	**1**

01/03/08

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL

E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria

RCRA Metals

Client: **Tetra Tech EM Inc.**
Description: **IMA-SF-D10-043**
Date Sampled: **11/13/2007 0900**
Date Received: **11/14/2007**

Laboratory ID: **IK14002-001**
Matrix: **Solid**
% Solids: **86.6** **11/14/2007 1726**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010B	1	11/16/2007 1214	KJC	11/14/2007 1412	67805

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Lead	**7439-92-1**	**6010B**	**7.3**		**0.58**	**mg/kg**	**1**

01/03/08

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL

E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria

RCRA Metals

Client: **Tetra Tech EM Inc.**
Description: **IMA-SB-M13-044**
Date Sampled: **11/13/2007 1045**
Date Received: **11/14/2007**

Laboratory ID: **IK14003-003**
Matrix: **Solid**
% Solids: **86.8** **11/14/2007 1726**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010B	10	11/24/2007 0322	KJC	11/14/2007 1412	67805

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Lead	**7439-92-1**	**6010B**	**100**		**5.8**	**mg/kg**	**1**

gaw
01/03/08

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL

E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria

RCRA Metals

Client: **Tetra Tech EM Inc.**
Description: **IMA-SB-H13-045**
Date Sampled: **11/13/2007 1345**
Date Received: **11/14/2007**

Laboratory ID: **IK14003-004**
Matrix: **Solid**
% Solids: **90.2** **11/14/2007 1726**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010B	10	11/24/2007 0329	KJC	11/14/2007 1412	67805

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Lead	**7439-92-1**	**6010B**	**440**		**5.5**	**mg/kg**	**1**

01/03/08

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL

E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria

RCRA Metals

Client: **Tetra Tech EM Inc.**
Description: **IMA-SF-L14-046**
Date Sampled: **11/14/2007 1155**
Date Received: **11/19/2007**

Laboratory ID: **IK19001-001**
Matrix: **Solid**
% Solids: **71.4** **11/19/2007 2027**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010B	1	11/26/2007 1716	KJC	11/19/2007 1543	68120

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Lead	**7439-92-1**	**6010B**	**200**		**0.70**	**mg/kg**	**1**

01/03/08

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL

E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria

RCRA Metals

Client: **Tetra Tech EM Inc.**
Description: **IMA-SF-J14-047**
Date Sampled: **11/15/2007 1045**
Date Received: **11/19/2007**

Laboratory ID: **IK19001-002**
Matrix: **Solid**
% Solids: **79.8** **11/19/2007 2027**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010B	1	11/26/2007 1722	KJC	11/19/2007 1543	68120

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Lead	**7439-92-1**	**6010B**	**100**		**0.63**	**mg/kg**	**1**

01/03/08

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL

E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria

RCRA Metals

Client: **Tetra Tech EM Inc.**
Description: **IMA-SF-K22-048**
Date Sampled: **11/15/2007 1615**
Date Received: **11/19/2007**

Laboratory ID: **IK19001-004**
Matrix: **Solid**
% Solids: **77.9** **11/19/2007 2027**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010B	5	11/26/2007 1735	KJC	11/19/2007 1543	68120

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Lead	**7439-92-1**	**6010B**	**300**		**3.2**	**mg/kg**	**1**

01/03/08

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL

E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria

RCRA Metals

Client: **Tetra Tech EM Inc.**
Description: **IMA-SF-L22-049**
Date Sampled: **11/15/2007 1510**
Date Received: **11/19/2007**

Laboratory ID: **IK19001-003**
Matrix: **Solid**
% Solids: **81.4** **11/19/2007 2027**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010B	5	11/26/2007 1728	KJC	11/19/2007 1543	68120

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Lead	**7439-92-1**	**6010B**	**200**		**3.1**	**mg/kg**	**1**

01/03/08

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL

E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria

RCRA Metals

Client: **Tetra Tech EM Inc.**
Description: **IMA-SB-H15-049**
Date Sampled: **11/16/2007 1005**
Date Received: **11/19/2007**

Laboratory ID: **IK19001-005**
Matrix: **Solid**
% Solids: **69.7** **11/19/2007 2027**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010B	1	11/26/2007 1813	KJC	11/19/2007 1543	68120

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Lead	**7439-92-1**	**6010B**	**420**		**0.72**	**mg/kg**	**1**

01/03/08

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL

E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria

RCRA Metals

Client: **Tetra Tech EM Inc.**
Description: **IMA-SB-H15DUP-050**
Date Sampled: **11/16/2007 1005**
Date Received: **11/19/2007**

Laboratory ID: **IK19001-006**
Matrix: **Solid**
% Solids: **77.6** **11/19/2007 2027**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010B	1	11/26/2007 1819	KJC	11/19/2007 1543	68120

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Lead	**7439-92-1**	**6010B**	**250**		**0.64**	**mg/kg**	**1**

01/03/08

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL

E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria

RCRA Metals

Client: **Tetra Tech EM Inc.**
Description: **IMA-QA-EB-051**
Date Sampled: **11/16/2007 1315**
Date Received: **11/19/2007**

Laboratory ID: **IK19001-007**
Matrix: **Aqueous**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6010B	1	11/21/2007 0344	KJC	11/19/2007 1502	68116

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Lead	7439-92-1	6010B	ND		0.010	mg/L	1

01/03/08

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL

E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria

RCRA Metals

Client: **Tetra Tech EM Inc.**
Description: **IMA-SF-A25-052**
Date Sampled: **11/19/2007 1040**
Date Received: **11/20/2007**

Laboratory ID: **IK20006-001**
Matrix: **Solid**
% Solids: **90.4** **11/20/2007 2131**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010B	10	11/26/2007 2057	KJC	11/20/2007 1652	68204

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Lead	7439-92-1	6010B	190		5.5	mg/kg	1

01/03/08

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL

E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria

RCRA Metals

Client: **Tetra Tech EM Inc.**
Description: **IMA-SF-E24-053**
Date Sampled: **11/19/2007 1250**
Date Received: **11/20/2007**

Laboratory ID: **IK20004-001**
Matrix: **Solid**
% Solids: **91.7** **11/20/2007 2131**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010B	10	11/26/2007 2045	KJC	11/20/2007 1652	68204

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Lead	**7439-92-1**	**6010B**	**250**		**5.4**	**mg/kg**	**1**

01/03/08

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL

E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria

RCRA Metals

Client: **Tetra Tech EM Inc.**
Description: **IMA-SF-C25-054**
Date Sampled: **11/19/2007 1345**
Date Received: **11/20/2007**

Laboratory ID: **IK20006-002**
Matrix: **Solid**
% Solids: **89.2** **11/20/2007 2131**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010B	10	11/26/2007 2110	KJC	11/20/2007 1652	68204

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Lead	**7439-92-1**	**6010B**	**39**		**5.6**	**mg/kg**	**1**

01/03/08

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL

E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria

Inorganic non-metals

Client: **Tetra Tech EM Inc.**
Description: **IMA-WA-STK-055**
Date Sampled: **11/19/2007 1445**
Date Received: **11/20/2007**

Laboratory ID: **IK20005-001**
Matrix: **Solid**
% Solids: **86.2** **11/20/2007 2131**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(pH) 9045C	1	11/20/2007 1515	PBC		68215

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH		**9045C**	**4.90**			**su**	**1**

01/03/08

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL

E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria

TCLP Metals

Client: **Tetra Tech EM Inc.**
Description: **IMA-WA-STK-055**
Date Sampled: **11/19/2007 1445**
Date Received: **11/20/2007**

