



February 10, 2009

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

**Subject: Final Removal Letter Report
ESB (Exide) Fund Lead
EPA Contract No. EP-W-05-054 (START III, Region 4)
Technical Direction Document No. TTEMI-05-001-0002**

Dear Mr. Sims:

The Tetra Tech EM Inc. (Tetra Tech) Superfund Technical Assessment and Response Team (START) is submitting this final letter report for field activities conducted in areas associated with the ESB (Exide) Fund Lead site located in Atlanta, Fulton County, Georgia, from September 23 through November 7, 2008 (see Figure 1 of Appendix A). Tetra Tech START was tasked to prepare a site-specific health and safety plan, conduct air monitoring for particulate matter during field activities, conduct soil screening using an x-ray fluorescence device (XRF), collect confirmation soil samples from excavated areas, provide written and photographic documentation of response activities, prepare geographical information system (GIS) figures (as necessary), and prepare draft and final letter reports summarizing field activities.

This letter report includes four appendices. Appendix A provides figures illustrating the properties associated with the site locations and the site layouts. Appendix B provides a photographic log of field activities. Appendix C provides a copy of the Tetra Tech START logbook notes. Appendix D provides Tetra Tech START Data Validation Report and Analytical Data Packages. Appendix E provides a table of witnesses for personnel involved in removal and restoration activities.

SITE BACKGROUND

The former ESB facility is located at 1246 Allene Avenue SW, in southwest Atlanta, Fulton County, Georgia (see Figure 1 in Appendix A). The area is industrial, with commercial and residential properties nearby and a railroad line to the north. The geographic coordinates for the site are 33.722156° north latitude and 84.411299° west longitude. The Electric Storage Battery Company manufactured lead-acid batteries at the Allene Avenue facility from 1948 until 1982. The company name was changed to Exide, Inc., in 1982. The current owner is Exide Technologies of Alpharetta, Georgia. Lead was allegedly released into the air from elevated roof stacks during the battery manufacturing process and was carried into the surrounding residential area, where it became concentrated in surface soils.

In February 1991, NUS Corporation (NUS), Superfund Division, conducted a Phase II screening site inspection. Environmental samples were collected and analyzed to assess the potential for migration of

chemicals via air from the ESB manufacturing facility. Sample analysis detected lead at elevated concentrations in downwind areas, south and west of the facility. NUS recommended further investigation of the ESB site for possible inclusion on the National Priorities List.

In 2004 and 2005, the U.S. Environmental Protection Agency (EPA) Region 4, Science and Ecosystem Support Division (SESD) conducted field investigations to determine whether the site posed risks to human health and the environment sufficient to warrant further investigation or remediation. Utilizing XRF spectrometry, SESD identified lead as the contaminant of concern and sampled properties surrounding the ESB facility to delineate the extent of lead contamination. Samples were sent to a fixed analytical laboratory for confirmation. The SESD sampling event is detailed in an EPA report titled "Field Sampling Investigation, ESB Inc.," dated July 2005. Sample analysis indicated lead concentrations above 400 milligrams per kilogram (mg/kg) on 16 residential properties surrounding the ESB facility. Moreover, an industrial ditch northeast of the facility on the other side of the railroad was sampled, and elevated lead concentrations were identified within the ditch and surrounding areas. EPA initiated a time-critical removal action beginning in February 2006 to address the contamination on residential properties. Tetra Tech START, under contract with the EPA, provided oversight of removal activities during the residential removal action. The removal action involved 27 residential properties located on Allene Avenue SW, Hartford Place SW, and Erin Avenue SW in a three-block section around the ESB plant. The removal action is detailed in a Tetra Tech START report titled "Draft Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Removal Action Report," dated February 16, 2007. The removal area did not include the ESB plant that was allegedly the original source of lead contamination. Additionally, EPA determined that the residential scope of the removal action did not cover contamination on the industrial properties surrounding an industrial ditch to the northeast; therefore, this area was not addressed during the residential removal action.

Based on the SESD sampling event in July 2005, EPA determined there may be elevated lead levels in the industrial ditch and decided to investigate further. Tetra Tech START returned to the industrial ditch in January 2008 after the owner of one of the properties containing the ditch, Great Dane Trucking, allowed EPA access to collect samples. Tetra Tech START used XRF to screen soil from the ditch embankment next to Great Dane Trucking's property. Laboratory analysis of this soil confirmed the XRF's measurements of lead concentrations exceeding 8 percent by weight (80,000 parts per million [ppm]). Most of the contamination within the ditch was observed to derive from a distinctive depositional layer of light-gray clay. The origin of this clay was unknown, but given the geology of the surrounding area, it was assumed not native to the site area.

Tetra Tech START researched the property owner records and discovered the property had once been part of the CSX railroad network; the rail line had been abandoned and dismantled some years ago. Aerial photographs show the right-of-way extending several miles to the north.

EPA On-Scene Coordinator (OSC) Les Sims obtained access from three nearby property owners: CSX, Sprint, and Great Dane Trucking. Sprint's property has a retention pond that drains into the area of concern.

Tetra Tech START conducted a removal assessment sampling event on June 12 and 13, 2008, at the nearby CSX, Sprint, and Great Dane Trucking properties. The removal assessment is detailed in a Tetra Tech START report titled "Draft Removal Assessment Letter Report," dated July 7, 2008. The sampling

event included soil screening with an XRF instrument and collection of surface and subsurface soil samples. Analytical results of the sampling event indicated lead levels above the site-specific removal action level (RAL) of 800 mg/kg in the industrial ditch area west of the Great Dane Trucking property; lead levels in soils at the CSX and Sprint properties were below the site-specific RAL of 800 mg/kg.

FIELD ACTIVITIES

On September 23, 2008, OSC Sims, Tetra Tech START, and Environmental Restoration (ER), LLC arrived at the ESB (Exide) facility to perform a dye test at the facility. The dye test would determine if the runoff from the facility fed into the industrial ditch area located west of the Great Dane Trucking property. ER removed a manhole cover from a junction box. Piping in the junction box was observed to run both back into the ESB facility and in the direction of the industrial ditch. Sediment within the manholes appeared a physical match to the gray clay in the ditch, and subsequent sampling of this material showed similar levels of lead. Based on this evidence, EPA determined that runoff from the ESB facility was the direct source of the gray clay in the industrial ditch, and therefore the source of the elevated lead levels within the area.

Removal Activities Industrial Ditch Area, University Avenue

From September 25 through October 6, 2008, ER conducted excavation activities in the industrial ditch area from the outfall located on the west side of Great Dane Trucking to the end of the ditch located at University Avenue (see Figure 2 in Appendix A). ER also performed soil scraping in the wooded area located north of the industrial ditch area. This area consisted of commercial and residential properties based on current land use (see Figure 2 in Appendix A). ER mobilized a track hoe, a skid steer, a dump truck, and a water truck to the site for soil excavation/scraping and dust control. The water truck was used during all excavation activities. Excavation and scraping was performed using a track hoe at the outfall of the ditch, working out toward University Avenue to reduce potential for cross-contamination. The soil was removed using a straight-edged bucket and hand shovels to minimize recontamination. This process was repeated until a small amount of soil accumulated, then was removed by a skid steer loader or a track hoe (depending on accessibility), and was placed in a dump truck for transport to a staging area at the northwest corner of Great Dane Trucking. The dump truck was parked on a layer of polyethylene sheeting to contain any contaminated soil that may have fallen out during the transfer from the skid steer/track hoe to the truck. The soil staged at Great Dane Trucking was placed on a layer of polyethylene sheeting. A berm made of hay bales wrapped in polyethylene sheeting surrounded the soil. The soil was covered at the end of each shift with a layer of polyethylene sheeting to minimize potential for migration due to wind or rain. According to ER, approximately 425 tons of soil was removed from the ditch area.

Based on lead concentrations in the soil, excavation personnel wore appropriate Level C personal protective equipment (PPE) —Tyvek suits, full-face respirators with P-100 cartridges, rubber cover boots, hard hats, steel-toed boots, reflective safety vests, and work gloves. A decontamination area was established at the north end of the ditch, with a boot wash station and trash bags for disposal.

From September 25 to October 6, 2008, Tetra Tech START conducted in-situ XRF soil screening. A

Niton XLi722 X-Ray Lead Analyzer U6090 was used for real-time total lead screening during removal activities. Using the Region 9 Preliminary Remediation Goal (PRG) for lead as a guideline, EPA set a RAL for commercial property (800 mg/kg) and for residential property (400 mg/kg). A calibration check was performed on the XRF prior to each day's activities. If the XRF was not used for a long period of time or when the battery was changed, another calibration check was performed. Screening consisted of collecting XRF readings for exposed soil every 2 to 4 feet after a small area had been removed. If lead levels were above their respective site-specific RALs, additional removal was performed. This process was repeated until the XRF indicated the RAL had been achieved at that location.

On October 6, 2008, Tetra Tech START collected four confirmation composite soil samples from the excavated/scraped areas (see Figure 2 in Appendix A). Each composite sample was composed of five aliquots from the respective areas and submitted to Analytical Services, Inc., (ASI) located at 110 Technology Parkway, Atlanta, Georgia, for analysis. All sample results indicated lead levels below the respective, site-specific RALs (see Table 1 in Appendix D).

Particulate Monitoring

From September 25 through October 6, 2008, Tetra Tech START conducted total particulate dust air monitoring for lead using two DataRAM particulate monitors. The DataRAM particulate monitors measured the concentration of total particulate dust in the air based on a time-weighted average (TWA). Air monitoring was performed during excavation of the industrial ditch area and during soil scraping of the wooded area north of the ditch. The first DataRAM was placed next to the ditch area (i.e., hot zone) inside the Great Dane Trucking property to monitor total dust concentrations during excavation. The second DataRAM was placed north of the ditch to monitor total dust concentrations that may have affected the residents at 717 University Avenue during excavation and scraping. On October 2, 2008, the second DataRAM was moved from north of the ditch area to an area approximately 25 feet south of the apartment building located at 717 University Avenue. The DataRAM was moved to accommodate excavation at its original location. The action level for total lead dust concentrations was calculated using the highest concentration of lead in the soil discovered during the June 2008 assessment. The action level for total lead dust concentrations was calculated as 40 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$). The maximum and minimum total dust concentrations based on the TWA are as follows:

- TWA concentrations in the hot zone ranged from 18.2 to 56.7 $\mu\text{g}/\text{m}^3$ based upon the averages collected at the end of each workday. Elevated concentrations derived from wind gusts and traffic stirring up dust in the Great Dane Trucking parking lot. Tetra Tech START notified ER personnel when TWA concentrations were greater than 40 $\mu\text{g}/\text{m}^3$, and ER immediately implemented additional dust control methods. ER personnel wore Level C respiratory protection at all times during excavation activities within the industrial ditch.
- TWA concentrations identified north of the ditch area ranged from 18.7 to 60.1 $\mu\text{g}/\text{m}^3$. Elevated concentrations were caused by wind gusts stirring up the dust in the area north of the ditch. Tetra Tech START notified ER personnel when TWA concentrations were greater than 40 $\mu\text{g}/\text{m}^3$, and ER immediately implemented additional dust control methods. Activity within this area was restricted to individuals wearing Level C respiratory protection.
- Total concentrations near 717 University Avenue ranged from 18.4 to 85.1 $\mu\text{g}/\text{m}^3$. Elevated

concentrations were caused by ER dumping clean fill dirt near the DataRAM. Tetra Tech START notified ER personnel when TWA concentrations were greater than $40 \mu\text{g}/\text{m}^3$, and ER immediately implemented additional dust control methods. During work activities, ER personnel donned Level C PPE. Although the TWA readings for some days indicate some off-site dust migration did occur, residents of 717 University Avenue were not present near the work area during excavation activities. Because the TWA action level is based on an 8-hour continuous exposure, nearby residents were not believed in danger from airborne dust during removal activities.

From October 7 through 15, 2008, ER installed a geo-membrane in the excavated portion of the industrial ditch and backfilled it with clean dirt. ER also installed pea gravel and rip-rap in the base of the ditch and coconut netting on the sides of the ditch to prevent erosion. The scraped areas of the commercial and residential sections of the work area were backfilled with clean dirt. The clean fill dirt was spread and graded using a track hoe or skid steer, depending on access to each area. These areas were seeded with a fescue/rye blend and covered with straw. ER also planted five oak trees along the north and northwest end of the ditch line to replace the trees removed during excavation.

Residential Soil Removal

In addition to addressing the contamination in the industrial ditch area, EPA focused on residential properties near the ESB facility that were not completed during the 2006 and 2007 removal and restoration activities: properties located at 1263 Allene Avenue, 1273 Allene Avenue, 1280 Allene Avenue, 778 Beechwood Avenue, and 713 Erin Avenue were addressed during the 2008 phase of the removal and restoration project.

1280 Allene Avenue

During removal activities conducted at 1280 Allene Avenue from January 3 to 17, 2007, the soil had been excavated in the backyard of the property, backfilled, regraded, and sodded. The regrading of the property allowed stormwater runoff to flow toward and pool at the back of the house. The resident informed EPA of the problem and requested the problem be addressed. On October 15, 2008, ER installed a soil berm at the request of the resident that extended across the length of the backyard from north to south. On October 23, 2008, Solid Rock Landscape installed Bermuda sod along the top of the berm.

1263 Allene Avenue

During removal activities conducted at 1263 Allene Avenue from July 7 to 12, 2006, the soil along the sidewalk located on the east side of the property had not been removed. The resident informed the EPA of the problem and requested the soil to be removed from along the sidewalk. From October 15 to 16, 2008, ER began soil removal along the sidewalk (see Figure 3 in Appendix A). The sidewalk was composed of intermittent hexagonal concrete tiles extending north from the intersection of Allene Avenue and Beechwood Avenue to the end of the property. The state of the tiles ranged from intact to thoroughly cracked and broken. Soil was removed along each side of the sidewalk using hand shovels to include areas around tree roots and between broken tiles. Approximately 1 to 2 inches of soil was removed from this area. Excavated soil was shoveled into a skid steer and placed in a small dump truck used to

transport clean fill dirt. To prevent cross-contamination, the bed of the truck was lined with a layer of polyethylene sheeting before the contaminated soil was placed into the bed. The contaminated soil was transported to the Great Dane Trucking property and staged.

During the soil removal, Tetra Tech START conducted in-situ soil screening using an XRF instrument. Methods used during the soil screening and the site-specific RAL were the same as those used in the residential section of the industrial ditch area. Screening consisted of collecting XRF readings for exposed soil every 1 to 2 feet after a small area had been removed. If lead levels were above the respective site-specific RALs, additional removal was performed. This process was repeated until the XRF indicated the RAL had been achieved at that location.

On October 16, 2008, Tetra Tech START collected one confirmation composite soil sample from the sidewalk area at 1263 Allene Avenue (see Table 1 in Appendix D). The composite sample was composed of 11 aliquots and analyzed for total lead concentration. The sample was submitted to Analytical Environmental Services, Inc., (AES) located at 3785 Presidential Parkway, Atlanta, Georgia, for analysis. Analysis of the sample indicated a total lead concentration of 86.7 mg/kg—below the site-specific RAL of 400 mg/kg.

From October 16 to 17, 2008, ER conducted site restoration at 1263 Allene Avenue. ER backfilled the area with clean fill dirt and graded the area with shovels and rakes. ER spread a fescue/rye grass seed blend throughout the area and covered it with straw.

1273 Allene Avenue

From October 16 to 21, 2008, ER scraped the soil from the east side to the north end of 1273 Allene Avenue (see Figure 4 in Appendix A). ER mobilized a track hoe and a dump truck to the site for soil removal and transportation. Scraping was performed using a track hoe with a straight-edged bucket at the south end of the east side of the property along Allene Avenue, and working toward the north end of the property at Beechwood Avenue to reduce potential for cross-contamination. Hand shovels were used to remove soil around bush and tree roots. The soil was scraped to depths ranging from 2 to 4 inches. During scraping activities, ER removed 12 plants/shrubs and one tree. The process was repeated until a small amount of soil was accumulated and then placed into a dump truck located on Beechwood Avenue for transport to the staging area located at the northwest corner of Great Dane Trucking. The dump truck was parked on a layer of polyethylene sheeting to contain any contaminated soil that may have fallen out during the transfer from the track hoe to the truck. According to ER, approximately 40 tons of soil was removed from the property. ER personnel wore appropriate PPE—Tyvek suits, rubber cover boots, hard hats, steel-toed boots, reflective safety vests, and work gloves.

During the soil removal, Tetra Tech START conducted in-situ soil screening using an XRF instrument. Methods used during the soil screening and the site-specific RAL were the same as those used in the residential section of the industrial ditch area. Screening consisted of collecting XRF readings for exposed soil every 2 to 4 feet after a small area had been removed. If lead levels were above the respective site-specific RALs, additional removal was performed. This process was repeated until the XRF indicated the RAL had been achieved at that location.

From October 20 to 21, 2008, Tetra Tech START collected three confirmation composite soil samples

from the scraped areas (see Figure 4 in Appendix A). Each composite sample was composed of six to seven aliquots from their respective areas and was submitted to AES for analysis. All sample results were below the respective site-specific RALs for lead (see Table 1 in Appendix D).

From October 20 to 21, 2008, Tetra Tech START conducted total particulate dust air monitoring for lead using two DataRAM particulate monitors. Air monitoring was performed during soil scraping of the property. The first DataRAM was placed on the porch of 1273 Allene Avenue at the front stairs. The second DataRAM was placed north of the property on Beechwood Avenue. The DataRAMs were placed at these locations to monitor total dust concentrations that may have affected the residents during soil scraping activities. The action level for total lead dust concentrations was calculated using the highest concentration (650 mg/kg) of lead in the soil as was determined from a previous soil assessment of the surrounding properties. The TWA action level for total lead dust concentrations was calculated as $5,130 \mu\text{g}/\text{m}^3$. Therefore, the TWA action level for nuisance dust of $5,000 \mu\text{g}/\text{m}^3$ was used as the level requiring dust reduction activity. The location and range of the total dust concentrations, based on the TWA, were as follows:

- Total dust concentrations on the front porch ranged from $12.9 \mu\text{g}/\text{m}^3$ to $41.4 \mu\text{g}/\text{m}^3$.
- Total dust concentrations north of the property on Beechwood Avenue ranged from $11.0 \mu\text{g}/\text{m}^3$ to $34.5 \mu\text{g}/\text{m}^3$.

From October 20 to 21, 2008, ER conducted site restoration with clean fill dirt at 1273 Allene Avenue. Clean fill dirt was transported to and deposited on the property using a small dump truck. ER used a skid steer, shovels, and rakes to spread and grade the clean fill dirt. On October 20, 2008, while spreading the fill dirt with the skid steer, ER ran over a pipe slightly extended above the ground located on the south end of the east side of the property. The pipe was pushed down and caused damage to the water line entering the home. ER repaired a 10-foot section of the water line using polyvinyl chloride (PVC) pipe. On October 23, 2008, Solid Rock Landscape installed Bermuda sod along the restored portion of the property.

778 Beechwood Avenue

On October 21, 2008, Tetra Tech START performed soil screening at 778 Beechwood Avenue, Atlanta, Fulton County, Georgia (see Figure 1 in Appendix A). The screening was conducted at the request of the property owner who was concerned that stormwater runoff from areas east of his property contained lead, and that his two-year-old child may have been exposed while playing in the backyard. Soil screening was performed with an XRF instrument for period of 60 nominal seconds every 10 feet in a grid-like pattern. Results of the screening ranged from less than the limit of detection (LOD) to 227.5 ± 48.9 ppm. The lead levels were below the RAL of 400 mg/kg.

713 Erin Avenue

During the removal activities conducted in 2006 and 2007, Bermuda sod had been installed at 713 Erin Avenue. The sod failed to grow due to the high amount of shade in the backyard, and the resident requested EPA address the matter. On November 6, 2008, Solid Rock Landscape replaced the Bermuda sod located in the backyard of the property with Fescue sod.

Staged Soil Treatment at Great Dane Trucking

ER collected a sample of the staged industrial ditch soil and submitted it for toxic characteristic leaching procedure (TCLP) analysis. The soil sample failed the TCLP standard for lead of 5 milligrams per liter (mg/L). ER conducted a bench-scale test to determine the amount of product necessary to stabilize and reduce leaching of the lead contamination in the soil.

From October 27 to November 5, 2008, ER treated the lead-contaminated soils from the industrial ditch area staged at the northwest corner of the Great Dane Trucking property (see Figure 2 in Appendix A). Approximately 92 tons of Free Flow 100[®], a calcium phosphate and magnesium-containing compound used to chemically stabilize and reduce leaching of metals from soil, was delivered to the site and used to treat the soil. The staged soil from the industrial ditch area was separated into three piles for treatment. The staged soil from the residential areas remained separate and was not treated based on previous TCLP soil sampling results from 2006 and 2007 removal activities. ER used a track hoe with a straight-edged bucket to mix the soil and Free Flow 100[®], and a pressure washer for dust reduction during treatment.

From October 28 to November 3, 2008, Tetra Tech START collected composite disposal samples from the three piles of treated industrial ditch soil and the one pile of untreated residential soil. Each composite sample was composed of five aliquots and submitted for TCLP analysis to AES. If the sample's TCLP result for lead exceeded 5 mg/L, the pile was treated with additional Free Flow 100[®] and resampled. The process was repeated until sample TCLP results for lead were below 5 mg/L (see Table 2 in Appendix D).

From October 27 through November 5, 2008, Tetra Tech START conducted total particulate dust air monitoring for lead using two DataRAM particulate monitors. Air monitoring was performed during the treatment of the soil staged on the Great Dane Trucking property. The first DataRAM was placed north of Great Dane Trucking next to a telephone pole located near 717 University Avenue to monitor dust concentrations that may have affected residents. The second DataRAM was placed on the Great Dane Trucking property east of the staged soil near the ER project trailer. Because ER was treating the soil from the ditch area, the action level for total lead dust concentrations was 40 $\mu\text{g}/\text{m}^3$. If lead dust concentrations exceeded 40 $\mu\text{g}/\text{m}^3$, ER was notified, and additional dust reduction methods were implemented. Locations and ranges of total dust concentrations, based on the TWA, were as follows:

- TWA concentrations north of Great Dane Trucking ranged from 5.0 to 33.9 $\mu\text{g}/\text{m}^3$.
- TWA concentrations east of the staged soil treatment area located on the Great Dane Trucking property ranged from 8.1 to 43.1 $\mu\text{g}/\text{m}^3$. Elevated concentrations were caused by vehicle traffic near the treatment area and the excess Free Flow 100[®] used to treat the soil. Tetra Tech START notified ER that the TWA concentrations exceeded 40 $\mu\text{g}/\text{m}^3$. ER immediately implemented additional dust reduction methods. Great Dane Trucking personnel and residents of 717 University Avenue were not present near the work area during treatment activities.
- On November 4, 2008, the DataRAM located north of Great Dane Trucking malfunctioned and was replaced with the DataRAM located on the east side of the treatment area.

From November 4 to 5, 2008, ER combined the four piles of soil for disposal.

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Disposal of Treated Soil at Great Dane Trucking

From November 6 to 7, 2008, ER loaded the treated soil into dump trucks as non-hazardous waste for disposal at Pine Ridge Landfill located at 105 Bailey Jester Road, Griffin, Spalding County, Georgia. According to ER, 557.06 tons of a soil and Free Flow 100[®] mixture was disposed of at the Pine Ridge Landfill.

Tetra Tech START conducted in-situ screening of the surface material in the soil staging area using an XRF instrument. Methods used during the screening and the site-specific RAL were the same as those used on the commercial property of the industrial ditch area. Screening consisted of collecting XRF readings of the surface material every 10 feet. If lead levels were above the respective site-specific RALs, the surface material was scraped using a track hoe with a straight-edged bucket to a depth of approximately 2 to 4 inches. This process was repeated until the XRF indicated the RAL for lead had been achieved at that location.

On November 7, 2008, Tetra Tech START collected a confirmation composite soil sample from the soil staging area. The composite sample consisted of seven aliquots and was submitted to AES for analysis. The result of sample analysis was below the site-specific RAL for lead (see Table 1 of Appendix D). ER performed site restoration by backfilling and spreading the staging area with 57-stone gravel using a skid steer.

Tetra Tech START and ER demobilized from the site on November 7, 2008.

If you have any questions or need additional copies of this report, please contact me at (678) 775-3106 or Andy Johnson at (678) 775-3100.

Sincerely,



Paul E. Prys II
START III Site Manager



Andrew F. Johnson
START III Program Manager

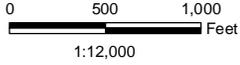
Attachments (5)

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

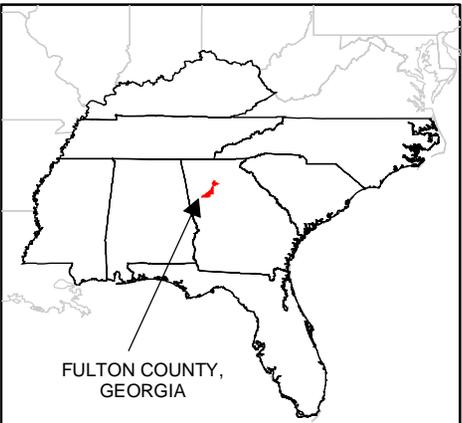
APPENDIX A

FIGURES

(Four Pages)



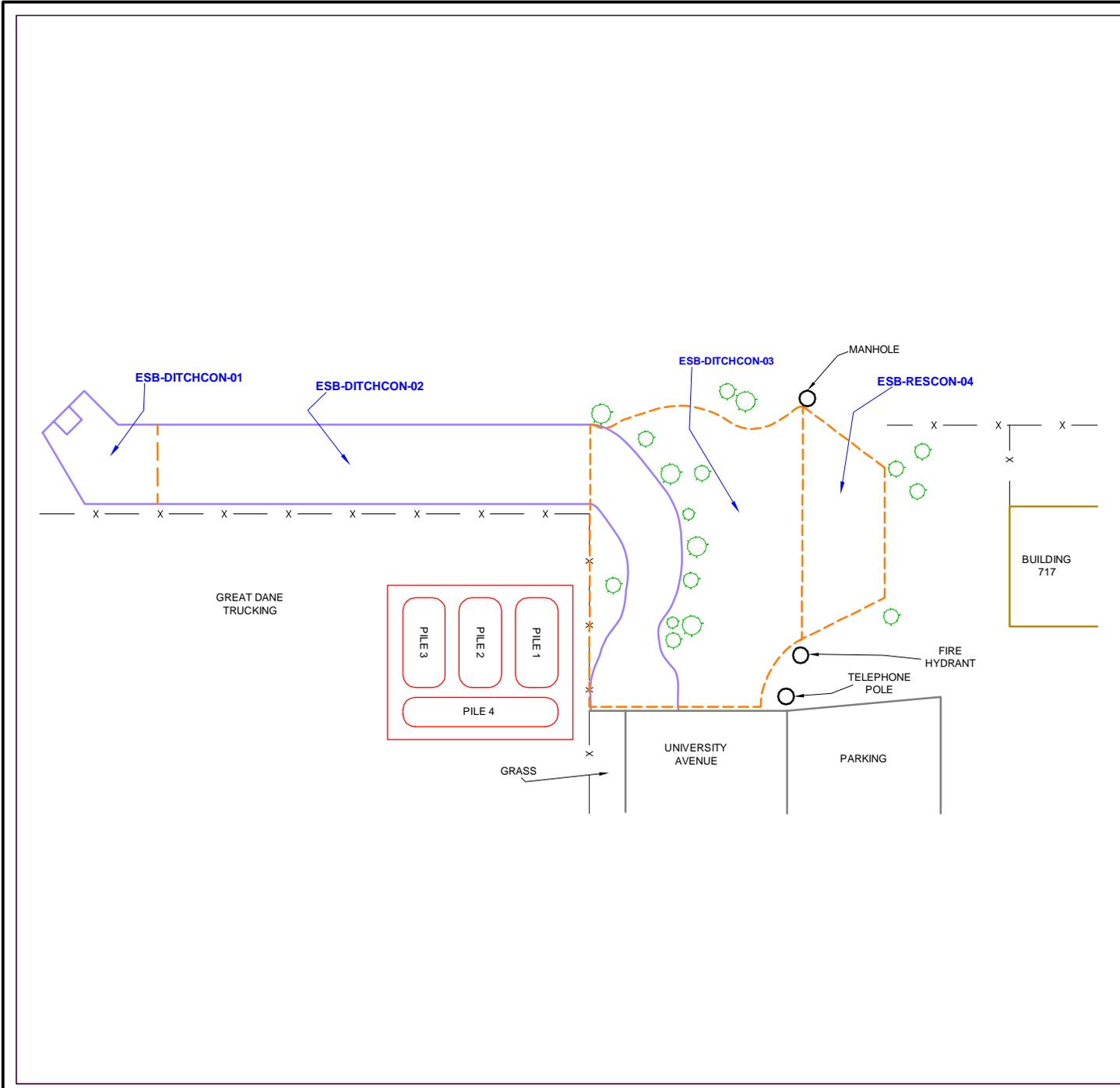
MAP SOURCE:
USGS, SOUTHWEST ATLANTA, GA
TOPOGRAPHIC QUADRANGLE, 1984



ESB FUND LEAD
ATLANTA,
FULTON COUNTY,
GEORGIA
TDD: TTEMI-05-001-0002

**FIGURE 1
SITE LOCATION**





LEGEND

-  CONFIRMATION SOIL SAMPLING AREA
-  TREE



DRAWING NOT TO SCALE



ESB FUND LEAD
 ATLANTA,
 FULTON COUNTY
 GEORGIA
 TDD No. TTEMI-05-001-0002

FIGURE 2
UNIVERSITY AVENUE DITCH
LAYOUT AND CONFIRMATION
SOIL SAMPLING AREA



LEGEND

- ◆ 165.0 ± 67.7 XRF LEAD SAMPLE LOCATION AND READING (BELOW 350 LIMIT)
- ◆ 365.7 ± 90.4 XRF LEAD SAMPLE LOCATION AND READING (ABOVE 350 LIMIT)

■ AREA WHERE EXCAVATION WAS COMPLETED

NOTE:
READINGS ARE PARTS PER MILLION (ppm).



