

**FEDERAL ON-SCENE COORDINATOR'S  
AFTER ACTION REPORT  
FOR THE  
HAMBURG KAERCHER CREEK SITE  
HAMBURG, BERKS COUNTY,  
PENNSYLVANIA**

Assessment Dates: April through August 2018  
Removal Dates: April 16, 2019 through October 22, 2021

*Prepared for:*



**U.S. Environmental Protection Agency Region III  
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## **FOREWORD**

The On-Scene Coordinator (OSC), as mandated by the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), Title 40 of the Code of Federal Regulations Part 300, is required to provide a coordinated federal response capability at the scene of an unplanned or sudden release of oil or hazardous substances that poses a threat to public health and welfare or the environment. In addition, the provisions of Section 104 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), promote a coordinated federal, state, and local response to mitigate situations at hazardous waste sites that pose an imminent and substantial threat to public health and the environment.

Conditions at the Hamburg Kaercher Creek Site presented an imminent and substantial risk of harm to human health and the environment because of the uncontrolled presence of a hazardous substance, thereby providing a legal basis for federal response activities. The provisions of the NCP (Section 300.415) were implemented by the U.S. Environmental Protection Agency Region III, Philadelphia, PA.

The OSC would like to extend thanks to the agencies and individuals who provided valuable assistance and expertise to ensure the successful completion of this cleanup effort.

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Todd Richardson  
On-Scene Coordinator  
U.S. Environmental Protection Agency Region III, Philadelphia, PA

## **1.0 INTRODUCTION**

This After Action Report describes removal action activities conducted at the Hamburg Kaercher Creek Site (Site) in Hamburg, Pennsylvania (Figure 1, Appendix A). This introduction provides a summary of the site background and history, the site location and description, and participating organizations. The rest of this report then document removal action activities, resource committed to the work, a site narrative, an analytical summary, and references.

### **1.1 INITIAL SITUATION (BACKGROUND AND SITE HISTORY)**

In October 2001, the U.S. Environmental Protection Agency (EPA) was notified of the presence of battery casings along Kaercher Creek near the Hamburg Fieldhouse Property. In 2002, Tetra Tech EM Inc. (Tetra Tech), under the direction of the On-Scene Coordinator (OSC), performed removal assessments along Kaercher Creek from Kaercher Lake to Kaercher Creek's confluence with the Schuylkill River. The Agency for Toxic Substances and Disease Registry (ATSDR) reviewed the Site assessment reports and issued a Health Consultation under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) that recommended an immediate removal action to protect human health).

EPA approved funding for the removal action at the Site, originally defined to include Kaercher Creek and Mill Creek, pursuant to a May 2003 Action Memorandum (EPA 2003). Both streams run through the Borough of Hamburg. On August 5, 2003, EPA approved a Change of Scope of the Removal Action, removing Mill Creek from the removal action for the Site and specifying that it would be addressed as a separate action. The objectives of the removal action for the Kaercher Creek site was to determine the extent of lead contamination in the sediment and surface soils of the creek bed and banks of Kaercher Creek; to conduct limited removal and disposal of lead contaminated soil and debris; to install a cover over the remaining lead contaminated soil and debris; and to perform creek bank stabilization measures. Cover materials consisted of clean soil, coir logs and/or matting, rip rap, and other fill material.

Between August 2003 and May 2004, EPA's removal action addressed a total of 5,470 feet of Kaercher Creek. EPA approved a subsequent May 2004 Action Memorandum to extend the completion timeline and provide sufficient funds to complete the removal action (EPA 2004). The

2003 – 2004 removal action is documented in the Federal On-Scene Coordinator After Action Report for the Hamburg – Kaercher Creek Site (EPA 2005)

Beginning in 2017, as part of a Focused Remedial Investigation for the Price Battery Superfund Site Operable Unit 3 (OU-3), the EPA Remedial Project Manager (RPM) directed the remedial contractor, CDM Smith (CDM), to assess the current condition of the geotextile fabric and the rip-rap cap installed during the 2003-2004 removal action on portions of Kaercher Creek between the Schuylkill River and Kaercher Lake. CDM performed these assessment activities in June 2017 and November 2017, and CDM found the geotextile fabric and the rip-rap cap to be in poor condition in some areas, including the portion of Kaercher Creek at and near the Hamburg Field House previously addressed through the 2003-2004 removal action. Based on the findings of this assessment, the EPA RPM notified the EPA On-Scene Coordinator (OSC) for consideration of additional assessment activities at the Field House portion of Kaercher Creek.

From April through August 2018, the OSC conducted site visits to confirm reported areas of the creek bank that had eroded and to screen select areas for lead contamination using an x-ray fluorescence (XRF) instrument. During these removal assessment site visits, many areas of erosion damage and exposed battery debris were observed. XRF screening of the erosion-damaged areas revealed lead concentrations ranging from 2,600 parts per million (ppm) to 2,800 ppm. Photo documentation is included in the Photographic Documentation Log, Appendix C.

In April 2019, EPA approved an action memorandum and funding to address a damaged portion of the RA at the Hamburg Kaercher Creek Site (specifically at the Hamburg Fieldhouse) performed pursuant to the May 2004 action memorandum (Attachment 5).