Laboratory ID: **IK20005-001**
Matrix: **Solid**
% Solids: **86.2** **11/20/2007 2131**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Leachate Date
1	1311/7470A	7470A	1	11/23/2007 2127	FLW	11/23/2007 1754	68376	11/21/2007 1705
1	1311/3010A	6010B	10	11/27/2007 1437	KJC	11/23/2007 1821	68447	11/21/2007 1705
2	1311/3010A	6010B	10	11/27/2007 1920	KJC	11/23/2007 1821	68447	11/21/2007 1705

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Arsenic	7440-38-2	6010B	ND		0.10	mg/L	1
Barium	7440-39-3	6010B	ND		0.25	mg/L	1
Cadmium	**7440-43-9**	**6010B**	**0.021**		**0.020**	**mg/L**	**1**
Chromium	7440-47-3	6010B	ND		0.050	mg/L	1
Lead	**7439-92-1**	**6010B**	**0.30**		**0.10**	**mg/L**	**2**
Mercury	7439-97-6	7470A	ND		0.00020	mg/L	1
Selenium	7782-49-2	6010B	ND		0.10	mg/L	1
Silver	7440-22-4	6010B	ND		0.050	mg/L	1

gaw
01/03/08

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL

E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria

RCRA Metals

Client: **Tetra Tech EM Inc.**
Description: **IMA-SB-K11-056**
Date Sampled: **11/21/2007 0950**
Date Received: **11/23/2007**

Laboratory ID: **IK23006-001**
Matrix: **Solid**
% Solids: **83.0** **11/23/2007 2006**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010B	10	11/28/2007 1505	KJC	11/23/2007 1542	68365

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Lead	**7439-92-1**	**6010B**	**240**		**6.0**	**mg/kg**	**1**

01/03/08

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL

E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria

RCRA Metals

Client: **Tetra Tech EM Inc.**
Description: **IMA-QA-EB-057**
Date Sampled: **11/21/2007 0900**
Date Received: **11/23/2007**

Laboratory ID: **IK23007-001**
Matrix: **Aqueous**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6010B	1	12/01/2007 2216	KJC	11/23/2007 1630	68364

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Lead	7439-92-1	6010B	ND		0.010	mg/L	1

qaw
01/03/08

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL

E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria

RCRA Metals

Client: **Tetra Tech EM Inc.**
Description: **IMA-SF-G25-057**
Date Sampled: **11/27/2007 0925**
Date Received: **12/01/2007**

Laboratory ID: **IL01018-001**
Matrix: **Solid**
% Solids: **88.7** **12/02/2007 0742**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010B	10	12/06/2007 1706	KJC	12/04/2007 2252	68974

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Lead	7439-92-1	6010B	330		5.6	mg/kg	1

01/03/08

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL

E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria

RCRA Metals

Client: **Tetra Tech EM Inc.**
Description: **IMA-SF-H24-058**
Date Sampled: **11/27/2007 1325**
Date Received: **12/01/2007**

Laboratory ID: **IL01018-003**
Matrix: **Solid**
% Solids: **82.4** **12/02/2007 0742**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010B	10	12/06/2007 1718	KJC	12/04/2007 2252	68974

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Lead	**7439-92-1**	**6010B**	**340**		**6.1**	**mg/kg**	**1**

01/03/08

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL

E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria

Inorganic non-metals

Client: **Tetra Tech EM Inc.**
Description: **IAM-WA-STK3-059**
Date Sampled: **11/28/2007 1510**
Date Received: **12/01/2007**

Laboratory ID: **IL01019-001**
Matrix: **Solid**
% Solids: **87.1** **12/02/2007 0742**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(pH) 9045C	1	12/04/2007 1000	IVC		68937

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
pH		9045C	4.49	*		su	1

01/03/08

Footnote(s): ANALYZED OUT OF HOLD

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

TCLP Metals

Client: **Tetra Tech EM Inc.**
Description: **IAM-WA-STK3-059**
Date Sampled: **11/28/2007 1510**
Date Received: **12/01/2007**

Laboratory ID: **IL01019-001**
Matrix: **Solid**
% Solids: **87.1** **12/02/2007 0742**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Leachate Date
1	1311/7470A	7470A	1	12/04/2007 2233	FLW	12/04/2007 1900	68949	12/03/2007 1604
1	1311/3010A	6010B	10	12/05/2007 1213	KJC	12/04/2007 1600	68963	12/03/2007 1604

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Arsenic	7440-38-2	6010B	ND		0.10	mg/L	1
Barium	7440-39-3	6010B	ND		0.25	mg/L	1
Cadmium	7440-43-9	6010B	ND		0.020	mg/L	1
Chromium	7440-47-3	6010B	ND		0.050	mg/L	1
Lead	7439-92-1	6010B	ND		0.10	mg/L	1
Mercury	7439-97-6	7470A	ND		0.00020	mg/L	1
Selenium	7782-49-2	6010B	ND		0.10	mg/L	1
Silver	7440-22-4	6010B	ND		0.050	mg/L	1

gaw
01/03/08

Footnote(s): ANALYZED OUT OF HOLD

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

RCRA Metals

Client: **Tetra Tech EM Inc.**
Description: **IMA-SF-B22-060**
Date Sampled: **11/27/2007 1330**
Date Received: **12/01/2007**

Laboratory ID: **IL01018-002**
Matrix: **Solid**
% Solids: **86.0** **12/02/2007 0742**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010B	10	12/06/2007 1712	KJC	12/04/2007 2252	68974

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Lead	7439-92-1	6010B	180		5.8	mg/kg	1

01/03/08

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL

E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria

RCRA Metals

Client: **Tetra Tech EM Inc.**
Description: **IMA-SF-B21-061**
Date Sampled: **11/28/2007 1325**
Date Received: **12/01/2007**

Laboratory ID: **IL01018-004**
Matrix: **Solid**
% Solids: **86.8** **12/02/2007 0742**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010B	10	12/06/2007 1724	KJC	12/04/2007 2252	68974

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Lead	7439-92-1	6010B	260		5.8	mg/kg	1

01/03/08

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL

E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria

RCRA Metals

Client: **Tetra Tech EM Inc.**
Description: **IMA-SF-B21DUP-062**
Date Sampled: **11/28/2007 1325**
Date Received: **12/01/2007**

Laboratory ID: **IL01018-005**
Matrix: **Solid**
% Solids: **88.1** **12/02/2007 0742**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010B	10	12/06/2007 1730	KJC	12/04/2007 2252	68974

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Lead	**7439-92-1**	**6010B**	**250**		**5.7**	**mg/kg**	**1**

01/03/08

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL

E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria

RCRA Metals

Client: **Tetra Tech EM Inc.**
Description: **IMA-QA-EB**
Date Sampled: **11/30/2007 1100**
Date Received: **12/01/2007**

Laboratory ID: **IL01018-007**
Matrix: **Aqueous**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6010B	1	12/07/2007 0058	KJC	12/03/2007 2034	68893

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Lead	7439-92-1	6010B	ND		0.010	mg/L	1

01/03/08

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL

E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria

ENCLOSURE 2

DATA VALIDATION-QUALIFIED FIXED LABORATORY ANALYTICAL RESULTS FOR SHEALY ENVIRONMENTAL SERVICES, INC. REPORT NOS. IK07015, IK12001, IK14002, IK14003, IK19001, IK20004, IK20005, IK20006, IK23006, IK23007, IL01018, AND IL01019

(3 Pages)

DATA VALIDATION-QUALIFIED FIXED LABORATORY ANALYTICAL RESULTS
FOR SHEALY ENVIRONMENTAL SERVICES, INC. REPORT NOS. IK07015, IK12001, IK14002, IK14003, IK19001, IK20004, IK20005, IK20006, IK23006, IK23007, IL01018, AND IL01019