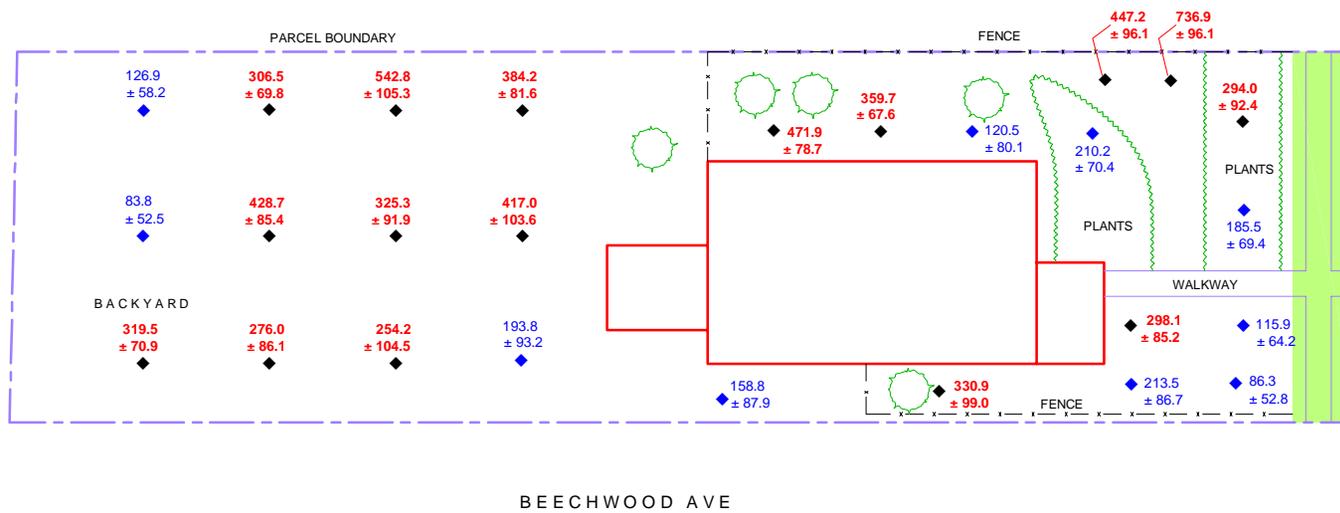
DRAWING NOT TO SCALE

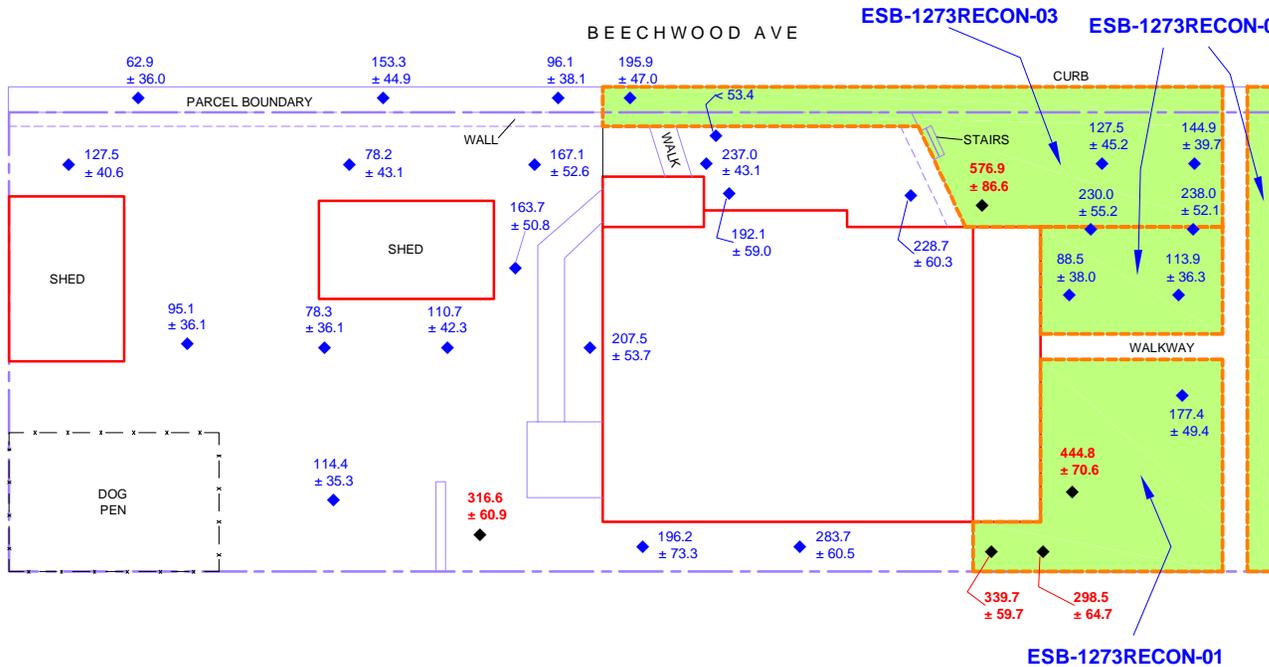


United States Environmental Protection Agency

ESB FUND LEAD
ATLANTA,
FULTON COUNTY
GEORGIA
TDD No. TTEMI-05-001-0002

FIGURE 3
1263 ALLENE AVE
REMOVAL AREA





LEGEND

◆ 165.0 ± 67.7
XRF LEAD SAMPLE LOCATION AND READING (BELOW 350 LIMIT)

◆ 365.7 ± 90.4
XRF LEAD SAMPLE LOCATION AND READING (ABOVE 350 LIMIT)

▭ AREA WHERE EXCAVATION WAS COMPLETED

NOTE: READINGS ARE PARTS PER MILLION (ppm).



DRAWING NOT TO SCALE



United States Environmental Protection Agency

ESB FUND LEAD
ATLANTA,
FULTON COUNTY
GEORGIA
TDD No. TTEMI-05-001-0002

FIGURE 4
1273 ALLENE AVE
REMOVAL AND CONFIRMATION
SAMPLING AREA



APPENDIX B
PHOTOGRAPHIC LOG
(20 Pages)



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

TDD Number: TTEMI-05-001-0002 **Location:** ESB (Exide) Fund Lead
Orientation: Southwest **Date:** September 25, 2008
Photographer: Scott Covode, Tetra Tech **Witness:** Scott Covode, Tetra Tech
Subject: Outfall from former ESB facility into ditch located on west side of Great Dane Trucking property.



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

TDD Number: TTEMI-05-001-0002

Location: ESB (Exide) Fund Lead

Orientation: North

Date: September 30, 2008

Photographer: Paul Prys, Tetra Tech

Witness: Paul Prys, Tetra Tech

Subject: Environmental Restoration (ER), LLC, wetting ditch area during excavation. Tetra Tech START performed in-situ soil screening using x-ray fluorescence (XRF). Areas less than the removal action level (RAL) for lead were marked with "C" for no additional excavation required, and areas greater than the RAL "X" for additional excavation required.



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

TDD Number: TTEMI-05-001-0002

Location: ESB (Exide) Fund Lead

Orientation: Northwest

Date: October 1, 2008

Photographer: Paul Prys, Tetra Tech

Witness: Paul Prys, Tetra Tech

Subject: ER excavating ditch area on west side of Great Dane Trucking property. Tetra Tech START performed in-situ soil screening using XRF. Areas less than the RAL for lead were marked with "C" for no additional excavation required.



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

TDD Number: TTEMI-05-001-0002

Location: ESB (Exide) Fund Lead

Orientation: Northwest

Date: October 2, 2008

Photographer: Paul Prys, Tetra Tech

Witness: Paul Prys, Tetra Tech

Subject: Close-up of gray clay along the sidewall of the ditch. Assuming the gray clay was the source of contamination, ER removed the soil until the clay was no longer visible and XRF screening resulted in lead levels below the site-specific RAL.



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

TDD Number: TTEMI-05-001-0002

Location: ESB (Exide) Fund Lead

Orientation: South

Date: October 7, 2008

Photographer: Paul Prys, Tetra Tech

Witness: Paul Prys, Tetra Tech

Subject: ER backfilling ditch area on west side of Great Dane Trucking property near the outfall.



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

TDD Number: TTEMI-05-001-0002

Location: ESB (Exide) Fund Lead

Orientation: South

Date: October 15, 2008

Photographer: John Schendel, Tetra Tech

Witness: John Schendel, Tetra Tech

Subject: Ditch area on west side of Great Dane Trucking property. Restoration consisted of filling the ditch with rip rap and pea gravel, placing coconut netting on the banks to inhibit erosion, and seeding the area with a rye-fescue grass blend.



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

TDD Number: TTEMI-05-001-0002 **Location:** ESB (Exide) Fund Lead
Orientation: North **Date:** October 9, 2008
Photographer: Paul Prys, Tetra Tech **Witness:** Paul Prys, Tetra Tech
Subject: Front walkway of 1263 Allene Avenue prior to excavation.



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

TDD Number: TTEMI-05-001-0002

Location: ESB (Exide) Fund Lead

Orientation: Northwest

Date: October 17, 2008

Photographer: John Schendel, Tetra Tech

Witness: John Schendel, Tetra Tech

Subject: Front walkway of 1263 Allene Avenue after restoration activities. Restoration consisted of backfilling the excavated areas with topsoil, seeding the area with a ryefescue grass blend, and covering the area with straw.



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

TDD Number: TTEMI-05-001-0002

Location: ESB (Exide) Fund Lead

Orientation: Southwest

Date: October 9, 2008

Photographer: Paul Prys, Tetra Tech

Witness: Paul Prys, Tetra Tech

Subject: Front yard of 1273 Allene Avenue prior to excavation.



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

TDD Number: TTEMI-05-001-0002

Location: ESB (Exide) Fund Lead

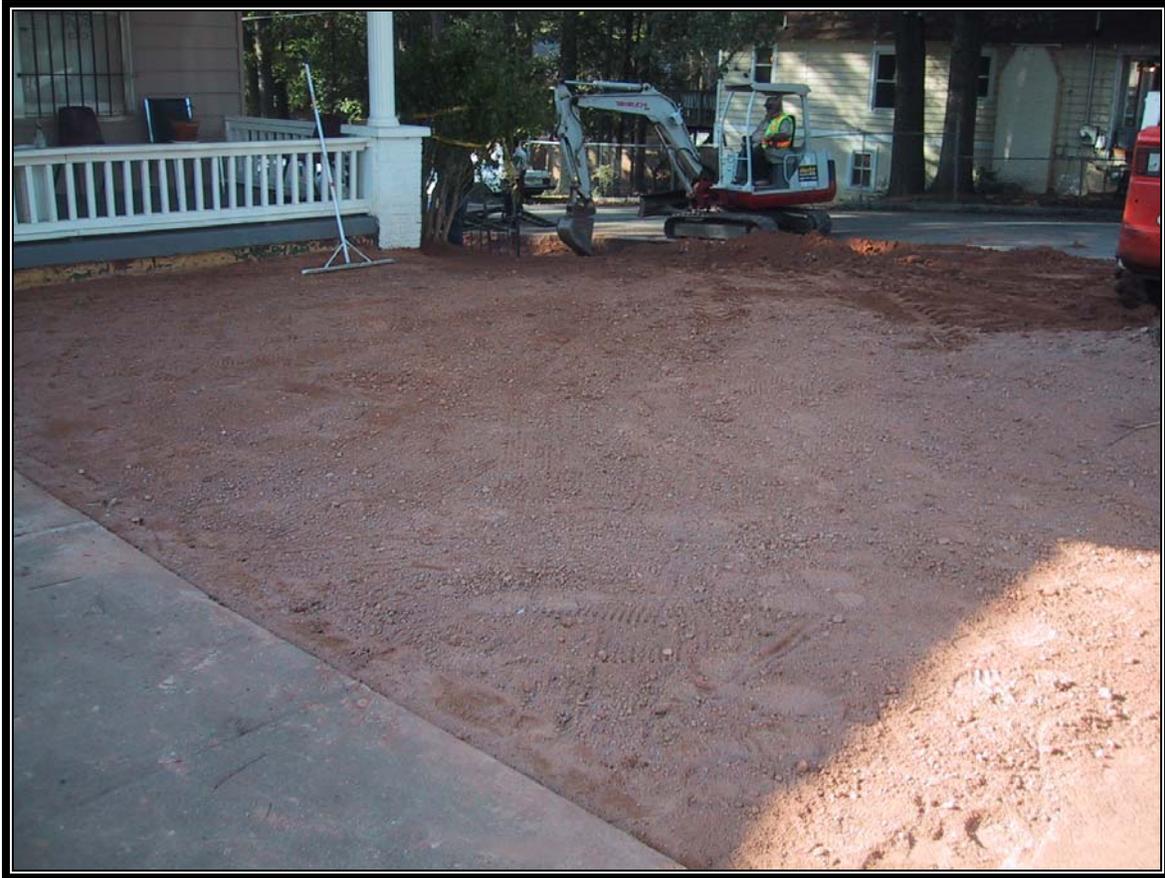
Orientation: Southwest

Date: October 20, 2008

Photographer: Paul Prys, Tetra Tech

Witness: Paul Prys, Tetra Tech

Subject: Front yard of 1273 Allene Ave; ER performed excavation using track hoe with a straight-edged bucket. Tetra Tech START conducted XRF in-situ soil screening. Areas less than the RAL for lead were marked with "C" for no additional excavation required, and areas greater than the RAL "X" for additional excavation required.



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

TDD Number: TTEMI-05-001-0002

Location: ESB (Exide) Fund Lead

Orientation: Northwest

Date: October 21, 2008

Photographer: Paul Prys, Tetra Tech

Witness: Paul Prys, Tetra Tech

Subject: Front yard of 1273 Allene Avenue. ER backfilled and graded the yard using a track hoe and a skid steer.



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

TDD Number: TTEMI-05-001-0002 **Location:** ESB (Exide) Fund Lead
Orientation: North **Date:** October 23, 2008
Photographer: Paul Prys, Tetra Tech **Witness:** Paul Prys, Tetra Tech
Subject: Solid Rock Landscape installing Bermuda sod in the front yard of 1273 Allene Avenue.



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

TDD Number: TTEMI-05-001-0002

Location: ESB (Exide) Fund Lead

Orientation: Northeast

Date: October 15, 2008

Photographer: John Schendel, Tetra Tech

Witness: John Schendel, Tetra Tech

Subject: ER installing soil berm to control erosion and stormwater runoff in the back yard of 1280 Allene Avenue.



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

TDD Number: TTEMI-05-001-0002

Location: ESB (Exide) Fund Lead

Orientation: Northwest

Date: October 23, 2008

Photographer: Paul Prys, Tetra Tech

Witness: Paul Prys, Tetra Tech

Subject: Solid Rock Landscape completing the installation of Bermuda sod on top of the soil berm in the back yard of 1280 Allene Avenue.



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

TDD Number: TTEMI-05-001-0002

Location: ESB (Exide) Fund Lead

Orientation: North

Date: October 28, 2008

Photographer: Paul Prys, Tetra Tech

Witness: Paul Prys, Tetra Tech

Subject: ER mixing staged, lead-contaminated soil located in the northwest corner of the Great Dane Trucking property with Free Flow 100[®] to chemically stabilize and reduce leaching of metals from the soil.



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

TDD Number: TTEMI-05-001-0002 **Location:** ESB (Exide) Fund Lead
Orientation: Northwest **Date:** November 6, 2008
Photographer: Courtney Roden, Tetra Tech **Witness:** Courtney Roden, Tetra Tech
Subject: Fescue sod installed in the back yard of 713 Erin Avenue.



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

TDD Number: TTEMI-05-001-0002

Location: ESB (Exide) Fund Lead

Orientation: North

Date: November 6, 2008

Photographer: Courtney Roden, Tetra Tech

Witness: Courtney Roden, Tetra Tech

Subject: ER loading dump trucks with treated soil for disposal as non-hazardous waste for transportation to Pine Ridge Landfill. Note the use of misting water for dust control.



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

TDD Number: TTEMI-05-001-0002

Location: ESB (Exide) Fund Lead

Orientation: North

Date: November 7, 2008

Photographer: Paul Prys, Tetra Tech

Witness: Courtney Roden, Tetra Tech

Subject: ER completed scraping soil from a section of the Great Dane Trucking lot used to stage soil excavated from the ditch area. Tetra Tech START performed in-situ soil screening using XRF. Areas less than the RAL for lead were marked with "C" for no additional excavation required. ER excavated approximately 2 to 4 inches of surface material prior to Tetra Tech START collecting confirmation soil samples.



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

TDD Number: TTEMI-05-001-0002

Location: ESB (Exide) Fund Lead

Orientation: West

Date: November 7, 2008

Photographer: Courtney Roden, Tetra Tech

Witness: Paul Prys, Tetra Tech

Subject: Tetra Tech START conducting confirmation soil sampling in staged soil area at Great Dane Trucking.



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

TDD Number: TTEMI-05-001-0002

Location: ESB (Exide) Fund Lead

Orientation: North

Date: November 7, 2008

Photographer: Courtney Roden, Tetra Tech

Witness: Courtney Roden, Tetra Tech

Subject: ER backfilling soil staging area with 57-stone gravel in Great Dane Trucking lot using a skid steer.

APPENDIX C

FIELD LOGBOOK NOTES

(72 Pages)

ESB

TEMP-0500/-0002

LOGBOOK ESB-LOG-01



"Rite in the Rain"

ALL-WEATHER

JOURNAL

No. 391

1273 Allene Ave.

Ditch

Log Book 1



CONTENTS

DATE

REFERENCE

PAGE

Myr Tim Sloan 770.864.3343
Eric Marvin Holleman - Ok city
Foreman ST. Louis office 636.227.7477

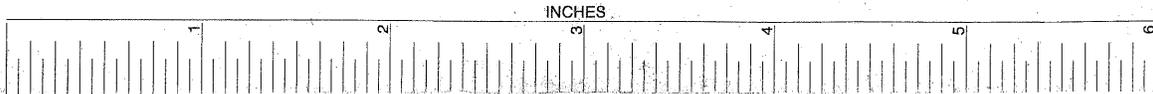
ER Bobo all ATL
workers Sean office
Jesse
Jonah
Cliff Sanders

Logbook A

ESB

TEMPER-05-001-000Z

Name _____
Address _____
Phone _____
Project _____



Clear Vinyl Protective Slipcovers (Item No. 30) are available for this style of notebook. Helps protect your notebook from wear & tear. Contact your dealer or the J. L. Daffing Corporation

23 SEP 08

P. Pags

0845 START WAS ON-SITE. ER WAS ON-SITE AND BEGAN REMOVING AN OLD FENCE NORTH OF THE DITCH AREA LOCATED NEAR UNIVERSITY DR. ER ALSO BEGAN REMOVING REMOVING TREE LIMBS NEAR DITCH AREA.

0915 ER STOPPED WORK TO CONDUCT THEIR HEALTH AND SAFETY MEETING. ER RESUMED CLEARING BUSHES NEAR THE DITCH AREA.

1100 START ARRIVED AT THE EXIDE FACILITY TO SEE IF SEWAGE WAS ON-SITE SO WE WOULD ENTER. START MET WITH SEWAGE AND WALKED AROUND THE FACILITY.

1100 EPA ARRIVED ON-SITE AT THE EXIDE FACILITY.

1125 ER ARRIVED AT EXIDE FACILITY AND BEGAN TRYING TO REMOVE THE SERVICED MANHOLE COVER LOCATED AT THE NORTHEAST SIDE OF THE BUILDING.

1215 ER REMOVED THE MANHOLE COVER. A VISUAL INSPECTION INDICATED THE MANHOLE WAS ~~FROM~~ ^{FROM} THE STORMWATER DRAIN AND NOT TIED TO THE

BRUCE

27 SEP 08

P. Pags

SANITARY SEWER.

1230 START MADE A DYE MIXTURE IN A 5 GALLON BUCKET. ER BEGAN RUNNING WATER DOWN THE STORMWATER DRAIN AND START BEGAN ADDING THE DYE.

1315 START NOTIFIED EPA AND ER THAT WATER CONTAINING THE DYE STARTED COMING OUT OF THE DRAIN LOCATED AT THE DITCH.

1400 START WAS OFF-SITE.

WEATHER: SUNNY HIGH OF 81°F.

SCOPE: DYE TESTING

11/2/09

BRUCE

BRUCE

24 SEP 08

P. PERS.

Weather: Sunny and 77°F (high)

SCOPE: Backhoe and Air Sampling

Dredging Bank Cleaning

0800 START on-site. ER began cleaning bank along the ditch line.

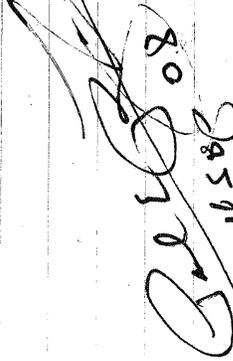
0900 START was off-site to get chain to lock up DATA ROOM.

1000 START was on-site.

1015 START began collecting backgrounds. Air samples (particulates) using the DATA ROOM. Samples were taken near the storm drain outlet located at the ditch.

1130 START was off-site.

1715 START contacted ER to turn-off and store the DATA ROOM.



 Paul L. B. 08
 24506

25 SEP 08

S. COVAGE

Weather: Cool 55°F Clear breeze 2-3 → NW-N

SCOPE: Oversight of excavation, air monitoring XRF sampling.

0730: START onsite. Env restoration already onsite w/ equipment. Quick overview mtg of site HHS considerations. Crew will wear APR's during excavation. Soil XRF to pocket then to truck then to plastic covered staging area inside fence. Some tree removed prior to excavation, more may be removed by truck hoe.

Data ram 1 received: (EPAS) START @ 0815

Data ram 2 charging

Data Ram 1 set @ Ditch Head inside fence

ER

0820: ER working @ foot of ditch for access w/ truck hoe. Proping area for truck to back in.

Data ram 1 has detector failure no TWA

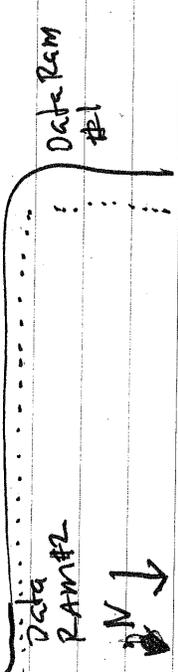
0835 Data ram 2 change loops. set up @ excavation in @ Data ram 1 site @ head of ditch at apt 306

0836: Data RAM 2 TWA 24.1 ug/m³


 JSC

Photos

#	Sub	P	O	W
1	Ditch pre excavation	JSC	WSW	-
2	Ditch "	JSC	W	
3	Ditch "		W	
4	Ditch "		WNW	
5	Ditch "		NW	
6	Rental equipment		E	
7	Track hoe		NW	
8	Track hoe removing trees		NW	
9	Soil collection area @ Great Dane		E	
10	Tree removal		NW	
11	Excav area created		E	
12	Turned up area in ditch		E/E/E	
13	" " lots of gray		E/E	
14	1st bucket		E/E	
15	Cleaned area w/ some gray		WSW	
16	Clear area E of pipe		S	
17	Dry Deion of equip		S	
18	Equip staging - Hot zone		S	



25508 08

S CORVADE

0900 Thermo confirms Data Ram is dead

Call to Eagle. Chede for unit

0905 ER crew moving debris from ditch

work gloves - no APR's, no booties

0907 Eagle has Data RAM - will pick up @

w lunch.

0917 Niton setup + calibrated

PERA metal standard sampled:

#2 Pb = 430.7 Err = 106.8

#1 Calibration readings

nom sec: 40.8

Res 264.7 EScale 4.9156

#3 Pb = 514.1 ERR = 111.9 PERA stand and

#4 Pb = 502.7 ERR = 111.1 PERA std

#5 Pb = 39.3 ERR bdk parking area

#6 Pb 43.4 ERR 81.5 @ bottom by fence ~~side~~

0945 Track hoe in ditch to remove more

trees on N side of ditch

0947: #2 WA DRZ 18.7 1hr 15 min

#7 Pb 96.1 Err 58.0 on asphalt near fence

1015 START corvado offsite to Eagle for data ram

ER not going to dig till after lunch 1230 ish

FR request niton of west track & for area

1245 START on site. ER @ Lunch



25 Sep 08

SCOPE

1200 Pata Ram 1 removed + set up
 @ End of ditch where soil x fer
 will take place wind out s/w gusty
 to 5-6.

1230 ER back on site.

Niton calibrated

nom sec 38.8

Res 271.0 Esale 4.9147

Sample @ xfer area

#11 Pb - BDL Err 0.15' front of 5' woodcut(?)

#13 Pb - BDL in xfer area 25' no ditch

#14 Pb - 877.4 Err 12.6 in ditch (mouth) on soil ^{gray}

1245 Pata Ram 2 TWA 18.2

Ditch was watered and is moist

#15 Pb 1557. Err 138 30' west of mouth

#16 Pb 98.2 Err 52. N wall of ditch @ #15

#17 Pb 1.5(M) ppm Err 0.0m 30' west of 15' "gray" clay

1300 ER is chipping branches. Indian(?) resident is watching - barefoot.

1305 Pata Ram 1 is 25' from chipping

TWA 50.1

#18 Pb BDL west of side next 2 residence

1320: spoke to STAFF BEAT. Clean-up good

15 Pb @ or below 800 ppm w/ less than

800 error factor on Niton.