## **1.2 SITE LOCATION AND DESCRIPTION**

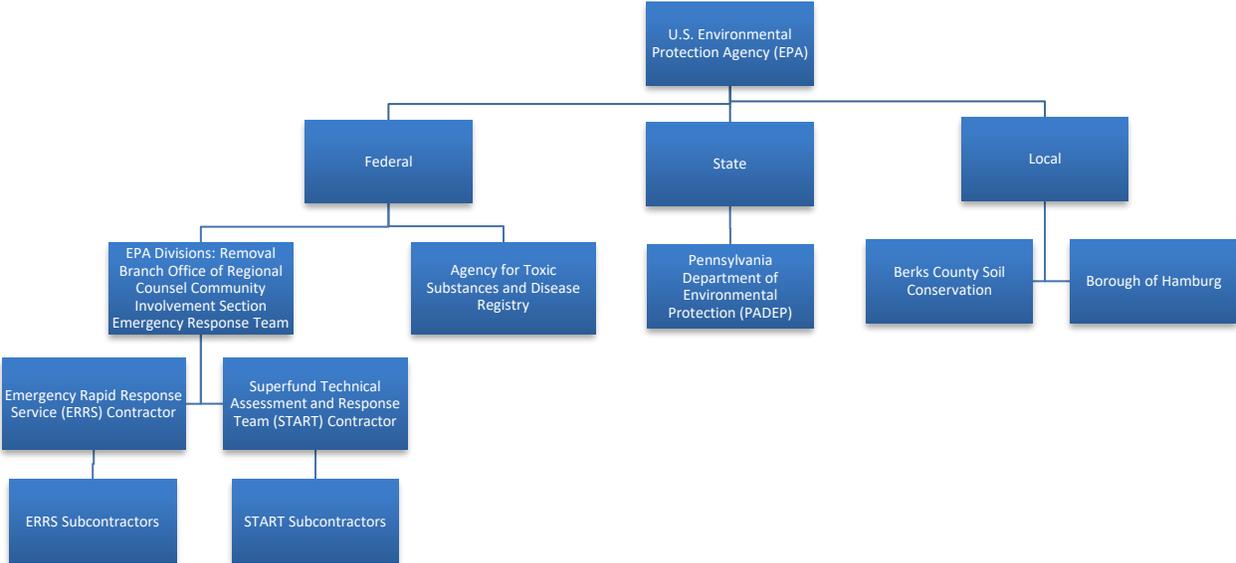
The Site is in the Borough of Hamburg at the intersection of Pine Street and Church Street in Berks County, Pennsylvania (Figure 1, Appendix A). The geographic coordinates at the approximate center of the Site are 40.5537210° north latitude and -75.9803895° west longitude. The Site is bounded by Pine Street to the north and east; by private undeveloped woodlands to the south; and by the Hamburg Manufacturing, Inc., foundry to the west (Figure 2, Appendix A). Kaercher Creek is fed by Kaercher Lake, located 1.5 miles upstream. The tax maps for each property involved with

the removal action can be found on the Berks County tax map list. The field house map number is 46449405292338; the Hamburg Manufacturing, Inc., map number is 46449405185931; the Melvin Stoltzfus map number is 46449405294079; and the Tommy Curtis map number is 46449406391565 (Berks County Tax Maps 2022).

**1.3 ROSTER OF AGENCIES, ORGANIZATIONS, AND INDIVIDUALS**

The chart below shows the agencies and organizations involved with the removal action described in this report.

**Agencies and Organizations Involved in the Removal Action**



**1.4 NAMES AND ADDRESSES**

Table 1 (Appendix B) lists the names and addresses of the agencies, organizations, and individuals involved with the removal action.

## 2.0 REMOVAL ACTION ACTIVITIES

### General Work Plan for the Banks of Kaercher Creek and Adjacent Flat Areas:

*(Please see Photographic Documentation Log in Appendix C for photo documentation.)*

1. All vegetation that was growing in areas containing battery debris was cleared and removed.
2. All small vegetation was chipped with a woodchipper and reused onsite. Stumps were screened with an XRF; if soil in the roots was above the action level (AL) of 400 parts per million (ppm), the soil was pressure washed from the stumps and the stumps were disposed offsite as non-hazardous waste.
3. An excavator was then used to remove contaminated soil and battery debris from the north bank of Kaercher Creek, including the flat area between the crown of the creek bank and the Fieldhouse parking lot. A minimum of 2 feet of contaminated material was excavated, stockpiled, and disposed. The excavated material was disposed according to federal, state, and local regulations.
4. High-visibility orange barrier fabric was placed over remaining soil on the floor of the excavation and fastened to the ground with 6-inch metal staples at locations where the AL could not be met. The barrier will serve as a marker to notify people of the presence of contaminated soil in case of future excavation or erosion.
5. The excavated creek bank areas were backfilled with 6-inches of clay, a geotextile fabric separation layer, and R5 and R6 rip-rap revetment stone effectively armoring the creek banks.
6. Excavations in the flat areas between the creek bank crown and the Fieldhouse parking lot were backfilled with 6-inches of clay, followed by 6-inches of 2RC stone, and approximately 8 to 10 inches of topsoil over the 2RC stone.
7. The flat, un-sloped portions of the Site were seeded and covered with shredded straw straw mat. A native, shade-tolerant, perennial seed mix was added over the topsoil. This was applied by hand or hydro seeding. A starter fertilizer was added to the topsoil according to the manufacturer's recommendation.
8. Any private or public property that was damaged or removed during the removal action was repaired or replaced. The asphalt roads and parking lot that were impacted during removal activities were repaved. Trees (which acted as a barrier between the creek and parking lot) were removed from the parking lot; these were replaced by boulders to serve as a barrier between the creek and parking lot.