Sample Designation:	**IMA-CON-A9-022**	**IMA-CON-C8-023**	**IMA-CON-D6-024**	**IMA-CON-G9-025**	**IMA-CON-H9-026**
Sample Collection Date:	**06-Nov-07**	**06-Nov-07**	**06-Nov-07**	**06-Nov-07**	**06-Nov-07**
Field Quality Control:					
Percent Solids	%	%	%	%	%
Percent Solids	**94.7**	**86.5**	**88.0**	**84.3**	**90.4**
Metals	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Lead	**120**	**270**	**240**	**330**	**580**

Sample Designation:	**IMA-CON-J9-027**	**IMA-CON-M5-028**	**IMA-CON-N1-029**	**IMA-CON-L5-030**	**IMA-CON-N4-031**
Sample Collection Date:	**06-Nov-07**	**06-Nov-07**	**06-Nov-07**	**06-Nov-07**	**07-Nov-07**
Field Quality Control:					
Percent Solids	%	%	%	%	%
Percent Solids	**88.8**	**89.0**	**83.3**	**87.0**	**81.7**
Metals	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Lead	**36**	**69**	**460**	**150**	**140**

Sample Designation:	**IMA-CON-N5-032**	**IMA-CON-05-033**	**IMA-CON-N6-034**	**IMA-CON-I10-035**	**IMA-CON-M10-036**
Sample Collection Date:	**07-Nov-07**	**07-Nov-07**	**07-Nov-07**	**08-Nov-07**	**08-Nov-07**
Field Quality Control:					
Percent Solids	%	%	%	%	%
Percent Solids	**83.8**	**83.4**	**87.6**	**86.5**	**86.4**
Metals	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Lead	**190**	**260**	**400**	**75**	**330**

Sample Designation:	**IMA-CON-M10DUP-037**	**IMA-CON-K11-038**	**IMA-CON-L11-039**	**IMA-QA-EB-040**	**IMA-SB-I12-041**
Sample Collection Date:	**08-Nov-07**	**08-Nov-07**	**08-Nov-07**	**09-Nov-07**	**09-Nov-07**
Field Quality Control:	**Field Duplicate**			**Rinsate Blank**	
Percent Solids	%	%	%		%
Percent Solids	**86.0**	**85.2**	**86.5**	NA	**88.8**
Metals	mg/kg	mg/kg	mg/kg	mg/L	mg/kg
Lead	**290**	**420**	**430**	0.010 U	**67**

DATA VALIDATION-QUALIFIED FIXED LABORATORY ANALYTICAL RESULTS
FOR SHEALY ENVIRONMENTAL SERVICES, INC. REPORT NOS. IK07015, IK12001, IK14002, IK14003, IK19001, IK20004, IK20005, IK20006, IK23006, IK23007, IL01018, AND IL01019

Sample Designation:	**IMA-SF-L12-042**	**IMA-SF-D10-043**	**IMA-SB-M13-044**	**IMA-SB-H13-045**	**IMA-SF-L14-046**
Sample Collection Date:	**12-Nov-07**	**13-Nov-07**	**13-Nov-07**	**13-Nov-07**	**14-Nov-07**
Field Quality Control:					
Percent Solids	%	%	%	%	%
Percent Solids	**88.8**	**86.6**	**86.8**	**90.2**	**71.4**
Metals	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Lead	**220**	**7.3**	**100**	**440**	**200**

Sample Designation:	**IMA-SF-J14-047**	**IMA-SF-K22-048**	**IMA-SF-L22-049**	**IMA-SB-H15-049**	**IMA-SB-H15DUP-050**
Sample Collection Date:	**15-Nov-07**	**15-Nov-07**	**15-Nov-07**	**16-Nov-07**	**16-Nov-07**
Field Quality Control:					
Percent Solids	%	%	%	%	%
Percent Solids	**79.8**	**77.9**	**81.4**	**69.7**	**77.6**
Metals	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Lead	**100**	**300**	**200**	**420**	**250**

Sample Designation:	**IMA-QA-EB-051**	**IMA-SF-A25-052**	**IMA-SF-E24-053**	**IMA-SF-C25-054**	**IMA-SB-K11-056**
Sample Collection Date:	**16-Nov-07**	**19-Nov-07**	**19-Nov-07**	**19-Nov-07**	**21-Nov-07**
Field Quality Control:	**Rinsate Blank**				
Percent Solids		%	%	%	%
Percent Solids	NA	**90.4**	**91.7**	**89.2**	**83.0**
Metals	mg/L	mg/kg	mg/kg	mg/kg	mg/kg
Lead	0.010 U	**190**	**250**	**39**	**240**

Sample Designation:	**IMA-SF-G25-057**	**IMA-QA-EB-057**	**IMA-SF-H24-058**	**IMA-SF-B22-060**	**IMA-SF-B21-061**
Sample Collection Date:	**27-Nov-07**	**21-Nov-07**	**27-Nov-07**	**27-Nov-07**	**28-Nov-07**
Field Quality Control:					
Percent Solids	%		%	%	%
Percent Solids	**88.7**	NA	**82.4**	**86.0**	**86.8**
Metals	mg/kg	mg/L	mg/kg	mg/kg	mg/kg
Lead	**330**	0.010 U	**340**	**180**	**260**

DATA VALIDATION-QUALIFIED FIXED LABORATORY ANALYTICAL RESULTS
FOR SHEALY ENVIRONMENTAL SERVICES, INC. REPORT NOS. IK07015, IK12001, IK14002, IK14003, IK19001, IK20004, IK20005, IK20006, IK23006, IK23007, IL01018, AND IL01019

Sample Designation:	**IMA-SF-B21DUP-062**	**IMA-QA-EB**
Sample Collection Date:	**28-Nov-07**	**30-Nov-07**
Field Quality Control:		
Percent Solids	%	
Percent Solids	**88.1**	NA
Metals	mg/kg	mg/L
Lead	**250**	0.010 U

Sample Designation:	**IMA-WA-STK-055**	**IMA-WA-STK3-059**
Sample Collection Date:	**19-Nov-07**	**28-Nov-07**
Field Quality Control:		
Percent Solids	%	%
Percent Solids	**86.2**	**87.1**
pH		
pH	**4.90**	**4.49**
TCLP Metals	mg/L	mg/L
Arsenic	0.10 U	0.10 U
Barium	0.25 U	0.25 U
Cadmium	**0.021**	0.020 U
Chromium	0.050 U	0.050 U
Lead	**0.30**	0.10 U
Mercury	0.00020 U	0.00020 U
Selenium	0.10 U	0.10 U
Silver	0.050 U	0.050 U

Notes:
mg/kg = Milligrams per kilogram
mg/L = Milligrams per liter
J = The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample.
R = The sample result is rejected as unusable due to serious deficiencies in one or more quality control criteria. The analyte may or may not be present in the sample.
U = The analyte was analyzed for, but was not detected at or above the associated value.
UJ = The analyte was analyzed for, but was not detected at or above the associated value, which is considered approximate due to deficiencies in one or more quality control criteria.
NA = Not applicable.
TCLP = Toxicity Characteristic Leaching Procedure.

