

FINAL CLOSE OUT REPORT

United Scrap Lead Co., Inc. Superfund Site City of Troy, Miami County, Ohio

I. Introduction

This Final Close Out Report documents that the U.S. Environmental Protection Agency (EPA) has determined, in accordance with *Close Out Procedures for National Priorities List Sites* (OSWER Directive 9320.2-22, May 2011), that all appropriate response actions at the United Scrap Lead Superfund Site have been successfully implemented in accordance with EPA's September 30, 1988, Record of Decision (ROD) and subsequent June 27, 1997, ROD Amendment.

II. Summary of Site Conditions

Background

The United Scrap Lead (USL) Co., Inc. Superfund Site (Site) is located on County Road 25-A (South Dixie Highway), in a lightly populated area in the City of Troy, Concord Township, Miami County in Ohio (Figure 1). The Site occupies about 25 acres of land, of which eight acres were the scope of the remedial action (RA) conducted in 1999 (Figure 2 and Figure 3).

The northern boundary of the Site is a gravel road, and lands to the north of the Site include an airfield and historical museum. The east edge is bordered by wooded areas and railroads.

The southern boundary of the Site is the channel referred to as the "McKaig Ditch" or "Tributary to Island 3" that drains into the Great Miami River. The west edge is bordered by four residential/business properties and by County Road 25-A. The Site consists of three general areas; an open flat area in the northern half of the site, a wooded area in the southeast quarter of the site, and the southwest quarter of the site where the offices, process buildings, and waste disposal areas were located.

The Site lies within the flood plain of the Great Miami River. Groundwater elevations are normally 3 to 10 feet below the ground surface, except during periods of heavy precipitation when flooding occurs. The Miami Conservancy District is responsible for preserving flood control along the Miami River Basin. The Site is located in the 10, 50, 100, and 500-year flood plains as defined by the Miami Conservancy District. The southeastern portion of the Site is frequently flooded after significant rainfall events. The surface Site drainage is generally in a southeasterly direction towards a culvert that discharges in the channel that forms the southern boundary of the Site.

The United Scrap Lead Co., Inc. Site operated as a lead battery reclaiming facility from 1946 to 1983. Starting in 1946 lead components from used automobiles and industrial batteries were transported to the Site. The lead components were then sold and shipped by rail to lead smelters for salvage. Battery tops and battery casing chips were disposed of on-site. Battery acid was

collected and discharged directly on the ground on-site. The business was incorporated as United Scrap Lead in 1964. From 1966 through 1980, United Scrap Lead Co., Inc. separated batteries from casings, severed the tops, collected the lead plates for reprocessing, and then disposed of the tops and casings on-Site. The resulting acid was originally discharged directly to an acid seepage field. In 1972, the acid was collected, neutralized with ammonia and discharged through the acid seepage field. The main source of soil contamination at the Site was the battery casing waste pile. The battery casing waste pile was located at soil surface adjacent to the offices in the southwest quarter of the site. Soil had also been contaminated by airborne dispersion of particulates, infiltration of water through the casings and into underlying and adjacent soils, and surface water drainage, including onto neighboring residences, the roadway, and the tributary source at the Site. Ohio Environmental Protection Agency (Ohio EPA) first became concerned about the Site conditions in 1979 when the State found levels of cadmium and lead in the groundwater onsite which exceeded the interim Federal Primary Drinking Water Standards (FPDWS). Ohio EPA required the United Scrap Lead company to comply with the State waste disposal regulations and dispose of the chipped battery casings off-Site. Lead reclamation operations ceased in 1980 but resumed by 1982 when the Site was leased to new individuals. In 1983, lead battery reclamation activities ceased permanently.

On September 8, 1983, the Site was proposed for listing on the National Priority List (NPL) (48 FR 40674) and was listed on September 21, 1984 (49 FR 37070). The CERCLIS ID is OHD018392928. EPA conducted an emergency removal action at the Site starting in November 1985 through September 1986 to remove and relocate contaminated soils and waste materials away from the neighboring residences and the roadway. Waste removed and relocated included rubber and plastic battery casing chips, pieces of the lead components from the batteries, lead paste, and lead contaminated soils. In addition to the consolidated pile of waste battery casing chips and components, several abandoned buildings were located on-site. Accumulations of debris included empty drums, fiberglass tanks, vehicles, wooden pallets, and trash.

From January 1986 to August 1988, EPA conducted the Remedial Investigation/Feasibility Study (RI/FS) for the Site. The FS was completed in 1988, which included the evaluation of an innovative technology under development by the U.S. Department of Interior—Bureau of Mines (BOM), which involved the treatment of both battery casing chips and contaminated soils to remove and recycle lead.

Selected Remedy and Remedial Action Objectives

Lead was selected as the contaminant of primary concern at the Site due to its detection in soils and in the on-site groundwater well at levels that may cause adverse health effects, and its inherent toxicity.

The Remedial Action Objectives (RAOs) were not listed in the 1988 ROD or 1997 ROD Amendment. The following RAOs are inferred from the remedy and discussion in the 1988 ROD and 1997 ROD Amendment:

- Prevent lead exposure via inadvertent ingestion and inhalation of lead contaminated soil and dust by non-residential commercial/industrial workers and trespassers.

- Prevent ingestion of lead contaminated groundwater by preventing migration of lead into the groundwater aquifer and water supply to adjacent properties.
- Prevent non-residential commercial/ industrial exposure to lead contaminated soils that may result in adverse health effects due to exposure to lead.

As noted earlier, the remedy for the Site was selected in a 1988 ROD and subsequently modified by a 1997 ROD amendment. Both of these decision documents are discussed below.

The selected remedy in the September 1988 ROD consisted of:

- Excavation and on-site treatment of approximately 55,000 cubic yards of battery casings with recycling of the recovered lead, treatment chemicals, and polypropylene battery casings. Recycling of rubber battery casings, or disposal at a non-Resource Conservation and Recovery Act (RCRA) landfill if recycling not possible.
- Excavation and onsite treatment of approximately 45,000 cubic yards of contaminated surface soils with lead concentrations greater than 500 milligram per kilogram (mg/kg) and subsurface soils failing leachability for lead established at the Extraction Procedure toxicity test level of 5.0 milligrams per liter (mg/L). Treated soils will be replaced on-site and covered with clean fill.
- Quarterly monitoring of groundwater during implementation of the remedial action and for two years following its completion
- Monitoring of surface waters as necessary during remediation to comply with discharge requirements
- Off-site soils and sediment from the Tributary to Island No. 3 will be excavated and brought on-site and mixed with the treated soils and covered with clean fill.
- Building/facilities and debris decontaminated and disposed of off-site in a non-RCRA landfill.
- A new well will be constructed for the nearby residences and the USL office
- Site drainage facilities will be constructed
- Minimal deed restrictions will be required on the property

The ROD also called for several investigations to be conducted during the remedial design to refine aspects of the remedial action:

- Further laboratory and pilot-studies to be conducted by or with oversight from the United States BOM to optimize the treatment process before full-scale implementation.
- Additional soil sampling at depth including Extraction Procedure toxicity analysis for lead to quantify the amount of soil requiring treatment.
- Additional surface soil sampling, including areas offsite, to quantify volumes of soil subject to remedial action.
- Additional sediment sampling to define the quantity of sediment subject to remedial action.

The Pre-Design Studies were developed by the BOM and implemented by the United States Army Corps of Engineers (USACE). In November 1991, the USACE completed the Pre-Design Report that included complete characterization and identification of all materials present at the Site, fully defined the extent of contamination, and evaluated current Site conditions. By June 1992, the USACE completed the plans for construction of a pilot plant for treatment of the

battery casing chips and contaminated soils, along with an economic analysis report. Based upon its review of these reports, the EPA ceased development of the innovative technology because the costs were substantially higher than those considered in the remedy process.

A revised risk assessment submitted by the PRPs on September 16, 1996, was approved by the EPA, in consultation with the Ohio EPA, which resulted in a value of 1,550 mg/kg total lead in soil for the on-site cleanup level. The Site is zoned 1-1, industrial district within the county and was deed-restricted for that use. An Ecological Evaluation completed by USACE in January 1997 determined that the relatively low level of post-remedial residual ecological risk would not be unacceptable. In June 1997, the EPA issued a ROD Amendment selecting excavation, treatment, and disposal of the battery casing chips and lead-contaminated soils in an EPA-approved landfill.