9. Any private or public property that was damaged or removed during the removal action was repaired or replaced. The asphalt roads and parking lot that were impacted during removal activities were repaved. Trees (which acted as a barrier between the creek and parking lot) were removed from the parking lot; these were replaced by boulders to serve as a barrier between the creek and parking lot.

## **2.1 ACTIVITIES OF VARIOUS AGENCIES**

The removal action for the Site involved representatives of the EPA, Pennsylvania Department of Environmental Protection (PADEP), local entities, and contractors. This section identifies the potentially responsible parties, agencies, and contractors and their involvement with the removal action.

## **2.2 POTENTIALLY RESPONSIBLE PARTIES**

Evaluation of cost recovery options will be conducted following completion of Site activities.

## **2.3 FEDERAL AGENCIES**

Several federal agencies were involved with the removal activities at the Site. Specific personnel and their responsibilities are summarized below.

EPA Region III OSC Todd Richardson was the responding EPA OSC who initiated response activities and activated the funds for a removal action. OSC Richardson coordinated all removal, disposal, sampling, health and safety procedures, and restoration activities on-Site.

EPA Region III Field Administrative Specialist (FAS) James Wright assisted with administrative duties, tracked project costs, audited contractor costs and equipment, and processed contractor invoices.

EPA Region III Biologist Bruce Pluta provided assistance with identifying any endangered species and selecting the most appropriate vegetation for restoration. EPA Region III Applied Science and Quality Assurance Branch (ASQAB) Representative Karen Costa provided Contract Laboratory Program (CLP) validated data packages to the lead OSC for the Site removal action.

EPA Region III Community Involvement Coordinator (CIC) Amanda Miles provided community

awareness services for the Site, including drafting and distributing community awareness update documents.

EPA Region III Office of Regional Counsel (ORC) Thomas Cinti provided the lead OSC with legal counsel.

## **2.4 STATE AGENCIES**

PADEP Project Manager Caine Stone was involved throughout various stages of the removal action at the Site. PADEP was copied on all Pollution Reports (POLREPs) and made visits to the Site to check on operations and ensure the Erosion and Sediment (E&S) Plan was followed (Entech Engineering 2019).

## **2.5 CONTRACTORS**

Environmental Restoration, LLC, under the ERRS contract, was the primary removal contractor for the Site. Its responsibilities included completion of environmental remediation actions and the removal and disposal of hazardous and non-hazardous materials and substances from the Site. This contractor was also responsible for developing and implementing work plans for the removal action, providing field trailer, securing the Site, assuring health and safety for its workers/subcontractors, and restoring the Site to near the original condition.

Weston Solutions, Inc. (Weston) and Tetra Tech, provided technical support to the OSC during removal activities as START contractors. Weston and Tetra Tech responsibilities included Site safety and contractor oversight; multimedia sampling; preparation of maps, diagrams, and Site figures; cost tracking; data evaluation; photographic and logbook documentation; and provision of recommendations on the removal project. Tetra Tech also assisted in the preparation of the Draft After Action Report. EPA created an internet website to inform the public of Site activities and START helped maintain this website by regularly posting photographs and POLREPs.

## 2.6 DISPOSAL METHODS AND QUANTITIES OF WASTE REMOVED

Lead-contaminated soil and sediment present at the Site were placed in a hazardous waste soil pile, removed, and disposed at several different facilities as shown in Table 2, Appendix B. All hazardous, “reportable quantity” waste was disposed of at Stericycle in Hatfield, Pennsylvania.

Based on lead concentrations from XRF analysis, some hazardous soil was treated on site with 3% soil amendment (Enviro Blend active ingredients: magnesium oxide and magnesium hydroxide) to bind the lead. The results of this treatment have proven to be successful in binding the lead and therefore this soil was able to be disposed of as nonregulated.

The suspected nonhazardous soil was treated with a 2% soil amendment (Enviro Blend active ingredients: magnesium oxide and magnesium hydroxide) to bind the lead, reducing its leachability. Analytical results indicate that the treatment was successful. Non-Department of Transportation (DOT), non-Resource Conservation and Recovery Act (RCRA)-regulated waste was disposed of at multiple landfills. PCB-containing waste was identified, removed, and disposed at Wayne Disposal in Wayne, Michigan. The ERRS contractor collected waste composite samples from temporary storage piles and sent them to Test America Laboratories, Inc., to be analyzed for volatile organic compounds (VOC), semi-volatile organic compounds (SVOC), metals, pesticides, polychlorinated biphenyls (PCB), and using the Toxicity Characteristic Leaching Procedure (TCLP) to characterize the material and determine the requirements for disposal. The outgoing waste would be resampled for the above parameters using the above procedures for every 2,000 tons of lead contaminated waste removed from the Site.

In total, 8,375.49 tons of soil and slag was removed and disposed as hazardous waste; 8,938.8 tons of soil was removed and disposed as non-hazardous waste; and 3.48 tons were removed and disposed as PCB waste.

Manifests for all waste material disposed are stored in the Site file maintained in the EPA Region III central record room in Philadelphia, Pennsylvania.