APPENDIX F

CHAIN-OF-CUSTODY FORMS

(7 Pages)

U. S. ENVIRONMENTAL PROTECTION AGENCY
REGION 4 TAT

CHAIN OF CUSTODY RECORD

ENVIRONMENTAL SERVICES DIVISION
COLLEGE STATION ROAD
ATHENS, GEORGIA 30613

PROJ. NO.	PROJECT NAME
	Industrial Metal Alloy

SAMPLERS (*Signature*): [signatures]

Circle/add Parameters Desired ( ) - Indicates Separate Containers

Water/Wastewater: (Gal G (ext org, Pest) (EP) (herb); 40 ml vial (VOA); 250 ml G (TOX); P (Bod, TSS, Cl, Fl, So4, etc); ILG (pheno) (O&G) (pest); ILP (met, hard) (Toc, COD, N, P, etc); 0.5-ILP (S⁼); ½ gal or ILP (CN)
Soil/Sed/Sldg: 8 oz G (ext org, pest, herb) (met) (EP); 4 oz G (VOA)
Waste: P or G (CN, S⁼, N, P, COD, etc); 8 oz G (ext org, pest, herb, VOA); 8 oz G (EP) (met, CN, S⁼, FP) (FP, BTU)
Misc: TOTAL LEAD

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	TOTAL LEAD	REMARKS/TAG NUMBERS
	11/6/07	1257	X		IMA-CON-A9-022	1	X	
	11/6/07	1300	X		IMA-CON-C8-023	1	X	
	11/6/07	1302	X		IMA-CON-D6-024	1	X	
	11/6/07	1310	X		IMA-CON-G9-025	1	X	
	11/6/07	1312	X		IMA-CON-H9-026	1	X	
	11/6/07	1319	X		IMA-CON-J9-027	1	X	
	11/6/07	1340	X		IMA-CON-M5-028	1	X	SPLIT FROM HEPACO
~~ ~~	~~11/6/07~~	~~1425~~	~~X~~		~~IMA-CON-N7-029~~	~~1~~	~~X~~	~~SPLIT FROM HEPACO~~ (DF)
	11/6/07	1030	X		IMA-CON-L5-030	1	X	SPLIT FROM HEPACO

Relinquished by: (*Signature*)	Date/Time	Received by: (*Signature*)	Relinquished by: (*Signature*)	Date/Time	Received by: (*Signature*)
[signature]	11/6/07 1530				
Relinquished by: (*Signature*)	Date/Time	Received by: (*Signature*)	Relinquished by: (*Signature*)	Date/Time	Received by: (*Signature*)

Remarks
Tetra Tech
Results MONDAY 11/12/07 PM
LEVEL IV DATA PACKAGE
Jessica Vickers (678) 775-3104 for questions

DISTRIBUTION: Original and Pink copies accompany sample shipment to laboratory, Pink copy retained by laboratory, Yellow copy retained by samplers, Blue copy extra copy as needed.

T4-10387

U. S. ENVIRONMENTAL PROTECTION AGENCY
REGION 4 TAT

CHAIN OF CUSTODY RECORD

ENVIRONMENTAL SERVICES DIVISION
COLLEGE STATION ROAD
ATHENS, GEORGIA 30613

PROJ. NO.	PROJECT NAME	SAMPLERS (Signature)
	Industrial Metal Alloy	

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Water/Wastewater																Soil/Sed/Sldg	Waste	Misc		REMARKS/TAG NUMBERS
							Circle/add Parameters Desired ( ) - Indicates Separate Containers	(Gal G (ext org, Pest) (EP) (herb)	40 ml vial (VOA)	250 ml G (TOX)	P (Bod, TSS, Cl, Fl, SO4, etc)	ILG (pheno) (O&G) (pest)	ILP (met, herb) (Toc, COD, N, P, etc)	0.5-ILP (S=)	½ gal or ILP (CN)	8 oz G (ext org, pest, herb) (met) (EP)	4 oz G (VOA)	P or G (CN, S=, N, P, COD etc)	8 oz G (ext org, pest, herb, VOA)	8 oz G (EP) (met, CN, S=, FP) (FP, BTU)	Total Lead				
	11/6/07	1425	X		IMA-CON-N1-029	1																X				Split from Hgparo
	11/7/07	1024			IMA-CON-N4-031	1																				
	11/7/07	1255			IMA-CON-N5-032	1																				
	11/7/07	1410			IMA-CON-05-033	1																				
	11/7/07	1500			IMA-CON-N6-034	1																				
	11/8/07	0850			IMA-CON-I10-035	1																				
		1005			IMA-CON-M10-036	1																				
		1005			IMA-CON-M10DUP-037	1																				
		1510			IMA-CON-K11-038	1																				
	↓	1525	↓		IMA-CON-L11-039	1																↓				
	11/9/07	1050		X	IMA-QA-EB-040	1																				Equipment Rinseate Blank

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
	11/9/07 1500				
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Remarks
Tetra Tech
Level IV Data Package
7 Calendar Day TAT
Jessica Vickers
(678) 775-3104 for questions

DISTRIBUTION: Original and Pink copies accompany sample shipment to laboratory. Pink copy retained by laboratory; Yellow copy retained by samplers, Blue copy extra copy as needed.

T4-10787

SHEALY ENVIRONMENTAL SERVICES, INC.

SHEALY **Chain of Custody Record**

106 Vantage Point Drive
West Columbia, South Carolina 29172
Telephone No. (803) 791-9700 Fax No. (803) 791-9111

Number 82265

Client: Tetra Tech	Report to Contact: Jessica Vickers	Telephone No. / Fax No. / E-mail: 678-775-3104 jessica.vickers@tteni.com	Quote No.: 10775
Address: 1955 Evergreen Blvd.	Sampler's Signature: X	Waybill No.: 8635 0881 7465	Page 1 of 1
City: Duluth / State: GA / Zip Code: 30096	Printed Name: Brian Malone	Analysis (Attach list if more space is needed.)	
Project Name: Industrial Metal Alloy			
Project No.: TTEMI-05-001-0039	P.O. No.		

Sample ID / Description (Containers for each sample may be combined on one line.)	Date	Time	G=Grab C=Composite	Matrix: Aqueous	Solid	Non-Aqueous	No. of Containers by Preservative Type: Unpres.	H2SO4	HNO3	HCl	NaOH	5035 Kit	Total Lead	Lot No. / Remarks / Cooler I.D.
IMA-SB-I12-041	11/9/07	1315	C		X		X						X	Split from Hepure
IMA-SF-L12-042	11/12/07	1425	C		X		X							
IMA-SF-D10-043	11/13/07	0900	C		X		X							48 hour TAT
IMA-SB-M13-044	11/13/07	1045	C		X		X							
IMA-SB-H13-045	11/13/07	1345	C		X		X							

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison ☐ Unknown

Sample Disposal: ☐ Return to Client ☒ Disposal by Lab

Note: All samples are retained for six weeks from receipt unless other arrangements are made.

Turn Around Time Required (Prior lab approval required for expedited TAT.)
☐ Standard ☒ Rush (Specify) 7 calender days, 48 hours on IMA-SF-D10

QC Requirements (Specify): per guide

	Date	Time		Date	Time
1. Relinquished by	11/13/07	1530	1. Received by		
2. Relinquished by			2. Received by		
3. Relinquished by			3. Laboratory received by		

Comments

LAB USE ONLY
Received on ice (Circle) Yes No Ice Pack
Receipt Temp. _____ °C

DISTRIBUTION: WHITE & YELLOW-Return to laboratory with Sample(s); PINK-Field/Client Copy

SHEALY ENVIRONMENTAL SERVICES, INC.

SHEALY **Chain of Custody Record**

106 Vantage Point Drive
West Columbia, South Carolina 29172
Telephone No. (803) 791-9700 Fax No. (803) 791-9111

Number 82260

Client: Tetra Tech	Report to Contact: Jessica Vickers	Telephone No. / Fax No. / E-mail: 678-775-3104 jessica.vickers@tetratech.com	Quote No.: 10775
Address: 1955 Evergreen Blvd.	Sampler's Signature: X [signature]	Waybill No.: 8635 0881 9096	Page 1 of 1
City: Duluth / State: GA / Zip Code: 30096	Printed Name: Brian Moore	Analysis (Attach list if more space is needed.)	
Project Name: Industrial Metal Alloy			
Project No.: TTEMI-05-001-0039	P.O. No.		