BC

25 Sep 08

S. COVAGE

1350 ER clean + prep APC's will set up boot
 wash and wear booties.

Pata Ram 1

Conc 47.0 TWA 60.1

wind out of east with w + gusts

3US wind is swirling around west end
 of ditch and soil xfer area

1401 Excavation begins. All on APR in

Excavation area. Niton calibrated

1430 START on APR.

1450 First area dug out One bucket

wide. Extensive gray clay.

#21 Pb BDL - clean red clay in scrape

#22 Pb 578.3 Err 92.7 side ~~with~~ ^{with} no grayER hand (shovel) scraped wall and under
 SW PIPE.

1505 ER excav will dig one bucket east of

Pipe to check for gray clay

1515 PATA RAM 2

TWA 14.7

#23 239.6 Err 780 soil under pipe

1520 water spray on Easternmost ditch - stack

pile and area to be excavated + further
 west.

BC

25 SEP 08

S CODE

1545 Excavation continues. New Niton battery.

Calibration

nom 388 Res 272.6 Escal 9.9109

#30 62 sec Pb BDL ditch bottom

#31 60 sec Pb BDL ditch bottom

#32 60 sec Pb 450.8 Err 86.0 ditch S wall

#33 60 sec Pb 7243 Err 359 East wall

#34 1.1 Pb BDL - bad sample

#35 60 sec Pb 421.3 91.7 err Floor of ditch

#36 85.2 45.3 err ditch of floor

1645 EPA dry clean equip park @ west end of ditch.

Data RAM 2.3

TWA 26.3 7 hrs 28 min

Data RAM 2.3

TWA 14.5 ug/m³ 8 hrs 5 min

1700: START offsite ER complete clean up

1800: START charges equipment @ home overnight

BS

26 SEP 08

S CODE

0730: STATION on site. ER on site loading

equipment: Hts discussion of level

in area of excavation. All personnel beyond

fence line should be in level C-APR's.

0735 Data Rem Position 2 setup inside fence near ongoing excavation.

0800 ER gear up. Add plastic sheeting to

refer area near apt complex.

Data RAM Posit 1 set up near refer area

0810 Niton calibrated

nom: 389 Res: 277.9 Escal: 4.9118

#38 RCTA metal std test: Pb 408.1 Err 103.6

0825 recal Niton after 10 min warm up

#39 nom: 388 Res: 264.5 Escal: 4.9145

#40 RCTA metals Pb 430.8 Err 112.9

0840 ER begin removing tree in turn of ditch.

> signif gray soil under neck its root system

0900 Area under tree hand excavated

#42 Pb 141.5 Err 53.9 under tree

#43 Pb 441.0 Err 84.6 under tree

#45 Pb 684.5 Err 31.9 NE bank

#46 Pb 160.2 Err 50.2 gray dust under tree

#47 Pb 109.1 Err 61.3 hand cleared area on NE bank

#48 Pb 229.1 Err 77 " " "

BS

26 SEP 08

S. COVODE

0940 Samples around tree appear clean. Samples on NE bank are still hot: 22,000 ppm. Out of zone for water break. Trench hoe will scrape NE bank but go not deeper around drain pipe
 1000 first track of dirt dumped on staging area in fence. ~~no~~ little visible dust from dumping
 1005 Back into Hot zone
 1030 Multiple scrapes + sample till surface readings = poor less. Sampling of on areas above ditch near fence were clean.

1130 ER break for lunch. START remains to shoot more samples. ~ 10 more shots made. Areas clean marked "H" Hot areas marked "H".

1150 START to lunch
 1230 START return. ER suited up to go back in.

1240 ER into hot zone
 Data RAM 1 TWA 33.4 ppm
 1350 START into Hot Zone w/ APR

SK

26 SEP 08

S. COVODE

1300 More scraping. More samples fill marked C for clean.

Photos

19 excav w/ "C's" marked J3C W - P D W
 20 excav w/ C's marked J3C WSW -
 21 " " " " J3C SW -
 22 silt fence w/ sample results. J3C SW -

1350 out of zone on break. START

Phys. on site. site overview + xfer

Data RAM 1 TWA 33.6

Data RAM 2 TWA 28.5

1430 START COVODE was off-site.

1530 Entered hot zone to screen soil in excavated areas for lead.

Marked areas requiring additional excavation.

1620 Work for the day ^{PERE} was

completed. Picked up DATA RAMS.

Data RAM 2 (same hot zone) TWA = 37.2 ppm

Data RAM 3 (C below) TWA = 22.8 ppm

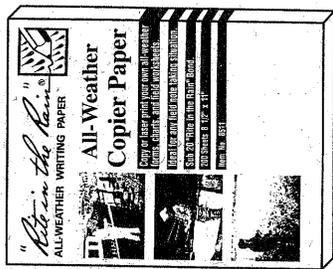
1700 START and container off-site.

 21 SEP 08

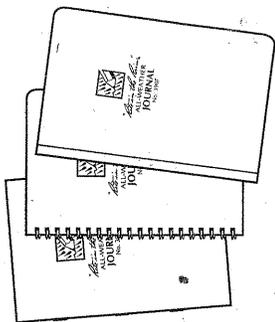


"Rite in the Rain"
ALL-WEATHER WRITING PAPER

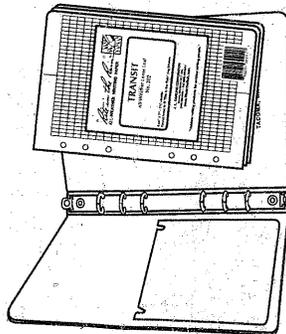
"Outdoor writing products...
for outdoor writing people."



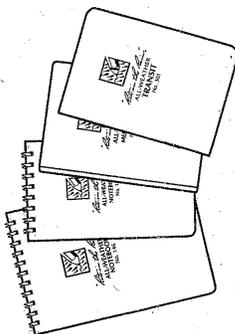
Copier & Ink-Jet Paper



Bound Books / Notebooks



Loose Leaf with Ring Binder



Memo Books



All-Weather Pens

www.RiteintheRain.com



Handwritten notes on lined paper:
The 3
26590
26590

ESB

ITEM I-05-001-0002

LOGBOOK ESB-LOG-φZ



"Rite in the Rain"[®]

ALL-WEATHER
JOURNAL

No. 391

Log Book 2

29 SEP 08

P. PAYS

0800 START ON-SITE. ER ENTERING HOT ZONE TO EXCAVATE SOIL.

0835 START BEYOND RUNNING DATA RANS.

0900 START ENTERED HOT ZONE TO CHECK

LEAD LEVELS IN EXCAVATED AREAS.

AREAS > 800 ppm WERE MARKED AND

ER CONTINUED TO EXCAVATE.

1030 EXITED THE HOT ZONE

1200 ER BROKE FOR LUNCH.

1230 START AND ER RE-ENTERED THE HOT

ZONE TO SCREEN AND EXCAVATE SOIL.

ER CUT DOWN TREES NEAR DECON AREA.

TWA (HOT ZONE)

TWA (DECON): 53.4 $\mu\text{g}/\text{m}^3$

1450 START AND ER EXITED THE HOT ZONE

TO TAKE A BREAK. START CLEARED

APPROXIMATELY 20 FT OF SITE WITH

1600 (BY 5/5) < 800 ppm.

NOTE: WEATHER SUNNY HIGH OF 85°F.

1500 START CHECKED THE DATA RANS.

TWA (HOT ZONE): 49.2 $\mu\text{g}/\text{m}^3$

TWA (DECON): 54.2 $\mu\text{g}/\text{m}^3$

AS TRUCKS WERE DRIVING THROUGH THE

GREAT DOME ROAD, VISIBILITY DROPT

700

29 SEP 08

P. PAYS

1645 START EXITED THE HOT ZONE. ER BEGAN

CLEANING UP THE WORK AREA BY

REMOVING MISCELLANEOUS DEBRIS.

1650 START COLLECTED THE DATA RANS

TWA (HOT ZONE): 49.5 $\mu\text{g}/\text{m}^3$

TWA (DECON): 57.0 $\mu\text{g}/\text{m}^3$

1700 START OFF-SITE.

Photo	TIME	Location	Q	P
2122 (5)	1546	UNIVERSITY AVE DITCH	N	PP
2123 (6)	1546		S	
2124 (7)	1546		S	
2125 (8)	1546		NW	



29 SEP 08
P. PAYS

30 SEP 08

P. PEGS

WEATHER: Sunny HIGH of 84°F
 SWEEP: Ditch Excavation at UNIVERSITY AVE.
 0800 STREET on-site. ER was on-site
 switching us and getting ready to
 enter the lot zone.

0810 START SAT OUT THE NOT ZONE DATA ROOMS,
 ONE IS LOCATED NEAR THE NOT ZONE AND
 THE OTHER IS NEAR THE BELOW AREA.
 0815 ER ENTERED THE NOT ZONE AND BEGAN
 THE EXCAVATION

0900 START ENTERED THE NOT ZONE TO BEGIN
 SCREENING THE SOIL FOR LEAD USING THE
 XRF. ER WAS EXCAVATING THE DITCH
 AREA AND SPENDING WATER FOR
 DUST CONTROL.

1020 STREET EXITED THE LOT ZONE.
 TWA (NOT ZONE): 56.7 $\mu\text{g}/\text{m}^3$
 TWA (BELOW): 38 $\mu\text{g}/\text{m}^3$
 DUST from GREAT DANE WAS NOTICED
 AS TRUCKS DROVE THROUGH THE ROAD AREA.

1115 STREET ENTERED THE NOT ZONE TO
 SCREEN SOIL FOR LEAD. ER BROKE FOR
 LUNCH. A few small areas were
 ABOVE 1000ppm. THESE AREAS WERE
 MARKED AND FURTHER EXCAVATED

PEGS

30 SEP 08

P. PEGS

until the areas were < 100ppm.
 1315 STREET EXITED THE LOT ZONE. ER
 CONTINUED TO EXCAVATE.

TWA (NOT ZONE): 40.4 $\mu\text{g}/\text{m}^3$
 TWA (BELOW): 54.7 $\mu\text{g}/\text{m}^3$
 VISIBLE DUST NOTICED FROM TRUCKS
 DRIVING THROUGH GREAT DANE LOT AND
 ER DROVE THROUGH ENTERING/EXITING
 NEAR BELOW AREA.

1430 STREET ENTERED NOT ZONE TO CONDUCT
 SOIL SCREENING OF EXCAVATED
 AREAS IN THE DITCH. AREAS > 200ppm
 WERE MARKED AND RE-EXCAVATED.

1520 STREET ENTERED EXITED THE LOT ZONE.
 SECOND BATTERY ON XRF ROW DEAD AND
 SOIL SCREENING WAS SUSPENDED. ER
 CONTINUED TO EXCAVATE.

TWA (NOT ZONE): 35.2 $\mu\text{g}/\text{m}^3$
 TWA (BELOW): 50.1 $\mu\text{g}/\text{m}^3$

[Signature]
 30 SEP 08

30 SEP 08

Photo	Time	Location	Direction
2124 (9)	1249	UNIVERSITY	N
2127 (10)	1249	UNIVERSITY	N
2127 (11)	1250		N
2129 (12)	1256		NE
2130 (13)	1261		N
2134 (14)	1258		NW
2132 (15)	1252		W

1600 ER EXITED THE HOT ZONE AND BEGAN CLEANING THE TRACK LINES AND OTHER EQUIPMENT. ER WAS STILL LOADING THE BRICK TRUCK WITH CONTAMINATED SOIL USING THE BACKHOE.

1130 START COLLECTED BOTH DATA RIMS
 TWA (HOT ZONE): 33.3 $\mu\text{g}/\text{m}^3$
 TWA (BELOW): 54.8 $\mu\text{g}/\text{m}^3$
 1700 START OFF-SITE.



10 OCT 08

WEATHER: Sunny High of 77°F
 SCOPE: Ditch Excavation at Univ. Ave.

0800 START ON-SITE.
 0810 START SET UP DATA RIMS AT HOT ZONE AND BELOW
 0830 START ENTERED HOT ZONE TO CONTINUE SCREENING SOIL. ER CONTINUED EXCAVATING

1020 START EXITED THE HOT ZONE. ER CONTINUED EXCAVATING FOR 10 MORE MINUTES BEFORE TAKING A BREAK.

TWA (HOT ZONE): 29.7 $\mu\text{g}/\text{m}^3$

TWA (BELOW): 49.0 $\mu\text{g}/\text{m}^3$

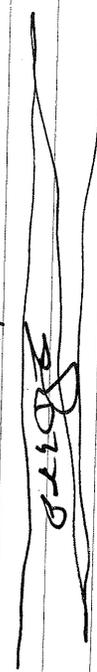
1100 START RE-ENTERED HOT ZONE TO RESUME SOIL SCREENING. ER CONTINUED EXCAVATING SOIL.

1200 START AND ER EXITED THE HOT ZONE. ER BROKE FOR LUNCH.

TWA (HOT ZONE): 20.9 $\mu\text{g}/\text{m}^3$

TWA (BELOW): 45.7 $\mu\text{g}/\text{m}^3$

1300 START AND ER RE-ENTERED THE HOT ZONE TO CONTINUE SCREENING AND SOIL EXCAVATION.



P. PANG

1 Oct 03

P. Papp

1600 START EXITED THE HOT ZONE. ER CONTINUED TO EXCAVATE.

TWA (HOT ZONE): 19 $\mu\text{g}/\text{m}^3$
 TWA (DBLON): 37.5 $\mu\text{g}/\text{m}^3$

NOTE: THE WIND WAS PRIMARILY blowing from the north and west

throughout the day

Photo Time	Location	O/S	R/P
2133 (10)	UNIVERSITY AFB DITCH	S	RP
2134 (10)	N/A	N	
2135 (10)	N/A	N	
2136 (10)	N/A	NW	
2137 (10)	N/A	SW	
2138 (10)	1347	SE	
2139 (10)	1347	NE	
2140 (10)	1603	S	
2141 (10)	1603	S	
2142 (10)	1624	N	
2143 (10)	1604	NW	
2144 (10)	1604	N	

1640 ER ENDED EXCAVATION OF THE > 10cm FOR THE DAY

[Signature]

1 Oct 03

P. Papp

1645 START COLLECTED THE DATA RAMMS.

TWA (HOT ZONE): 12.3 $\mu\text{g}/\text{m}^3$
 TWA (DBLON): 41.5 $\mu\text{g}/\text{m}^3$
 1700 START WAS OFF-SITE

[Signature]
 10 Oct 03

2 Oct 08

P. Pruss

Weather: Sunny High of 76°F

SUGG: Ditch Excavation University Ave

2750 STREET ON-SITE.

1800 STREET SET OUT DATA RAILS AT HOT ZONES AND NEAR NET BLDG 717 (Southwest of bldg)

0825 STREET AND ER ENTERED THE HOT ZONE to begin excavation and soil screening

1100 STREET EXITED THE HOT ZONE, ER EXITED AT APPROXIMATELY 1030 to take a break, STREET CHECKED THE SOIL ALONG THE TUBE LINES AND SIFT FUNDS AND FOUND (BOD LEVELS)

RAINING FROM 1200 TO 2600 GPM. STREET INFORMED ER AND WILL CONSULT WITH EPA ON A COURSE OF ACTION.

TWA (HOT ZONE): 29.1 $\mu\text{g}/\text{m}^3$ TWA (DECON): 29.2 $\mu\text{g}/\text{m}^3$

1125 STREET OFF-SITE TO GET SAMPLING EQUIPMENT FROM OFFICE.

1400 STREET BACK ON-SITE, ER CONTINUED EXCAVATION OF DITCH SOIL. EPA ON-SITE.

1420 STREET ENTERED HOT ZONE TO

CONTINUE SCREENING SOIL. START

PERC

2 Oct 08

P. Pruss

FOUND SOME AREAS > 200 GPM AND ER CONTINUED TO DIG UNTIL THE AREAS WERE < 200 GPM.

1630 STREET EXITED THE HOT ZONE, ER COMPLETED EXCAVATION FOR THE DAY.

1650 ER EXITED THE HOT ZONE.

1700 STREET COLLECTED THE DATA RAILS.

TWA (BLDG 717): 18.4 $\mu\text{g}/\text{m}^3$ TWA (HOT ZONE): 15.8 $\mu\text{g}/\text{m}^3$

1715 START WAS OFF-SITE.

(PHOTOS LOG ON NEXT PAGE)

Bob

2 Oct 08

P. Pags

Photo Time Location

2145 (14) 0803 University Ave Ditch

2146 (15) 0803

2147 (16) 0824

2148 (17) 0824

2149 (18) 0824

2150 (19) 0828-1058

2151 (20) 1059

2152 (21) 1059

2153 (22) 1059

2154 (23) 1059

2155 (24) 1624

2156 (25) 1625

2157 (26) 1625

2158 (27) 1625

2159 (28) 1626

2160 (29) 1626

2161 (30) 1626

2162 (31) 1626

2163 (32) 1626

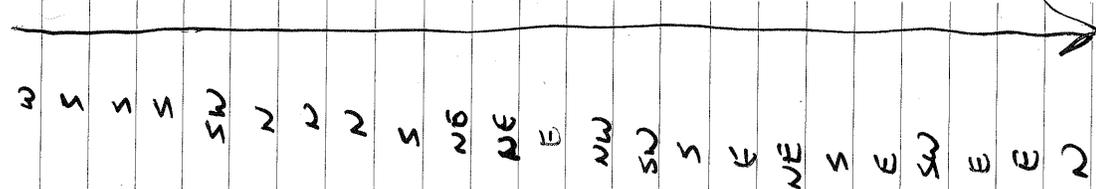
2164 (33) 1626

2165 (34) 1627

2166 (35) 1627

2167 (36) 1627

2168 (37) 1700



300303

3 Oct 08

P. Pags

Weather: Sunny High of 75°F

Scarb: Ditch Excavation at University Ave

0740: STREET on-site.

0750 STREET SAT OUT DATA RANS NEAR HOT ZONE AND SOUTHWEST OF BIR 7FT,

0810 ER AND STREET ENTERED THE HOT ZONE. ER CONTINUED DIGGING ON THE NORTH SIDE OF THE GREAT DOME FORM. STREET

CONTINUED SCREENING SOIL TO ENSURE LEAD LEVELS WERE BELOW 900 PPM.

1010 STREET EXITED HOT ZONE TO GET MORE MARKING POINT

1045 STREET RE-ENTERED THE HOT ZONE TO CONTINUE SCREENING IN THE DITCH.

ER BEGAN DIGGING NEAR THE ORIGINAL DUMP TRUCK LOADING AREA.

1200 ER WENT TO BUILD STREET CONTINUED SCREENING SOIL.

1300 ER RESUMED EXCAVATION.

1315 STREET EXITED HOT ZONE TO GET MORE MARKING POINT.

1340 STREET RE-ENTERED THE HOT ZONE TO CONTINUE SCREENING. AREAS > 900 PPM WERE MARKED AND SAVED.

See 103

3 Oct 08

P.P.S

Note: At approximately 1415, EPA was on-site to observe the excavation and screening.

1700 STREET AND ER EXITED THE HOT ZONE. ER CLEANED UP THE AREA AND STREET COLLECTED THE DETA ZONES.

TWA (HOT ZONE) : 21.5 ppm

TWA (BIG 717) : 27.6 ppm

1715 ER AND STREET WERE OFF -STB,

[Signature]
3 Oct 08

3 Oct 08

P.P.S

Photo Time Location
2169 (53) / 541 UNIVERSITY AVE Ditch E PP

2170 (53) / 541	SW
2171 (54) / 541	W
2172 (53) / 542	W
2173 (53) / 542	E
2174 (53) / 542	SW
2175 (53) / 542	S
2176 (53) / 543	SW
2177 (6) / 543	NE
2178 (6) / 543	N
2179 (53) / 544	NE
2180 (53) / 547	N
2181 (54) / 547	NW
2182 (53) / 547	SE
2183 (6) / 548	SB

[Signature]
3 Oct 08

6 Oct 08

P. Phis

WEATHER: MOSTLY SUNNY WITH N10W OF 33°F
 SCOP: DITCH EXCAVATION AT UNIVERSITY AVB,
 0715: STREET ON-SITE. ER BEGAN PREPARING
 THE STAGING AREA. INSIDE THE GARAGE
 DANG STAGING YARD.

0720: STREET SAT OUT THE DATA RANS IN
 THE HOT ZONE AND DOWNWARD AT
 SOUTHWEST AREA OF BLDG 717.

0800 ER ENTERED THE HOT ZONE TO CONTINUE
 EXCAVATION. EPA NOTIFIED STREET THAT
 THE AREA NORTH OF THE LINE b/w THE
 MANHOLE AND THE FIBR HYGREAT WOULD
 BE TREATED AS RESIDENTIAL AND MUST
 BE SCREENED TO < 400 ppm.

0830 STREET ENTERED THE HOT ZONE TO
 SCREEN SOIL IN THE RESIDENTIAL AREA
 AND TO SHOW ER WHERE TO SCRAPE.

EVERYTHING SOUTH OF THE LINE b/w THE
 FIBR HYGREAT AND THE MANHOLE WAS TO
 BE TREATED AS COMMERCIAL PROPERTY.

1030 A truck arrived with backfill and
 put it in the SCRAPE and CLEARED
 RESIDENTIAL ZONE. Some dust was

NOTICED DURING DUNGING. DATA FROM WBAE
 BLDG 717 may be affected.

PERCS

6 Oct 08

P. Phis

NOTE: Wind seems to be blowing from
 the South.

1130 STREET EXITED HOT ZONE.

1145 ER EXITED HOT ZONE AND BACK TO LUNCH.
 1200 Another staging truck with backfill

ARRIVED ON-SITE AND PLACED THE LOAD
 NEXT TO THE PREVIOUS LOAD. DUST WAS

NOTICED AND DATA ZONE MAY BE AFFECTED
 1220 STREET ENTERED HOT ZONE TO TAKE

TWO CONFIRMATION SOIL SAMPLES IN THE
 DITCH. ONE SAMPLE WBAE THIS DRAIN
 PIPE AND THE SECOND SAMPLE IN DITCH ON
 WEST SIDE OF FEUER.

1240 SAMPLE - ESB-DITCHCON-01 WAS TAKEN.

1250 SAMPLE ESB-DITCHCON-02 WAS TAKEN.

1330 GL DECIDED TO CUT DOWN TREES

LOCATED AT THE NORTHWEST CORNER OF

THE GREAT DANE FENCE. DEBRITE

EXCAVATION 6 FEET'S AROUND THE ROOTS,
 SOIL SCREENING LEVELS RANGED FROM

1900 TO 41,000 ppm. THE TREES HAD

TO BE REMOVED IN ORDER TO GET THE
 SOIL < 400 ppm.

1350 STREET EXITED THE HOT ZONE.

TWO (BLDG 717): 25.1 ppm.

PERCS

6 Oct 08

P. Pans

1350 START EXITED THE HOT ZONE.

TWA (B10g 717): 85.1 $\mu\text{g}/\text{m}^3$ TWA (HOT ZONE): 31.5 $\mu\text{g}/\text{m}^3$

ER EXITED THE HOT ZONE TO BEAK

BEFORE CUTTING DOWN TREES.

1415 ER ENTERED HOT ZONE TO CUT DOWN

TREES.

1500 START ENTERED HOT ZONE TO CONTINUE

SOIL SCREENING.

TWA (B10g 717): 79.5 $\mu\text{g}/\text{m}^3$ TWA (HOT ZONE): 29.5 $\mu\text{g}/\text{m}^3$

1830 ER COMPLETED EXCAVATION AND START

UNCOMPLETED SOIL SCREENING. ER BEGAN

CLEANING UP PRIOR TO LEAVING FOR THE

DAY.

1845 START COLLECTED THE DATA PANS.

TWA (B10g 717): 76.1 $\mu\text{g}/\text{m}^3$ TWA (HOT ZONE): 28.6 $\mu\text{g}/\text{m}^3$

1850 SAMPLE ESB-DITCHLOW-05 WAS TAKEN

1855 SAMPLE ESB-DITCHES FORB

1855 SAMPLE ESB-RESECON-04 WAS TAKEN.

1900 ER WAS OFF-SITE.

1910 START WAS OFF-SITE.

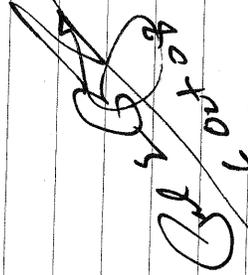

 Paul E. Pans
6 Oct 08

6 Oct 08

P. Pans

Plots	Time	Location
2184 (08)	1045	UNIVERSITY AND DITCH
2185 (08)	1046	
2186 (09)	1046	
2187 (09)	1046	
2188 (09)	1047	
2189 (09)	1054	
2190 (09)	1054	
2191 (09)	1056	
2192 (09)	1056	
2193 (09)	1057	
2194 (09)	1057	

P. Pans	Location
0 P	
S PP	
S	
W	
NW	
SW	
W	
NW	
SW	
SW	
W	
S	


 Paul E. Pans
6 Oct 08

7 Oct 03

P. Prys

0800 STREET ON-SITE to take site photos.
ER was backfilling ^{TPSR} property (ditch).
Spoke with Tim Stearn of

ER and he said they would possibly start excavation on home property on Friday.