The selected remedy in the 1997 ROD Amendment consisted of:

- Lead Acid Battery Casing Chips: Excavation of approximately 56,000 cubic yards of battery casing chips for treatment on-site, or off-site at permitted treatment storage and disposal facilities (TSDF), to meet the land disposal requirements (LDRs) as a RCRA D008 waste, and disposal at an approved solid waste landfill.
- Contaminated Soils: Excavation of the first foot of contaminated surface soils under the existing battery casing chips pile, which exceed the cleanup level of 1,550 mg/kg lead in soil. In addition, any on-site soils outside the boundaries of the battery casing chips pile that exceed the cleanup level of 1,550 mg/kg, will be either consolidated under a solid waste cover system, or excavated and disposed of at an approved solid waste landfill, provided testing show that those soils are not hazardous wastes.
- Lead in Soil Clean Up Level: The Potentially Responsible Parties (PRPs)/Defendants submitted a revised risk assessment dated September 19, 1996, which the EPA and the Ohio EPA have reviewed and approved. The EPA, in consultation with the Ohio EPA, established a level of 1,550 mg/kg lead in soil as a cleanup level for on-site soils.
- Excavation Requirements: Any lead-contaminated water rising into the excavation would have to be treated to meet the substantive requirements of the Clean Water Act if the water was transported for treatment off-site.
- Pre-Excavation Confirmatory Sampling: Confirmatory sampling of the contaminated areas on the USL Site will be conducted.
- X-Ray Fluorescence ("XRF") Field Sampling Instrumentation: The XRF field sampling technology will be used to determine the soils that are above the cleanup level and that will be excavated and disposed of at an approved solid waste landfill.
- Post-Excavation Confirmatory Soil Sampling: Post-excavation soil sampling will be conducted to confirm that all soils with lead contamination in excess of the cleanup level, above the regional groundwater table, have been excavated and removed from the USL Site.
- Solid Waste Cover System Requirements: A solid waste cover system will be constructed over any contaminated soils that contain greater than 1,550 mg/kg lead, which remain above the regional groundwater table. A solid waste cover system is not required if all battery casings and soil contamination in excess of 1,550 mg/kg is removed.
- Native grass vegetation.

- **Treatment/Disposal:** The toxic characteristic leaching procedure (TCLP) test will be used at the USL Site to determine whether or not the soils that are contaminated with lead in excess of the cleanup level of 1,550 mg/kg lead in soil, are nonhazardous and should go directly to an approved solid waste landfill without any treatment, or are characteristic for lead and therefore, hazardous, and need to be treated, either on-site or off-site at a permitted TSDF, to meet LDRs. Contaminated soils that fail the TCLP test will be treated to meet LDRs and pass the TCLP test, followed by disposal in an approved solid waste landfill. If a batch of treated soils fails the TCLP, the soil will be treated again until the batch met the LDRs for a non-lead acid battery RCRA D008 waste. The soils contaminated with lead which exceed the cleanup level, that meet LDRs and pass the TCLP test, will be disposed of at an approved solid waste landfill, without further treatment.
- **Groundwater Monitoring:** The technical groundwater monitoring requirements for this USL Site are described in 40 C.F.R. Parts 264, Subpart F - Releases from Solid Waste Management Units. The groundwater monitoring action level for lead is 50 parts per billion (ppb).

The following original ROD remedial actions established in the 1988 ROD remained in place in the 1997 ROD Amendment:

- **Monitoring of Surface Waters and Air:** Monitoring of the surface waters and air will be performed during the remedial action and quarterly for two years after completion of the Remedial Action.
- **Excavation and Non-Excavation Area Backfill. Grading, Topsoil, Erosion Control, and Revegetation:** In addition to erosion control and revegetation of all backfilled areas, all areas disturbed during the remedial action will be filled and graded with clean fill. The Site will be graded in such a way as to promote positive site drainage and to prevent ponding of waters on the site, once remedial actions are complete.
- **Deed Restrictions:** Deed restrictions will be required to: (1) protect the solid waste cover system; (2) ensure that the site is and remains zoned light industrial or commercial; (3) ensure that there are restrictions prohibiting excavation in those areas of the USL Site that continue to have lead in soil at depth (below the regional groundwater table) in excess of the cleanup level of 1,550 mg/kg lead in soil; and (4) ensure that these restrictions run with the property.
- **Fencing:** The fence shall be repaired and maintained throughout the remedial design/remedial action phase, to prevent access and vandalism to the USL Site.

Remedy Implementation

On September 12, 1991, an Administrative Order by Consent was executed under which certain PRPs constructed a fence around the perimeter of the Site to prohibit access and eliminate direct contact with the hazardous materials at the Site.

Beginning in August 1992, EPA implemented components of the 1988 ROD remedy, while other components were being reconsidered based on the pre-design investigations and new cost estimates. The first phase of the Remedial Action ("Phase I - RA") addressed off-site contaminated areas, secured onsite soils and battery casing chips, and secured other site-related

areas, so that neither the public health nor the environment would be affected while the remedy was being reconsidered.

The Phase I - RA was conducted by the USACE, through an interagency agreement with the EPA, and was completed in March 1995. The USACE submitted the final report for the Phase I - RA, dated December 8, 1995. Phase I of the RA included the following activities:

- Excavation of Off-site Soils: Off-site contaminated soils were removed in all areas of concern, the backyard of a nearby residence, the lot of a used car business, and along the USL Site access road. Excavation proceeded until lead concentration levels above 210 mg/kg were removed in the top two feet, and 500mg/kg at depths greater than two feet. Properties were sampled in 10 by 10-foot grid sections and soil was sent for laboratory analysis for total lead. 475 cubic yards were excavated from the residential properties, and 11,600 cubic yards from a commercial property. These soils were transported on-site for temporary stockpiling to be disposed of during the RA. Verification sampling was performed, and sent to a laboratory for analysis once excavation was completed; no additional excavation was required
- Replacement of Off-Site Soils: Off-site contaminated soils were replaced with clean soils and returned to original grade and vegetation. The lead concentration limit for the backfill was established at 210 mg/kg
- Cover Soils and Battery Casing Chips: Stockpiled soils and battery casing chips that were moved onsite for temporary stockpiling were covered with dust control tarpaulins. Subsequently in 1996, one year after this action was taken, the stockpiled soils and battery casing chips were leveled out over the existing area of contaminated soils to be remediated along with site soils.
- Installation of Residential Well: A new residential well was installed for an adjacent residence and the former USL Office Building. The newly installed residential well was sampled to ensure proper installation.
- Decontamination, Removal and Disposal: Two on-site buildings were decontaminated, removed, and disposed of off-site. 63.3 tons of non-hazardous special waste, 240 cubic yards of hazardous waste, 258 tires, 200 yards of scrap metal, and 10 cubic yards of transite siding were disposed of at disposal facilities.
- Removal and Disposal: All drums and debris located on-site were removed and disposed of off-site. 31 tons of non-hazardous special waste were disposed,
- Installation of a Septic Tank System: A new septic tank system was installed for the USL office property.

Following the 1997 ROD amendment and completion of the new human health and ecological risk assessment, a Consent Decree was negotiated with the USL Settling Defendants. The CD was lodged on July 31, 1998, with the U.S. District Court for Southern District of Ohio, Western Division, Dayton, Ohio, for Remedial Design (RD) and RA, and was entered on September 28, 1998. The EPA approved the RD/RA Work Plan on April 23, 1999, and issued a notice to proceed with remedial action.

In June 1999, remedial action activities commenced pursuant to the final Amended ROD. These remedial activities were completed on November 30, 1999. ENTACT, LLC, performed

the remedial action for the PRPs. EPA oversight was performed by USACE from the Huntington and Omaha Districts. Nearly 62,000 cubic yards of battery casing debris were excavated, treated, and shipped off-Site for disposal at a Subtitle D landfill. Approximately 8,000 cubic yards of soil under the battery casing debris and 7,000 cubic yards of overburden soil were excavated, treated, and shipped off-Site to the Subtitle D landfill for disposal.

The treatment of battery casing debris and contaminated soils onsite involved stabilization using sizing, screening, and high-speed mixing with a phosphate based fixing additive. The treatment process was designed to render the debris nonhazardous < 5.0 mg/L TCLP for lead and meet the LDR technology-based treatment standard of reduced leachability. Treated materials were sampled at 200 cubic yard intervals to test that TCLP Lead results were < 5.0 mg/L before treated material was loaded for transport to the off-site. Approximately 1,550 cubic yards of the of the overburden soils exceeded the 1,550 mg/kg cleanup level for lead but passed the TCLP test for lead. This material was transported to the Subtitle D landfill without treatment. Additionally, 3,000 cubic yards of overburden soil from the stockpile was tested and did not require treatment. This overburden soil was utilized as clean backfill for the Site. Treated soils and battery casing debris that did not meet the cleanup standards during post-treatment verification sampling were retreated and re-sampled until the cleanup standards and landfill disposal requirements were achieved. Table 1 of the 2000 RA Complete Report shows the TCLP Results.