Sample ID / Description (Containers for each sample may be combined on one line.)	Date	Time	G=Grab C=Composite	Matrix: Aqueous	Matrix: Solid	Matrix: Non-Aqueous	No. of Containers by Preservative Type: Unpres.	H2SO4	HNO3	HCl	NaOH	5035 Kit	Total Lead	Lot No. / Remarks / Cooler I.D.
IMA-SF-G14-046	11/14/07	1155	C		X		X						X	Split with Hepaco
IMA-SF-J14-047	11/15/07	1045	C		↓		↓						↓	↓
IMA-SF-L22-049	↓	1510	C				↓							
IMA-SF-K22-048	↓	1615	C				↓							
IMA-SB-H15-049	11/16/07	1005	C				1							
IMA-SB-H15DUP-050	↓	1105	C		↓		1							
IMA-BA-EB-051	11/16/07	1315	G	X					1				↓	Equipment rinseate

Possible Hazard Identification
☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison ☐ Unknown

Sample Disposal
☐ Return to Client ☑ Disposal by Lab

Note: All samples are retained for six weeks from receipt unless other arrangements are made.

Turn Around Time Required (Prior lab approval required for expedited TAT.)
☑ Standard ☐ Rush (Specify) 7 calendar day

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished by [signature]	11/16/07	1500	1. Received by		
2. Relinquished by			2. Received by		
3. Relinquished by			3. Laboratory received by		

Comments

LAB USE ONLY
Received on ice (Circle) Yes No Ice Pack
Receipt Temp. _____ °C

DISTRIBUTION: WHITE & YELLOW-Return to laboratory with Sample(s); PINK-Field/Client Copy

SHEALY Chain of Custody Record

SHEALY ENVIRONMENTAL SERVICES, INC.
106 Vantage Point Drive
West Columbia, South Carolina 29172
Telephone No. (803) 791-9700 Fax No. (803) 791-9111

Number 82262

Client	Report to Contact	Telephone No. / Fax No. / E-mail	Quote No.
Tetra Tech	Jessica Vickers	678-775-3104 jessica.vickers@ttemi.com	10775

Field	Entry
Address	1955 Evergreen Blvd.
City	Duluth
State	GA
Zip Code	30096
Project Name	Industrial Metal Alloy
Project No.	X9017.0.001.0039.3003
P.O. No.	
Sampler's Signature	X [signature]
Printed Name	Brian Malone
Waybill No.	8635 0881 9685
Page	1 of 1

Analysis (Attach list if more space is needed.)

Lot No.

Sample ID / Description (Containers for each sample may be combined on one line.)	Date	Time	G=Grab C=Composite	Matrix: Aqueous	Matrix: Solid	Matrix: Non-Aqueous	Unpres.	H2SO4	HNO3	HCl	NaOH	5035 Kit	Total Lead	TCLP	RCRA Metals	pH	Remarks / Cooler I.D.
IMA-SF-A25-052	11/14/07	1040	C		X		1						X				
IMA-SF-E24-053	↓	1250	↓		↓		1						↓				48 hr TAT
IMA-SF-C25-054	↓	1345	↓		↓		1						↓				
IMA-WA-STK-055	↓	1445	↓		↓		2							X	X	X	3-day TAT

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison ☐ Unknown

Sample Disposal
☐ Return to Client ☒ Disposal by Lab

Note: All samples are retained for six weeks from receipt unless other arrangements are made.

Turn Around Time Required (Prior lab approval required for expedited TAT.)
☐ Standard ☒ Rush (Specify) 7 Calendar unless identified in comments

QC Requirements (Specify)

Relinquished by	Date	Time	Received by	Date	Time
1. Relinquished by [signature]	11/15/07	1630	1. Received by		
2. Relinquished by			2. Received by		
3. Relinquished by			3. Laboratory received by		

Comments

LAB USE ONLY
Received on ice (Circle) Yes No Ice Pack
Receipt Temp. ________ °C

DISTRIBUTION: WHITE & YELLOW-Return to laboratory with Sample(s); PINK-Field/Client Copy

SHEALY Chain of Custody Record

SHEALY ENVIRONMENTAL SERVICES, INC.
106 Vantage Point Drive
West Columbia, South Carolina 29172
Telephone No. (803) 791-9700 Fax No. (803) 791-9111

Number 82261

Client: Tetra Tech	Report to Contact: Jessica Vickers	Telephone No. / Fax No. / E-mail: 678-775-3104 jessica.vickers@ttemi.com	Quote No.: 1077
Address: 1955 Evergreen Blvd.	Sampler's Signature: X [signature]	Waybill No.: 8635 0881 7476	Page 1 of ___
City: Duluth / State: GA / Zip Code: 30096	Printed Name: BRIAN MALONE	Analysis (Attach list if more space is needed.)	
Project Name: Industrial Metal Alloy			
Project No.: X9817Ø.ØØ1.ØØ39.3ØØ3 / P.O. No.			Lot No.

Sample ID / Description (Containers for each sample may be combined on one line.)	Date	Time	G=Grab C=Composite	Aqueous	Solid	Non-Aqueous	Unpres.	H2SO4	HNO3	HCl	NaOH	5035 Kit		Total Lead									Remarks / Cooler I.D.
IMA-SB-K11-Ø56	11/20/07	0950	C		X		1							X									3 day TAT
IMA-QA-EB-Ø57	11/21/07	0900	G	X					1					X									

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison ☐ Unknown

Sample Disposal: ☐ Return to Client ☒ Disposal by Lab

Note: All samples are retained for six weeks from receipt unless other arrangements are made.

Turn Around Time Required (Prior lab approval required for expedited TAT.) ☒ Standard ☐ Rush (Specify) 3-day TAT IMA-SB-K11-Ø56

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished by [signature]	11/20/07	1200	1. Received by		
2. Relinquished by			2. Received by		
3. Relinquished by			3. Laboratory received by		

Comments

LAB USE ONLY
Received on ice (Circle) Yes No Ice Pack
Receipt Temp. ________ °C

DISTRIBUTION: WHITE & YELLOW-Return to laboratory with Sample(s); PINK-Field/Client Copy

SHEALY ENVIRONMENTAL SERVICES, INC.

SHEALY **Chain of Custody Record**

106 Vantage Point Drive
West Columbia, South Carolina 29172
Telephone No. (803) 791-9700 Fax No. (803) 791-9111

Number 82264

Client: Tetra Tech	Report to Contact: Jessica Vickers	Telephone No. / Fax No. / E-mail: 678-775-3104 jessica.vickers@Hemi.com	Quote No.: 10775
Address: 1955 Evergreen Blvd.	Sampler's Signature: X	Waybill No.: 8635 0881 7487	Page 1 of 1
City: Duluth / State: GA / Zip Code: 30096	Printed Name: Brian Malone	Analysis (Attach list if more space is needed.)	
Project Name: Industrial Metal Alloy			
Project No.: X9017.6.001.0139.3003	P.O. No.		Lot No.

Sample ID / Description (Containers for each sample may be combined on one line.)	Date	Time	G=Grab C=Composite	Matrix: Aqueous	Solid	Non-Aqueous	No. of Containers by Preservative Type: Unpres.	H2SO4	HNO3	HCl	NaOH	5035 Kit	Total Lead	TCLP	RCRA Metals	pH	Remarks / Cooler I.D.
IMA-SF-G25-057	11/27	0925	C		X		1						X				
IMA-SF-B22-060	11/27	1330	C		X		1										
IMA-SF-H24-058	11/27	1325	C		X		1										
IMA-SF-B21-061	11/28	1325	C		X		1										
IMA-SF-B21DUP-062	11/28	1325	C		X		1										
IMA-WA-STK3-059	11/28	1510	C		X		2							X	X	X	3 day TAT
IMA-QA-EB	11/30	1100	G	X					1				X				

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison ☐ Unknown

Sample Disposal
☐ Return to Client ☒ Disposal by Lab

Note: All samples are retained for six weeks from receipt unless other arrangements are made.