### 3.0 RESOURCES COMMITTED

The removal action at the Site received initial and additional funding allocations to eliminate the threat it posed to public health or welfare and the environment (EPA 2019).

#### 3.1 INITIAL FUNDING REQUEST

For the 2019-2021 assessment and removal work, the initial funding request was signed on April 16, 2019, allocating a project ceiling of \$14,587,677 to eliminate the imminent threat to public health or welfare and the environment posed by existing conditions at the Site. The proposed actions included: determining the extent of contamination; excavating and disposing of lead-contaminated waste; stabilizing lead-contaminated waste to reduce the threat to human health from potential lead exposure; and restoring affected areas with appropriate vegetation (EPA, 2019). A copy of the request for additional funds and change in scope is included in the Action Memorandum of April 2019 (Attachment 5).

#### 3.2 ESTIMATED TOTAL COST SUMMARY

The total estimated cost as of December 20, 2021, is shown by organization below:

<u>Organization</u>	<u>Costs through December 20, 2021</u>
START	\$200,779.83
ERRS	\$8,083,954.42
TOTAL (START/ERRS)	\$8,294,734.25
EPA	To be determined

## 4.0 SITE NARRATIVE

*The following narrative of Site activities is a general overview. Site activities were chronicled daily in logbook form. Site activities were also documented in POLREPS, Attachment 1.*

### 4.1 PREVIOUS ASSESSMENTS AND ACTIONS

Onsite activities for the 2003-2004 EPA-led cleanup included: excavating contaminated sediment and soil; transporting the lead-contaminated soil offsite for disposal; and capping remaining areas of contamination. Soil capping activities included backfilling with clean soil, fertilizing and seeding the area with native grass seed, mulching with straw, and planting trees and shrubs as appropriate. Sediment capping activities included installing geotextile fabric and backfilling with rip rap stone.

Removal activities associated with the 2003 – 2004 EPA clean-up were complete in December 2004. However, an ecological assessment of Kaercher Creek by EPA remedial program contractors (CDM) in 2017 reported significant areas of erosion on the banks of Kaercher Creek. In May of 2018, EPA and START (Weston) confirmed the erosion-damaged creek bank and screened surface soil in areas of erosion. Several areas of erosion were observed with visible battery casings and lead concentrations ranging from 2,600 to 2,800 ppm.

In August 2019 START (Weston) collected 32 total surface sediment (SD) samples to determine the extent of potential contamination of the sediment. The samples were collected in the creek bed at 50-foot intervals. The sampling points were located on an aerial map using global positioning system (GPS) technology. These samples were dried in ovens, sieved through a 250-micron ( $\mu\text{m}$ ) mesh sieve, and placed in XRF cups. The samples were analyzed using an XRF instrument. The results of the XRF analysis identified lead concentrations in sediment ranging from 29.1 to 207 ppm.

## 4.2 CREEK BANK AND BED SAMPLING AND RESTORATION

During excavation operations conducted as part of the ongoing removal activities, buried, and partially buried drums were encountered in the northeast work area of the site, in a flat area adjacent to the bank. These drums were rusted, and some were in deteriorating conditions. Ten drums were excavated and disposed. All the drums contained a solidified sandy, waxy material. Although the material was solid and appeared to be inert, as a precaution, the On Scene Coordinator (OSC) directed EPA's Emergency and Rapid Response Services contractor to perform disposal sampling on the drummed material. Initial Clor-N-Soil tests indicated PCBs greater than 50 ppm. The analysis revealed a total PCB concentration of 537 parts per million (ppm). This waste is considered PCB remediation waste. EPA approved a Change in Scope Memorandum in April 2020 to allow for the excavation and disposal of the PCB remediation waste (Attachment 6). As a result, the north and south banks were sampled for PCB Aroclors, and additional Clor-N-Soil tests were performed to indicate if additional sampling was necessary.

The removal and restoration process along the sloped creek bank involved: (1) excavating contaminated soil, (2) placing an orange, high-visibility barrier fabric, (3) backfilling over the fabric with clay, (4) installing Mirifi 1100N fabric over the clay, and (5) placing R5 and R6 revetment stone on the geotextile fabric. The restoration process used for flat areas was placement of orange barrier fabric, clay, 2RC, topsoil, and hydroseed.

Near the midway point of bank excavation, a large vein of slag was encountered which screened at greater than 10 percent (100,000 ppm) lead using the XRF. The slag material was removed and sent to the hazardous soil pile before transportation for offsite disposal.

In preparation for predicted rain events and tropical storms, added erosion and sediment control measures were installed in 2020. Two turbidity curtains were installed downstream from the rock check dam to enhance stream protection from any fugitive contaminated sediment released due to the heavy precipitation events. On August 2, 2020, approximately 6 inches of rain fell in the area after a series of thunderstorms. On August 4, 2020, a tropical storm hit the area and caused a washout of the edge of the excavation. Some sediment got past the cofferdam and into the creek.

This material was screened with an XRF instrument to determine whether any contamination got past the cofferdam. The XRF results indicated that some contaminated soil had entered the creek. Most of the contaminated sediment was recovered.