To assist in determining the required depth of excavation, x-ray fluorescence (XRF) screening devices were utilized during the remedial action. This allowed the contractors to excavate soils to a certain depth, then use the XRF to get an immediate reading of the total lead concentration in the soils. If soils exceeded 1,550 mg/kg lead, the excavation depth was increased until this cleanup criterion was achieved. Soil samples were collected and also verified by laboratory analysis. As all soils above the regional groundwater level exceeding the 1,550 mg/kg cleanup level were removed, no Solid Waste Cover System, as described in the ROD Amendment, was required at the Site. Soils utilized for backfill and grading were sampled and analyzed for the following compounds: volatile organic compounds; pesticides; polychlorinated biphenyls; total petroleum hydrocarbons; and metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver). Sample analysis showed the compounds were below the detection limits for all compounds except barium. The barium concentration was 218 mg/kg, which was similar to surrounding concentrations.

Additionally, one metal building was demolished and the scrap metal was transported to a Subtitle D landfill. The remediated areas were revegetated with a mixture of seed. The presence of heavy vegetation in the disposal area and across the site contributes to making the remaining lead contamination less bioavailable to future receptors. Secure fencing around the site also prevents trespasser access onto the property.

Surface water monitoring and sampling were conducted during the remedial action. This was done to monitor the releases of lead to the McKaig ditch as a result of the materials handling at the Site. Storm water runoff control measures were implemented such as installing a straw/hay bale unit directly up-gradient of the McKaig ditch which reduced the impacts from the Site to the ditch.

Seven residential and four groundwater monitoring wells were sampled in accordance with the Phase I Groundwater Monitoring Program Plan. All wells were sampled for lead and arsenic. The results of such sampling showed that the Federal Primary Drinking Water Standards for arsenic or lead were not exceeded.

Air monitoring activities were performed to monitor particulate matter and lead concentrations throughout the remedial action. Ambient Air Quality Standards were not exceeded for lead or particulate matter during the remedial action.

On November 30, 1999, the EPA, the Ohio EPA, and the USACE conducted the final inspection of the USL Site. EPA determined that the remedy was constructed according to the RD/RA specifications and signed a Preliminary Close-Out Report on December 15, 1999. The PRP submitted a site-wide Remedial Action Report (RA Report) on February 3, 2000. Figure 4 shows an image of the site from May 1999 while Remedial Action activities were taking place on site.

Institutional Controls (ICs)

The Site is zoned I-1, industrial district within the county and is deed-restricted for that use. On August 11, 2015, an EC was recorded in the Miami County Recorder's office which restricts future use of the Site. The EC outlines the long-term stewardship guidelines that should be taken to ensure that the use of the property is consistent with the remediation of soils to commercial industrial land use standards. The precautions against potential environmental exposures at the site are outlined in the Environmental Covenant are as follows:

- 1) The property shall solely be used for commercial industrial purposes. Appropriate uses are outlined in the Environmental Covenant.
- 2) No groundwater shall be used for potable purposes.
- 3) The owner shall maintain the existing six-foot high security fence around the perimeter of the property to limit access to trespassers.
- 4) The Environmental Covenant runs with the land.
- 5) The owner shall submit to EPA and Holders on an annual basis that the activity and use limitations of the Environmental Covenant remain in place and are being complied with.

During the remedial action, all soils exceeding the commercial industrial cleanup standard of 1,550 mg/kg total lead were transported to a Subtitle D landfill. In addition, 3,000 cubic yards of soil were found to contain less than 1,550 mg/kg total lead and were used for onsite backfill material. Based on the extensive excavation of soils, soil sampling results and the groundwater sampling results Region 5 determined an IC to prohibit excavation in soils at depth was not required as no areas of soil exceeded 1,550 mg/kg of total lead.

On July 2015, Judge Rice of the Southern District of Ohio signed an Order, which authorized the sale of the Site to the WACO Historical Society. The WACO Historical Society operates a historical aviation museum on the parcel adjacent to the Site to the north. The museum purchased the Site on August 21, 2015. The museum has plans to extend the runway from its property on to the USL Site, which is allowed as a specified land use and described in the Site EC. As of Spring 2021, no date has been set for construction of the runway extension.

Since compliance with ICs is necessary to sustain the protectiveness of the remedy, planning for long-term stewardship is required to ensure that the ICs are maintained, monitored, and enforced so that the remedy continues to function as intended. Ownership by the WACO Historical Society benefits the Site by providing long-term stewardship. ICs currently in place will protect any workers and ensure that any future excavated soils are properly managed. Ohio EPA and EPA receive annual reporting that the ICs remain in place and that no violations of the ICs have occurred. A Risk Management Plan has been developed to guide long-term stewardship at the Site. The Risk Management Plan describes the long-term stewardship procedures outlined in the EC, provides a framework for soil management to ensure any excavated soils remain onsite or are properly managed, and outlines notification procedures for any redevelopment work. EPA additionally documents that effective ICs are maintained and the remedy continues to function as intended by the decision documents during the FYR review process. FYRs include inspections, review of the ICs, and certification that ICs remain in-place and effective.

Final Inspection

A site inspection was conducted on September 1, 2020 by Katherine Thomas, EPA Remedial Project Manager, with John Schilling, WACO Historical Society, and Ken Ott, from the Historical WACO Field. Ohio EPA did not participate in the site inspection due to Ohio EPA COVID-19 protocols. In summary, the perimeter-area fencing, and access gates are generally in good condition. Site use is restricted by the fencing and gates. No signs of vandalism or trespassing were observed. No uses of the site incompatible with the 2015 ERC were observed. The area subject to remedial action activities is heavily vegetated. Significant efforts have been taken to remove vegetation in the northern half of the parcel (outside of the eight acre area subject to RA) and grade the site in a manner that would support the future extension of the runway, as permitted in the EC. EPA concluded that minor repairs to the fencing damaged during a recent flooding event were needed and that additional signage should be added to the perimeter fencing.

III. Monitoring Results

Once excavation of all casing debris and impacted soils exceeding 1,550 mg/kg total lead located above the regional water table was completed, verification sampling of the underlying soils beneath the battery casing debris pile was initiated. The purpose of the sampling was to verify that the remaining soils located above the regional water table did not exceed the action level of 1,550 mg/kg total lead in soils. A 50-foot by 50-foot coordinate grid system was installed to track sampling and excavation activities for verification purposes. To assist in the excavation activities, an x-ray fluorescence (XRF) screening device was used to direct the excavation activities within the underlying soils. The XRF readings provided immediate indications of the total lead upon completion of the excavation activities. A soil sample was also collected in each grid location and submitted to a laboratory for total lead analysis to verify that the action level in soils had been met at that location. If the soil sample indicated that the action level of 1,550 mg/kg had not been met, the XRF screening device would be used to delineate the area further requiring excavation. The impacted soils would be excavated, and after excavation an additional soil sample was collected for laboratory analysis for total lead to verify that the remaining soils did not exceed 1,550 mg/kg total lead. Results for the verification sampling from

the 2000 RA Report can be found in Figure 4 and in Table 4. Figure 3 shows the initial soil verification results. Table 4 shows the laboratory results for both the initial sampling results, and reverification samples taken at the final excavation depth for any location where additional excavation was necessary due to exceedances above the 1,550 mg/kg lead cleanup number. All reverification laboratory samples taken from locations that required additional excavation were below the 1,550 mg/kg cleanup level. The sample locations in Table 4 use the grid system shown in Figure 3. As all soils above the regional groundwater level exceeding the 1,550 mg/kg cleanup level were removed, no Solid Waste Cover System, as described in the ROD Amendment, was required at the site.

EPA required the PRPs to develop a groundwater monitoring plan for the Site. The purpose of this plan was to ensure that the groundwater was not adversely impacted by the past Site conditions. The PRPs developed the plan and incorporated it into the final Operation and Maintenance Plan for the Site dated February 2000. The plan required limited groundwater monitoring sampling for the Site. EPA approved this limited monitoring program for the following reasons: the battery casings and lead-contaminated soils were excavated, transported off-Site, and disposed off-Site; and, historical groundwater monitoring and residential well sampling since 1979 did not show exceedances of the FPDWS for lead. The groundwater samples were analyzed for the following parameters: total lead, total arsenic, dissolved lead, dissolved arsenic, oxidation-reduction potential, specific conductivity, temperature, and pH. The metal analyses were performed using EPA Method 6020A, and metal results were compared to the 0.05 mg/L arsenic and the 0.015 mg/L lead FPDWS.