Turn Around Time Required (Prior lab approval required for expedited TAT.)
☐ Standard ☐ Rush (Specify) Ten day unless noted in comments

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished by	11/30/07	1400	1. Received by		
2. Relinquished by			2. Received by		
3. Relinquished by			3. Laboratory received by		

Comments

LAB USE ONLY
Received on ice (Circle) Yes No Ice Pack
Receipt Temp. _____ °C

DISTRIBUTION: WHITE & YELLOW-Return to laboratory with Sample(s); PINK-Field/Client Copy

APPENDIX G

TABLE OF WITNESSES

(1 Page)

TABLE OF WITNESSES
INDUSTRIAL METAL ALLOYS
WINSTON-SALEM, FORSYTH COUNTY, NORTH CAROLINA

Mr. Matthew Huyser
On-Scene Coordinator
U.S. Environmental Protection Agency
61 Forsyth Street, SW
11th Floor
Atlanta, GA 30303
Telephone No.: (404) 562-8934

Mr. Didi Fung, Project Manager
Mr. Brian Malone, Environmental Scientist
Superfund Technical Assessment and Response Team
Tetra Tech EM Inc.
1955 Evergreen Blvd.
Building 200, Suite 300
Duluth, GA 30096
Telephone No. (Fung): (678) 775-3095
Telephone No. (Malone): (440) 781-7944

Mr. Chuck Bartholomew, Field Manager
Mr. James Kessler, Project Manager
PRP Contractor
Hepaco
2711 Burch Dr.
Charlotte, NC 28269
Telephone No.: (704) 564-8854

Mr. Reinhard Ruhmke
Field Operations Manager
PRP Consultant
Brown and Caldwell
990 Hammond Drive, Suite 400
Atlanta, Georgia 30328
Telephone No.: Not available

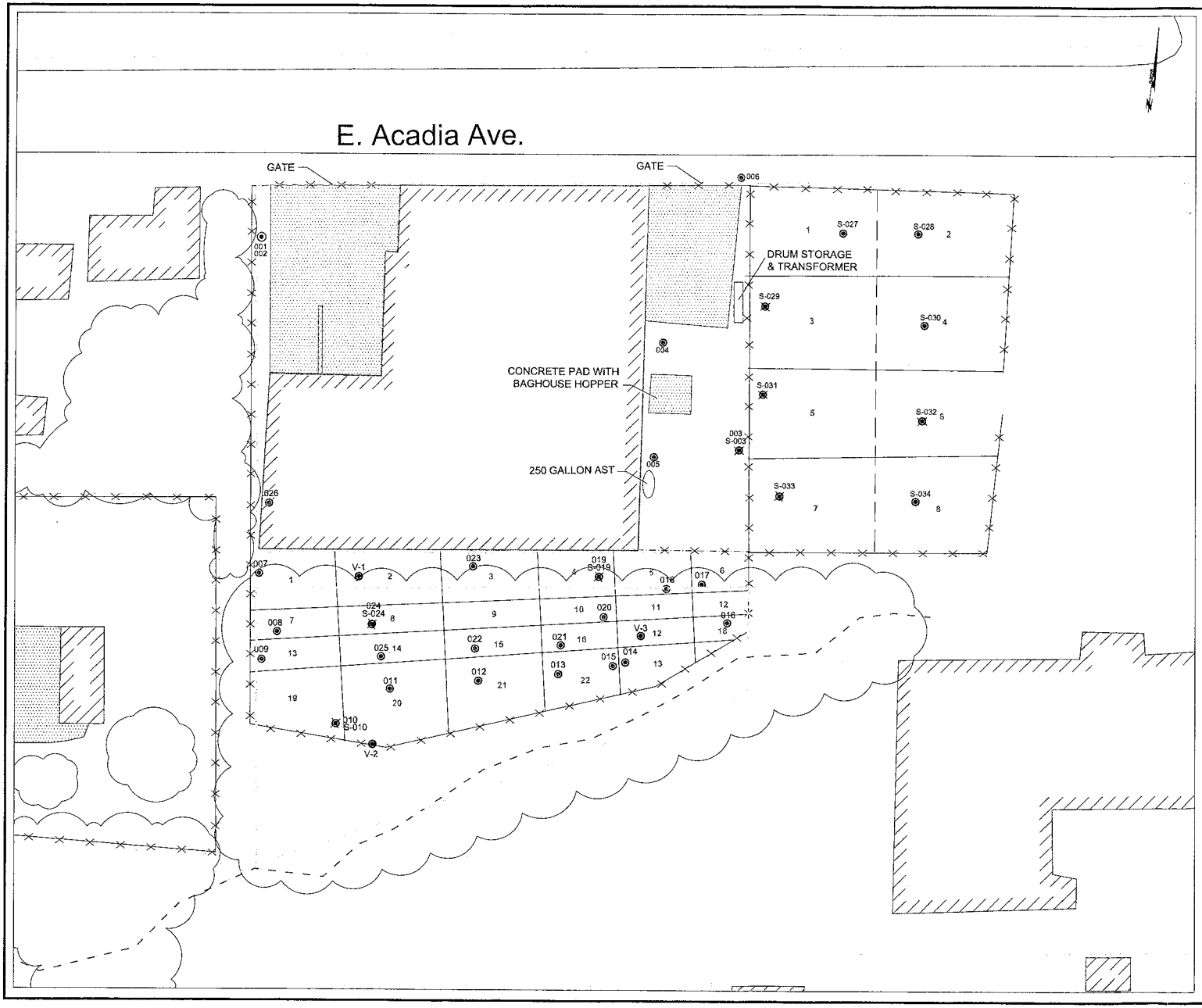
ATTACHMENT 1

HISTORICAL SAMPLE LOCATION FIGURES

PREPARED BY

BROWN AND CALDWELL

(6 Pages)



LEGEND:

- PROPERTY LINE
- IMACO PROPERTY LINE
- CHAIN-LINK FENCE
- UNNAMED STREAM TRIBUTARY (CENTERLINE)
- HEAVY VEGETATION/BRUSH/TREELINE
- IMPERVIOUS SURFACE
- 001 — XRF SOIL SCREENING SAMPLE LOCATION
- V-1 — SOIL/MATERIAL PROFILING SAMPLE LOCATION
- S-003 — SOIL SAMPLE LOCATION (TOTAL Pb, Ar, Cd)
- S-029 — SOIL SAMPLE LOCATION FOR TREATABILITY STUDY (TLCP Pb, Ar, Cd)
- 1 — SAMPLE GRID ASSIGNMENT

20 0 20 40
SCALE FEET
1" = 40'

FORMER INDUSTRIAL METAL ALLOY SITE

FIGURE 2-2
SOIL ASSESSMENT - MARCH AND APRIL 2006
20 EAST ACADIA AVENUE
WINSTON-SALEM, FORSYTH COUNTY, NORTH CAROLINA

Prepared For: NK HOLDINGS, LLP

BROWN AND CALDWELL

DATE:	01/22/07
SCALE:	1"= 40'
DRAWN BY:	TTH
PROJ.	130170

Prepared: 1/25/07
Prepared for: NK Holdings, LLP

BROWN AND CALDWELL

Former Industrial Metal Alloy Company Site

Figure 2-3: Stream Sampling Results (November 2006)