In November 2020, a soil and sediment sampling event occurred primarily on the north bank with some sampling on the south bank and in the creek bed. The event involved the collection of 31 PCB samples and 21 lead samples. All of the PCB samples were shipped to a CLP laboratory for analysis. The lead samples were processed into XRF cups and analyzed exsitu on an XRF stand. Nine of the 21 lead samples analyzed exsitu were sent to the EPA laboratory for analysis. All of the sample point locations were collected on GPS and a map was generated. Sample results indicated that PCBs were not detected, and some elevated lead concentrations were detected in an isolated area of Kaercher Creek sediment, and on the south bank of Kaercher Creek.

After further discussions concerning the release of contaminated sediment into the creek, the decision was made to dam approximately 250 feet of the creek, reroute the creek flow with pumps and hoses, and vacuum the surficial sediment to remove it. In April 2021 to facilitate the remediation of contaminated sediment resulting from the washout, a dam was constructed upstream using preformed concrete blocks, sandbags, and plastic sheeting. Two diesel pumps were set up to discharge approximately 250 feet downstream. The pumps were run continuously for two weeks while the identified area of contamination was addressed.

A vacuum truck arrived on April 26, 2021, and vacuuming operations began. However, the hose for the vacuum truck regularly clogged and EPA determined that vacuuming the sediment was not effective. The vacuum truck was demobilized from the Site the same day. A small excavator was then used to scrape the sediment off the surface of the creek bed; the excavator took care not to damage the underlying geotextile fabric installed during the 2004 removal action. However, in situ and ex situ XRF screening of the sediment remaining on top of the geotextile fabric continued to reveal elevated levels of lead contamination. The source of the lead-contaminated sediment directly above the geotextile fabric could not be definitively determined.

On April 28, 2021, the excavated creek bed was divided into five sections. Two sediment samples were collected from each section (one surface and one subsurface) and screened in situ and ex situ with an XRF. Following this sampling event, EPA determined that additional excavation could potentially damage the geotextile liner; and therefore, the disturbed portion of the creek bed was “capped” with clean sand amended with leaf litter for organic content and covered with river rock.

During the first weeks of May 2021, EPA determined that sediment samples for laboratory analysis should be collected downstream and upstream of the washout point. This request was made because EPA’s Remedial Program was conducting a Remedial Investigation/Feasibility Study (RI/FS) for Kaercher Creek as part of Price Battery Site OU-3 work, and the laboratory data would be necessary to incorporate and document the sediment results to finalize the RI/FS. The samples were analyzed in situ and ex situ and were sent to a Contract Laboratory Program (CLP) lab for laboratory confirmation of the XRF results.

On May 20, 2021, surface sediment samples were collected from 0- to 2-inches below ground surface (bgs) with a disposable plastic scoop. The sampling team collected sediment down to 2-inches bgs and transferred the sediment into a labeled resealable, plastic bag. Subsurface sediment samples were collected at 9-inches bgs. The sediment was then dried, sieved, and put in an XRF cup for ex situ analysis. The XRF cups were then sent to a CLP lab for confirmation. Sediment samples were collected in accordance with Tetra Tech SOP No. 006-5, “Sediment and Sludge Sampling” (Tetra Tech 2020b). See the Trip Report for additional sampling information and data tables (Attachment 4).

Creek bank and bed removal and restoration activities were completed in October 2021. From June 2019 to the completion of site activities in October 2021, approximately 104,640 square feet of Kaercher Creek banks were remediated, including the flat area adjacent to the bank and grassy areas. In total, 8,375.49 tons of soil and slag was removed and disposed as hazardous waste; 8,938.8 tons of soil was removed and disposed as non-hazardous waste; and 3.48 tons were removed and disposed as PCB waste.

### **4.3 OTHER SITE RESTORATION**

The Hamburg Municipal Utilities Authority needed to install extensions on two manholes in the contaminated area. ERRS assisted with the excavation of contaminated soil from around the manholes and hauled the excavated soil to the hazardous soil stockpile.

A storm drain adjacent to the parking lot was encountered. The concrete apron around it was redone to provide better drainage from the parking lot.

An asphalt cap was installed on the west, east, and north side of the HFD training building. This created a permanent cap over the affected areas, and eliminated the need to excavate, dispose, and backfill soil in these areas.

Eight replacement trees were installed on the HFD property near the field house to compensate for the trees removed during the remediation. Large boulders were placed along the access road with spacing so that a car would not be able to inadvertently drive off the road and into the creek. Previously, the former trees in this area served this function.

The area adjacent to the rear of the foundry was excavated and restored with crushed stone. A 10-foot by 10-foot shade structure was constructed in this area after restoration activities were complete. This shade structure provides foundry employees with a break area with shade since all trees previously providing shade were removed to remediate the area.

## **5.0 ANALYTICAL SYNOPSIS**

The AL used on the Site was 400 ppm for surface soil (300 ppm for soil in situ to account for variations in accuracy of XRF readings due to moisture levels and heterogeneity). Analytical data have been separated into categories according to the property owners of the areas that comprise the Site removal action. Soil sampling was implemented to determine the areas that needed to be excavated, capped, and restored. Post-removal soil screening was performed to determine whether (1) remaining contaminated soil and debris was below the AL of 300 ppm in situ or (2) barrier fabric needed to be installed to identify areas with residual lead contamination.