0730 START OFF-SITE.

Photo	Time	Location	O	P
2195 (1)	0810	UNIVERSITY AVE Ditch	W	PP
2196 (2)	0810		W	
2197 (3)	0811		NW	
2198 (4)	0811		S	
2199 (5)	0811		E	
2200 (6)	0811		W	
2201 (7)	0812		S	

[Signature]

9 Oct 03

P. Prys

0945 START ARRIVED AT 1273 ALIENE AVE SW
TO MEET with EPA and to take
pre-excavation photos of this property.

Photo	Time	Location	O	P
2202 (1)	1037	1273 ALIENE AVE SW	E	PP
2203 (2)	1038		S	
2204 (3)	1038		SE	
2205 (4)	1038		W	
2206 (5)	1038		W	
2207 (6)	1039		E	
2208 (7)	1039		S	
2209 (8)	1039		S	
2210 (9)	1039		SE	
2211 (10)	1040		W	
2212 (11)	1040		SW	
2213 (12)	1040		S	
2214 (13)	1040		SW	
2215 (14)	1041		SW	
2216 (15)	1041		W	
2217 (16)	1041		NW	
2218 (17)	1041		NW	
2219 (18)	1041		SW	
2220 (19)	1041		SW	
2221 (20)	1042		SW	

[Signature]

9 Oct 08

P. Pans

Photo	Time	Location	Direction
2222 (21)	1042	1273 ALIENE AVE SW	NW PP
2223 (22)	1042		N
2224 (23)	1042		NW
2225 (24)	1042		N
2226 (25)	1043		SW
2227 (26)	1043		N
2228 (27)	1043		N
2229 (28)	1043		S
2230 (29)	1044		W
2231 (30)	1044		W
2232 (31)	1044		W
2233 (32)	1044		W
2234 (33)	1044		NW
2235 (34)	1045		N
2236 (35)	1045		W
2237 (36)	1045		E
2238 (37)	1045		S
2239 (38)	1046		S
2240 (39)	1046		SW
2241 (40)	1046		W
2242 (41)	1046		SW
2243 (42)	1046		SW
2244 (43)	1047		S
2245 (44)	1103		S

Barry

9 Oct 08

P. Pans

Photo	Time	Location	Direction
2241 (45)	1103	1273 ALIENE AVE SW	SE PP
2242 (46)	1103		NE
2243 (47)	1103		NW
2244 (48)	1103		N
2245 (49)	1103		NW
2246 (50)	1104		SE
2247 (51)	1104		S
2248 (52)	1104		SW
2249 (53)	1104		NW
2250 (54)	1104		NW
2251 (55)	1104		S
2252 (56)	1104		SW
2253 (57)	1105		W
2254 (58)	1105		NW
2255 (59)	1105		SW
2256 (60)	1105		E
2257 (61)	1105		SW
2258 (62)	1105		N
2259 (63)	1105		N
2260 (64)	1106		NE
2261 (65)	1106		NE
2262 (66)	1106		W
2263 (67)	1106		SW
2264 (68)	1106		SE

Barry

9 Oct 08

P. Prys

Photo Time Location

Photo	Time	Location	O	P
2270 (71)	1106	1273 ALIENE AVE SW	SE	PP
2271 (72)	1107		SW	PP
2272 (71)	1107		S	
2273 (72)	1107		SW	
2274 (73)	1107		S	
2275 (74)	1108		SE	
2276 (75)	1109		E	
2277 (76)	1138		E	
2278 (77)	1138		E	
2279 (78)	1139		N	
2280 (79)	1139		W	
2281 (80)	1139		S	
2282 (81)	1140		SW	
2283 (82)	1140		W	
2284 (83)	1140		NW	
2285 (84)	1140		NW PP SW	
2286 (85)	1140		SW	
2287 (86)	1140		SW	
2288 (87)	1140		SW	
2289 (88)	1140		PP SW W	
2290 (89)	1141		S	
2291 (90)	1141		SW	
2292 (91)	1141		W	
2293 (92)	1141		W	

Bul 2088

9 Oct 08

P. Prys

1145 START TOOK PPE-EXCAVATION PHOTOS

f 1263 ALIENE AVE SW. WORK INVOLVES

HAND DIGGING AROUND SIDEWALK AND

RIGHT OF WAY

Photo	Time	Location	O	P
2294 (93)	1146	1263 ALIENE AVE SW.	N	PP
2295 (94)	1146		N	
2296 (95)	1147		NW	
2297 (96)	1147		W	
2298 (97)	1147		W	
2299 (98)	1147		NW	
2300 (99)	1147		NW	
2301 (100)	1147		S	
2302 (101)	1148		S	
2303 (102)	1148		SW	
2304 (103)	1148		SE	
2305 (104)	1148		SW	
2306 (105)	1148		S	
2307 (106)	1148		S	
2308 (107)	1149		S	
2309 (108)	1149		W	
2310 (109)	1149		NW	
2311 (110)	1149		SW	

Bul 2088

9 Oct 08

P. Prins

1150 START TOOK PHOTOS OF BACK YARD

LOCATED AT 1280 ALIENE AVE SW

PREPARE TO REGARDING ACTIVITIES -

Photo	Time	Location	D	P
2312 (111)	1152	1280 ALIENE AVE SW	W	AP
2313 (112)	1152		W	
2314 (113)	1152		E	
2315 (114)	1152		NE	
2316 (115)	1152		NE	
2317 (116)	1153		E	
2318 (117)	1153		NE	
2319 (118)	1153		W	
2320 (119)	1153		W	
2321 (120)	1153		NW	
2322 (121)	1154		SW	
2323 (122)	1154		W	
2324 (123)	1154		NW	
2325 (124)	1154		W	
2326 (125)	1155		E	
2327 (126)	1155		E	
2328 (127)	1155		SE	
2329 (128)	1156		SW	
2330 (129)	1156		W	
2331 (130)	1157		W	

302026

9 Oct 08

P. Prins

Photo Time Location

2132 (131) 1156 1280 ALIENE AVE SW SE PP

2133 (132) 1156 SE

2134 (133) 1156 E

2135 (134) 1157 NE

2136 (135) 1157 W

2137 (136) 1157 NW

2138 (137) 1157 NW

2139 (138) 1157 NW

2140 (139) 1158 W

2141 (140) 1159 NE

1205 START WAS OFF-SITE.

~~302026~~
302026

10/15/08

John Schendel

0915- START Schendel arrived at the drainage ditch site, located at the western end of University Avenue.

Weather: Clear, cool, slight breeze, dry. Only a few clouds out of the west.

START Schendel talked to Tim Sloan telephone, who said today it was dry enough to finish backfilling the ditch with pea gravel. Work on the residential property was not planned for today, but was planned for tomorrow. Tim Sloan said that they would be starting tomorrow at the Residential Properties at the corner of Beachwood and Allene at about 0700. Mr. Sloan said that he would not be there tomorrow, but that Mr. Marvin Hallman (working today with the backhoe) would be in charge.

Mr. Sloan said that it would take all day to finish the work on the ditch at the western end of University Avenue. At this time they were laying down 1 to 2 inches of pea gravel into the bed of the

10/15/08

John Schendel

ditch. Large rocks (irregularly shaped up to 1 foot in dimension) were pre-placed in spots where erosion was of particular concern. Beneath the large rocks and on top of the entire bed of the ditch was laid a geotextile fabric.

Pea gravel was and is being spread atop the geotextile fabric and perhaps on top of the ~~top~~ large rocks. Once the pea gravel ^{10/15/08} is completed, they will also erect stone at the outer bend of the ditch to prevent erosion of its banks. Restoring the excavated areas adjacent to the ditch were also planned for today.

0945- START Schendel leaves ditch site for now.

John Schendel

10/17/08

10/15/08

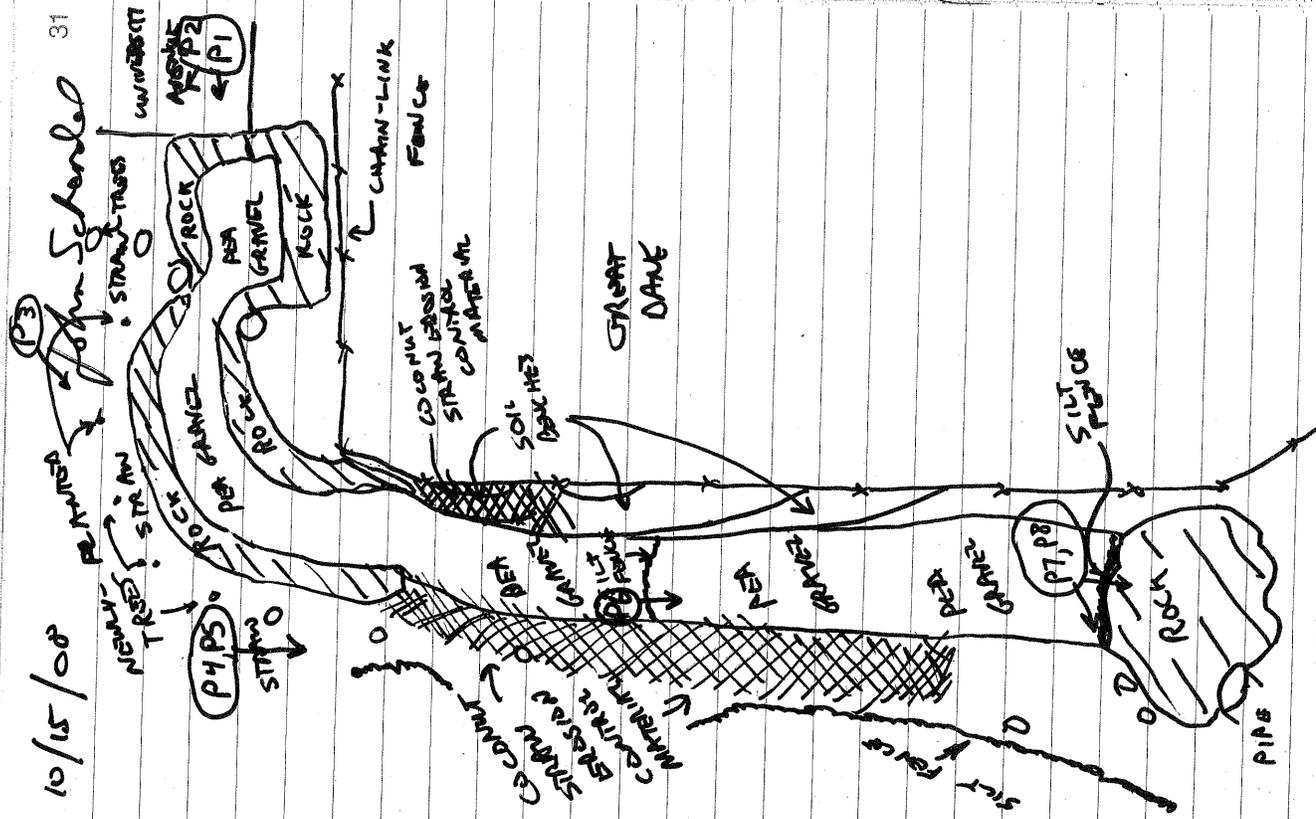
John Schabel

0740 - START Schabel arrives at Great Dane playing area. John Jover and Marvin Hallman of Environmental Restoration tell START Schabel that the plan for the day is to complete site restoration activities at the ditch site and then proceed to a residential property on allene to install a low-concrete block wall as an erosion control measure, to address the resident's concerns regarding storm-water runoff at the yard. The yard had undergone a removal about a year earlier, according to John Jover.

Mr. Jover and Mr. Hallman indicated that it was unlikely that soil removal activities would occur today. START Schabel will leave site shortly and, if soil removal activities were to begin today, Mr. Jover would call START Schabel in advance so that Mr. Schabel can return to the site in time to support the removal. 0845 - START Schabel photographs ditch restoration that has been completed.

10/15/08

John Schabel



10/15/08, 10/16/08, 10/17/08
John Schendel

PHOTOGRAPHIC LOG

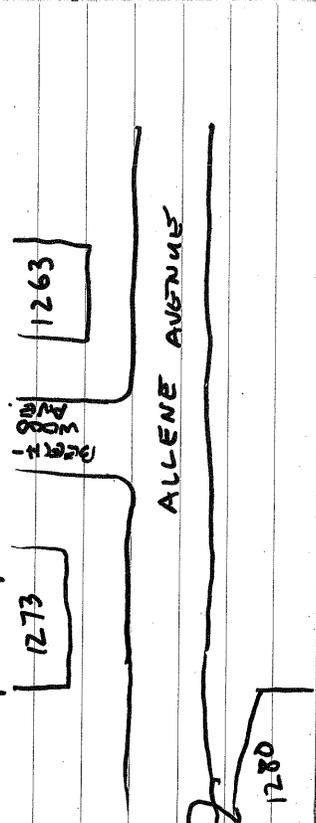
PHOTO NO.	CAMERA PHOTO NO.	DATE	TIME	DESCRIPTION
P1	823-2342	10/15/08	0905	END OF DITCH
P2	823-2343	10/15/08	0905	N/SR END OF DITCH
P3	823-2344	10/15/08	0910	BEND IN DITCH
P4	823-2345	10/15/08	0912	VIEW UP DITCH
P5	823-2346	10/15/08	0912	ANOTHER VIEW UP DITCH
P6	823-2347	10/15/08	0914	VIEW FROM MIDDLE OF DITCH
P7	823-2348	10/15/08	0916	VIEW OF HEAD OF DITCH
P8	823-2349	10/15/08	0916	BACK YARD OF 1263 ALLENE, BEFORE BRUSH, CONCRETE WORK
P9	823-2350	10/15/08	0926	BACK YARD OF 1280
P10	823-2351	10/15/08	0926	ALLENE, BEFORE EROSION CONTROL WORK
P11	823-2352	10/15/08	1012	COMPLETED SOIL BARRIERS AT 1280
P12	823-2353	10/15/08	1012	ALLENE, BEFORE EROSION CONTROL WORK
P13	823-2354	10/15/08	1259	FRONT OF 1263 ALLENE JUST BEFORE REPAIR WORK
P14	823-2355	10/15/08	1303	BEGINNING EXCAVATION AT 1273 ALLENE
P15	823-2356	10/16/08	AM	FINAL SCISSORS & EXCAVATING AT 1273 ALLENE
P16	823-2357	10/14/08	PM	EXCAVATION COMPLETED AT 1263 ALLENE
P17	823-2358	10/16/08	PM	EXCAVATION 50-FOOT AT 1273 ALLENE
P18	823-2359	10/17/08	1205	STAKES AND TRIP STAMPS XRF-CLEAN AREAS AT 1273
P19	823-2360	10/17/08	1207	
P20	823-2361	10/17/08	1207	

10/15/08

John Schendel

0924 - START Schendel goes to 1280 Allene Avenue. Jeff Crandly, EPA OSC, in there with ERAS contractor. The property owner, according to OSC Crandly, has requested that, instead of a concrete block wall only an earthen berm be constructed in the back yard for erosion/stormwater runoff control purposes. Property owner's name is ^{Trumpy} ~~Trumpy~~ ¹⁶⁷⁸⁻⁷¹⁶⁰⁻³³³³ Mr. Fordan does not want a block wall because he wants to be able to drive a vehicle across the area.

0940 - START Schendel notes that the front-yard removal is going to occur at 1273 Allene Avenue, which is diagonally across the street from 1280 Allene Ave. The removal of soil between the sidewalk and the street is supposed to occur in front of 1263 Allene Avenue.



10/15/08

John Schendel

~1030 - START Schendel discusses the plan for removing potentially contaminated soil from 1233 Allene Ave. and 1263 Allene Ave. with OSC Crowley and Marvin Hollman. (see file of a permit in almost complete) and the plan is to remove soil by hand from the space between the sidewalk and the road in front of 1263 Allene Ave. One of the two owners of this residence, Ms. Robin Hasketh, came out to greet START Schendel, OSC Crowley, and Mr. Hollman. She said she was aware of our plan for soil removal and she asked about the time in her back yard that were dying because when soil removal was performed at an earlier time in the back yard, the root systems of some of the trees were so badly damaged.

1259 - START Schendel photographs completed soil beam at 1280 Allene Avenue.
1303 - Soil removed in front of 1263 Allene Avenue begins.

• Instrument; Niton Model XLI 722

Serial No. 60978

Leak Tested: 6/10/08

10/15/08

John Schendel

35

Leak test due: 12/10/08.

Detectors were calibrated after the instrument had been on for at least 10 minutes.

READING NO.	SEC	Pb PPM	Pb BGR (20)	COMMENT
2654	34.8	<LOD= 45.3	---	SiO ₂ 9000
2655	38.3	<LOD= 56.2	---	MIST 2709 LOW
2656	49.8	1207	136	MIST 2711 MED
2657	35.7	5940	323	MIST 2710 HIGH
2658	37.5	443.9	110.2	{ RCPA As, Ba, Cs, Pb, Se, Ag
2659	33.1	484.1	115.7	(READ)
2660	38.3	479.6	109.9	(ASBQ WITH PLASTIC BAGS ONE MEASUREMENT)
2661 (A)	36.6	175.9	60.7	
2663 (B)	33.1	174.7	59.3	
2664 (C)	48.9	222.1	66.0	
2665 (D)	29.5	196.7	60.1	
2666 (E)	38.3	198.3	65.2	
2667 (F)	33.1	152.7	54.0	
2669 (I)	10.2	131.1	61.9	
2670 (2)	33.1	167.9	59.4	
2671 (3)	43.6	293.9	80.7	272, 26.9
2672 (4)	22.5	573.6	100.9	189.7, 68.8
2673 (5)	32.2	139.0	53.9	2738, 28.7
2674 (6)	28.3	289.3	69.6	122.6, 62.2

LEGEND FOR COMMENTS:
" = HIGH PPM
" = LOW PPM

10/15/08

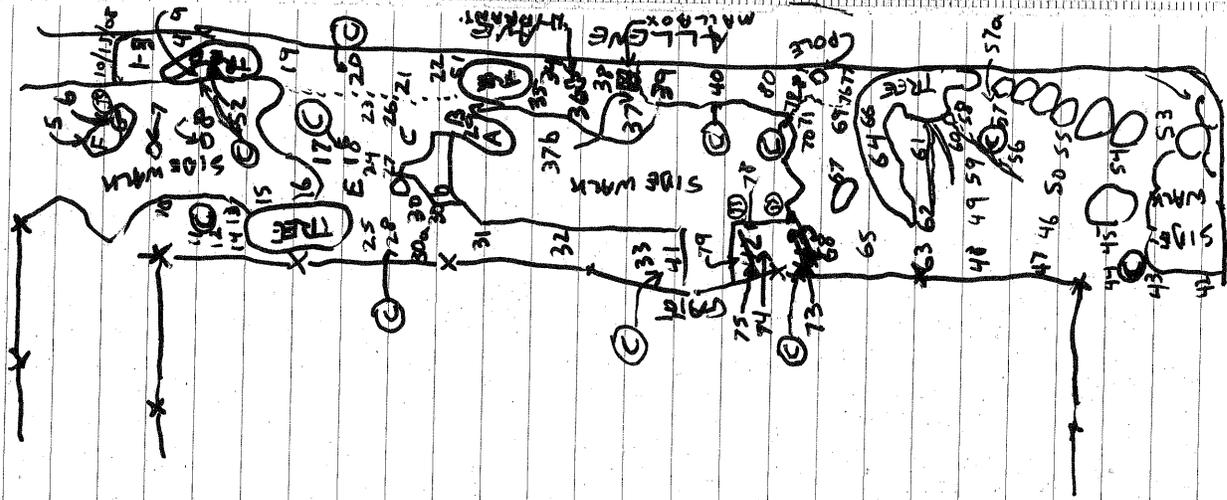
John Schardel

READING No. NOM SEC Pb (Pb) Pbc (Pb) Comment

2676 (7)	32.2	146.9	59.9	
2677 (8)	23.4	145.4	52.3	
2678 (9)	38.4	144.8	150	2724, 27.8 153.4, 57.5 2719, 28.7
2 (10)	60.0	430.7	106.8	130.5, 58.4
2686 (11)	34.0	102.0	50.2	
2687 (12)	32.2	138.7	57.0	
2689 (13)	30.4	125.1	56.9	
2690 (14)	28.7	438.5	89.7	2718, 27.8 140.6, 39.1
2691 (15)	33.1	173.8	57.1	
2692 (16)	27.8	167.8	58.9	
2695 (17)	28.7	198.5	58.5	
2696 (18)	34.3	99.2	46.1	
2697 (19)	27.8	147.8	163	2736, 29.5 289.0, 72.0
2700 (20)	30.4	225.1	69.9	2728, 16.4 2722, 59.6
2701 (21)	12.0	133.0	56.9	2729, 25.2 132.5, 54.3
2702 (22)	30.4	362.5	83.1	2705, 29.5 243.7, 78.0
2703 (23)	28.7	201.8	65.3	
2704 (24)	26.0	178.1	69.3	
2706 (25)	29.6	189.7	58.3	
2708 (26)	27.8	174.8	62.4	
2709 (27)	28.7	269.5	76.5	
2710 (28)	29.5	283.8	73.6	
2711 (29)	31.3	74.5	48.6	
2712 (30)	28.7	335.9	82.2	2731, 30.4 237.4, 64.8

10/15/08

John Schardel



10/15/08

John Scherdel

1422 - Tilled with Lee Seung, OSC. HC confirmed that the ERAS contour was supposed to remove a few inches of soil in all exposed portions not covered by sidewalk between the road (Allene Ave.) and the fence in the front

of 1263 Allene Avenue

READING No.	NO. SET	Pb (ppm)	Pb (ppm)	ERR (20')	COMMENT
2713 (30a)	36.6	272.5	73.4		
2714 (30b)	26.9	341.7	79.9	2788	27.8
2715 (31)	43.6	591.6	110.0	1998	76.1
2716 (32)	26.9	217.2	69.2	2733	27.8
2717 (33)	15.5	785.8	114.7	269.6	73.4
2744 (34)	26.9	177.7	65.0	2790	28.7
2745 (35)	28.7	227.0	60.7	241.9	79.2
2746 (36)	26.9	259.5	68.7	2799	28.7
2748 (37)	26.9	219.5	62.8	127.5	51.4
2749 (38)	27.8	425.0	86.6	REMAINING WAS HIGH	
2750 (39)	32.2	769.9	104.2	2509	26.0
2751 (40)	19.9	130.6	14.1	2541	65.2
2752 (41)	30.4	492.3	96.3	2803	27.8
2755 -	34.8	405.9	104.8	219.9	70.3
				2805	26.9
				2879	76.0
				204.7	66.2
				2877	53.1
				2824	70.8
				2848	28.7
				283.9	87.2
				RCRA 15, 16, 17, 18, 19	
				CS, Pb, Se, Mo	

1821 - START Scherdel lower site

10/16/08

John Scherdel

0740 - START Scherdel arrives at 1263 Allene Ave.

Weather: Clear, cool, dry, slight haze. START Scherdel warns of XRF contamination for 10 minutes and fills in the data.

READING No.	NO. SET	Pb (ppm)	Pb (ppm)	ERR	COMMENT	
2757	-	? <LOD	36.7	5102	99.5% BURN	
2758	-	? <LOD	109.2	RCRA 15, 16, 17, 18, 19	Pb, Se, Mo	
2770	42	29.5	<LOD	85.9		
2772	43	29.5	83.5	45.0		
2773	44	26.0	83.6	48.6		
2775	45	28.6	286.1	74.3		
2776	46	31.3	201.1	61.6		
2777	47	26.9	244.7	68.9		
2778	48	28.7	229.9	66.6		
2779	49	29.5	172.0	68.6		
2780	50	27.8	168.8	58.9		
2793	51	29.5	331.0	80.6	ROOTS: LEAVES IN PLACE	
2796	30b	28.9	339.2	83.7	2847	18.1
2797	52	28.7	464.8	104.6	ROOTS: LEAVES IN PLACE	
2809	37b	26.9	160.9	58.0		
2810	30b	27.8	187.2	64.5		
2811	31	28.6	175.1	64.7		
2812	32	26.9	111.2	54.6		
2815	53	26.9	245.0	69.8		

10/16/08

John Schueler

REMAINING NO.	MAP NO.	NOM. SEC PPM	ERA	COMMENTS
2819	54	28.6	224.2	65.5
2820	55	28.6	164.7	60.5
2821	56	33.0	276.1	74.4
2822	57	28.6	612.2	109.5 • 2887, 27.8 183.6, 65.0
2823	58	26.9	479.9	100.2 • 2873, 26.9 348.8, 90.25
2824	59	28.7	236.0	71.6
28	60	010 NOT RECORD WAS LOWER THAN 400		
2827	61	26.9	87.3	55.4
2828	62	26.9	120.4	59.2
2829	63	26.9	113.7	52.9
2830	64	27.8	<100 = 84.3	
2831	65	29.6	193.1	72.2
2834	66	26.9	214.1	73.0
2841	67	27.8	375.7	91.8
2843	68	28.6	316.0	76.0
2844	69	28.6	158.6	66.7
2849	70	27.8	264.5	73.3
2852	-	40.9	550.4	118.2
CHANGE BATTERY - WAIT 10 MINUTES AND THEN CALIBRATE THE DETECTOR				
2854	-	39.1	459.5	115.2
2855	-	31.3	<LOD = 37.7	51.0 99.5% BURN
2856	71	28.6	200.5	61.6
2857	72	27.8	880.3	129.9 • 2883, 27.8 <LOD = 68.5
2858	73	31.3	117.8	52.0

ACRA A₃, B₂, C₁, C₂, P₈, S₂, A₀

ACRA A₃, B₂, C₁, C₂, P₈, S₂, A₀

10/16/08

John Schueler

REMAINING NO.	MAP NO.	NOM. SEC PPM	ERA	COMMENTS
2861	74	28.6	228.2	77.6
2863	75	26.9	276.1	77.7
2870	78	26.7	177.9	62.6
2878	79	26.0	198.9	66.3
2880	76	29.5	91.6	53.8
2881	77	30.4	161.4	55.3
2884	80	33.9	136.7	57.4
2885	81	28.7	280.5	84.4
2891	57a	27.8	666.8	117.4 • ROOTS: LEAVES IN PLACE
BEGIN SCREENING 1273 ALLEN AVE. (SEE MAP PAGES 44 AND 45)				
2902	1	26.9	226.4	71.9
2910	2	27.8	256.8	72.9
2911	3	28.7	180.5	60.6
2913	4	30.4	276.8	74.6
2914	5	28.7	152.5	50.7
2915	6	13.7	155.6	56.0

John Schueler
10/17/08

10/16/08 John Schabel -

1510 - START Schabel collect a 10th point composite sample from excavated space between fence and Allene Avenue in front of 1263 Allene Ave.

Sample: ESB-1263ALLENE-101608

See map on page 37 for location of duplicate (marked on map with a "C"). Sample will be analyzed for total lead.

1610 - OSC Lee Simon was on site earlier and took several photographs of both the final excavation activities in front of 1263 Allene Ave. and the beginning of the excavation activities at 1273 Allene. A backhoe is being used to lift the soil, some shanks, and about 4 inches of soil at 1273 Allene, starting at the left side of the front yard.

Currently, ERRS personnel are backfilling the excavated area in front of 1263 Allene Ave. with clean fill.

1620 - START Schabel will begin screening excavated portions of 1273 Allene Ave.

1728 - START Schabel leaves site of 1263 and 1273 Allene Avenue. ERRS Contractor has stopped for the day. Excavation at 1273 Allene and backfilling at 1263 Allene will resume tomorrow.

10/17/08 John Schabel

0735 - START Schabel arrives at site of 1273 Allene Avenue.

Weather: Cloudy, slightly cool, slight breeze.

0814 - START Schabel warm up XRF instrument and Data RAM in preparation for continued excavation activities at 1273 Allene Ave.

• Data RAM: Model DR-2000

Manufactured date: 5/01.

Serial No.: 2624

0840 - Data RAM is geared and placed on front porch of 1273 Allene Ave.

TIME	CONC. (µg/m ³)	COMMENTS
0840	~50	BACKGROUND - AROUND STREET FROM 1273 ALLENE
0843	~50	ON PORCH, 1273 ALLENE
1020	50-80	" "
1153	45-50	" "

Data RAM is turned off and stored.

The ERRS contractor ~~started~~ finished backfilling at 1263 Allene Ave. They then sealed and applied a layer of hay to the soil.