1 inch equals 200 feet

0 50 100 200 300 400 Feet

N W E S

20 East Acadia Avenue
Winston-Salem, Forsyth County
North Carolina

R:\Projects\129170_AG6\Map_Docs\StreamSampleLocations.mxd

R:\Projects\130170_AGS\Map_Docs\StreamSampleLocationsDecember.mxd

Prepared: 1/25/07

Prepared for: NK Holdings, LLP

BROWN AND CALDWELL

Former Industrial Metal Alloy Company Site

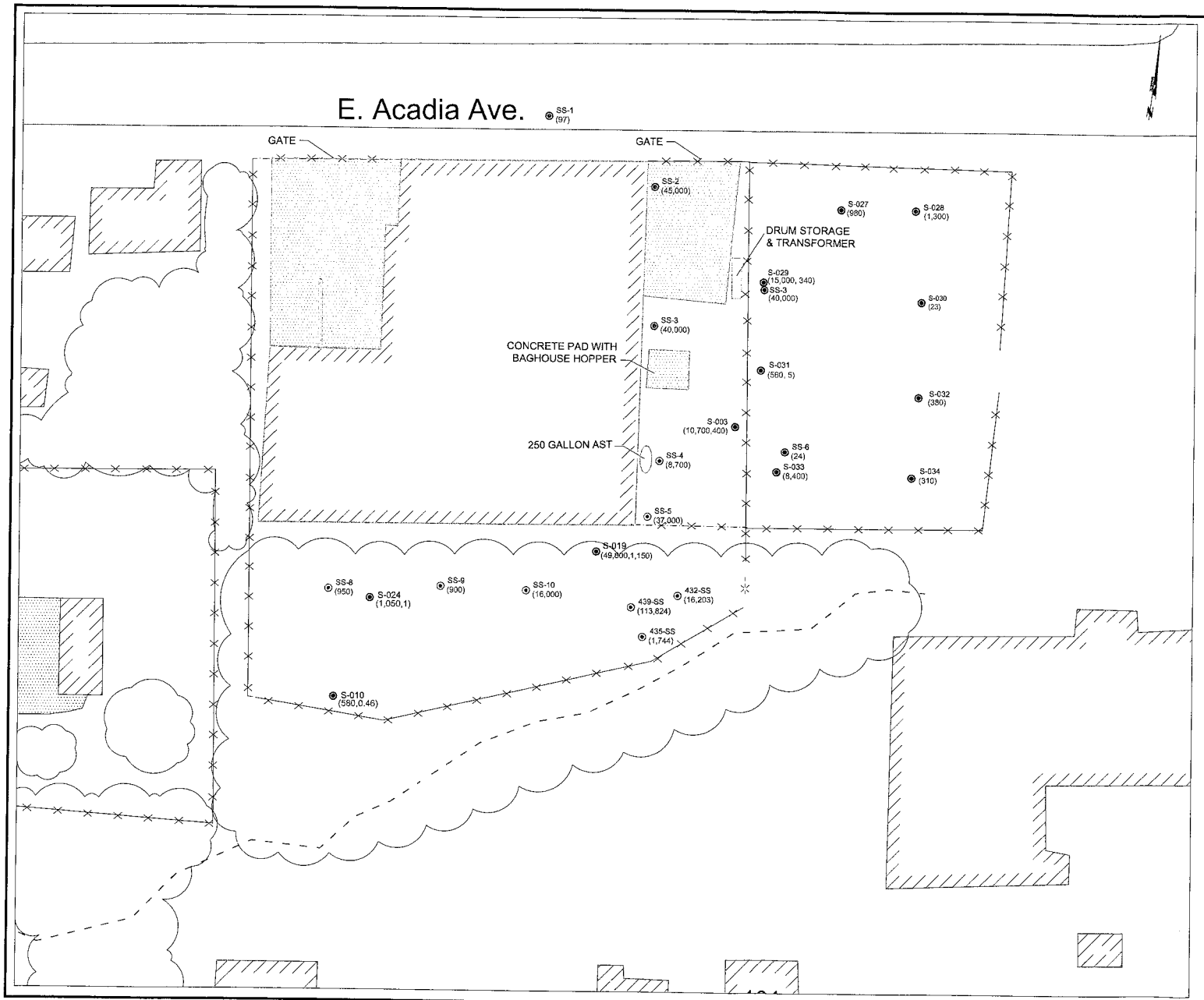
Figure 2-4: Stream Sampling Results (December 2006)

1 inch equals 50 feet

0 12.5 25 50 75 100 Feet

N W E S

20 East Acadia Avenue
Winston-Salem, Forsyth County
North Carolina



LEGEND:

- PROPERTY LINE
- IMACO PROPERTY LINE
- CHAIN-LINK FENCE
- UNNAMED STREAM TRIBUTARY (CENTERLINE)
- HEAVY VEGETATION/BRUSH/TREELINE
- IMPERVIOUS SURFACE
- S-001 — BROWN AND CALDWELL SURFICIAL SOIL SAMPLE LOCATION
- SS-1 — USEPA SURFICIAL SOIL SAMPLE LOCATION
- 439-SS — NCDENR SURFICIAL SOIL SAMPLE LOCATION (APPROXIMATE)
- (10,700, 400) — LEAD CONCENTRATION, TCLP-LEAD CONCENTRATION, MG/KG

20 0 20 40
SCALE FEET
1" = 40'