All soil and sediment samples for the Site removal action were screened for total lead concentration by XRF in the field in accordance with SW-846 Test Method 6200, Field Portable X-Ray Fluorescence Spectrometry for the Determination of Elemental Concentrations in Soil and Sediment (EPA 2007). Ten percent of the ex-situ samples collected during Site removal activities were dried and processed into XRF cups. Ten percent of the processed samples were sent to the EPA laboratory in Fort Meade, Maryland for total lead analysis to confirm the lead results obtained through XRF screening. The START Senior Chemist provided a data validation package for the XRF lead results obtained in the field.

Post-removal confirmation screening was implemented in situ using an XRF, and the results were entered onto a site diagram. The high and low range values were entered into a logbook.

## 6.0 REFERENCES

Berks County, Pennsylvania. Tax Maps. Accessed on-line in January 2022 at:  
<https://www.co.berks.pa.us/Dept/Mapping/Pages/TaxMaps.aspx>.

Entech Engineering. 2019. Erosion and Sediment Control Plan and Report.

Tetra Tech, Inc. (Tetra Tech). 2020a. Hamburg Kaercher Creek Field Sampling Plan. Revision September.

Tetra Tech. 2021. Trip Report for Hamburg Kaercher Creek Site Sediment Sampling. Revision 0. December.

U.S. Environmental Protection Agency (EPA). 2007. Field Portable X-Ray Fluorescence Spectrometry for the Determination of Elemental Concentrations in Soil and Sediment. SW-846 Method 6200. Revision 0. February.

EPA. 2003. Action Memorandum. Approval of a Funding Request for a Removal Action at Hamburg Kaercher Creek and Mill Creeks Site. January.

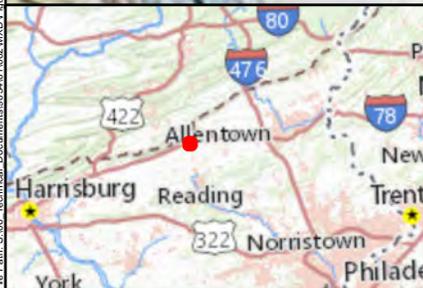
EPA 2004. Action Memorandum. Request for Additional Funding, and Exemption from the 12 Months and 42 Million Statutory Limits for a Removal Action – Hamburg Kaercher Creek Site. January.

EPA. 2019. Action Memorandum. Request for Additional Funding and Change in Scope for a Removal Action at the Hamburg Kaercher Creek Site in Hamburg, Berks County, Pennsylvania. December.

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## APPENDIX A - FIGURES

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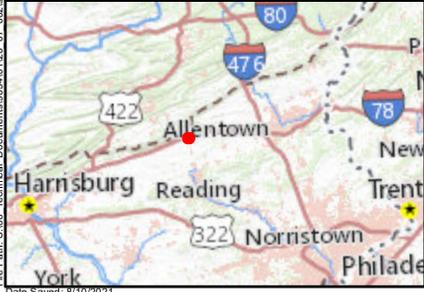


Hamburg Kaercher Creek  
 Hamburg, Berks County, Pennsylvania

**Figure 1**  
**Site Location Map**

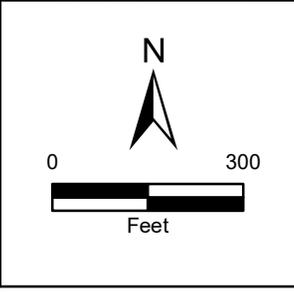


Prepared For: R3 START VI  
 Prepared By: V. Petrov  
 Coordinate System: NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet