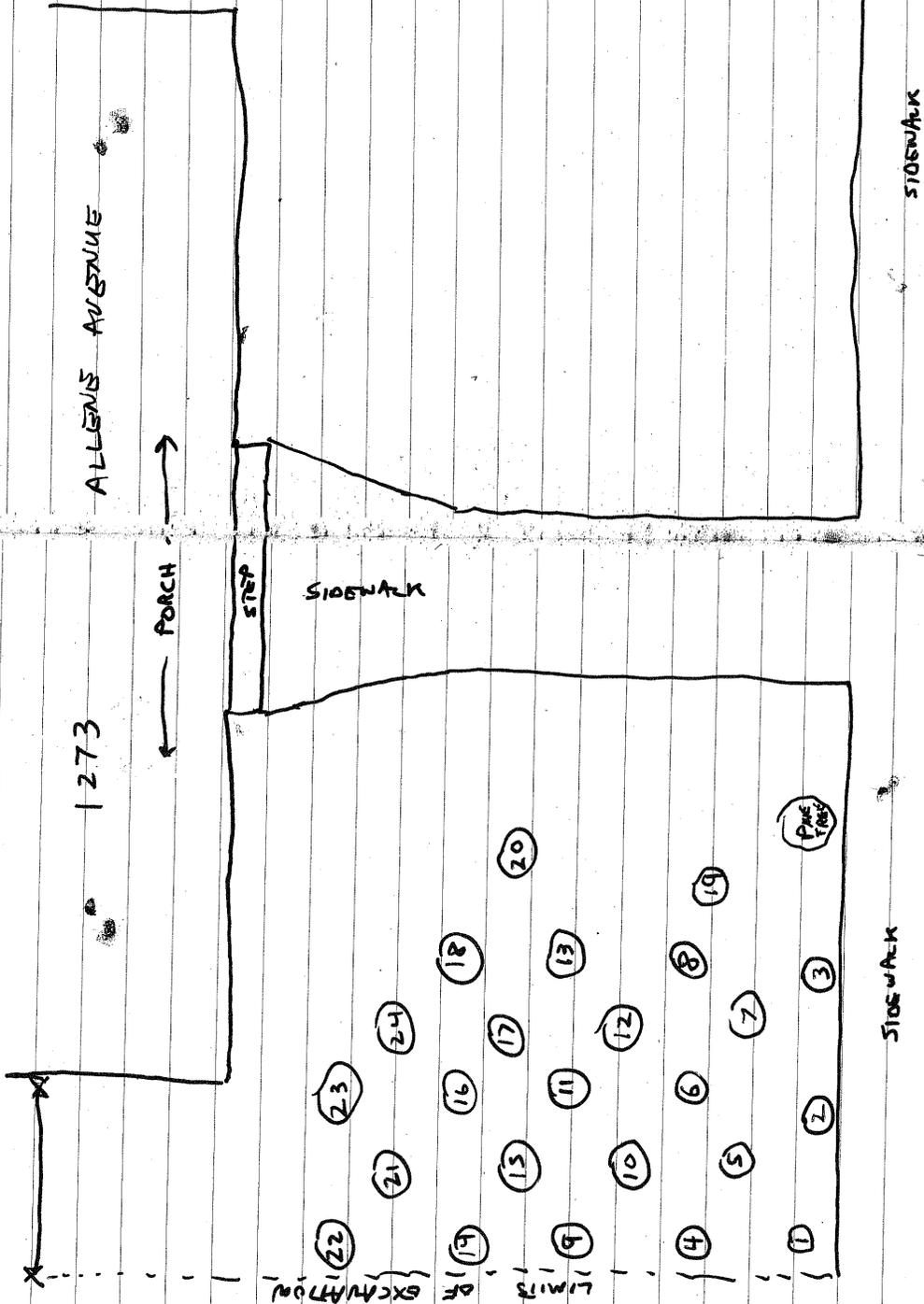
The ERRS contractor also continued excavation at 1273 Allene Ave, but they are stopping for the day due to rainfall that began mid-morning and is continuing to fall at this time (12:00).

10/16/08
10/17/08

John Schendel

10/16/08
10/17/08

John Schendel



10/17/08 ^{SEE MAP} (VALUES IN THIS) John Schedd

READING MAP NOM Pb Pb
No. SEC PPM EAR(20) COMMENT

XRF Instrument is turned on ~ 0800 and

allowed to warm up; then detectors is calibrated.

2916	-	373	600	= 45.5	SiO ₂ 97.5% CaMn
2917	-	58.5	452.1	110.4	RCRA As, Pb, Cr, Cd, Cu, Ni, Zn, Hg
2918	7	27.7	186.9	66.5	
2919	8	6.8	180.1	69.5	
2920	9	26.0	119.1	50.9	
2922	10	25.1	156.7	58.9	
2923	11	29.5	174.3	62.0	
2924	12	26.0	143.2	55.1	
2927	13	26.9	205.1	62.0	
2928	14	27.8	138.5	59.0	
2930	15	29.5	188.6	62.8	
2931	16	28.6	177.8	64.3	
2932	17	27.8	257.2	68.1	
2933	18	26.9	208.9	74.0	
2936	19	28.6	226.6	63.1	
2937	20	27.8	246.2	63.8	
2946	21	30.4 / 30.4	181.9	64.5	
2948	22	26.9	170.7	62.4	
2949	23	27.7	316.4	76.2	
2950	24	28.6	166.0	56.0	
2958	-	30.4	486.9	121.9	RCRA As, Pb, Cr, Cd, Cu, Ni, Zn, Hg
2959	-	39.0			DETECTOR CALIBRATION, RES: 270.1

10/17/08

READING MAP NOM Pb Pb
No. SEC PPM EAR(20) COMMENT

John Schedd

John Schedd
10/17/08

10/17/08

John Schudel

1028 - Telephone call with Karen Nordon
800 - 875-1578 Ext. 472. • This instrument should
have a post-detection calibration resolution
6300 EV.

• True value for standard:

STANDARD TRUE VALUE (PB) COMMENT

SiO₂ 99.5% BLANK

NIST 2709 LOW

NIST 2711 MED

NIST 2710 HIGH

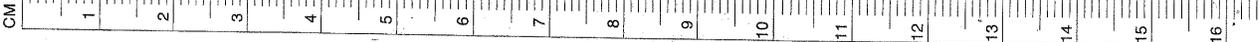
RCR, As, Pb, Cd, Cr,
Pb, Se, Ag

• How does water influence measurements, as for
example, during rain events? ANSWER: Water
increases the sample density and the
water may also interact with the x-rays.
Niton (someone named Steve) said that
he wasn't sure how the signal and count
result change due to increases in water
content in in situ soil. He said collecting
a sample and drying it is preferable
to in situ analysis.

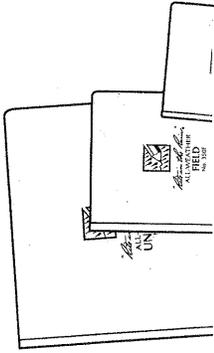
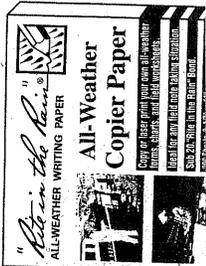
John Schudel

10/17/08

1215 - START Schudel leave 1273 Allison Ave. site
for the day.



"Rite in the Rain"
ALL-WEATHER WRITING PAPER



ER ENVIRONMENTAL
RESTORATION, LLC

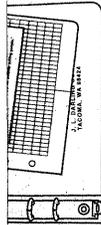
6940 Commercial Dr.
Morrow, GA 30260
www.erllc.com

NAICS: 562910
GSA Contract
GS-10F-0291S

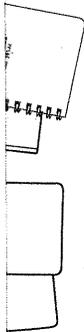
Martin (Jake) Jones
Emergency Response Supervisor

Office: 770-961-9272
24 Hr. Emergency: 888-814-7477
Fax: 770-961-9282

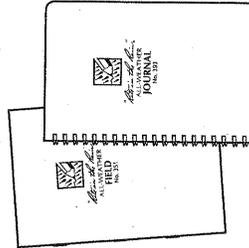
Mobile: 770-276-4305
jjones@erllc.com



Loose Leaf / Ring Binder



Memo Books



Notebooks



All-Weather Pens

www.RiteintheRain.com

ESB

ITEM - 05 - 001 - 0002



HORIZONTAL LINE

All-Weather Notebook
No. 391

LOGBOOK ESB - LOG - 03

4 5/8" x 7" - 48 Numbered Pages

Log Book 3

10/20/08

P. Pags

6730 START - ON SITE. P. Pags AND S. SCHEDULE DISCUSSES THE WORK PERFORMED AT 1273 ALIENE AVE.

WEATHER: SUNNY HIGH OF 68°F.

SLOPE: 1273 ALIENE AVE Excavation

6800 ERAS contractor on-site, STARTED DATA Roms.

6825 ERAS CREW. WAS DIGGING ON NORTH SIDE OF 1273 ALIENE. DATA Roms WERE SET out. DATA RAM 4 (THERMO) WAS PLACED ON THE POOTH. DATA RAM (MIE) WAS PLACED ON TOP OF CURB AT WEST TO 1263 ALIENE.

DATA RAM 4 (THERMO): 41.4 $\mu\text{g}/\text{m}^3$
DATA RAM (MIE): 22.5 $\mu\text{g}/\text{m}^3$

6830 START BEGAN SCREENING SOIL ON SOUTH SIDE OF FRONT YARD. AREAS > 400 ppm WERE RE-EXCAVATED UNTIL THE VRF READING WAS < 400 ppm INCLUDING ERASE.

0950 TWA DATA RAM 4 (THERMO): 16.2 $\mu\text{g}/\text{m}^3$
TWA DATA RAM (MIE): 19.4 $\mu\text{g}/\text{m}^3$

1115 START CLEARED THE SOUTH END OF THE FRONT YARD.

1125 TWA DATA RAM 4 (THERMO): 15.0 $\mu\text{g}/\text{m}^3$
TWA DATA RAM (MIE): 14.6 $\mu\text{g}/\text{m}^3$

GR E BSE

10/20/08

P. Pags

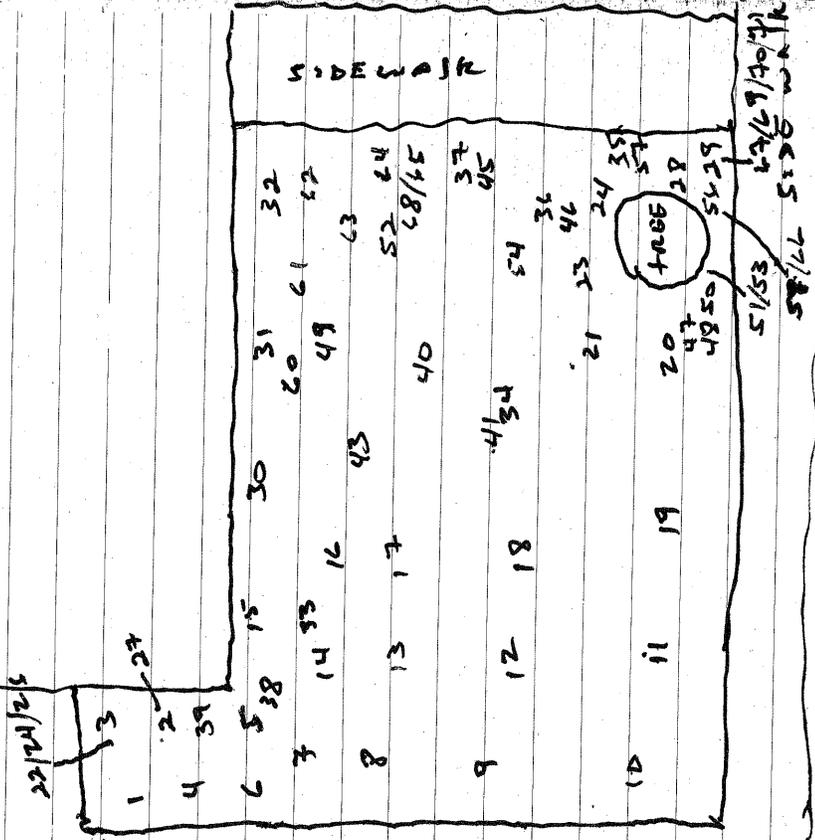
VRF READING MAP # EXCAVATION ERASE

2961	1	295.1	72.0
2962	2	654.4	103.4
2963	3	873.8	135.9
2964	4	188.3	65.9
2965	5	594.5	92.3
2566	6	71.7	49.5
2967	7	219.5	65.7
2968	8	134.9	56.0
2969	9	119.8	49.5
2970	10	97.0	54.9
2971	11	120.8	51.7
2972	12	221.3	67.3
2973	13	122.8 178.4	68.8
2974	14	115.3	64.3
2975	15	258.1	84.6
2976	16	402.8	91.3
2977	17	344.8	96.6
2978	18	278.8 288.4	73.9
2979	19	210.3	66.9
2980	20	359.0	84.1
2981	21	253.5	73.0
2982	22	697.9	152.8
2983	23	228.1	64.0
2984	24	334.6	86.7

Paul E

10/20/08

P. Pius



123 124
125 126

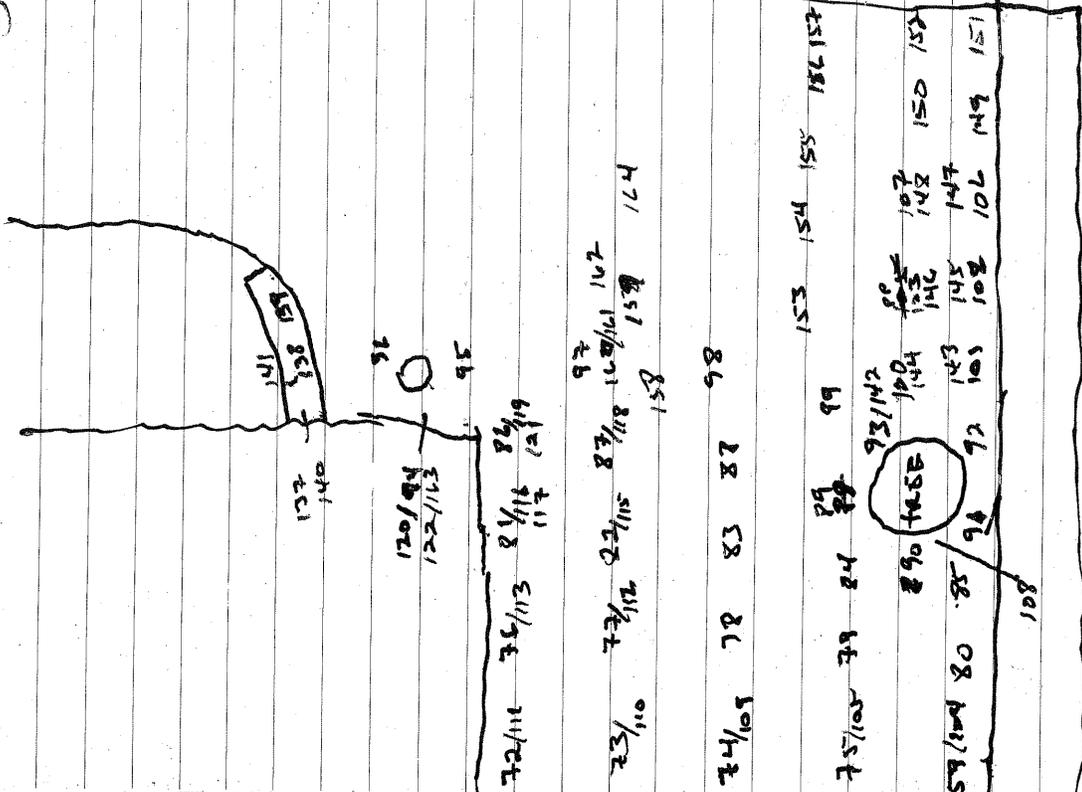
telephone pole street sign

127/128/129

mailbox building

10/20/08

P. Pius



131/132 133 135 136

mailbox building

10/20/08

P. Pong

VRC READING	MAP #	CONCENTRATION	ERROR
2985	25	362.1	83.6
2986	26	116.5	65.1
2987	27	211.8	63.2
2988	28	522.1	105.1
2989	29	320.0	82.5
2990	30	514.4	116.2
2991	31	425.9	101.3
2992	32	607.0	110.7
2993	33	149.1	54.8
2994	34	407.0	82.2
2995	35	365.5	81.0
2996	36	352.9	109.7
2997	37	366.2	84.7
2998	38	252.9	68.0
2999	39	307.7	69.4
3000	40	261.9	80.2
3001	41	250.9	72.0
3002	42	277.3	71.7
3003	43	320.2	77.2
3004	44	463.0	89.2
3005	45	443.4	88.2
3006	46	278.2	79.2
3007	47	327.3	79.5
3008	49	354.5	77.3

Cal 1685

10/20/08

P. Pong

VRC READING	MAP #	CONCENTRATION	ERROR
3009	49	479.0	92.4
3010	50	363.3	83.8
3011	51	131.1	60.3
3012	52	399.0	87.5
3013	53	210.5	67.2
3014	54	415.3	113.4
3015	55	132.6	65.7
3016	56	340.1	81.1
3017	57	222.2	73.2
3018	58	379.1	89.3
3019	59	342.5	91.8
3020	unknown	unknown	0.5
3021	60	189.8	59.5
3022	61	131.5	67.7
3023	62	264.7	80.8
3024	63	102.5	67.9
3025	64	227.9	89.0
3026	65	528.6	101.8
3027	66	272.0	81.3
3028	67	402.4	84.2
3029	68	149.8	70.5
3030	69	480.5	85.1
3031	70	438.7	86.3
3032	71	59.8	59.4

unknown 1.0 mm SEC

Cal 1685

10/20/08

P. Pags

REF	READING	MAP #	CONCENTRATION	ERROR
3033		71	157.8	58.4
3034	NEW battery			38.8 ERS 270.2
3035		72	744.5	117.6
3031		73	331.9	89.0
3032		74	109.0	63.3
3038		75	317.8	91.7
3039		76	958.1	145.1
3040		77	352.7	89.1
3041		78	191.1	74.8
3042		79	127.5	57.8
3043		80	258.1	94.6
3044		81	736.0	115.7
3045		82	280.7	71.6
3041		83	148.3	62.8
3047		84	140.5	60.5
3048		85	251.9	90.4
3049		86	981.6	118.2
3050		87	493.4	113.3
3051		78	229.5	71.9
3052		87	294.1	81.5
3053		80	375.3	115.6
3054		71	284.2	110.3
3055		92	273.8	77.9
3056		93	667.2	114.0

Paul Pags

10/20/08

P. Pags

REF	READING	MAP #	CONCENTRATION	ERROR
3057		94	548.2	98.1
3058		95	1125	158
3059		96	1432	153
3064		97	454.1	97.6
3061		98	278.5	77.6
3062		99	290.2	77.1
3063		100	449.0	105.9
3064		101	531.1	95.3
3065		102	496.1	104.0
3066		103	313.6	77.9
3067		104	112.9	55.3
3068		105	139.3	56.2
3069		106	655.5	104.4
3070		107	388.7	82.5
3071		108	325.0	99.7
3072		109	103.9	58.2
3073		110	215.1	70.0
3074		111	264.2	79.0
3075		112	159.0	69.7
3076		113	136.8	55.9
3077		114	276.9	86.9
3078		115	167.2	61.5
3079		116	512.7	105.4
3080		117	299.2	85.0

Paul Pags

10/20/08

P. Prings

1150 EARS CREW BREAK FOR LUNCH.

1225 TWA DATA FROM (TNEEMS) : 15.4 $\mu\text{g}/\text{m}^3$ TWA DATA FROM (MIE) : 12.9 $\mu\text{g}/\text{m}^3$

1230 EARS CREW RETURNED FROM LUNCH.

1240 EARS CREW RE-EXCAVATED AREAS MARKED

A 7400 GPM. START RESCREENED AREAS

UNTIL RESULTS WERE < 400 GPM

1345 START ~~SOIL~~ COLLECTED A 6 PT COMPOSITE

SOIL SAMPLE FROM THE SOUTH END OF

THE FRONT YARD. EARS CONTRACTOR

WANTS TO TRY TO BACKFILL THIS AREA

TODAY. (ESB-1273 RES COP-01)

1400 TWA DATA FROM (TNEEMS) : 14.7 $\mu\text{g}/\text{m}^3$ TWA DATA FROM (MIE) : 18.7 $\mu\text{g}/\text{m}^3$

1515 START COLLECTED A 7 PT COMPOSITE

SOIL SAMPLE FROM THE AREA B/W THE

ROAD AND SIDEWALK AND THE NORTH SIDE

OF THE FRONT YARD. THIS AREA IS

COMPOSED OF A LINE FROM THE EDGE OF

THE HOUSE TO A TREE A BACK TO THE

WALKWAY

1520 TWA DATA FROM (TNEEMS) : 13.9 $\mu\text{g}/\text{m}^3$ TWA DATA FROM (MIE) : 11.0 $\mu\text{g}/\text{m}^3$

1530 START NOTICED A WATER LEAK AT THE

SOUTH END OF THE FRONT YARD. START

GAIL EBBE

10/20/08

P. Prings

VEP READING MAP # CONCENTRATION ERROR

3081 118 190.3 63.2

3082 119 693.9 111.6

3083 120 538.4 93.0

3084 SOIL COMPOSITE
SCREEN 185.7 57.1

3085 121 178.3 73.7

3086 122 375.8 91.9

3087 123 547.3 185.3

3088 124 503.9 101.9

3089 125 218.3 71.1

3090 124 176.9 66.3

3091 127 691.4 111.6

3092 128 497.4 90.3

3093 129 < LOD = 69.7

3094 130 147.8 60.4

3095 131 766.7 116.5

3096 132 < LOD = 58.6

3097 133 < LOD = 80.2

3098 SOIL COMPOSITE
SCREEN 152.1 51.7

3099 134 111.7 57.8

3100 135 107.2 56.3

3101 CHANGES TO HAZARDOUS MATERIAL MONITOR 38.9 RES 209.0

3102 RAW CALIBRATION MONITOR 38.9 RES 270.7

3103 136 113.3 59.1

3104 137 512.7 99.9

GAIL EBBE

10/20/08

P. Pugs

Point #	Location	Q	P
2362 (21)	1773 ALIENE AVE	S	EP
2363 (22)		SE	
2364 (23)		SW	
2365 (24)		NW	
2366 (25)		W	
2367 (26)		NE	
2368 (27)		NW	
2369 (28)		S	
2370 (29)		SW	
2371 (30)		W	
2372 (31)		S	
2373 (32)		N	
2374 (33)		N	
2375 (34)		S	
2376 (35)		S	
2377 (36)		NE	
2378 (37)		SW	
2379 (38)		SE	

Bob [Signature]
20 OCT 08

10/20/08

P. Pugs

NOTIFIED THE EARS SUPERVISOR, EARS SHUT OFF THE WATER AND BEYOND DIGGING TO REPAIR THE PIPE. PIPE WAS DAMAGED WHEN THE BOBENT SANK OVER IT WHILE SPREADING BACKFILL.

1730 TWA DATA ROOM 4 (TNEAMS): 12.9 $\mu\text{g}/\text{m}^3$

TWA DATA ROOM (MSE): 11.6 $\mu\text{g}/\text{m}^3$

1830 Collected DATA ROOMS

TWA DATA ROOM 4 (TNEAMS): 12.9 $\mu\text{g}/\text{m}^3$

TWA DATA ROOM (MSE): 12.3 $\mu\text{g}/\text{m}^3$

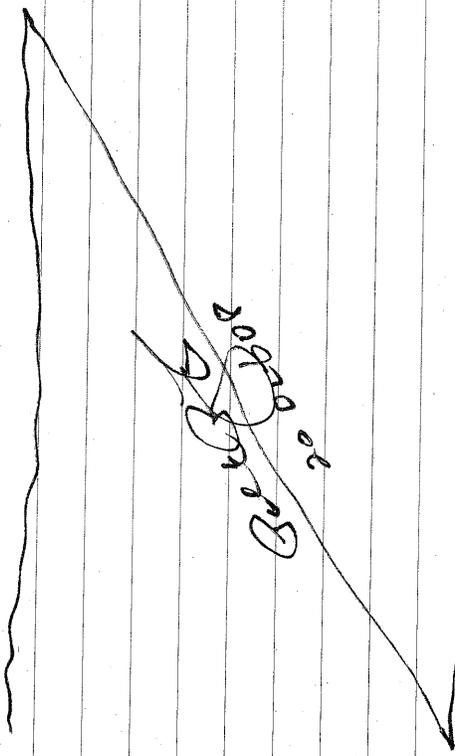
1840 EARS CONTRACTOR COMPLETED REPAIR ON

1273 ALIENE AVE WATER LINE. WATER IS

STILL SEEPING INTO HOLE FOR FARM

SOMEWHERE b/w REPAIR AND HOUSE.

1855 STREET AND EARS CREW OFF-SITE.



Bob [Signature]
20 OCT 08

10/20/08

P. Rings

KRF READING	MAP	CONCENTRATION	ERROR
3105	138	310.3	89.7
3106	139	282.5	74.7
3107	140	130.7	63.8
3108	141	186.5	57.6
3109	142	332.1	77.6
3110	143	329.7	86.8
3111	144	270.4	23.8
3112	145	245.4	79.9
3113	146	119.2	36.2
3114	147	231.5	75.1
3115	148	212.4	69.4
3116	149	600 = 95.6	
3117	150	181.0	68.5
3118	151	386.8	100.5
3119	152	184.5	62.6
3120	153	273.1	72.6
3121	154	153.5	55.3
3122	155	302.3	71.2
3123	156	255.0	76.2
3124	157	138.8	68.9
3125	158	218.7	62.7
3126	159	310.3	80.8
3127	160	308.2	93.6
3128	161	140.4	56.1

Bill [Signature]

10/20/08

P. Rings

KRF READING	MAP	CONCENTRATION	ERROR
3129	162	192.1	64.5
3130	163	500.7	96.0
3131	164	109.3	52.9
PP 3132			
PP 3133			
PP 3134			
PP 3135			

~~Bill [Signature]~~
10/20/08

21 Oct 08

P. Pags

WEATHER: Sunny High 57 73°F

SCRE! 1273 ALIENE AVE EXCAVATION

0730 START AND ERAS CREW WERE ON-SITE.

0745 ERAS CREW BEGAN EXCAVATION ON

NORTH END OF PROPERTY. START

TURNED ON DATA RAMS, DATA RAM 4

THERMO PLACED ON 1273 ALIENE AVE PORCH

AND DATA RAM MEE PLACED ACROSS

STREET NORTH END OF 1273 ALIENE AVE

NEAR 1263 ALIENE AVE.

0900 TWA DATA RAM 4 (THERMO): 23.7 $\mu\text{g}/\text{m}^3$ TWA DATA RAM (MEE): 34.5 $\mu\text{g}/\text{m}^3$

0950 ERAS CONTRACTOR BEGAN SPREADING

BACKFILL IN FRONT YARD.

1130 ERAS CREW COMPLETED EXCAVATION OF

1273 ALIENE AVE. STREET COMPLETED

SOIL SCREENING. ALL AREAS SCREENED

WAS < 400 $\mu\text{g}/\text{m}^3$. START INFARMED

ERAS CREW THEY COULD BACKFILL THE

REST OF THE PROJECT.

TWA DATA RAM 4 (THERMO): 27.7

TWA DATA RAM (MEE): 23.1 $\mu\text{g}/\text{m}^3$

DATA RAMS WERE COLLECTED.

1145 START COLLECTED A 7pt COMPOSITE SOIL

SAMPLE from the north end of the

Bob E. Pags

21 Oct 08

P. Pags

KRE READING MAP # CONCENTRATION ERROR

3132 Calibration non sec 38.9 RES 272.8

3133 | 191.3 63.8

3134 2 116.5 52.8

3135 3 207.6 62.9

3136 4 227.2 79.2

3137 5 182.0 65.8

3138 6 92.8 52.5

3139 7 177.4 51.7

3140 8 107.1 63.0

3141 9 212.4 72.5

3142 10 138.1 50.2

3143 11 223.1 72.2

3144 12 207.6 67.4

3145 13 152.5 57.3

3146 14 272.3 93.5

3147 15 265.9 64.9

3148 16 245.3 74.6

3149 17 499.4 95.3

3150 18 93.1 53.0

3151 19 485.7 100.9

3152 20 345.8 88.5

3153 21 229.8 74.3

3154 22 263.9 75.4

3155 23 485.0 87.4

Bob E. Pags

21 Dec 08 P. Pung

REF READING	MAP #	CONCENTRATION	GRADE
3156	24	116.2	60.5
3157	25	176.3	65.2
3158	26	145.1	72.3
3159	27	120.9	66.1
3160	28	< LOD = 87.2	
3161	29	216.3	64.7
3162	30	204.9	64.6
3163	31	248.7	82.6
3164	32	95.6	57.7
3165	33	475.8	100.3
3166	34	131.0	61.8
3167	35	176.1	59.6
3168	36	151.1	61.5
3169	37	127.5	53.5
3170	38	276.2	75.2
3171	39	163.2	73.9
3172	40	279.6	85.2
3173	41	266.1	77.7
3174	42	179.0	66.8
3175	43	235.9	68.4
3176	44	290.7	71.1
3177	45	260.7	80.1
3178	46	314.0	72.1
3179	unknown station classed		

P. Pung

21 Oct 08 P. Pung

REF READING	MAP #	CONCENTRATION	GRADE
3180	47	273.6	74.3
3181	48	98.0	57.8
3182	soil core sample 56	191.1	61.9

~~P. Pung
21 Oct 08~~

21 OUT 08

P. Pays

prosperity to include the side of the house.