In July 1999, monitoring wells sampled as part of the Phase I groundwater monitoring program plan did not show any exceedances of the FPDWS for arsenic and lead. The off-Site residential well results in July 1999 showed that arsenic and lead were non-detectable in all residential wells except RW-7. Residential well RW-7 showed a total lead concentration of 0.0018 mg/L which is below the FPDWS. Table 1 shows the Phase I groundwater sampling results. During the Phase II April 2000 sampling event, an upgradient monitoring well and three downgradient monitoring wells were sampled and did not show any exceedances of the FPDWS for arsenic or lead. Table 2 shows the Phase II groundwater sampling results.

Sampling and analysis indicate that lead is not migrating with the groundwater, and the removal of the lead source minimized any potential future impacts to the groundwater. Also, past sampling events since 1979 showed that lead and arsenic concentrations from groundwater monitoring wells and residential wells were non-detectable or below the FPDWS for lead and arsenic. Therefore, groundwater monitoring was terminated at the Site in April 2000.

The current landowner, WACO Historical Society, maintains the property, including the perimeter fence, and reports IC Compliance to Ohio EPA and EPA on an annual basis. A Risk Management Plan has been developed to guide the long-term stewardship of the Site. The Risk Management Plan describes the long-term stewardship activities outlined in the EC as well as notification and annual reporting requirements to Ohio EPA and EPA.

IV. Attainment of Groundwater Restoration Cleanup Levels

This section is not applicable. The selected remedy does not require groundwater restoration as a cleanup objective. The components of the selected remedy included limiting direct contact with surface and sub-surface soils, limiting the potential for soil to serve as a source of groundwater contamination. As detailed above, sampling events since 1979 showed that lead and arsenic concentrations from groundwater monitoring wells and residential wells were non-detectable or below the FPDWS for lead and arsenic.

V. Summary of Operation and Maintenance (O&M) Required

No operation and maintenance (O&M) activities are required as part of the remedy, besides those outlined in the EC.

On February 8, 2019, the United States District Court for the Southern District of Ohio entered a Consent Decree resolving the United States' cost recovery claims at the United Scrap Lead Co., Inc. site with the last three non-settling viable defendants in the battery-cracking *Atlas Lederer* arranger-liability case. Enforcement activities have concluded at the Site, and O&M is conducted by the current landowner, WACO Historical Society.

The August 2015 EC recorded in the Miami County Recorder's office remains in place and effective. The ICs on the USL Site parcel restrict future use of the Site including the following: restricted to commercial /industrial activities; prohibit the use of groundwater for purposes other than commercial/industrial; and maintain existing six-foot perimeter fence. WACO Historical Society maintains the property and performs the O&M necessary at the site. As previously discussed, long-term stewardship is required to ensure that the ICs are maintained, monitored, and enforced. A site Risk Management Plan that outlines the long-term stewardship procedures has been developed. The O&M requirements from the EC and notifications and annual reporting requirements are described in the Risk Management Plan.

VI. Demonstration of Cleanup Activity Quality Assurance/Quality Control (QA/QC)

A QA/QC program for the RA construction activity was outlined in the RD/RA work plan and the Quality Assurance Project Plan (QAPP). The EPA approved the Quality Assurance Project Plan for the Remedial Action on May 11, 1999. Sampling and analysis were conducted according to an EPA-approved Sampling and Analysis Plan or QAPP. The analytical data were reviewed according to EPA guidance. The data collected met the QA criteria and are usable for its intended purpose. Procedures were implemented to ensure precision, accuracy, representativeness, completeness, and comparability of all generated data. Data review and validation was performed throughout the remedial action.

As part of the Remedial Action data validation process, at least 10% of the data from the Level 3 reports was reviewed by the QA Manager to check on the data validity. A summary of the data

review for the treatment samples and verification samples is presented in the 2000 Remedial Action Report. The review showed that all data was acceptable for use and the project completeness goals were met.

VII. Five-Year Review (FYR)

Statutory FYRs are required due to the fact that hazardous substances, pollutants, or contaminants remain at the site above levels that allow for unlimited use and unrestricted exposure (UU/UE). The Site was cleaned to a commercial industrial clean closure, but soil lead levels between 400 mg/kg and 1,550 mg/kg remain at the Site. Additionally, the Site is located within the 10- and 50-year flood plains as defined by the Miami Conservancy District. The EC at the site restricts future use to commercial/industrial development. Consequently, a statutory five-year review will be required in accordance with Section 121(c) of CERCLA and as provided in OSWER Directive. FYRs were conducted in 2001, 2006, 2011, and 2016. A FYR will be published in April 2021 and FYRs will continue to be published every five years.

On August 11, 2015, an EC was recorded in the Miami County Recorder's office for the Site. On August 21, 2015, WACO Historical Society purchased the Site (Attachment 2). In 2015, EPA determined that the Site met the requirements for a Site-wide Ready for Anticipated Use Determination (SWRAU) based on previous remedial action and the documents reviewed for the Site. A SWRAU determination was signed by EPA on October 8, 2015.

The most recent FYR, completed on April 14, 2016, determined that the remedy at the United Scrap Lead Superfund Site is protective of human health and the environment. The remedial measures currently in place are functioning as intended by the decision documents, thereby eliminating the potential exposure pathways identified in the RI, ROD, and ROD Amendment. The 2016 FYR discusses the 2001 risk evaluation conducted by EPA's human health toxicologist assessing the residual concentrations of lead in the soil in the onsite fenced area. The assessment utilized the laboratory results from the soil verification sampling conducted at the conclusion of the RA that were taken using a 50-foot by 50-foot grid across the site. The mean lead concentration in the total soil fraction across the entire fenced in area at the site was determined to be 209 (+ 291) mg/kg. Variations in the lead concentrations in the individual sampling grid data indicated that potential risk may vary depending on exposure to different areas of the site. The southerly third of the site, where operations and the RA took place (based on 47 sampling grid blocks which account for approximately 2.7 acres), was found to have a mean lead concentration in the total soil fraction of 275 (+ 429) mg/kg, thus indicating a small increase in exposure. The remaining soil lead concentration in the most contaminated half-acre area (based on 9 contiguous sampling grid blocks), was found to have a mean soil lead concentration of 775 (+ 470) mg/kg. While the mean residual lead concentrations on Site are below the current industrial commercial cleanup standard of 800 mg/kg, the assessment recommended that site security in the form of fencing should remain in place to prevent trespassers from entering the property.

A review of the ICs indicates compliance with the stated objectives of the 2015 EC. No inappropriate land or groundwater use has been observed. Access to the Site is restricted by

the use of perimeter fencing. No issues or recommendations that affect the protectiveness of the remedy were identified during the 2016 FYR. The most important tasks to continue are ensuring that the ICs remain in place and effective. IC effectiveness will continue to be evaluated through annual submissions from WACO Historical Society to Ohio EPA, site inspections, and through continued FYRs at the Site. The FYR recommended minor repairs to the fencing surrounding the site. Finally, the FYR recommended deletion of the Site from the NPL.

In 2020, EPA conducted an analysis of the site-specific clean-up level to ensure that it is still considered protective of human health (Appendix A). As the site is commercial/industrial and children will not be present long-term on the site, it was determined that the 2019 update of the Adult Lead Model (ALM) should be used to ensure that clean-up level of lead left in place is still considered protective from potential exposures to the fetus of pregnant women who may work on or visit the site. Using the same exposure scenarios as outlined in the 1996 risk assessment, the lead soil cleanup level of 1,550 mg/kg equates to a 95% probability of resulting in a fetal blood lead level below 7 ug/dL. As of 2021, there are no full time commercial/ industrial operations or workers at the site. An unoccupied fenced and secured utility shed operated by MetroNet is located on the western edge of the Site, and a portion of the northwestern area of the Site is used for utility maintenance vehicle parking and storage.

The 2021 FYR has been drafted and will be published in April 2021. The 2021 FYR finds that the recommendations from the 2016 FYR have been addressed. No issues or recommendations that affect the protectiveness of the remedy were identified. The 2021 FYR concludes that the landowner should continue to repair the perimeter fence and reattach no trespassing warning signs, as needed, and that the EC should be amended to reference the Risk Management Plan for long-term stewardship procedures. Finally, the 2021 FYR notes that all the inferred RAOs have been met and that effective ICs are in place, and recommends the Site be deleted from the NPL.

VIII. Site Completion Criteria

The Site meets all site completion requirements specified in OSWER Directive 9320.2-22, *Close Out Procedures for National Priorities List Sites*. Cleanup goals for the site have been met and are consistent with Agency policy and guidance. Cleanup actions specified in the ROD and ROD Amendment for the site have been implemented and the site meets acceptable risk levels for all media and exposure pathways. Confirmatory groundwater sampling results show that the Site does not pose any threat to human health or the environment. The ongoing IC actions required at the Site are consistent with Agency policy and guidance. Therefore, EPA has determined that no further Superfund response is necessary at the Site to protect human health and the environment.