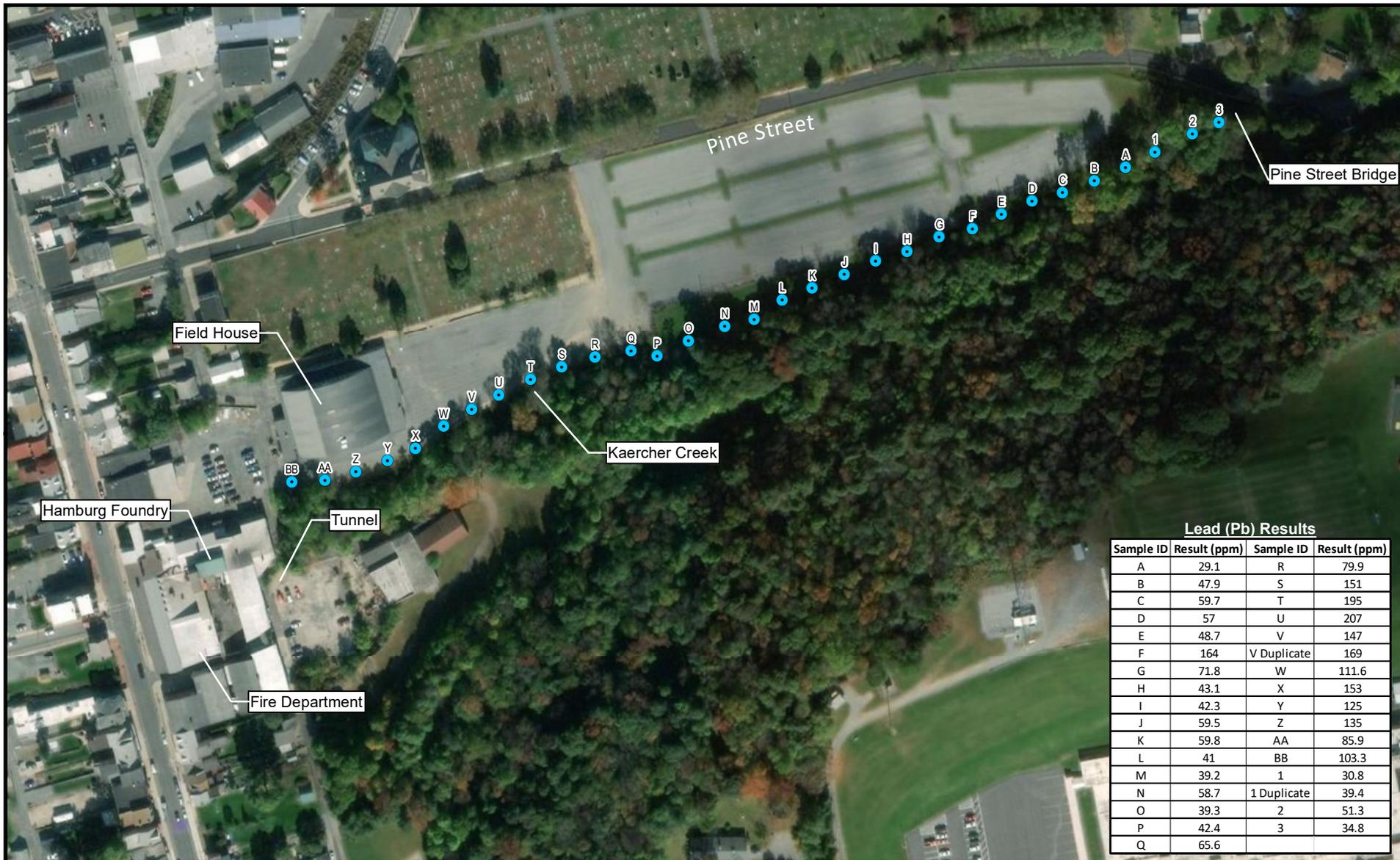
[1] Source: 2019 Sediment Sample Locations Map. Please note that Tetra Tech revised Weston Solutions Figure 1 of August 14, 2019 to Figure 2 so that it would logically fit into the After Action Report for Hamburg Kaercher Creek.

Source: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS



<p>Hamburg Kaercher Creek Hamburg, Berks County, Pennsylvania</p>	
<p><b>Figure 2</b> <b>Site Layout</b></p>	
Prepared For: R3 START VI	Prepared By: V.Petrov
Coordinate System: NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet	

File Path: S:\06 Technical Documents\903410\20\_07\_02\usa\MKD\Figure 1 - Site Layout.mxd  
Date Saved: 8/10/2021

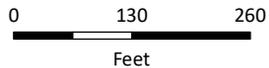


**Legend**

● Sediment Sample Locations



Coordinate System:  
WGS84 UTM Zone 18N Feet



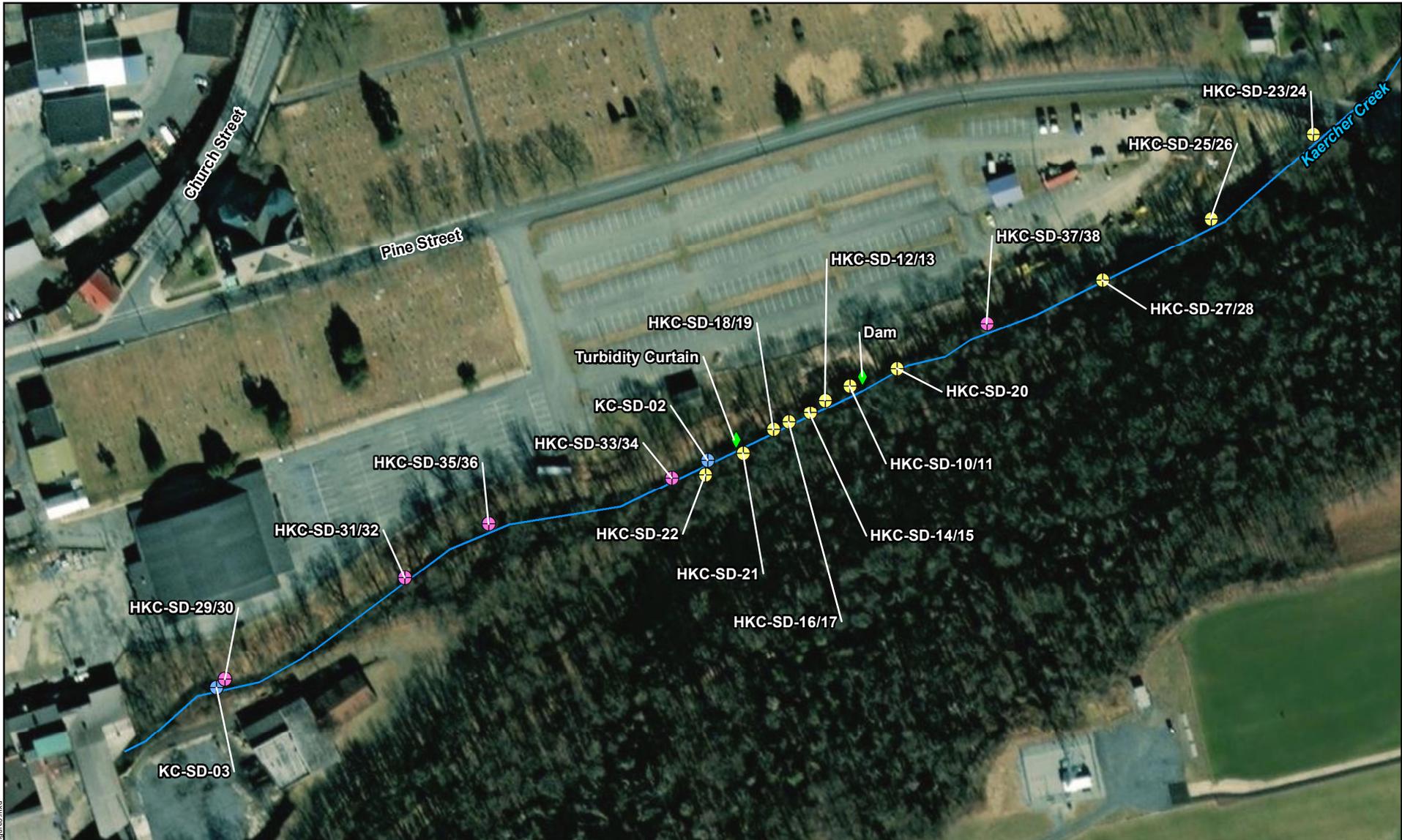
[1] Source: 2019 Sediment Sample Locations Map. Please note that Tetra Tech revised Weston Solutions Figure 1 of August 14, 2019 to Figure 2 so that it would logically fit into the After Action Report for Hamburg Kaercher Creek.