1215' STREET WAS OFF-SITE TO CONDUIT SOIL SCREENING AT 778 BEECHWOOD AVE. THE OWNERS WERE NOT HOME, CALLED OSC SIMS TO SEE IF IT WAS OKAY TO GO ONTO THEIR PROPERTY WITHOUT THEM BEING HERE. LEFT OSC SIMS A VOICEMAIL MESSAGE.

1220 STREET OFF-SITE.
1300 STREET RETURNED TO 1273 ALLIENE AVE TO PICKUP SOME MARKING POINT. START TOOK PHOTOS OF CURRENT BACKFILL AND OF THE REPAIRED PIPE.

1640 STREET ARRIVED AT 778 BEECHWOOD AVE TO PERFORM SOIL SCREENING IN THE BACKYARD.

1930 STREET COMPLETED SOIL SCREENING AT 778 BEECHWOOD AVE. ALL SCREENING RESULTS WERE < 400 PPM. STREET WAS OFF-SITE.

[Handwritten signature]
210608

21 OUT 08

P. Pays

Photo	Location	Time	A	P
2320 (39)	1273 ALLIENE AVE	0859	E	PP
2391 (40)		0859	W	
2382 (41)		0907	NE	
2383 (42)		0907	S	
2384 (43)		0907	N/A	
2385 (44)		1018	S	
2386 (45)		1019	SE	
2387 (46)		1121	N/W	
2388 (47)		1122	SE	
2389 (48)		1122	E	
2390 (49)		1122	NE	
2391 (50)		1123	W	
2392 (51)		1124	W	
2393 (52)		1326	W	
2394 (53)		1326	S	
2395 (54)		1326	N/W	
2396 (55)		1326	N/A	
2397 (56)		1327	N/A	
2398 (57)		1327	N/W	
2399 (58)		1327	N/W	
2400 (59)		1328	SE	
2401 (60)		1644	W	
2402 (61)		1644	N/W	
2403 (62)		1644	W	

[Handwritten signature]

21 Oct 08

P. Pugs

Photo	Location	Time	0	S
2404 (63)	1233 AILENE AVE	1644	NW	PP
2405 (64)	↓	1645	W	
2406 (65)	↓	1645	SW	↓

[Handwritten signature]
 210
 210
 210

21 Oct 08

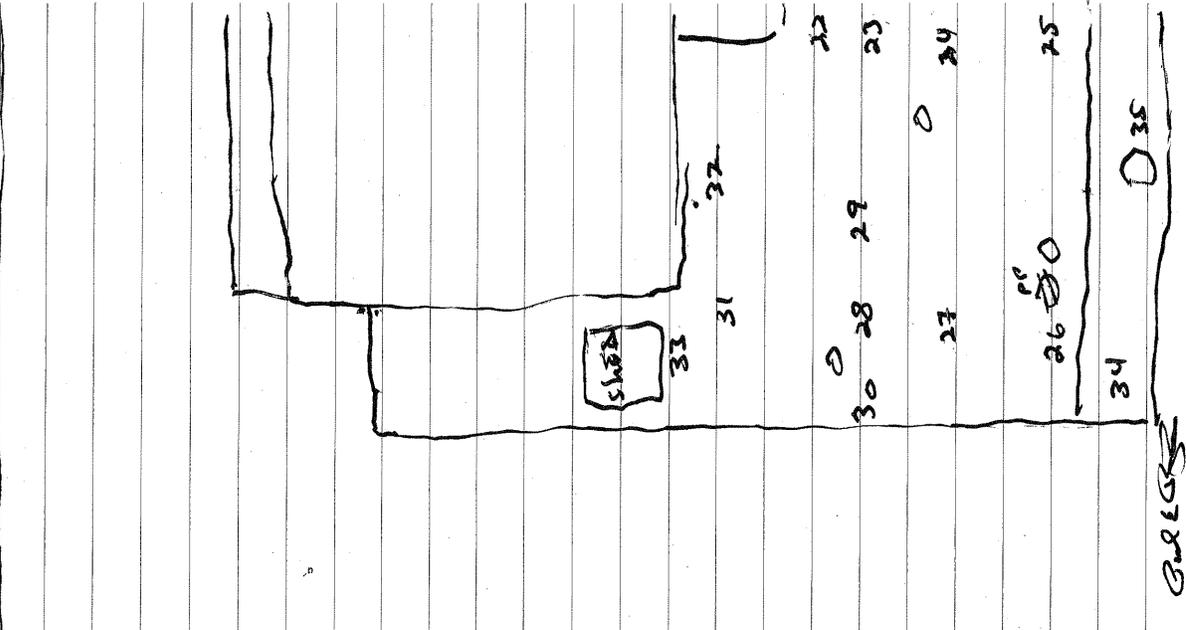
P. Pugs

REF	READING	MAP #	concentration	ERROR
3183 calibration of ref for 278 Beechwood Ave				
3184	1	< LOD = 53.5		
3185	2	< LOD = 58.9		
3186	3	< LOD = 44.4		
3187	4	49.8		30.9
3188	5	178.2		55.6
3189	NS 32.1	nomsec	114.2	41.2
3190	NS 6.7	nomsec	154.4	58.7
3191	6	158.7		45.8
3192	7	65.8		40.9
3193	8	205.4		54.8
3194	9	89.2		46.4
3195	10	169.1		47.1
3196	11	129.8		51.4
3197	12	227.5		48.9
3198	13	138.2		52.4
3199	14	100.1		41.8
3200	15	151.5		49.0
3201	16	< LOD = 49.0		
3202	17	< LOD = 44.5		
3203	18	123.9		46.3
3204	19	93.7		39.3
3205	20	57.0		26.2
3206	21	91.0		45.3

[Handwritten signature]
 GLE

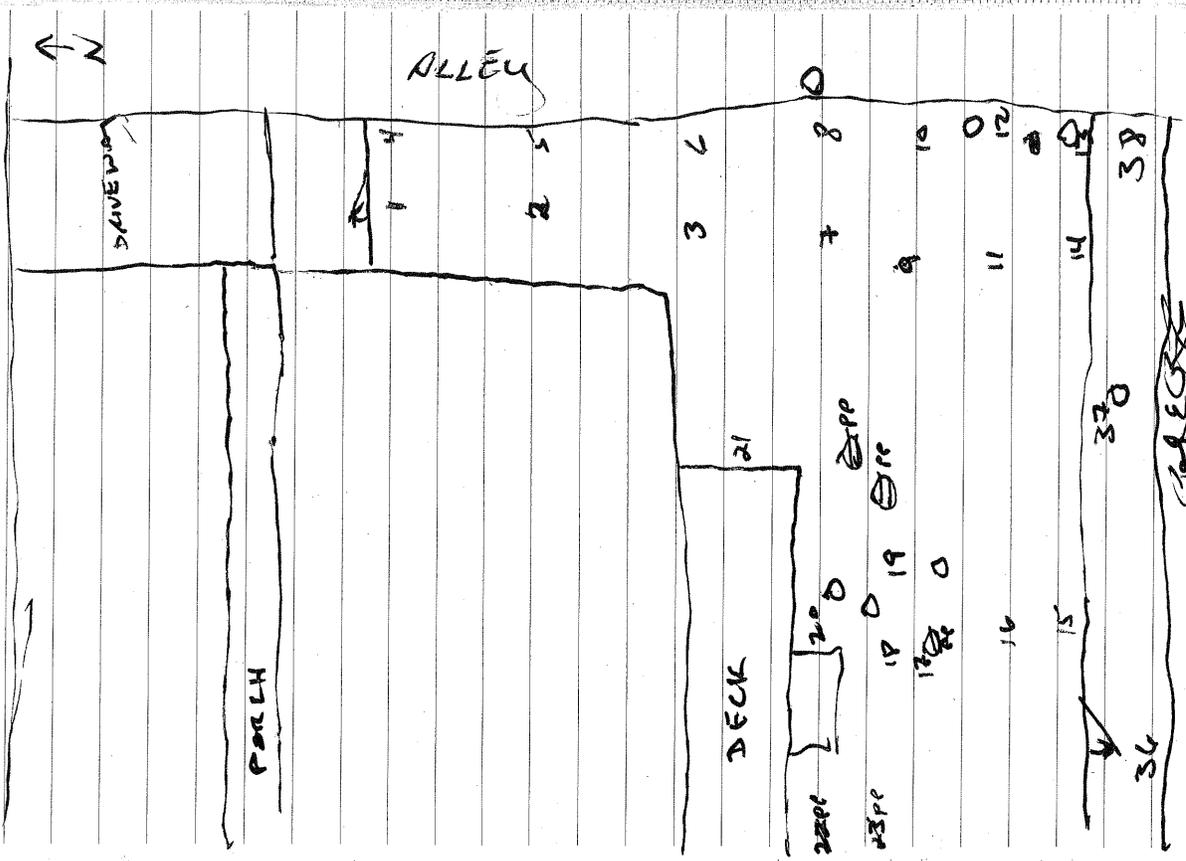
21 OCT 08

P. Rays
RECONWARD AVE



21 OCT 08

P. Rays



ALLEY

Garage

21 Oct 08

P. Papp

REF READING MAP # CONCENTRATION FEET

3207	22	< LOD = 57.7	
3208	23	< LOD = 36.1	
3209	24	< LOD = 36.6	
3210	25	189.2	50.7
3211	26	72.9	36.0
3212	27	< LOD = 54.1	
3213	28	< LOD = 35.8	
3214	29	47.1	30.3
3215	30	< LOD = 50.8	
3216	31	< LOD = 32.7	
3217	32	106.8	50.6
3218	33	90.2	40.1
3219	34	122.3	50.2
3220	NS 11.0 NOMSEC	147.1	44.2
3221	NS 6.0 NOMSEC	118.0	56.3
3222	NS 2.6 NOMSEC	143.1	78.5
3223	35	47.4	25.2
3224	36	< LOD = 35.6	
3225	NS NOMSEC 2.3	34.6	22.6
3226	37	36.5	22.3
3227	38	71.0	35.4

NS: NO SAMPLE

Paul Papp

21 Oct 08

23 Oct 08

P. Papp

WEATHER: Cloudy and Windy High of 63°F

SCENE: 1273 ALIEN AVENUE EXCAVATION

0930 STANT ARRIVED ON-SITE TO TAKE photo of the sod installation. STANT spoke with Tim Sloan of ER and he said the sod contractor would not be on-site until 1030 to 1100.

STANT INFORMED ER THAT HE WOULD CONTACT HIM AROUND 1100 TO SEE IF THE sod contractor was on-site. Mr. Sloan ALSO INFORMED STANT THAT THE REPLACED A 10 FT SECTION OF THE DAMAGED PIPE LOCATED ON THE SOUTH END OF THE FRONT LAWN ON 22 OCT 08 AND THE TENDRINT SEEMED PLEASED WITH THEIR WORK.

1000 STANT OFF-SITE.

1100 STANT CONTACTED MR. SLOAN. HE

INFORMED STANT THAT THE sod

CONTRACTOR WAS ON-SITE AND IN THE PROCESS OF UNLOADING THE sod.

1230 STANT WAS ON-SITE AT 1273 ALIEN AVENUE.

STANT TOOK PHOTOS OF THE sod

INSTALLATION AS WELL AS THE PHOTOS OF

sod installation at 1280 ALIEN AVENUE.

→ PAPP

23 Oct 08

P. Pangs

1315 STACT was off-site.

Photo	Location	Q. P.
1	1273 ALIENE AVE	W PP
2		W
3		W
4		S
5		S
6		SW
7		SE
8		SE
9		PP S SE
10		NW
11		N
12		NW
13		N
14		NW
15		W
16		SW
17		SE
18		E
19		S
20		S
21		SW
22		W

(2011) Pangs

23 Oct 08

P. Pangs

Photo Location

23	1273 ALIENE AVE	NW PP
24		N
25		N
26		NW
27		W
28		SW
29	1280 ALIENE AVE	SE PP
30		SW
31		SW
32		NW
33		NW
34		NW
35		SW

23 Oct 08
Pangs

27 OCT 08

P. Pears

WEATHER: Sunny High of 58°F

SUBJECT: Treating soil staged at Great Dane

0815 START WAS ON-SITE. WIND WAS BLOWING AT APPROX. 20 MPH NNW.

0855 ER WAS ON-SITE. ER WAS WAITING ON THE FREE FLOW TO BE DELIVERED TO THE

SITE. FREE FLOW IS A CALCIUM SULFATE BASED PRODUCT THAT WILL BE

USED TO TREAT THIS SOIL. TIM SLOAN ESTIMATES THEY WILL TREAT APPROX.

800 CUBIC YARDS OF SOIL.

0915 ER CREW BEGAN REMOVING THE POLY SHEETING FROM AROUND THE STAGED SOIL. ER ESTIMATED TREATING 1000 CUBIC

YARDS OF SOIL WHEN THEY ARRIVED THE FREE FLOWS THEY HAVE ORDERED

3 LOADS WHICH ARE APPROX. 23 TONS EACH. THEY WILL BE MIXING TO AN

ESTIMATED 6.9%.

1017 FIRST LOAD OF FREE FLOW ARRIVED ON-SITE.

1030 SECOND LOAD OF FREE FLOW ARRIVED ON-SITE.

ER WAS IN PROCESS OF UNLOADING THE FIRST LOAD BY DUMPING IT ON THE SOUTH

END OF THE STAGED SOIL AREA.

P. Pears

27 OCT 08

P. Pears

RETURN TIME LOCATION

2407 (1) 1014 STAGED SOIL ON GREAT DANE NW RP

2408 (2) 1014 Lot NW

2409 (3) 1015 W

2410 (4) 1015 W

2411 (5) 1016 NE

2412 (6) 1029 W

2413 (7) 1030 N

2414 (8) 1039 NW

2415 (9) 1040 W

2416 (10) 1040 W

2417 (11) 1040 W

2418 (12) 1042 W

2419 (13) 1042 W

2420 (14) 1042 W

2421 (15) 1042 W

2422 (16) 1116 N

2423 (17) 1220 NW

2424 (18) 1220 NW

2425 (19) 1221 W

2426 (20) 1316 S

2427 (21) 1316 S

2428 (22) 1617 S

2429 (23) 1618 SE

P. Pears

27 Oct 08

P. Prays

1100 START SAT OUT DATA ROMS. FIRST

DATA ROM (S/N D24D) WAS PLACED OFF-SITE

NEAR TELEPHONE POLE SOUTH OF BLDG 717.

INITIAL TWA WAS 10.7 $\mu\text{g}/\text{m}^3$. SECOND

DATA ROM WAS PLACED ON-SITE APPROX.

40 FT FROM STAGED SOIL ON EAST SIDE.

INITIAL TWA WAS 8.1 $\mu\text{g}/\text{m}^3$ (S/N D71D).

ER CREW WAS WELDING A PLATE (FLAT) TO THE BUCKET TO ASSIST IN THE MIXING PROCESS.

1130 Wind was blowing from the north. START MOVED ON-SITE DATA ROM TO THE SOUTH END OF THE STAGED SOIL. ER CREW BEGAN FOR LUNCH WITH THE TRENCH-HOE BUCKET WAS BEING WALKED ON.

1200 ER CREW BEGAN MIXING THE SOIL WITH THE FREE FLOW 100. TIM SLOAN WAS

ATTEMPTING TO GET INFORMATION FROM THE LANDFILL TO DETERMINE THE NUMBER OF TULP SAMPLES THAT WOULD TO BE TAKEN.

1300 TWA DATA ROM (D241) = 5.2 $\mu\text{g}/\text{m}^3$ TWA DATA ROM (D71D) = 8.1 $\mu\text{g}/\text{m}^3$

THERE WAS LITTLE TO NO DUST COMING FROM THE STAGED PILE OF SOIL AT THIS TIME.

P. Prays

23 Oct 08

P. Prays

1330 Wind shifted to blowing from the west.

START MOVED DATA ROM TO THE EAST SIDE OF THE STAGING PILE.

1500 TWA DATA ROM (D241) = 5.2 $\mu\text{g}/\text{m}^3$ TWA DATA ROM (D71D) = 10.6 $\mu\text{g}/\text{m}^3$

SLIGHT BREEZE. ONLY DUST SEEMS TO COME FROM FREE FLOW 100 WHEN IT IS BEING MIXED. VERY LITTLE DUST FROM SOIL IS BEING GENERATED.

1700 START COLLECTED THE DATA ROMS.

TWA DATA ROM (D241) = 5.0 $\mu\text{g}/\text{m}^3$ TWA DATA ROM (D71D) = 10.8 $\mu\text{g}/\text{m}^3$

ER CREW COMPLETED MIXING FOR THE DAY AND WERE WETTING DOWN THE SOIL. 1730 START AND ER CREW OFF-SITE.

P. Prays
29 Oct 08

28 Oct 08

P. Pears

Weather: Sunny High of 52°F

Scope: Treating soil stored at Crest Dam

0800 Start and ER crew on-site. ER

continued mixing soil. Slight breeze.

0820 Start set out the data rams. First

data ram (D24) was placed off-site

at a telephone pole south of Agt 1510

717. Second data ram (D710) was

placed on-site ^{to East} west of staged soil

during mixing. Tim Sloan of ER

requested start to sample the first

pile mixer yesterday. Start

informed him that we would need the

load fill information before any

sampling could begin.

0900 TWA DATA RAM (D24): 8.7 $\mu\text{g}/\text{m}^3$ TWA DATA RAM (D710): 19.4 $\mu\text{g}/\text{m}^3$ 1100 TWA DATA RAM (D24): 10.7 $\mu\text{g}/\text{m}^3$ TWA DATA RAM (D710): 16.6 $\mu\text{g}/\text{m}^3$

ER crew continues mixing soil using

FREE FLOW 100 - Wind 8 mph WNW.

1150 ER crew breaks ^{for} for lunch.

1210 ER crew back on-site and began

continues mixing soil. Wind 8 mph WNW.

Pretty cloudy and 36°F.

P. Pears

28 Oct 08

P. Pears

1300 TWA DATA RAM (D24): 10.8 $\mu\text{g}/\text{m}^3$ TWA DATA RAM (D710): 15.6 $\mu\text{g}/\text{m}^3$

ER crew began remixing the first pile

from yesterday with the remaining

FREE FLOW 100.

1500 TWA DATA RAM (D24): 10.7 $\mu\text{g}/\text{m}^3$ TWA DATA RAM (D710): 14.4 $\mu\text{g}/\text{m}^3$

ER crew continued to mix the second

pile.

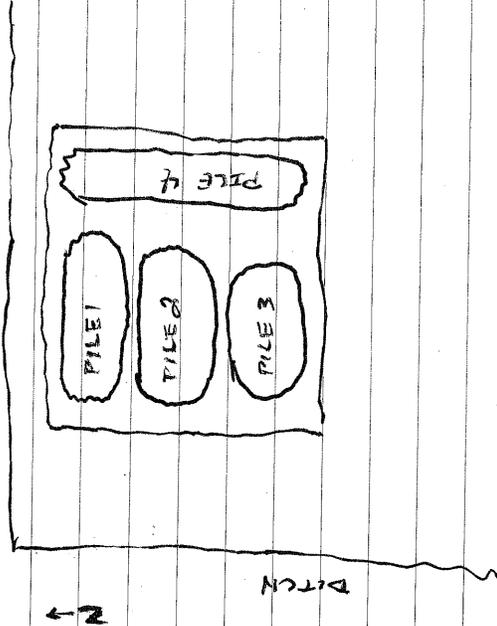
Note: 1425 Start collected ESB-RESTCLP-03

from PILE 4.

1438 Start collected ESB-DIRTCLP-01

from PILE 1.

UNIVERSITY AVE



P. Pears

28 Oct 08

P. Pears

1525 STACT ARRIVED AT 1273 ALIENE AVE

to take photos of the yards. Tim Sloan
 of ER noticed a large number of
 PINE NEEDLES LAYING ON THE NEW SOD
 in the front yards. MR. SLOAN
 EXPRESSED CONCERN THAT THE ACIDITY
 of the FALLEN PINE NEEDLES COULD KILL
 the NEW SOD.

1620 ER CREW STOPPED MIXING PILE 2 AND

WAS FINISHED MIXING FOR THE DAY.

1625 STACT COLLECT SAMPLE ESB-DITTELP-02
 FROM PILE 2.

1640 STACT COLLECTED THE DATA RAMS.

TWA DATA RAM (DE41): 10.7 $\mu\text{g}/\text{m}^3$ TWA DATA RAM (D71D): 13.2 $\mu\text{g}/\text{m}^3$ 1650 STACT WAS OFF-SITE TO TAKE SAMPLES
 TO AES. FOR TELP-LEADS ANALYSIS.

[Signature]
 Bob
 28 Oct 08

28 Oct 08

P. Pears

Photo	Time	Location	
2430 (24)	0844	STAGED SOIL IN GREAT DANE LOT	NW PP
2431 (25)	0845		NW
2432 (26)	0851		N
2433 (27)	0851		N
2434 (28)	0851		N
2435 (29)	1529		W
2436 (30)	1529		NW
2437 (31)	1529		W
2438 (32)	1530		W
2439 (33)	1531		N

[Signature]
 Bob
 28 Oct 08

29 Oct 08

P. Pays

Weather: Sunny High of 58°F

Scope: Treating Soil Stages at Great Dane

0800 Start and ER crew on-site.

0820 Start set out data rams, wind blower

used. First data ram (D241) was

placed off-site near telephone pole

south of Bldg 717. Second data ram

(D710) was placed on-site east of

staged soil (approximately 45 ft)

near ER trailer.

0830 ER crew began re-mixing ^{PP} ER piles lot 2

while waiting on last load of FREE

Fluoroc to arrive on-site.

0900 TWA DATA RAM (D241): 7.0 $\mu\text{g}/\text{m}^3$ TWA DATA RAM (D710): 11.6 $\mu\text{g}/\text{m}^3$

0930 The last load of FREE Flow 100 arrives

on-site and was off-loaded.

1000 ER crew began mixing Pile 3.

1100 TWA DATA RAM (D241): 6.2 $\mu\text{g}/\text{m}^3$ TWA DATA RAM (D710): 17.3 $\mu\text{g}/\text{m}^3$

1130 ER crew broke for lunch.

1230 ER crew back on-site and resumed

mixing pile 3.

1300 TWA DATA RAM (D241): 5.9 $\mu\text{g}/\text{m}^3$ TWA DATA RAM (D710): 14.8 $\mu\text{g}/\text{m}^3$

— PAYS —

29 Oct 08

P. Pays

1310 ER crew began dust reduction

activities due to the amount of dust

being generated while mixing pile 3.

1400 One of the ER crew left sight to get

more water for dust reduction.

1430 ER suggested mixing until the crew

members returned with more water.

ER was generating a large amount of

airborne dust.

1500 TWA DATA RAM (D241): 5.5 $\mu\text{g}/\text{m}^3$ TWA DATA RAM (D710): 16.1 $\mu\text{g}/\text{m}^3$

ER crew received back on-site with water.

and began wetting down pile 3.

1620 ER crew ended mixing pile 3 for the day.

1625 Start collected soil sample

ESB-DISTCLP-04 from pile 3.

1635 Start collected data rams.

TWA DATA RAM (D241): 5.2 $\mu\text{g}/\text{m}^3$ TWA DATA RAM (D710): 17.8 $\mu\text{g}/\text{m}^3$

1645 Start and ER crew off-site. Start took

soil sample to AES for analysis.



29 Oct 08

29 Oct 08 P. Pains

Photo	Time	Location
2440 (34)	0907	Staged Soil on Great Dams S CP
2441 (35)	0908	Lot S
2442 (36)	1039	N
2443 (37)	1039	N
2444 (38)	1529	NE
2445 (39)	1529	NE
2446 (40)	1617	NW

29 Oct 08

30 Oct 08 P. Pains

Weather: Sunny High of 65°F
 Sigs: Treating Soil Staged at Great Dams
 0800 Start and ER crew on-site.
 0815 Start set out data rooms, first data room (D241) located ^{PP} off-site near telephone pole south of Bldg 717.
 0830 ER crew leaves site to water the grass at 1273 ALLEN AVE.
 0930 TWA DATA ROOM (D241): 28.5 $\mu\text{g}/\text{m}^3$
 TWA DATA ROOM (D710): 30.3 $\mu\text{g}/\text{m}^3$
 ER crew has not begun mixing soil for this day.
 1030 ER crew returns with more water for dust reduction while mixing P.16 3.
 1045 ER crew began mixing P.16 3 and using water to control any dust created during the process.
 1100 TWA DATA ROOM (D241): 20.5 $\mu\text{g}/\text{m}^3$
 TWA DATA ROOM (D710): 22.0 $\mu\text{g}/\text{m}^3$
 1130 ER crew broke for lunch and to get more water for dust reduction.
 1255 ER ~~crew~~ was back on-site with more water and began spraying P.16 3.
 1300 TWA DATA ROOM (D241): 15.5 $\mu\text{g}/\text{m}^3$
 TWA DATA ROOM (D710): 16.1 $\mu\text{g}/\text{m}^3$
 PB 082

30 Oct 08

P. Prys

1400 ER crew off-site to get more water.

No soil mixing at this time.

1500 DATA RAM TWA (D241): 13.8 $\mu\text{g}/\text{m}^3$ DATA RAM TWA (D710): 13.2 $\mu\text{g}/\text{m}^3$

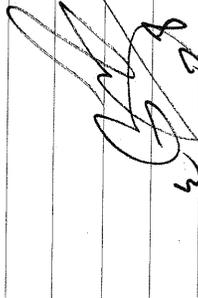
1530 ER crew returned with water for dust control.

1600 ER crew began wetting all piles of dirt and started cleaning up for the day.

1615 START COLLECTED THE DATA RAMS.

TWA DATA RAM (D241): 14.6 $\mu\text{g}/\text{m}^3$ TWA DATA RAM (D710): 12.5 $\mu\text{g}/\text{m}^3$

1630 START AND ER CREW WERE OFF-SITE.


 P. Prys
 30 Oct 08

31 Oct 08

P. Prys

Weather: Sunny High of 68°F

Scope: Treating Soil Staged at Great Dane

0800 START AND ER CREW ON-SITE. ER CREW

WETTING DOWN PILE 2 FOR ADDITIONAL

MIXING. SOIL SAMPLE RESULTS SHOWED

PILES 1 & 2 FAILED TCLP FOR LEAD AND

PILE 4 PASSED.

ESB-DIT-TCLP-01: 8.45 mg/L (P.161)

ESB-DIT-TCLP-02: 6.50 mg/L (P.162)

ESB-DIT-TCLP-03: 0.218 mg/L (P.164)

0825 START SET OUT DATA RAMS. FIRST DATA

RAM (D241) WAS PLACED OFF-SITE SOUTH OF

Bldg 717 NEAR TELEPHONE PALS. SECOND

DATA RAM (D710) PLACED APPROX 45 FT

EAST OF STAGED SOIL ON-SITE.

0900 TWA DATA RAM (D241): 33.9 $\mu\text{g}/\text{m}^3$ TWA DATA RAM (D710): 43.1 $\mu\text{g}/\text{m}^3$

ER CREW BEGAN MIXING SOIL IN PILE 2 WITH REMAINING FREE FLOW 100

1100 TWA DATA RAM (D241): 25.7 $\mu\text{g}/\text{m}^3$ TWA DATA RAM (D710): 31.1 $\mu\text{g}/\text{m}^3$

ER CREW CONTINUED TO MIX PILE 2.