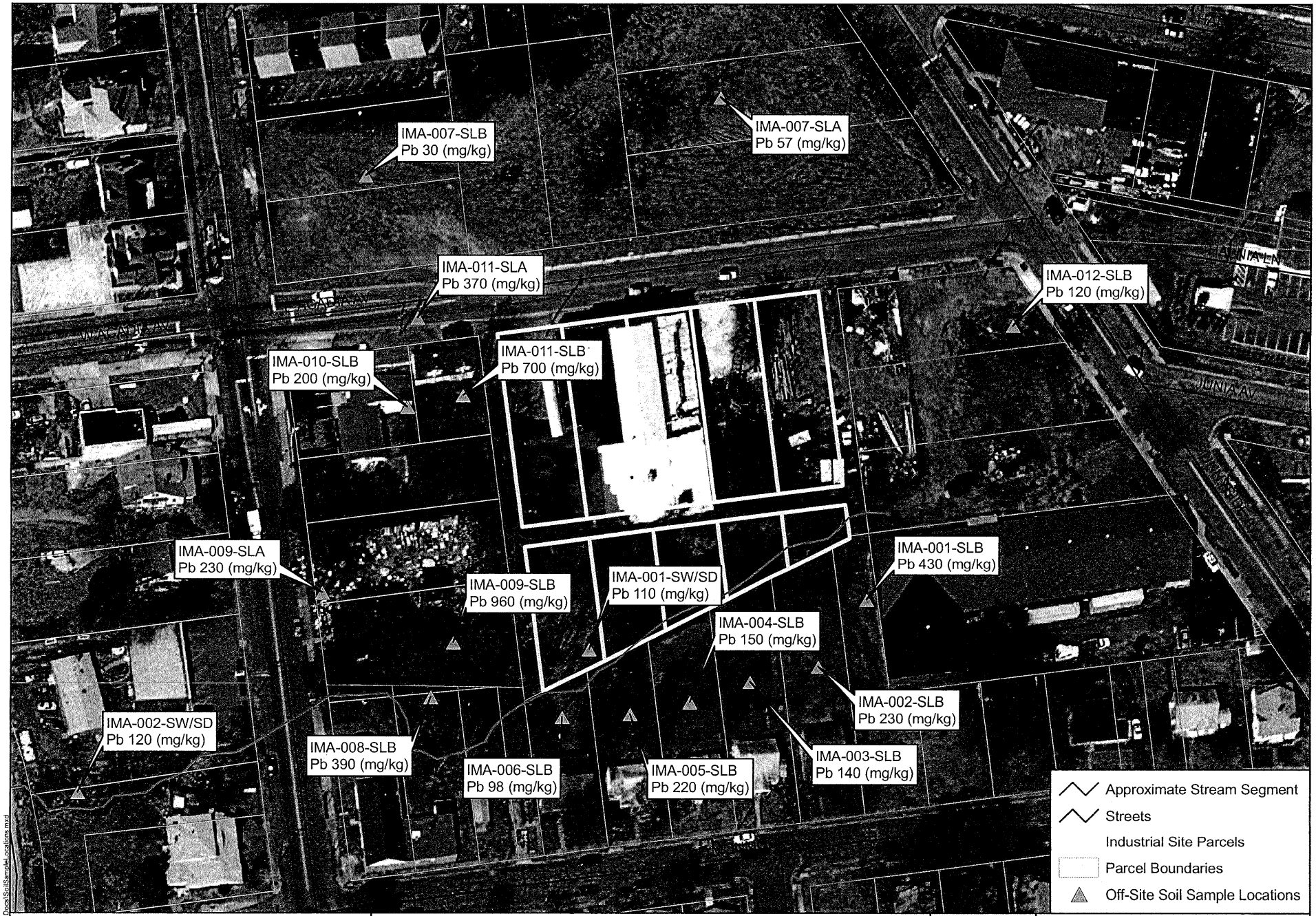
FORMER INDUSTRIAL METAL ALLOY SITE

FIGURE 2-5
SURFICIAL SOIL ANALYTICAL RESULTS
20 EAST ACADIA AVENUE
WINSTON-SALEM, FORSYTH COUNTY, NORTH CAROLINA

Prepared For: NK HOLDINGS, LLP

BROWN AND CALDWELL

DATE:	01/23/07
SCALE:	1"= 40'
DRAWN BY:	TTH
PROJ.	130170



R:\Projects\130170_AGO\Map_Docs\SoilSampleLocations.mxd

Prepared: 1/25/07
Prepared for: NK Holdings, LLP

BROWN AND CALDWELL

Former Industrial Metal Alloy Company Site

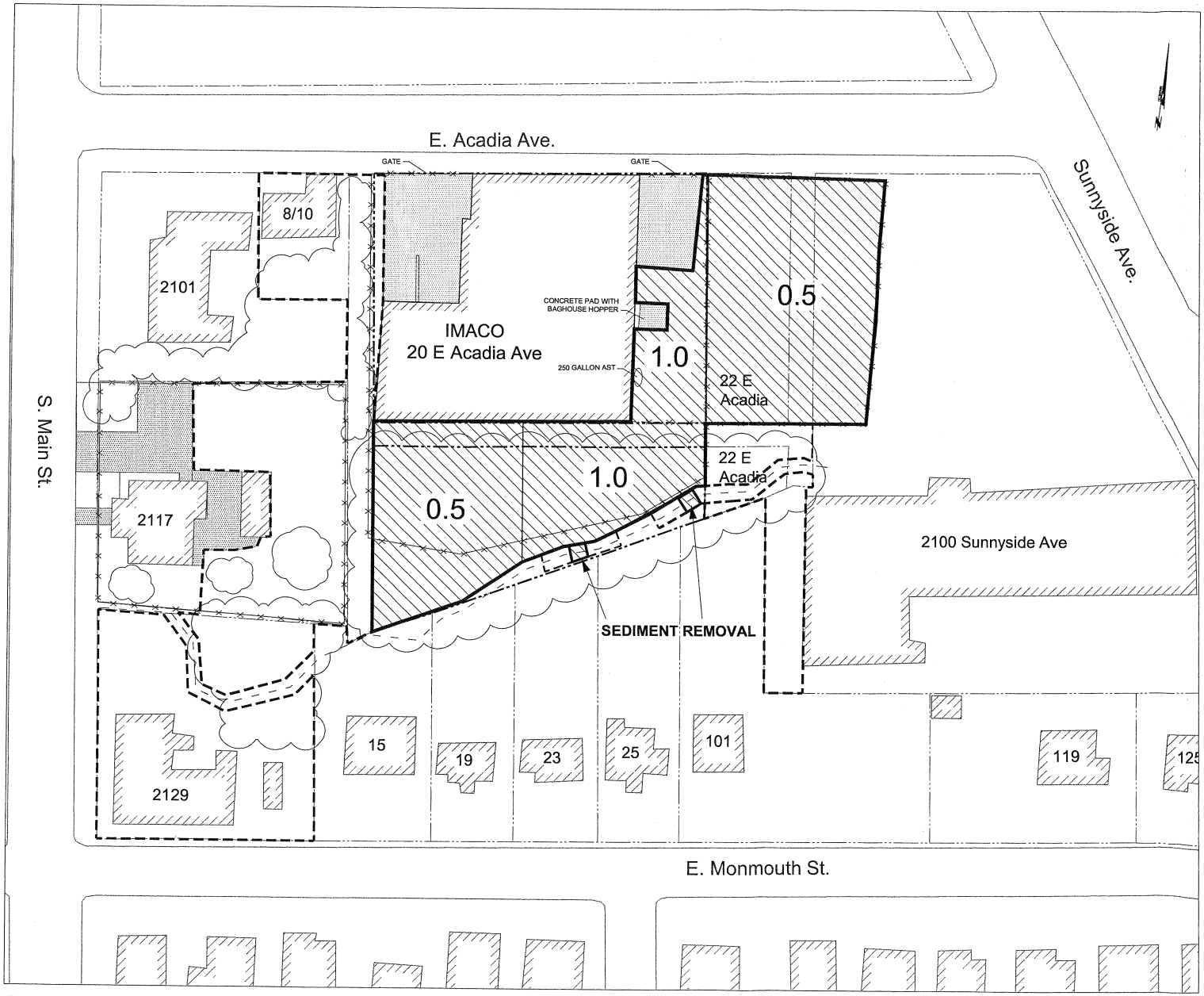
Figure 2-6: EPA Off-Site Soil Sample Analytical Results, December 2005

1 inch equals 100 feet

0 25 50 100 150 200 Feet

N
W E
S

20 East Acadia Avenue
Winston-Salem, Forsyth County
North Carolina



LEGEND:

- PROPERTY LINE
- IMACO PROPERTY LINE
- CHAIN–LINK FENCE
- UNNAMED STREAM TRIBUTARY (CENTERLINE)
- HEAVY VEGETATION/BRUSH/TREELINE
- IMPERVIOUS SURFACE
- 0.5 — INITIAL EXCAVATION EXTENT AND DEPTH (IN FEET)
- POTENTIAL EXTENT OF REMEDIATION BEYOND INITIAL LIMITS
- 25 — BUILDING/STREET ADDRESS NUMBER

NOTES:

1. INITIAL REMEDIATION LIMITS MAY BE THE FINAL LIMITS BASED ON SOIL SCREENING AND CONFIRMATORY SAMPLING RESULTS.
2. EXCEPT FOR THE INITIAL EXCAVATION EXTENT SHOWN ON THIS DRAWING, ALL SUBSEQUENT SOIL REMEDIATION WORK SHALL OCCUR AND PROCEED IN 20 FT BY 20 FT GRID CELLS.
3. REMEDIATION WORK MAY EXTEND AS FAR AS THE POTENTIAL REMEDIATION EXTENT SHOWN. MAXIMUM DEPTH OF EXCAVATION ON RESIDENTIAL PROPERTIES, IF REQUIRED, IS UNKNOWN AT THIS TIME (TO BE DETERMINED).

60 0 60 120
SCALE FEET
1" = 60'

FORMER INDUSTRIAL METAL ALLOY SITE

FIGURE 3-1
SITE REMEDIATION PLAN
20 EAST ACADIA AVENUE
WINSTON-SALEM, FORSYTH COUNTY, NORTH CAROLINA

Prepared For: NK HOLDINGS, LLP

BROWN AND CALDWELL

DATE:	01/24/07
SCALE:	1"= 60'
DRAWN BY:	TTH
PROJ.	130170