The Site achieved Construction Completion with the signing of the Preliminary Closeout Report on December 10, 1999. Groundwater monitoring was discontinued in April 2000 due to consistent sampling results indicating no exceedances of FPDWS onsite and at adjacent residential wells. ICs for the site were implemented in August 11, 2015. The 2015 EC restricts future use of the Site to commercial /industrial activities, prohibits the use of groundwater for purposes other than commercial/industrial, and requires the maintenance of the existing six-foot perimeter fence. EPA determined that the Site met the requirements for a Site-wide Ready for

Anticipated Use Determination (SWRAU) based on documenting that all cleanup goals in the ROD or other decision document have been achieved for any media that may affect current and reasonably anticipated future land uses, so that there are no unacceptable risks, and that all institutional or other controls required in the ROD or identified as part of the response action to help ensure long-term protection have been put in place. A SWRAU determination was signed by EPA on October 8, 2015.

IX. Bibliography

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EPA (November 27, 2001) *Risk Evaluation for United Scrap Lead Trespasser Scenario*

EPA (September 2, 2006) *Second Five-Year Review Report for United Scrap Lead Co., Inc. Superfund Site Miami County, OH*

EPA (September 8, 2011) *Third Five-Year Review Report for United Scrap Lead Co., Inc. Superfund Site Miami County, OH*

EPA (October 8, 2015) *EPA Letter Re: Site-wide Ready for Anticipated Use (SWRAU)*

Hollencamp (August 11, 2015) *Environmental Covenant Arthur Hollencamp*

US District Court Southern District of Ohio Western Division (July 7, 2015) *Order Signed Case No. C-3-91-309 Re: Sale of United Scrap Lead Site to WACO Historical Society*

EPA (April 14, 2016) *Fourth Five-Year Review Report for United Scrap Lead Co., Inc. Superfund Site Miami County, OH*

WACO Historical Society (March 2021) *Risk Management Plan for the United Scrap Lead Superfund Site*

List of Attachments

Figure 1 – Site Location

Figure 2 – Site Map Including Surrounding Areas

Figure 3 – Site Map May 1999 Showing Remedial Action Activities on Site

Figure 4 – On Site Soil Verification Sampling Results from the 2000 RA Report

Table 1 – Phase I Groundwater Sampling Results

Table 2 – Phase II Groundwater Sampling Results

Table 3 – ICs Currently in Place at United Scrap Lead Co., Inc. Site

Table 4 – On Site Soil Verification Sampling Results from the 2000 RA Report

Appendix A: December 2020 Protectiveness Evaluation of Lead Clean-up Level for the United Scrap Lead Site

Approved by:

4/7/2021

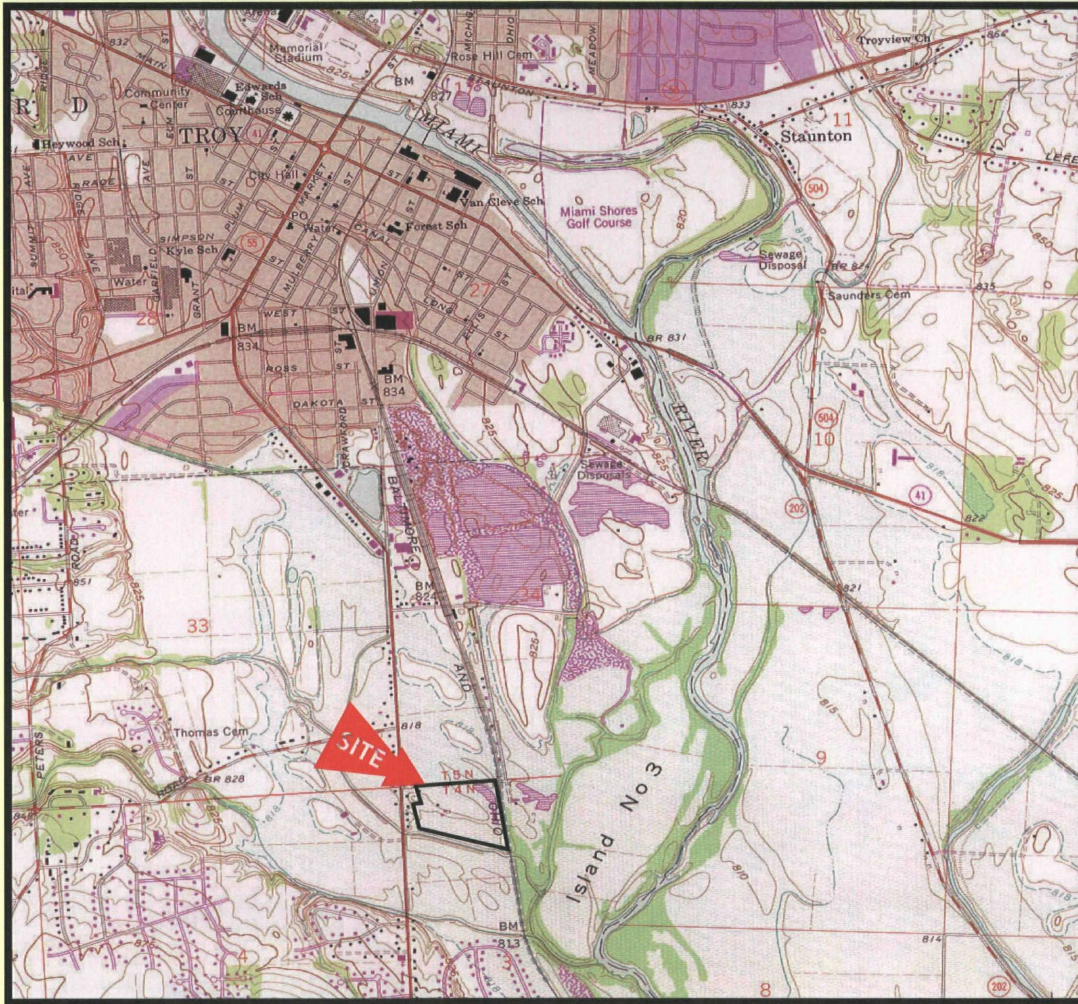
X 

Douglas Ballotti, Director

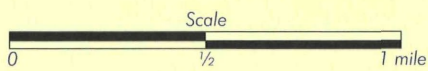
Superfund & Emergency Management Division

Signed by: DOUGLAS BALLOTTI

Figure 1: Site Location



After U.S.G.S. 7.5 Min. Topo Quad., Troy, Ohio, 1957, Revised 1982



Quadrangle Location


FIGURE TITLE: General Site Location Map	CLIENT: United Scrap Lead	
DOCUMENT TITLE: Groundwater Report	LOCATION: Troy, Ohio	
 <p>ENTACT 1616 Corporate Ct., Suite 150 Irving, Texas 75038 (972)580-1323</p>	DATE: 7/2000	PREPARED BY: LC
	SCALE: As Shown	CHECKED BY: LC
	PROJECT NO: D523	FIGURE NO: 1