1130 ER CREW INFORMED START THAT THEIR WATER TOTE WOULD BE OFF-SITE FOR THE REST OF THE DAY. START TOLD THE ER CREW THAT

P. Prys

31 OUT 08

P. Pags

they still had to control the dust while mixing P16 2. At this time, the ER crew could still mix P16 2, but not as aggressively as they wanted.

1300 TWA DATA RAM (DAVID): 22.4 $\mu\text{g}/\text{m}^3$

TWA DATA RAM (D71): 22.1 $\mu\text{g}/\text{m}^3$

ER crew continued to mix P16 2.

1345 ER crew completed mixing P16 2. START

took a 5 pt composite soil sample of

FILE 2 ~~FILE 2~~ (ESB-DITTELP-D2A)

1400 START COLLECTED DATA RAMS.

TWA DATA RAM (DAVID): 22.7 $\mu\text{g}/\text{m}^3$

TWA DATA RAM (D71): 19.8 $\mu\text{g}/\text{m}^3$

ER COVERED soil piles with poly sheeting AND WAS OFF-SITE. START WAS OFF-SITE.

Photo	Time	Location	OP
2447(41)	1214	Staged Sailer Great	NW EC
2448(42)	1214	DONE Lot	NW D

~~Bob Pags~~
31 OUT 08

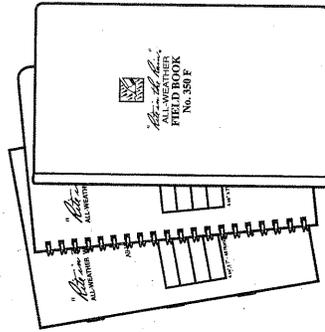
~~Bob Pags~~
31 OUT 08

Page 1 of 8

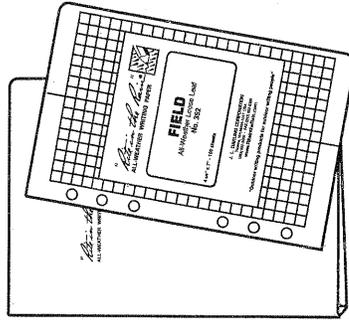


"Rite in the Rain"
ALL-WEATHER WRITING PAPER

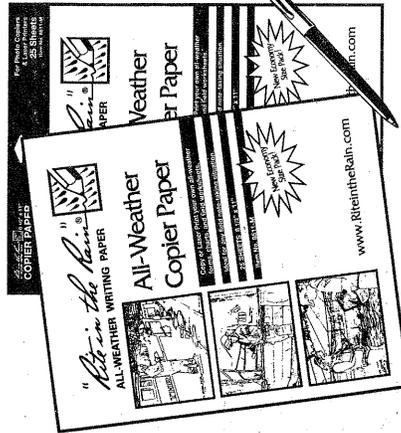
"Outdoor writing products...
for outdoor writing people."



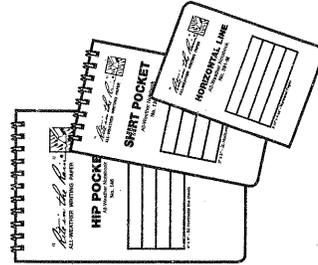
Bound Books / Notebooks



Loose Leaf / Field Binders



Copier Paper / All-Weather Pens



Memo Books

www.RiteintheRain.com

ESB
ITEM I-05-001-0002



HORIZONTAL LINE

All-Weather Notebook
No. 391

LOGBOOK ESB-LOG-04

4 5/8" x 7" - 48 Numbered Pages

LogBook 4

2 03

11/03/08

J. Wickes

weather: sunny, breezy, high of 68°F
scope: treating soil staged at Areat
Done

0830 START + ER crew on-site. ER
crew wetting down pile #1 for
for mixing. Sample results
showed pile 3 passed TCLP
for lead.

0850 START set out datagrams.
Datagram D241 was placed
off-site south of Bldg 717 near
telephone pole. Datagram D710
placed approximately 45 ft.
east of staged soil on-site
0930 ER crew mixing soil for pile 1
with free flow 100.

1000 TWA - Datagram D241 = 18.3 $\mu\text{g}/\text{m}^3$

TWA - Datagram D710 = 16.6 $\mu\text{g}/\text{m}^3$

1100 TWA - Datagram D241 = 16.7 $\mu\text{g}/\text{m}^3$

TWA - Datagram D710 = 14.8 $\mu\text{g}/\text{m}^3$

1200 TWA - Datagram D241 = 16.8 $\mu\text{g}/\text{m}^3$

TWA - Datagram D710 = 13.7 $\mu\text{g}/\text{m}^3$

ER ~~begins~~ begins wet-down
process for free flow/soil
mix.

3

11/03/08

J. Wickes

1300 TWA - Datagram D241 = 19.8 $\mu\text{g}/\text{m}^3$

TWA - Datagram D710 = 12.4 $\mu\text{g}/\text{m}^3$

Received call from AES with
results for pile 2 - passed.

ESB-DITTCLP-02A = 3.19 mg/L

1345 Ed Sims arrives on-site.

He requested to call Paul Puyf
about emailing pictures of
the plants/shrubs removed
from Mr. Ransom's house.

1400 TWA - Datagram D241 = 33.1 $\mu\text{g}/\text{m}^3$

TWA - Datagram D710 = 11.7 $\mu\text{g}/\text{m}^3$

Shut down datagrams for the
day. Plug up to change in
Jim Sloan's office (with
permission).

1420 Collect sample for TCLP
lead from pile 1 -> 5-pt.
composite.

1430 Leave site to drive sample
to AES.

~~J. Wickes~~
J. Wickes
11/03/08

11/4/8

0800 START demy on site. START PLYS on site.

0820 ER arrives. Begin to uncover piles

0845 DataRAMs set out.

ER moving pile 2 into pit 3.

- D2H1 south of piles at

apartments

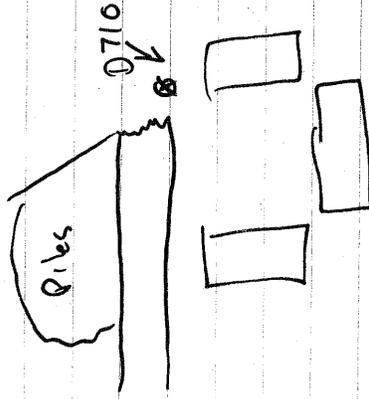
- D710 next to site office

0900 DataRAM 2H1 malfunctions. Speak w/ Will Collins @ G2 warehouse. No fix.

P. PLY will return it today.

In the meantime D710 is moved to

D2H1's position



0905 ER practicing proper dust control w/ pressure washer misting exposed soil.

CCM

11/4/8

1045 TWA on DataRAM 710

is currently 22.7 mg/m³

- ER is waiting for water truck to return.

1130 Truck is back, soil movement

resumes.

1215 break.

1245 ER back moving soil.

Picking up corner of plastic from where pile 4 used to be

piles 2, 3, & 4 are now 1 large

piles

1355 TWA on 710 = 12.3 mg/m³

ER has ceased dirt moving for

the day. Now replacing

new hay bale bems + cutting

plastic to cover piles

1445 ER covers pile with plastic

1500 Remove DataRAM. Final TWA = 12.3

mg/m³

- ER continues to clear/police

site

1530 ER / START off site

CCM

11/05/08

Wednesday

Weather: Sunny, High 71°F

Scope: Treating soil staged at Great Dane, moving soil for ease of loading.

0800 - START Roden and START Phys on-site. Phys briefs Roden.

0830 - ER crew on-site. ER wets soil pile to the ~~the~~ ^{ER} North.

to prevent dust from blowing off poly. START Roden

and Phys set out DataRAM. Placement approx 45 ft N of pile.

0900 - START Phys off-site.

0915 - ER crew shovels dirt around pile to pick up contaminated soil that may have bled off poly.

0930 - TWA - DataRAM 710 = 19.3 $\mu\text{g}/\text{m}^3$ 1030 - TWA - DataRAM 710 = 14.8 $\mu\text{g}/\text{m}^3$ 1130 - TWA - DataRAM 710 = 12.5 $\mu\text{g}/\text{m}^3$ 1300 - TWA - DataRAM 710 = 9.9 $\mu\text{g}/\text{m}^3$ 1400 - TWA - DataRAM 710 = 8.7 $\mu\text{g}/\text{m}^3$

ER continues to move soil to centralized location (on poly) for ease of loading mixed soil to haul off-site.

1445 - ER has moved hay bails from northernmost section of pile and placed on pile. Pile has moved approx.

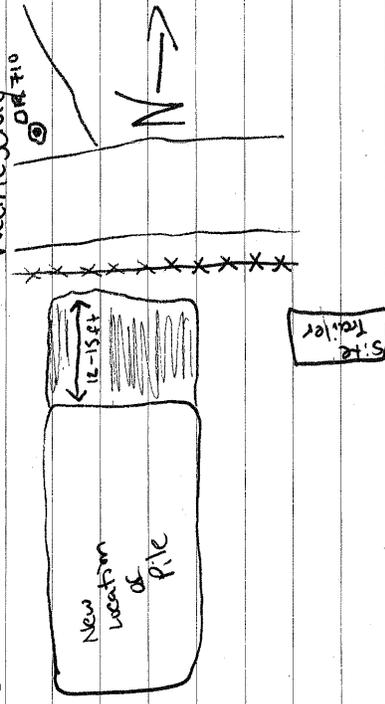
12-15 ft south to a more centralized location. Poly has also been moved from area.

1500 - TWA - DataRAM 710 = 9.7 $\mu\text{g}/\text{m}^3$ 1520 - ^{Fresh} Bails of hay are being placed along new northern border of pile. Poly placed on bails at way to act as a berm.

C. Roden

11/05/08

Wednesday



1530 - ER crew lays plastic over pile and prepares to leave.

1545 - START collects DataRAM. Last reading of the day;

TWA - DataRAM 710 = 9.4 $\mu\text{g}/\text{m}^3$

ER crew off-site.

1600 - START Roden leaves site for the day.

C. Roden

11/06/08

Thursday

Weather: Sunny, High 75°F, Wind; Calm

Scope: Soil will be loaded on trucks and hauled off-site.

0730 - START Roden arrives on-site. ER crew ~~ready~~

Already on-site. Eighth truck this morning is loaded with soil.

0800 - START sets out DataRAM D710. ER practicing proper dust control by pressure misting north section of soil.

0900 - TWA - DataRAM D710 = 21.0 $\mu\text{g}/\text{m}^3$

0920 - 9th hauling truck arrives on-site. 0936 - truck leaves.

0938 - 10th hauling truck arrives on-site. ER continues to

C. Roden

11/06/08

Thursday

→ practice proper dust control while backhoe loads soil onto hauling truck. (refer photo)
 1000 - TWA - DataRAM D710 = 14.7 $\mu\text{g}/\text{m}^3$
 1100 - ER crew man leaves site to get more water.
 TWA - DataRAM D710 = 11.1 $\mu\text{g}/\text{m}^3$
 1115 - Last truck leaves site before lunch.
 1120 - Lunch
 1145 - ER back from lunch and hauling trucks on-site ready to be loaded.

1230 - TWA - DataRAM D710 = 9.2 $\mu\text{g}/\text{m}^3$
 2nd truck of the day is loaded w/ soil. A small fire from unknown source had been started SW of site. Creating smoke plume drifting over Great Dane property.

1230 - Seems fire has been extinguished. ER back w/ water truck. START Baden drives to 413 Erin Ave SW to take picture of yard w/ freshly laid fescue grass.

1330 - TWA - DataRAM D710 = 9.5 $\mu\text{g}/\text{m}^3$
 1430 - TWA - DataRAM D710 = 10.1 $\mu\text{g}/\text{m}^3$
 1500 - 29th truck arrives on-site to load soil. ER continues to practice proper dust control while loading soil onto trucks.

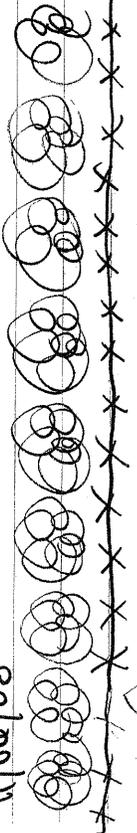
1515 - START Prys arrives on-site w/ XRF tool. START screens soil where soil was staged for background.
 C. Cooper

XRF Reading	Map #	Concentration	Error
1	1	397.8	± 86.3
2	2	78.6	± 44.9
3	3	106.8	± 67.4
4	4	91.6	± 49.6
5	5	118.9	± 52.9
6	6	88.8	± 49.1
7	7	140.9	± 61.8
8	8	283.4	± 79.2
9	9	187.0	± 67.3
10	10	466.9	± 93.2
11	11	561.1	± 102.4
12	12	153.2	± 67.0
13	13	2429.0	± 196.0
14	14	913.9	± 112.0
15	15	678.1	± 94.6
16	16	879.2	± 124.9
17	17	4625.0	± 282.0
18	18	6290.0	± 357.0
19	19	5281.0	± 360.0
20	20	500.5	± 90.2
21	21	615.2	± 108.5
22	22	208.8	± 65.2
23	23	98.6	± 52.4
24	24	4207 = 54.1	
25	25	4605 = 70.9	

BRIDGE

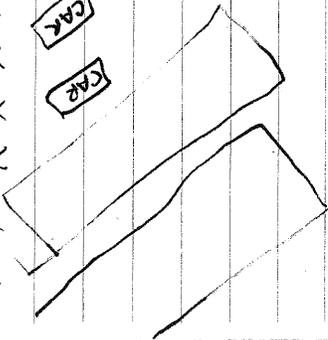
10

11/06/08

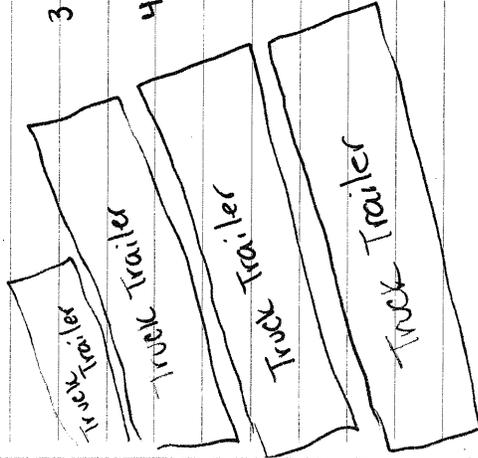


1
CAR
CAR

2



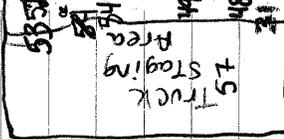
3



4

5

11
12



53 54 55 46
57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

11

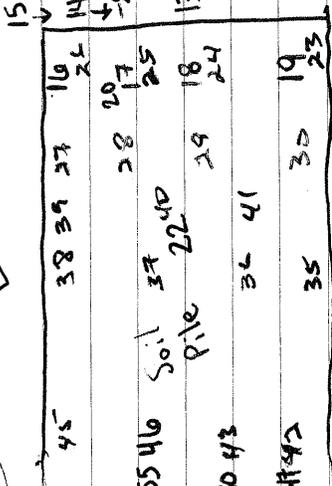
11

Thursday



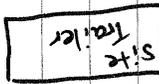
Backroom

Back Lot



10 ← approx 15 ft →
9
8

6



7

Bull 108

Bull 108

11/16/08

Thursday

1620 - START Roden Collects Sataran, Last

Reading for day TWA - Data AM 710 = 11.5 ug/m³

1645 - START Roden leaves site for the day. ER

began scraping soil/old asphalt where

PILES 1, 2, & 3 were staged. ER scraped

2-3 inches because some of this old asphalt

came up during scraping.

1700 START beyond SCREENING SCRAPED NEARS

where soil was staged. Started with

YRF READING 23.

1740 START CHANGED YRF BATTERY AND

CALIBRATED YRF.

1815 ER STOPPED SCRAPING THIS STAGED SOIL

AREA. SCRAPED SOIL WAS PLACED WITH

REMAINING SOIL FOR DISPOSAL. ER PLACED

POLY SHEETING OVER PILE AND PLACED A

POLY BAG BEHIND ANNOUIT. ER ALSO

CLEARED TRACKS OF THE TRACK HOE.

1845 START OFF-SITE. ER OFF-SITE.

Bob E. [Signature]
6 Nov 08

11/16/08

P. Pangs

YRF READING MAG # Concentration Error

26 26 < LOD = 67.0

27 27 < LOD = 61.5

28 28 < LOD = 56.9

29 29 < LOD = 76.5

30 30 87.9 ± 57.8

31 31 156.2 ± 59.3

32 32 1587 164

33 33 716.5 113.0

34 calibration RES 215.6 Escal 4.8075

35 35 318.0 74.1

36 36 80.8 53.6

37 37 < LOD = 66.5

38 38 < LOD = 55.9

39 39 < LOD = 68.5

40 40 < LOD = 54.9

41 41 < LOD = 66.4

42 42 422.1 90.5

43 43 161.8 41.3

Bob E. [Signature]

11/07/08

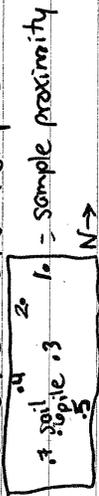
Friday

Weather; High 72°F, Wind: ϕ 93% Partly Sunny
 Scope: To continue loading the last of soil pile
 onto hauling trucks to be taken off-site.

ϕ 70 ϕ - START Roden on-site. ER crew on-site
 and three hauling trucks.

ϕ 715- START sets out DataRAM. START Pys arrives
 on-site.

ϕ 74 ϕ - START Pys takes two ~~point~~ sample points
 that will comprise of the final composite. Sample
 points were taken on the north of pile.



After samples taken, two gravel trucks dump a load
 of gravel on north end of soil pile.

ϕ 745- TWA - DataRAM D710 = 52.2 μ g/m³. START
 Pys takes samples 3 and 4 of composite.

ϕ 80 ϕ - ER spreads gravel w/ skid steer over staged
 soil pile. (north end)

ϕ 815- START takes XRF readings central and south
 section of soil pile.

ϕ 845- TWA - DataRAM D710 = 58.8 μ g/m³

ϕ 945- TWA - DataRAM D710 = 47.7 μ g/m³

START takes more XRF readings to ensure no further
 digging is needed.

100 ϕ - START completes composite by taking samples 5, 6 & 7.
 C. Bode

11/07/08

Friday

* Refer to site map on 11/06/08 for XRF reading locations.

XRF Reading Map # Concentration Error
 (44 calibration Res. 261.2 FScale=4.9145)

45 45 88.6 \pm 53.9

46 46 78.4 \pm 51.1

47 47 103.4 \pm 49.0

48 48 <LOD = 59.5

49 49 278.5 \pm 66.7

50 50 71.4 \pm 45.2

51 No Sample

52 52 <LOD = 58.4

53 53 <LOD = 69.3

54 54 159.0 \pm 59.1

55 55 93.4 \pm 54.0

56 (Composite sample) 81.5 \pm 42.1

57 57 421.9 \pm 93.8

C. Bode

Friday

11/07/08

- 1015 - 39 total loads of soil were taken off-site.
- 32 loads on 11/06/08 and 7 loads on 11/07/08.
- 1030 - Last load of soil is carried off-site. Contaminated soil on backhoe was cleaned off and placed on poly.
- Poly loaded onto truck. No contaminated soil left on-site.
- ~~ER spreads site fence at location~~
- 1045 - ER spreads gravel over staged soil area.
- 1058 - Last DataRAM reading TWA - D710 = 37.5 $\mu\text{g}/\text{m}^3$
- 1055 - START prys leaves site for the week.
- 1137 - Last gravel truck arrives on-site. ER spreads second load of gravel.
- 1300 - START Roden leaves site

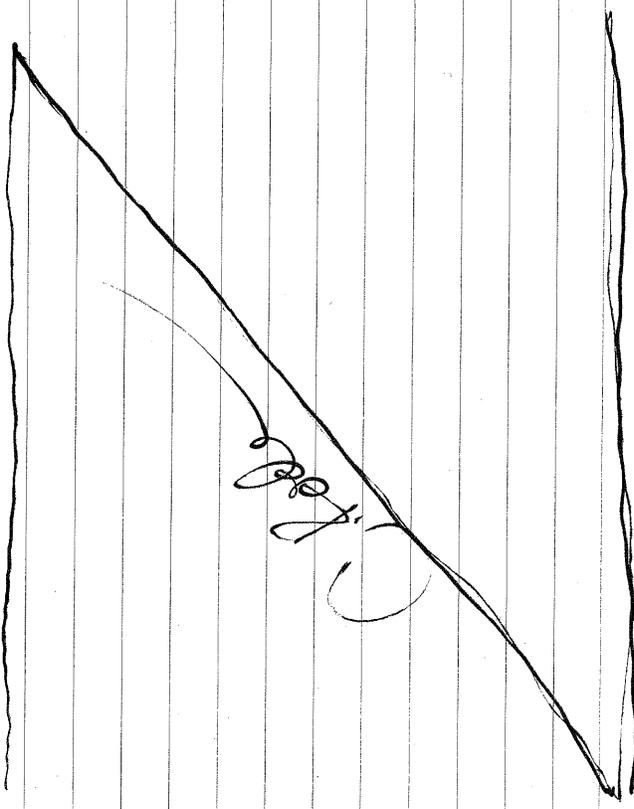


Plate	Date	Time	Location	P. Prys
2449 (1)	11/5/08	1553	Great Dome Ten/Leas Lot	W CR
2450 (2)	11/6/08	0941	713 Erin Ave	N CR
2451 (3)	11/6/08	0941		W
2452 (4)	11/6/08	0959		W
2453 (5)	11/6/08	1049	Greenb Dome Ten/Leas Lot	N CR
2454 (6)	11/6/08	1343	713 Erin Ave	NW CR
2455 (7)	11/6/08	1343		S
2456 (8)	11/6/08	1552	Great Dome Ten/Leas Lot	W CR
2457	11/7/08	0726		NE PP
2458 (9)	11/7/08	0726		NE
2459 (10)	11/7/08	0841		SW
2460	11/7/08	0841		W
2461	11/7/08	0841		SW
2462 (11)	11/7/08	0842		NW
2463 (12)	11/7/08	0846		NW
2464 (13)	11/7/08	0847		N
2465 (14)	11/7/08	0847		NW CR
2466 (15)	11/7/08	0847		NW PP
2467 (16)	11/7/08	0849		N PP
2468 (17)	11/7/08	0941		W CR
2469 (18)	11/7/08	1059		N PP
2470	11/7/08	1115		N CR
2471	11/7/08	1144		N CR
2472	11/7/08	1150		SW CR

Bar 2008

Photo	Date	Time	Location	P. Rays
2473(2E)	11/7/08	1155	Great Dene Teniler Lot w	CR
2474(2E)	11/7/08	1155		W
2475(2E)	11/7/08	1204		N
2476(2E)	11/7/08	1205		N
2477(2E)	11/7/08	1226		NW
2478(2E)	11/7/08	1247		W
2479(2E)	11/7/08	1248		W
2480(2E)	11/7/08	1320		NW
2481(2E)	11/7/08	1322		NW
2482(2E)	11/7/08	1323		NW
2483(2E)	11/7/08	1329		NW
2484(2E)	11/7/08	1330		N
2485(2E)	11/7/08	1335		N
2476(2E)	11/7/08	1355		NE
2487(2E)	11/7/08	1356		SE
2488(2E)	11/7/08	1356		W
2489(2E)	11/7/08	1357		SW

~~2002 Nov 7~~

APPENDIX D

SOIL SAMPLING RESULT TABLES AND TETRA TECH DATA VALIDATION REPORT

(31 Pages)

ESB (EXIDE) FUND LEAD
TABLE 1
LEAD CONFIRMATION SOIL SAMPLING RESULTS

Sample Date	Location	Sample Number	Sample Results (mg/kg)
10/6/08	Industrial Ditch, University Avenue	ESB-DITCHCON-01	64
10/6/08	Industrial Ditch, University Avenue	ESB-DITCHCON-02	200
10/6/08	Industrial Ditch, University Avenue	ESB-DITCHCON-03	290
10/6/08	Industrial Ditch, University Avenue	ESB-DITCHCON-04	81
10/16/08	1263 Allene Avenue	ESB-1263ALLENE-101608	86.7
10/20/08	1273 Allene Avenue	ESB-1273RESCON-01	124 J
10/20/08	1273 Allene Avenue	ESB-1273RESCON-02	101 J
10/20/08	1273 Allene Avenue	ESB-1273RESCON-03	186 J
11/7/08	Great Dane Trucking Soil Staging Area	ESB-GDTCON-01	55.7 J

Notes:

mg/kg = Milligrams per kilogram

J = The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample.

ESB (EXIDE) FUND LEAD
TABLE 2
TCLP SOIL SAMPLING RESULTS

Sample Date	Location	Sample Number	Sample Results (mg/L)
10/28/08	Pile 1, Great Dane Trucking Soil Staging Area	ESB-DITTCLP-01	8.45
10/28/08	Pile 2, Great Dane Trucking Soil Staging Area	ESB-DITTCLP-02	6.50
10/28/08	Pile 4, Great Dane Trucking Soil Staging Area	ESB-DITTCLP-03	0.218
10/29/08	Pile 3, Great Dane Trucking Soil Staging Area	ESB-DITTCLP-04	2.32
10/31/08	Pile 2, Great Dane Trucking Soil Staging Area	ESB-DITTCLP-02A	3.19
11/3/08	Pile 1, Great Dane Trucking Soil Staging Area	ESB-DITTCLP-01A	1.12

Notes:

mg/L = Milligrams per liter

J = The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample.

TCLP = Toxicity characteristic leaching procedure





December 12, 2008

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

Subject: ESB, Inc., Site
Technical Direction Document Number TTEMI-05-001-0002
Contract No. EP-W-05-054 (START III Region 4)
Cursory Data Validation Report
Analytical Environmental Services, Inc., Reports Nos. 0809A92, 0810B75, and 0810F11 and Analytical Services, Inc. Report No. 264305
Analytical Parameter: Total Lead

Laboratory Report No.	Samples	Field Duplicate Pairs	Field Blank Samples
0809A92	ESB-SEWER-1A, ESB-SEWER-1B, and ESB-OUTFALL	None	None
0810B75	ESB-1263ALLENE-101608	None	None
0810F11	ESB-1273RESCON-01, ESB-1273RESCON-02, and ESB-1273RESCON-03	None	None
264305	ESB-Ditch Con-01, ESB-Ditch Con-02, ESB-Ditch Con-03, and ESB-RES Con-04	None	None

Dear Mr. Sims:

The Tetra Tech Superfund Technical Assessment and Response Team (START) conducted data validation on the analytical results for 11 soil samples that were collected at the ESB, Inc. (Exide) Site in Atlanta, Georgia, on September 17 through October 21, 2008. The samples were analyzed under laboratory reports numbers 0809A92, 0810B75, and 0810F11 by Analytical Environmental Services, Inc. (AES), of Atlanta, Georgia, and laboratory report number 264305 by Analytical Services, Inc. (ASI), of Norcross, Georgia. The soil samples were analyzed for total 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 (EPA October 2004). The analytical methods used by AES and ASI 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 AES or ASI data packages, 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 Blanks *
- Matrix Spike/Matrix Spike Duplicates (MS/MSD)
- Laboratory Control Samples (LCS) and Laboratory Control Sample Duplicates (LCSD) *
- Dilution and Reported Detection Limits
- Analyte Quantitation *

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

The following efficient and effective data validation approach was used for providing an abbreviated assessment of the quality of the set of data. 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 was not 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 package, with hand-entered qualifications from the data validation effort. Enclosure 2 presents the same data validation-qualified analytical results in table format.