Figure 2: United Scrap Lead Co., Inc. Site Map Including Surrounding Areas

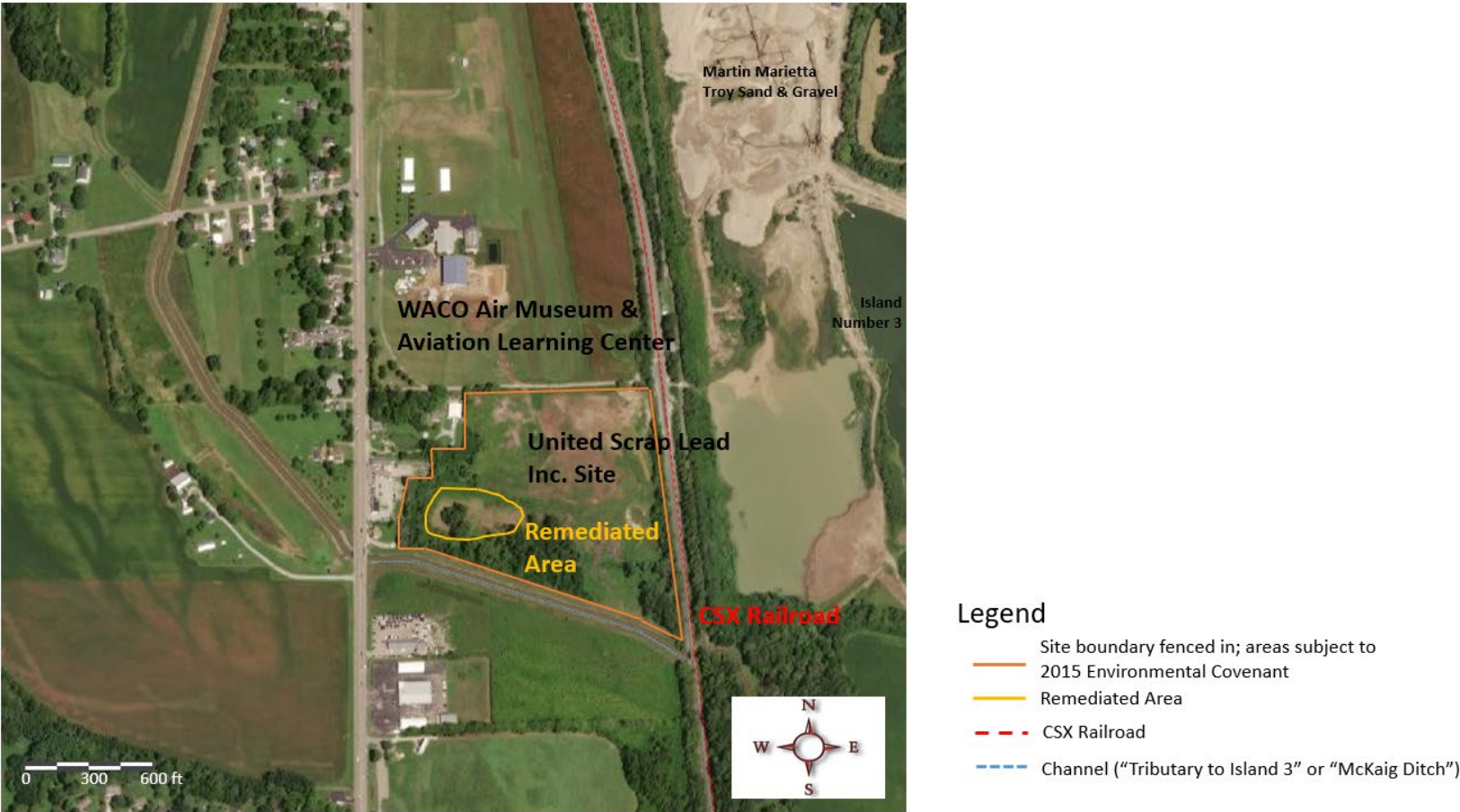


Figure 3: Site Map May 1999 Showing Remedial Action Activities on Site



Figure 4: On Site Soil Verification Sampling Results from the 2000 RA Report

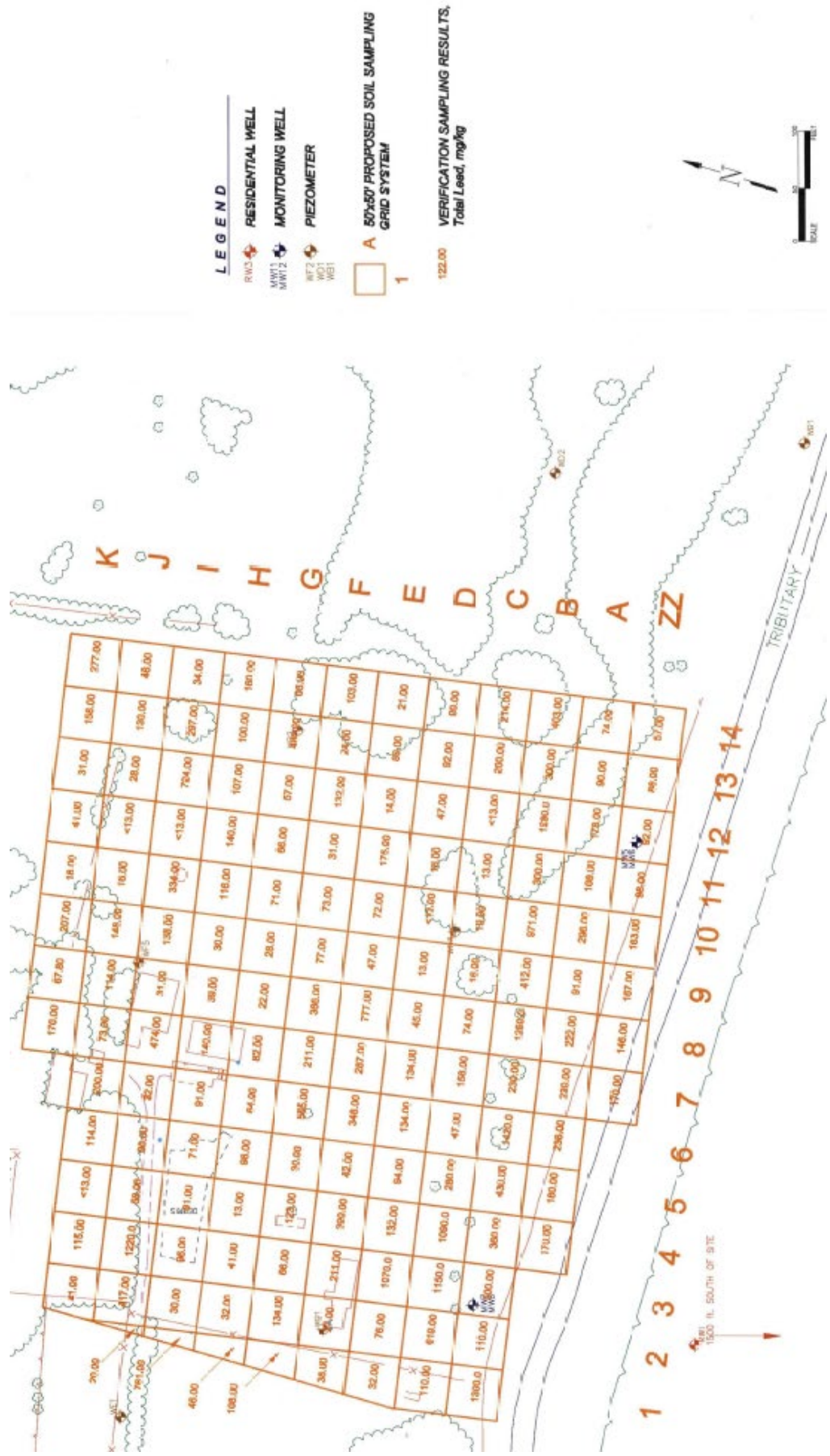


Table 1: Phase I Groundwater Sampling Results

Well Number	Date Sampled	Comments	Total Arsenic, mg/L	Dissolved Arsenic, mg/L	Total Lead, mg/L	Dissolved Lead, mg/L
Site Wells						
MW-6	4/25/00	Downgradient	< 0.0050	0.0074	0.0013	< 0.0010
MW-6A (duplicate)	4/25/00	Downgradient	0.0085	0.0066	0.0043	< 0.0010
MW-8	4/25/00	Downgradient	0.0078	< 0.0050	0.0022	< 0.0010
MW-10	4/25/00	Upgradient	< 0.0050	< 0.0050	< 0.0010	< 0.0010
MW-16	4/25/00	Downgradient	< 0.0050	< 0.0050	< 0.0010	< 0.0010
Rinsate Blank	4/25/00		< 0.0050	NA	< 0.0010	NA

Notes:

1. Maximum Contaminant Levels are as follows: Arsenic, 0.05 mg/L; Lead, 0.015 mg/L.
2. < - Indicates that the constituent was not detected above the stated reporting limit.

Table 2: Phase II Groundwater Sampling Results

Well Number	Date Sampled	Comments	Total Arsenic, mg/L	Dissolved Arsenic, mg/L	Total Lead, mg/L	Dissolved Lead, mg/L
Site Wells						
MW-6	1/25/00	Downgradient	< 0.0050	0.0054	0.0022	< 0.0010
MW-8	1/25/00	Downgradient	< 0.0050	< 0.0050	< 0.0010	< 0.0010
MW-10	1/25/00	Upgradient	< 0.0050	< 0.0050	< 0.0010	< 0.0010
MW-16	1/25/00	Downgradient	< 0.0050	< 0.0050	< 0.0010	< 0.0010
Rinsate Blank	1/25/00		< 0.0050	NA	< 0.0010	NA
Residential Wells						
RW-1	1/26/00	Addresses Redacted	< 0.0050	NA	< 0.0010	NA
RW-2	1/26/00		< 0.0050	NA	0.0025	NA
RW-3	1/25/00		< 0.0050	NA	< 0.0010	NA
RW-4	1/25/00		< 0.0050	NA	< 0.0010	NA
RW-4D (duplicate)	1/25/00		< 0.0050	NA	< 0.0010	NA
RW-5	NS		NS	NS	NS	NS
RW-6	NS		NS	NS	NS	NS
RW-7	1/26/00		< 0.0050	NA	< 0.0010	NA
RW-7D (duplicate)	1/26/00		< 0.0050	NA	0.0035	NA

Notes:

1. Maximum Contaminant Levels are as follows: Arsenic, 0.05 mg/L; Lead, 0.015 mg/L.
2. < - Indicates that the constituent was not detected above the stated reporting limit.

Table 3: ICs Currently in Place at the United Scrap Lead

Media, engineered controls, and areas that do not support UU/UE based on current conditions	IC Objective	Title of IC Instrument Implemented and Date
Groundwater	Restrict groundwater use to commercial/ industrial non-potable uses; Prohibit potable use of groundwater	EC, recorded August 11, 2015, at the Miami County Recorder's Office, Troy, OH
Soils	Restricts land use to Commercial/ Industrial; Prohibit residential and other prohibited developments; Prohibit direct exposure	EC, recorded August 11, 2015, at the Miami County Recorder's Office, Troy, OH
Access Restrictions	Maintain integrity of the fence; Limit access to trespassers	EC, recorded August 11, 2015, at the Miami County Recorder's Office, Troy, OH

Table 4: On Site Soil Verification Sampling Results from the 2000 RA Report

Sample locations are shown on Figure 4. Table 4 shows the laboratory results for both the initial sampling results, and reverification samples taken at the final excavation depth for any location where additional excavation was necessary due to exceedances above the 1,550 mg/kg lead cleanup number.

Sample Characterzation	Sample Date	Sample Identification	Analyses (mg/L)	Total Lead (mg/L)
G2 Verification	9/27/99	V-001-G2	Total Pb	32.00
F2 Verification	9/27/99	V-002-F2	Total Pb	134.00
E2 Verification	9/28/99	V-003-E2	Total Pb	27.00
E1 Verification	9/28/99	V-004-E1	Total Pb	38.00
F1 Verification	9/28/99	V-005-F1	Total Pb	168.00
G1 Verification	9/28/99	V-006-G1	Total Pb	46.00
D1 Verification	9/28/99	V-007-D1	Total Pb	32.00
C1 Verification	9/28/99	V-008-C1	Total Pb	110.00
H2 Verification	10/1/99	V-009-H2	Total Pb	30.00
H3 Verification	10/1/99	V-010-H3	Total Pb	96.00
H3 Verification	10/1/99	V-010-H3 Dup	Total Pb	102.00
G3 Verification	10/1/99	V-011-G3	Total Pb	41.00
G4 Verification	10/1/99	V-012-G4	Total Pb	10500.00
F3 Verification	10/1/99	V-013-F3	Total Pb	66.00
F4 Verification	10/1/99	V-014-F4	Total Pb	123.00
D2 Verification	10/1/99	V-015-D2	Total Pb	76.00
D3 Verification	10/1/99	V-016-D3	Total Pb	1070.00
D4 Verification	10/4/99	V-017-D4	Total Pb	132.00
E3 Verification	10/4/99	V-018-E3	Total Pb	211.00
E4 Verification	10/4/99	V-019-E4	Total Pb	390.00
C2 Verification	10/4/99	V-020-C2	Total Pb	619.00
C2 Verification	10/4/99	V-020-C2 Dup	Total Pb	722.00
C3 Verification	10/4/99	V-021-C3	Total Pb	1150.00
B1 Verification	10/4/99	V-022-B1	Total Pb	1720.00
B2 Verification	10/4/99	V-023-B2	Total Pb	110.00
B3 Verification	10/4/99	V-024-B3	Total Pb	500.00
B4 Verification	10/5/99	V-025-B4	Total Pb	360.00
A4 Verification	10/5/99	V-026-A4	Total Pb	170.00
A5 Verification	10/5/99	V-027-A5	Total Pb	180.00
B5 Verification	10/5/99	V-028-B5	Total Pb	430.00
C5 Verification	10/5/99	V-029-C5	Total Pb	280.00
B6 Verification	10/5/99	V-030-B6	Total Pb	1420.00
B6 Verification	10/5/99	V-030-B6 Dup	Total Pb	1420.00
A6 Verification	10/5/99	V-31-A6	Total Pb	238.00
B1 Reverification	10/7/99	V-032-B1 R	Total Pb	1300.00
C4 Verification	10/7/99	V-033-C4	Total Pb	1090.00
B7 Verification	10/7/99	V-034-B7	Total Pb	230.00
G4 Reverification	10/11/99	V-012-G4 R	Total Pb	13.00
A7 Verification	10/11/99	V-035-A7	Total Pb	230.00

Sample Characterzation	Sample Date	Sample Identification	Analyses (mg/L)	Total Lead (mg/L)
ZZ7 Verification	10/11/99	V-036-ZZ7	Total Pb	170.00
ZZ8 Verification	10/11/99	V-037-ZZ8	Total Pb	146.00
A8 Verification	10/11/99	V-038-A8	Total Pb	222.00
B8 Verification	10/11/99	V-039-B8	Total Pb	1250.00
ZZ9 Verification	10/11/99	V-040-ZZ9	Total Pb	167.00
ZZ9 Verification	10/11/99	V-040-ZZ9 Dup	Total Pb	160.00
A9 Verification	10/11/99	V-041-A9	Total Pb	91.00
B9 Verification	10/11/99	V-042-B9	Total Pb	412.00
B10 Verification	10/12/99	V-043-B10	Total Pb	971.00
B11 Verification	10/12/99	V-044-B11	Total Pb	300.00
A11 Verification	10/12/99	V-045-A11	Total Pb	169.00
ZZ11 Verification	10/12/99	V-046-ZZ11	Total Pb	98.00
ZZ10 Verification	10/12/99	V-047-ZZ10	Total Pb	183.00
A10 Verification	10/12/99	V-048-A10	Total Pb	296.00
ZZ12 Verification	10/12/99	V-049-ZZ12	Total Pb	92.00
A12 Verification	10/12/99	V-050-A12	Total Pb	178.00
A12 Verification	10/12/99	V-050-A12 Dup	Total Pb	196.00
B12 Verification	10/12/99	V-051-B12	Total Pb	1290.00
C12 Verification	10/12/99	V-052-C12	Total Pb	<13.00
ZZ13 Verification	10/12/99	V-053-ZZ13	Total Pb	88.00
A13 Verification	10/12/99	V-054-A13	Total Pb	90.00
B13 Verification	10/12/99	V-055-B13	Total Pb	300.00
C13 Verification	10/12/99	V-056-C13	Total Pb	260.00
D13 Verification	10/12/99	V-057-D13	Total Pb	92.00
E13 Verification	10/12/99	V-058-E13	Total Pb	89.00
ZZ14 Verification	10/12/99	V-059-ZZ14	Total Pb	57.00
A14 Verification	10/12/99	V-060-A14	Total Pb	74.00
A14 Verification	10/12/99	V-060-A14 Dup	Total Pb	71.00
B14 Verification	10/12/99	V-061-B14	Total Pb	403.00
C14 Verification	10/12/99	V-062-C14	Total Pb	214.00
D14 Verification	10/12/99	V-063-D14	Total Pb	99.00
G13 Verification	10/14/99	V-064-G13	Total Pb	480.00
G14 Verification	10/14/99	V-065-G14	Total Pb	65.00
F15 Verification	10/14/99	V-066-F15	Total Pb	131.00
E14 Verification	10/14/99	V-067-E14	Total Pb	21.00
H1 Verification	10/16/99	V-068-H1	Total Pb	761.00
I1 Verification	10/16/99	V-069-I1	Total Pb	2040.00
I2 Verification	10/16/99	V-070-I2	Total Pb	417.00
I2 Verification	10/16/99	V-070-I2 Dup	Total Pb	596.00
J2 Verification	10/16/99	V-071-J2	Total Pb	1670.00
J3 Verification	10/16/99	V-072-J3	Total Pb	115.00