SAMPLE PRESERVATION, SAMPLE RECEIPT, AND HOLDING TIMES

The sample matrix was not indicated on the chain-of-custody records for data packages 0810F11 and 264305. No qualifications are warranted for these omissions.

The laboratory incorrectly identified sample ESB-RES Con-04 as ESB-Ditch Con-04. The sample identification has been manually corrected for Enclosures 1 and 2.

MATRIX SPIKE/MATRIX SPIKE DUPLICATES

MS/MSD recoveries and RPD results were within the specified control limits with the following exceptions. The MS/MSD analyses for data package 0809A92 were performed using sample ESB-SEWER-1B, which had a lead result much greater than the spike concentration. Therefore, MS/MSD recoveries could not be determined. No qualifications are warranted for this data gap. The MS/MSD analyses for data package 0810B75 had lead recoveries below QC limits, but were performed on a sample collected from another site. Therefore, no qualifications are warranted for this irregularity. The MS/MSD analyses for data package 0810F11 were performed on sample ESB-1273RESCON-01 and yielded recoveries of 138 and 71 percent, both outside the QC limits of 75 to 125 percent. Therefore, all lead results in the data package containing samples ESB-1273RESCON-01, ESB-1273RESCON-02, and ESB-1273RESCON-03 were qualified as estimated (flagged "J"). These irregularities may be a result of varying concentrations of lead in the unspiked sample. The data user should be aware that similar irregularities may exist for samples from other data packages. The MS/MSD analyses for data package 264305 were performed on sample ESB-Ditch Con-01 and all recoveries were well within QC limits.

DILUTION 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. The extract for sample

Mr. L. Sims
December 12, 2008

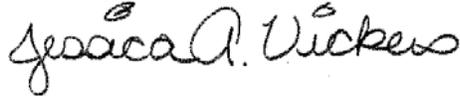
ESB-SEWER-1A from data package 0809A92 was analyzed at a 100-fold dilution due to the high lead concentration. The lead concentration was reported from the dilution and was within the calibration range, so no qualifications were applied.

OVERALL ASSESSMENT OF DATA

The overall quality of this data package was acceptable. No data were rejected. The lead results for one data package were qualified as estimated because of matrix spike irregularities. Similar problems may exist for samples from other data package. All results may be used as qualified.

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.,
REPORTS NOS. 0809A92, 0810B75 AND 0810F11 AND ANALYTICAL SERVICES, INC.,
REPORT NO. 264305**

(Eleven Pages)

Analytical Environmental Services, Inc.

Date: 19-Sep-08

CLIENT: Tetra Tech EM Inc.
 Lab Order: 0809A92
 Project: ESB
 Lab ID: 0809A92-001

Client Sample ID: ESB-SEWER 1A
 Collection Date: 9/17/2008 10:30:00 AM

Matrix: SOIL

Analyses	Result	Qual	MDL	Rpt. Limit	Units	BatchID	DF	Date Analyzed
METALS, TOTAL			SW6010B		(SW3050B)			Analyst: DJ
Lead	77900		10.4		521 mg/Kg-dry	104287	100	9/18/2008 11:17:28 A
PERCENT MOISTURE			D2216					Analyst: JF
Percent Moisture	26.6		0		0 wt%		1	9/18/2008 11:00:00 A

[Signature]
 12/08/08

Qualifiers:	*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
	E	Estimated value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix
			BRL	Not detected at MDL

Analytical Environmental Services, Inc.

Date: 19-Sep-08

CLIENT: Tetra Tech EM Inc.
 Lab Order: 0809A92
 Project: ESB
 Lab ID: 0809A92-002

Client Sample ID: ESB-SEWER 1B
 Collection Date: 9/17/2008 10:30:00 AM

Matrix: SOIL

Analyses	Result	Qual	MDL	Rpt. Limit	Units	BatchID	DF	Date Analyzed
METALS, TOTAL								
Lead	1130		SW6010B 0.108	(SW3050B)	5.41 mg/Kg-dry	104287	1	Analyst: DJ 9/17/2008 8:27:42 PM
PERCENT MOISTURE								
Percent Moisture	10.2		D2216 0		0 wt%		1	Analyst: JF 9/18/2008 11:00:00 A

JLF
12/08/08

Qualifiers:			
*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix
		BRL	Not detected at MDL

Analytical Environmental Services, Inc.

Date: 19-Sep-08

CLIENT: Tetra Tech EM Inc.
 Lab Order: 0809A92
 Project: ESB
 Lab ID: 0809A92-003

Client Sample ID: ESB -OUTFALL
 Collection Date: 9/17/2008 11:30:00 AM

Matrix: SOIL

Analyses	Result	Qual	MDL	Rpt. Limit	Units	BatchID	DF	Date Analyzed
METALS, TOTAL			SW6010B		(SW3050B)			Analyst: DJ
Lead	854		0.123	6.17	mg/Kg-dry	104287	1	9/17/2008 8:50:33 PM
PERCENT MOISTURE			D2216					Analyst: JF
Percent Moisture	31.8		0	0	wt%		1	9/18/2008 11:00:00 A

Jaw
 12/08/08

Qualifiers:			
*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix
		BRL	Not detected at MDL



ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis

110 Technology Parkway Norcross, GA 30092

(770) 734-4200 FAX (770) 734-4201

Laboratory Report

Tetra Tech EM Inc.
1955 Evergreen Blvd
Suite 200
Duluth, GA 30096

Attention: Ms. Jessica Vickers

October 10, 2008
Report No. **264305-1**

Tetra Tech EM Inc.

Sample Description: Soil, Composite, ESB-Ditch Con-01, 10/06/2008, 12:40, received 10/07/2008

Analyte	Result	Report. Limit	Units	Qual.	Analytical Method	Preparation Method	Dil. Factor	CAS #	Results Source ID	Batch #	Preparation Date	Preparation Time	Analytical Date	Analytical Time	Init.
General Chemistry															
Moisture	20.3	0.04	%		SOP Moisture	Moisture%	1	E-11870	264305-1	156953			10/07/2008	1715	MZF
Metals															
Total Lead (Pb)	64	3.1	mg/kg		EPA 6010B	EPA 3050	1	7439-92-1	264305-1	156869	10/07/2008	1400	10/08/2008	1623	FBS

gaw
12/12/08



ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis

110 Technology Parkway Norcross, GA 30092

(770) 734-4200 FAX (770) 734-4201

Laboratory Report

Tetra Tech EM Inc.
1955 Evergreen Blvd
Suite 200
Duluth, GA 30096

Attention: Ms. Jessica Vickers

October 10, 2008
Report No. **264305-2**

Tetra Tech EM Inc.

Sample Description: Soil, Composite, ESB-Ditch Con-02, 10/06/2008, 12:50, received 10/07/2008

Analyte	Result	Report. Limit	Units	Qual.	Analytical Method	Preparation Method	Dil. Factor	CAS #	Results Source ID	Batch #	Preparation Date	Time	Analytical Date	Time	Init.
General Chemistry															
Moisture	29.3	0.04	%		SOP Moisture	Moisture%	1	E-11870	264305-2	156953			10/07/2008	1715	MZF
Metals															
Total Lead (Pb)	200	3.5	mg/kg		EPA 6010B	EPA 3050	1	7439-92-1	264305-2	156869	10/07/2008	1400	10/08/2008	1629	FBS

Jave
12/12/08



ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis

110 Technology Parkway Norcross, GA 30092

(770) 734-4200 FAX (770) 734-4201

Laboratory Report

Tetra Tech EM Inc.
1955 Evergreen Blvd
Suite 200
Duluth, GA 30096

Attention: Ms. Jessica Vickers

October 10, 2008
Report No. **264305-3**

Tetra Tech EM Inc.

Sample Description: Soil, Composite, ESB-Ditch Con-03, 10/06/2008, 18:50, received 10/07/2008

Analyte	Result	Report. Limit	Units	Qual.	Analytical Method	Preparation Method	Dil. Factor	CAS #	Results Source ID	Batch #	Preparation Date	Preparation Time	Analytical Date	Analytical Time	Init.
General Chemistry															
Moisture	11.6	0.04	%		SOP Moisture	Moisture%	1	E-11870	264305-3	156953			10/07/2008	1715	MZF
Metals															
Total Lead (Pb)	290	2.8	mg/kg		EPA 6010B	EPA 3050	1	7439-92-1	264305-3	156869	10/07/2008	1400	10/08/2008	1625	FBS

gaw
12/12/08



ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis

110 Technology Parkway Norcross, GA 30092

(770) 734-4200 FAX (770) 734-4201

Laboratory Report

Tetra Tech EM Inc.
1955 Evergreen Blvd
Suite 200
Duluth, GA 30096

Attention: Ms. Jessica Vickers

October 10, 2008
Report No. **264305-4**

Tetra Tech EM Inc.

Sample Description: Soil, Composite, ESB-Ditch Con-04, 10/06/2008, 18:55, received 10/07/2008

RES
Jaw

Analyte	Result	Report. Limit	Units	Qual.	Analytical Method	Preparation Method	Dil. Factor	CAS #	Results Source ID	Batch #	Preparation Date	Preparation Time	Analytical Date	Analytical Time	Init.
General Chemistry															
Moisture	5.32	0.04	%		SOP Moisture	Moisture%	1	E-11870	264305-4	156953			10/07/2008	1715	MZF
Metals															
Total Lead (Pb)	81	2.6	mg/kg		EPA 6010B	EPA 3050	1	7439-92-1	264305-4	156869	10/07/2008	1400	10/08/2008	1641	FBS

Jaw
12/12/08

Analytical Environmental Services, Inc.

Date: 20-Oct-08

CLIENT: Tetra Tech EM Inc.
 Lab Order: 0810B75
 Project: ESB
 Lab ID: 0810B75-001

Client Sample ID: ESB-1263ALLENE-101608
 Collection Date: 10/16/2008 3:10:00 PM

Matrix: SOIL

Analyses	Result	Qual	MDL	Rpt. Limit	Units	BatchID	DF	Date Analyzed
METALS, TOTAL			SW6010B		(SW3050B)			Analyst: MU
Lead	86.7		0.0922		4.61 mg/Kg-dry	105412	1	10/17/2008 11:59:08 A
PERCENT MOISTURE			D2216					Analyst: MAS
Percent Moisture	4.96		0		0 wt%		1	10/17/2008 11:00:00 A

[Signature]
 12/08/08

Qualifiers:			
*	Value exceeds Maximum Contaminant Level	<	Less than Result value
>	Greater than Result value	B	Analyte detected in the associated Method Blank
E	Estimated value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix
		BRL	Not detected at MDL

Analytical Environmental Services, Inc.

Date: 23-Oct-08

CLIENT: Tetra Tech EM Inc.
 Lab Order: 0810F11
 Project: ESB
 Lab ID: 0810F11-001

Client Sample ID: ESB-1273 RESCON-01
 Collection Date: 10/20/2008 1:45:00 PM

Matrix: SOIL

Analyses	Result	Qual	MDL	Rpt. Limit	Units	BatchID	DF	Date Analyzed
METALS, TOTAL			SW6010B					Analyst: MU
Lead	124	J	0.0886	(SW3050B)	4.43 mg/Kg-dry	105634	1	10/22/2008 8:44:07 P
PERCENT MOISTURE			D2216					Analyst: MAS
Percent Moisture	7.62		0		0 wt%		1	10/22/2008 4:00:00 P

(Signature)
 12/08/08

Qualifiers:			
*	Value exceeds Maximum Contaminant Level	<	Less than Result value
>	Greater than Result value	B	Analyte detected in the associated Method Blank
E	Estimated value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix
		BRL	Not detected at MDL

Analytical Environmental Services, Inc.

Date: 23-Oct-08

CLIENT: Tetra Tech EM Inc.
 Lab Order: 0810F11
 Project: ESB
 Lab ID: 0810F11-002

Client Sample ID: ESB-1273 RESCON-02
 Collection Date: 10/20/2008 3:15:00 PM

Matrix: SOIL

Analyses	Result	Qual	MDL	Rpt. Limit	Units	BatchID	DF	Date Analyzed
METALS, TOTAL			SW6010B		(SW3050B)			Analyst: MU
Lead	101	J	0.0763		3.82 mg/Kg-dry	105634	1	10/22/2008 9:00:07 P
PERCENT MOISTURE			D2216					Analyst: MAS
Percent Moisture	8.81		0		0 wt%		1	10/22/2008 4:00:00 P

gaw
12/08/08

Qualifiers:	*	Value exceeds Maximum Contaminant Level	<	Less than Result value
	>	Greater than Result value	B	Analyte detected in the associated Method Blank
	E	Estimated value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified
Rpt Lim		Reporting Limit	S	Spike Recovery outside limits due to matrix
			BRL	Not detected at MDL

Analytical Environmental Services, Inc.

Date: 23-Oct-08

CLIENT: Tetra Tech EM Inc.
 Lab Order: 0810F11
 Project: ESB
 Lab ID: 0810F11-003

Client Sample ID: ESB-1273 RESCON-03
 Collection Date: 10/21/2008 11:45:00 AM
 Matrix: SOIL

Analyses	Result	Qual	MDL	Rpt. Limit	Units	BatchID	DF	Date Analyzed
METALS, TOTAL			SW6010B		(SW3050B)			Analyst: MU
Lead	186	J	0.0892	4.46	mg/Kg-dry	105634	1	10/22/2008 9:03:19 P
PERCENT MOISTURE			D2216					Analyst: MAS
Percent Moisture	11.7		0	0	wt%		1	10/22/2008 4:00:00 P

gaw
 12/08/08

Qualifiers:			
*	Value exceeds Maximum Contaminant Level	<	Less than Result value
>	Greater than Result value	B	Analyte detected in the associated Method Blank
E	Estimated value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix
		BRL	Not detected at MDL

ENCLOSURE 2

**DATA VALIDATION-QUALIFIED FIXED LABORATORY ANALYTICAL RESULTS FOR
ANALYTICAL ENVIRONMENTAL SERVICES, INC., REPORTS NOS. 0809A92, 0810B75 AND
0810F11 AND ANALYTICAL SERVICES, INC., REPORT NO. 264305**

(One Page)

**DATA VALIDATION-QUALIFIED FIXED LABORATORY ANALYTICAL RESULTS
FOR ANALYTICAL ENVIRONMENTAL SERVICES, INC. REPORT NOS. 0809A92, 0810B75, AND 0810F11 AND ANALYTICAL
SERVICES, INC. REPORT NO. 264305**

Sample Designation:	ESB-SEWER-1A	ESB-SEWER-1B	ESB-OUTFALL
Sample Collection Date:	17-Sep-08	17-Sep-08	17-Sep-08
Percent Moisture	%	%	%
Percent Moisture	26.6	10.2	31.8
Lead	mg/kg, dry weight	mg/kg, dry weight	mg/kg, dry weight
Lead	77,900	1,130	854

Sample Designation:	ESB-Ditch Con-01	ESB-Ditch Con-02	ESB-Ditch Con-03	ESB-RES Con-04
Sample Collection Date:	6-Oct-08	6-Oct-08	6-Oct-08	6-Oct-08
Percent Moisture	%	%	%	%
Percent Moisture	20.3	29.3	11.6	5.32
Lead	mg/kg, dry weight	mg/kg, dry weight	mg/kg, dry weight	mg/kg, dry weight
Lead	64	200	290	81

Sample Designation:	ESB-1263ALLENE-101608	ESB-1273 RESCON-01	ESB-1273 RESCON-02	ESB-1273 RESCON-03
Sample Collection Date:	16-Oct-08	20-Oct-08	20-Oct-08	20-Oct-08
Percent Moisture	%	%	%	%
Percent Moisture	4.96	7.62	8.81	11.7
Lead	mg/kg, dry weight	mg/kg, dry weight	mg/kg, dry weight	mg/kg, dry weight
Lead	86.7	124 J	101 J	186 J

Notes:

% = Percent

mg/kg = Milligrams per kilogram

J = The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample.



December 8, 2008

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

**Subject: ESB, Inc., Site
Technical Direction Document Number TTEMI-05-001-0002
Contract No. EP-W-05-054 (START III Region 4)
Cursory Data Validation Report
Analytical Environmental Services, Inc., Reports Nos. 0810K46, 0810L34, 0810N34,
0811061, AND 0811408
Analytical Parameters: Total Lead and Toxicity Characteristic Leaching Procedure
(TCLP) Lead**

Laboratory Report No.	Samples	Field Duplicate Pairs	Field Quality Control Samples
0810K46	ESB-DITTCLP-01, ESB-DITTCLP-02, and ESB-RESTCLP-03	None	None
0810L34	ESB-DITTCLP-04	None	None
0810N34	ESB-DITTCLP-02A	None	None
0811061	ESB-DITTCLP-01A	None	None
0811408	ESB-GDTCON-01	None	None

Dear Mr. Sims:

The Tetra Tech Superfund Technical Assessment and Response Team (START) conducted data validation on the analytical results for seven soil samples that were collected at the ESB, Inc. (Exide), Site in Atlanta, Georgia, on October 28, 2008 through November 7, 2008. The samples were analyzed under laboratory reports numbers 0810K46, 0810L34, 0810N34, 0811061, and 0811408 by Analytical Environmental Services, Inc. (AES), of Atlanta, Georgia. The soil samples in laboratory report numbers 0810K46, 0810L34, 0810N34, and 0811061 were analyzed for TCLP lead by SW-846 Methods 1311 and 6010B. The sample in report No. 0811408 was analyzed for total 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 (EPA October 2004). The analytical methods used by AES 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 AES data packages, 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 *

Mr. L. Sims
December 8, 2008

- Laboratory Blanks *
- Matrix Spike/Matrix Spike Duplicates (MS/MSD)
- Laboratory Control Samples (LCS) and Laboratory Control Sample Duplicates (LCSD) *
- Dilution and Reported Detection Limits *
- Analyte Quantitation *

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

The following efficient and effective data validation approach was used for providing an abbreviated assessment of the quality of the set of data. 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 was not 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 package, with hand-entered qualifications from the data validation effort. Enclosure 2 presents the same data validation-qualified analytical results in table format.

MATRIX SPIKE/MATRIX SPIKE DUPLICATES

MS/MSD recoveries and RPD results were within the specified control limits for all of the TCLP lead data packages. The MS/MSD analyses for total lead in data package 0811408 were performed using sample ESB-GDTCON-01, which had a lead concentration almost equal to the spike concentration. The MS/MSD recoveries for total lead were 44 and 87 percent, versus the QC limits of 75 to 125 percent, and the RPD was 26 percent, versus the QC limit of 20 percent. Therefore, the total lead result for sample ESB-GDTCON-01 in data package 0811408 was qualified as estimated (flagged "J"). These irregularities may be a result of varying concentrations of lead in portions of the unspiked sample. It is possible that similar irregularities may occur in samples in other data packages.

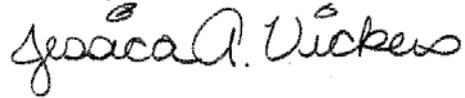
OVERALL ASSESSMENT OF DATA

The overall quality of these data packages was acceptable. No data were rejected. The lead result for sample ESB-GDTCON-01 in data package 0811408 was qualified as estimated because of matrix spike irregularities. Similar heterogeneity may exist in samples from the other data packages. All results may be used as qualified.

Mr. L. Sims
December 8, 2008

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.,
REPORTS NOS. 0810K46, 0810L34, 0810N34, 0811061, AND 0811408**

(Seven Pages)

Analytical Environmental Services, Inc.

Date: 31-Oct-08

CLIENT: Tetra Tech EM Inc.
 Lab Order: 0810K46
 Project: ESB
 Lab ID: 0810K46-001

Client Sample ID: ESB-DIT TCLP-01
 Collection Date: 10/28/2008 2:35:00 PM
 Matrix: SOLID

Analyses	Result	Qual	MDL	Rpt. Limit	Units	BatchID	DF	Date Analyzed
ICP METALS, TCLP			SW1311/6010B	(SW3010A)				Analyst: DJ
Lead	8.45	*	0.0105	0.0500	mg/L	105934	1	10/30/2008 2:40:44 P

gaw
 12/08/08

Qualifiers:	*	Value exceeds Maximum Contaminant Level	<	Less than Result value
	>	Greater than Result value	B	Analyte detected in the associated Method Blank
	E	Estimated value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified
Rpt Lim		Reporting Limit	S	Spike Recovery outside limits due to matrix
			BRL	Not detected at MDL

Analytical Environmental Services, Inc.

Date: 04-Nov-08

CLIENT: Tetra Tech EM Inc.
 Lab Order: 0811061
 Project: ESB
 Lab ID: 0811061-001

Client Sample ID: ESB-DITTCLP-01A
 Collection Date: 11/3/2008

Matrix: SOIL

Analyses	Result	Qual	MDL	Rpt. Limit	Units	BatchID	DF	Date Analyzed
ICP METALS, TCLP Lead	1.12		0.0105	0.0500	mg/L	106123	1	11/4/2008 1:12:14 PM

SW1311/6010B (SW3010A)

Analyst: DJ

gaw
12/08/08

Qualifiers:			
*	Value exceeds Maximum Contaminant Level	<	Less than Result value
>	Greater than Result value	B	Analyte detected in the associated Method Blank
E	Estimated value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix
		BRL	Not detected at MDL

Analytical Environmental Services, Inc.

Date: 31-Oct-08

CLIENT: Tetra Tech EM Inc.
Lab Order: 0810K46
Project: ESB
Lab ID: 0810K46-002

Client Sample ID: ESB-DIT TCLP-02
Collection Date: 10/28/2008 4:25:00 PM

Matrix: SOLID

Analyses	Result	Qual	MDL	Rpt. Limit	Units	BatchID	DF	Date Analyzed
ICP METALS, TCLP			SW1311/6010B	(SW3010A)				Analyst: DJ
Lead	6.50	*	0.0105	0.0500	mg/L	105934	1	10/30/2008 2:51:47 P

(Signature)
12/08/08

Qualifiers:			
*	Value exceeds Maximum Contaminant Level	<	Less than Result value
>	Greater than Result value	B	Analyte detected in the associated Method Blank
E	Estimated value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix
		BRL	Not detected at MDL

Analytical Environmental Services, Inc.

Date: 03-Nov-08

CLIENT: Tetra Tech EM Inc.
 Lab Order: 0810N34
 Project: ESB
 Lab ID: 0810N34-001

Client Sample ID: ESB-DITTCLP-02A
 Collection Date: 10/31/2008 1:45:00 PM

Matrix: SOIL

Analyses	Result	Qual	MDL	Rpt Limit	Units	BatchID	DF	Date Analyzed
ICP METALS, TCLP			SW1311/6010B	(SW3010A)				Analyst: BB
Lead	3.19		0.0105	0.0500	mg/L	106033	1	11/1/2008 5:27:33 PM

gaw
 12/08/08

Qualifiers:			
*	Value exceeds Maximum Contaminant Level	<	Less than Result value
>	Greater than Result value	B	Analyte detected in the associated Method Blank
E	Estimated value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix
		BRL	Not detected at MDL

Analytical Environmental Services, Inc.

Date: 31-Oct-08

CLIENT: Tetra Tech EM Inc.

Client Sample ID: ESB-RES TCLP-03

Lab Order: 0810K46

Collection Date: 10/28/2008 2:25:00 PM

Project: ESB

Lab ID: 0810K46-003

Matrix: SOLID

Analyses	Result	Qual	MDL	Rpt. Limit	Units	BatchID	DF	Date Analyzed
ICP METALS, TCLP			SW1311/6010B	(SW3010A)				Analyst: DJ
Lead	0.218		0.0105	0.0500	mg/L	105934	1	10/30/2008 2:55:22 P

QAW
12/08/08

Qualifiers:	*	Value exceeds Maximum Contaminant Level	<	Less than Result value
	>	Greater than Result value	B	Analyte detected in the associated Method Blank
	E	Estimated value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix
			BRL	Not detected at MDL

Analytical Environmental Services, Inc.

Date: 03-Nov-08

CLIENT: Tetra Tech EM Inc.
 Lab Order: 0810L34
 Project: ESB
 Lab ID: 0810L34-001

Client Sample ID: ESB-DITTCLP-04
 Collection Date: 10/29/2008 4:25:00 PM

Matrix: SOLID

Analyses	Result	Qual	MDL	Rpt. Limit	Units	BatchID	DF	Date Analyzed
ICP METALS, TCLP			SW1311/6010B	(SW3010A)				Analyst: DJ
Lead	2.32		0.0105	0.0500	mg/L	105934	1	10/31/2008 1:37:18 P

Open
 12/08/08

Qualifiers:			
*	Value exceeds Maximum Contaminant Level	<	Less than Result value
>	Greater than Result value	B	Analyte detected in the associated Method Blank
E	Estimated value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix
		BRL	Not detected at MDL

Analytical Environmental Services, Inc.

Date: 11-Nov-08

CLIENT: Tetra Tech EM Inc.
 Lab Order: 0811408
 Project: ESB
 Lab ID: 0811408-001

Client Sample ID: ESB-GDTCON-01
 Collection Date: 11/7/2008 7:40:00 AM

Matrix: SOIL

Analyses	Result	Qual	MDL	Rpt. Limit	Units	BatchID	DF	Date Analyzed
METALS, TOTAL								
Lead	55.7	J	SW6010B 0.0931	(SW3050B) 4.65	mg/Kg-dry	106319	1	Analyst: DJ 11/8/2008 4:57:05 PM
PERCENT MOISTURE								
Percent Moisture	8.83		D2216 0		0 wt%		1	Analyst: JF 11/10/2008 9:00:00 AM

JFW
12/08/08

Qualifiers:	* Value exceeds Maximum Contaminant Level	< Less than Result value
	> Greater than Result value	B Analyte detected in the associated Method Blank
	E Estimated value above quantitation range	H Holding times for preparation or analysis exceeded
	J Estimated value detected below Reporting Limit	N Analyte not NELAC certified
	Rpt Lim Reporting Limit	S Spike Recovery outside limits due to matrix
		BRL Not detected at MDL

ENCLOSURE 2

**DATA VALIDATION-QUALIFIED FIXED LABORATORY ANALYTICAL RESULTS FOR
ANALYTICAL ENVIRONMENTAL SERVICES, INC., REPORTS NOS. 0810K46, 0810L34,
0810N34, 0811061, AND 0811408**

(One Page)

**DATA VALIDATION-QUALIFIED FIXED LABORATORY ANALYTICAL RESULTS
FOR ANALYTICAL ENVIRONMENTAL SERVICES, INC. REPORT NOS. 0810K46, 0810L34,
0810N34, 0811061, AND 0811408**

Sample Designation:	ESB-DITTCLP-01	ESB-DITTCLP-01A
Sample Collection Date:	28-Oct-08	3-Nov-08
TCLP Lead	mg/L	mg/L
TCLP Lead	8.45	1.12

Sample Designation:	ESB-DITTCLP-02	ESB-DITTCLP-02A
Sample Collection Date:	28-Oct-08	31-Oct-08
TCLP Lead	mg/L	mg/L
TCLP Lead	6.50	3.19

Sample Designation:	ESB-RESTCLP-03	ESB-DITTCLP-04
Sample Collection Date:	28-Oct-08	29-Oct-08
TCLP Lead	mg/L	mg/L
TCLP Lead	0.218	2.32

Sample Designation:	ESB-GDTCON-01
Sample Collection Date:	7-Nov-08
Percent Moisture	%
Percent Moisture	8.83
Lead	mg/kg, dry weight
Lead	55.7 J

Notes:

- % = Percent
- mg/kg = Milligrams per kilogram
- mg/L = Milligrams per liter
- TCLP = Toxicity characteristic leaching procedure
- J = The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample.

APPENDIX E
TABLE OF WITNESSES
(One Page)

TABLE OF WITNESSES
ESB (EXIDE) FUND LEAD
ATLANTA, FULTON COUNTY, GEORGIA

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