Sample Characterization	Sample Date	Sample Identification	Analyses (mg/L)	Total Lead (mg/L)
I3 Verification	10/16/99	V-073-I3	Total Pb	1220.00
H4 Verification	10/16/99	V-074-H4	Total Pb	91.00
H5 Verification	10/16/99	V-075-H5	Total Pb	71.00
H6 Verification	10/16/99	V-076-H6	Total Pb	91.00
G5 Verification	10/16/99	V-077-G5	Total Pb	98.00
F5 Verification	10/16/99	V-078-F5	Total Pb	30.00
E5 Verification	10/16/99	V-079-E5	Total Pb	42.00
D5 Verification	10/16/99	V-080-D5	Total Pb	94.00
D5 Verification	10/16/99	V-080-D5 Dup	Total Pb	355.00
C6 Verification	10/16/99	V-081-C6	Total Pb	47.00
D6 Verification	10/16/99	V-082-D6	Total Pb	134.00
E6 Verification	10/16/99	V-083-E6	Total Pb	348.00
F6 Verification	10/16/99	V-084-F6	Total Pb	565.00
G6 Verification	10/16/99	V-085-G6	Total Pb	64.00
F13 Verification	10/16/99	V-086-F13	Total Pb	24.00
F14 Verification	10/16/99	V-087-F14	Total Pb	103.00
D12 Verification	10/16/99	V-088-D12	Total Pb	97.00
C7 Verification	10/16/99	V-089-C7	Total Pb	158.00
D7 Verification	10/18/99	V-090-D7	Total Pb	134.00
D7 Verification	10/18/99	V-090-D7 Dup	Total Pb	76.00
E7 Verification	10/18/99	V-091-E7	Total Pb	287.00
F7 Verification	10/18/99	V-092-F7	Total Pb	211.00
C8 Verification	10/18/99	V-093-C8	Total Pb	74.00
D8 Verification	10/18/99	V-094-D8	Total Pb	45.00
E8 Verification	10/18/99	V-095-E8	Total Pb	777.00
F8 Verification	10/18/99	V-096-F8	Total Pb	366.00
C9 Verification	10/18/99	V-097-C9	Total Pb	16.00
D9 Verification	10/18/99	V-098-D9	Total Pb	13.00
E9 Verification	10/18/99	V-099-E9	Total Pb	47.00
F9 Verification	10/18/99	V-100-F9	Total Pb	77.00
F9 Verification	10/18/99	V-100-F9 Dup	Total Pb	84.00
C10 Verification	10/18/99	V-101-C10	Total Pb	19.00
D10 Verification	10/18/99	V-102-D10	Total Pb	<13.00
E10 Verification	10/18/99	V-103-E10	Total Pb	72.00
F10 Verification	10/18/99	V-104-F10	Total Pb	73.00
C11 Verification	10/18/99	V-105-C11	Total Pb	13.00
D11 Verification	10/18/99	V-106-D11	Total Pb	16.00
E11 Verification	10/18/99	V-107-E11	Total Pb	175.00
F11 Verification	10/18/99	V-108-F11	Total Pb	31.00
G11 Verification	10/18/99	V-109-G11	Total Pb	66.00
D12 Verification	10/18/99	V-110-D12	Total Pb	47.00
D12 Verification	10/18/99	V-110-D12 Dup	Total Pb	<13.00

Sample Characterzation	Sample Date	Sample Identification	Analyses (mg/L)	Total Lead (mg/L)
E 12 Verification	10/18/99	V-111-E12	Total Pb	14.00
F12 Verification	10/18/99	V-112-F12	Total Pb	132.00
G12 Verification	10/18/99	V-113-G12	Total Pb	57.00
I4 Verification	10/18/99	V-114-I4	Total Pb	56.00
J4 Verification	10/18/99	V-115-J4	Total Pb	3200.00
I5 Verification	10/19/99	V-116-I5	Total Pb	88.00
J5 Verification	10/19/99	V-117-J5	Total Pb	114.00
I6 Verification	10/20/99	V-118-I6	Total Pb	72.00
J6 Verification	10/20/99	V-119-J6	Total Pb	200.00
J2 Reverification	10/21/99	V-071-J2 R	Total Pb	41.00
I1 Reverification	10/21/99	V-069-I1 R	Total Pb	20.00
H7 Verification	11/1/99	V-120-H7	Total Pb	140.00
I7 Verification	11/1/99	V-121-I7	Total Pb	474.00
G8 Verification	11/1/99	V-122-G8	Total Pb	22.00
G7 Verification	11/1/99	V-123-G7	Total Pb	82.00
H8 Verification	11/1/99	V-124-H8	Total Pb	39.00
I8 Verification	11/1/99	V-125-I8	Total Pb	31.00
G9 Verification	11/1/99	V-126-G9	Total Pb	28.00
H9 Verification	11/1/99	V-127-H9	Total Pb	30.00
G10 Verification	11/8/99	V-128-G10	Total Pb	71.00
H10 Verification	11/8/99	V-129-H10	Total Pb	116.00
H10 Verification	11/8/99	V-129-H10 Dup	Total Pb	100.00
H11 Verification	11/8/99	V-130-H11	Total Pb	140.00
H12 Verication	11/8/99	V-131-H12	Total Pb	107.00
H13 Verification	11/8/99	V-132-H13	Total Pb	100.00
H13 Verification	11/8/99	V-132-H13 Dup	Total Pb	134.00
H14 Verification	11/8/99	V-133-H14	Total Pb	160.00
J4 Reverification	11/9/99	V-115-J4 R	Total Pb	<13.00
I14 Verification	11/17/99	V-134-I14	Total Pb	34.00
J14 Verification	11/17/99	V-135-J14	Total Pb	46.00
J14 Verification	11/17/99	V-135-J14 Dup	Total Pb	36.00
K14 Verification	11/17/99	V-136-K14	Total Pb	277.00
I13 Verification	11/17/99	V-137-I13	Total Pb	297.00
J13 Verification	11/17/99	V-138-J13	Total Pb	130.00
J13 Verification	11/17/99	V-138-J13 Dup	Total Pb	215.00
K13 Verification	11/17/99	V-139-K13	Total Pb	158.00
I12 Verification	11/17/99	V-140-I12	Total Pb	724.00
I12 Verification	11/17/99	V-140-I12 Dup	Total Pb	177.00
J12 Verification	11/17/99	V-141-J12	Total Pb	28.00
K12 Verification	11/17/99	V-142-K12	Total Pb	31.00
I11 Verification	11/18/99	V-143-I11	Total Pb	<13.00
I11 Verification	11/18/99	V-143-I11 Dup	Total Pb	13.00

Sample Characterzation	Sample Date	Sample Identification	Analyses (mg/L)	Total Lead (mg/L)
J11 Verification	11/18/99	V-144-J11	Total Pb	<13.00
K11 Verification	11/18/99	V-145-K11	Total Pb	41.00
I10 Verification	11/18/99	V-146-I10	Total Pb	334.00
I10 Verification	11/18/99	V-146-I10 Dup	Total Pb	344.00
J10 Verification	11/18/99	V-147-J10	Total Pb	16.00
K10 Verification	11/18/99	V-148-K10	Total Pb	18.00
I9 Verification	11/19/99	V-149-I9	Total Pb	138.00
J9 Verification	11/19/99	V-150-J9	Total Pb	148.00
K9 Verification	11/19/99	V-151-K9	Total Pb	207.00
J8 Verification	11/19/99	V-152-J8	Total Pb	114.00
K8 Verification	11/19/99	V-153-K8	Total Pb	67.80
J7 Verification	11/19/99	V-154-J7	Total Pb	73.00
K7 Verification	11/19/99	V-155-K7	Total Pb	176.00

Appendix A



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
2565 Plymouth Rd
Ann Arbor, MI 48105

MEMORANDUM

SUBJECT: Protectiveness Evaluation of Lead Clean-up Level for the United Scrap Lead Superfund Site

FROM: Keith Fusinski, PhD Toxicologist US EPA
Laboratory Services and Applied Science Division.
Science and Quality Assurance Branch

A handwritten signature in black ink, appearing to read "Keith Fusinski", is located to the right of the "FROM:" field.

TO: Katherine Thomas, Remedial Project Manager US EPA
Superfund and Emergency Management Division,
Remedial Response Branch #1, Remedial Response Section #1

DATE: 12/14/2020

STATEMENT OF THE ISSUE

The 1997 Record of Decision (ROD) Amendment for the United Scrap Superfund Site selected a site-specific commercial/ industrial cleanup level of 1,550 mg/kg for lead based on the approved 1996 Risk Assessment. A current analysis of the clean-up level was requested to ensure that it is still considered protective of human health.

ANALYSIS

As the site is commercial/industrial and children will not be present long-term on the site, it was determined that the 2019 update of the Adult Lead Model (ALM) should be used to ensure that clean-up level of lead left in place is still considered protective from potential exposures to the fetus of pregnant women who may work on or visit the site.

In 2017, the ALM was updated with changes to the Default Baseline Blood Lead Concentrations and Geometric Standard Deviation inputs in the model. This along with the updated National Health and Nutrition Examination Survey (NHANES 2009 – 2014) data used in the ALM model could potentially change the Preliminary Remediation Goal output in the model from that calculated in the 1996 Risk Assessment.

Using the same exposure time (250 days/year) as used in the 1996 Risk Assessment the updated model predicted a lead cleanup concentration of 2,205 mg/kg would result 95% probability of resulting in a fetal blood lead level below 10ug/dL. The cleanup level selected in the 1997 ROD Amendment was 1,550 mg/kg which is below the updated

calculated cleanup value and is considered protective. The PRG of 1,550 mg/kg equates to a 95% probability of resulting in a fetal blood lead level below 7 ug/dL.