Hamburg Kaercher Creek  
Hamburg, Berks County, Pennsylvania

Figure 3  
Sediment Sample Locations  
August 14, 2019

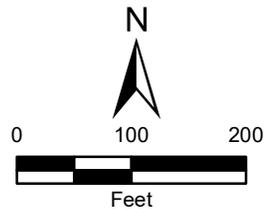
TDD#: WS01-19-04-006  
Contract: EP-53-15-02  
Prepared: 9/9/2019





**Legend**

- ⊕ CDM Location
- ⊕ Sediment Location - XRF Screening
- ⊕ Sediment Location - XRF Screening & Lab Analysis
- ◆ Other Features
- Streams



Hamburg Kaercher Creek  
Hamburg, Berks County, PA

**Figure 4**  
**Sample Location Map**



Prepared For: EPA R3 START VI | Prepared By: Megan Kelly  
Coordinate System: NAD 1983 2011 StatePlane Pennsylvania South FIPS 3702 FT US

File Path: S:\06 Technical Documents\90340120\_07\_002\Figure3.mxd

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## APPENDIX B - TABLES

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**Table 1: Agencies, Organizations, and Individuals**

Agency/Organization	Contact	Brief Description of Duties
<b>Federal</b>		
EPA HQ Office of Land and Emergency Management	Office of Land and Emergency Management	Approved the Site scope of work and funding for the Site.
EPA Region III Hazardous Site Cleanup Division Mail Code 3SD32 1650 Arch Street Philadelphia, PA 19103 (215) 814-3245	Fran Burns Chief of Preparedness and Response Branch (PRB) Western Response Branch	Assisted in Site funding and provided a liaison to coordinate with EPA upper management.
EPA Region III Removal Response Section Mail Code 3SD32 1650 Arch Street Philadelphia, PA 19103 (215) 814-5264	Todd Richardson Primary On-Scene Coordinator (OSC)	Coordinated all removal activities.
EPA Region III Western PA/MD Remedial Section Mail Code 3SD22 1650 Arch Street Philadelphia, PA 19103 (215) 814-3214	John Banks Remedial Project Manager (RPM)	Backup to the OSC for the Site;
EPA Region III Removal Branch Mail Code 3SD33 1650 Arch Street Philadelphia, PA 19103 (215) 814-3251	James Wright Field Administrative Specialist (FAS)	Assisted with administrative duties, tracked project costs, audited contractor costs and equipment, and processed contractor invoices.
EPA Region III Analytical Services and Quality Assurance Branch (ASQAB) Fort Meade 701 Mapes Road Fort Meade, MD 20755 (410) 305-2689	Karen Costa ASQAB Representative	Provided analytical and quality assurance services through the EPA Contract Laboratory Program (CLP).
EPA Region III Community Involvement Section Mail Code 3SD43 1650 Arch Street Philadelphia, PA 19103 (215) 814-5517	Amanda Miles Community Involvement Coordinator (CIC)	Provided community relations assistance.

**Table 1: Agencies, Organizations, and Individuals (Continued)**

Agency/Organization	Contact	Brief Description of Duties
<b>Federal</b>		
EPA Region III Office of Regional Counsel (ORC) Mail Code 3RC42 1650 Arch Street Philadelphia, PA 19103 (215) 814-2634	Thomas Cinti Assistant Regional Counsel	Provided legal support with Site access and property owner's legal counsel.
EPA Region III Remedial Section 1650 Arch Street Philadelphia, PA 19103 (215) 814-2380	Bruce Pluta Biologist	Provided technical assistance to EPA concerning threatened and endangered species.
<b>State</b>		
PADEP Southcentral Region 909 Elmerton Avenue Harrisburg, PA 17110-8200	Caine Stone Pennsylvania Department of Environmental Protection (PADEP) Representative	State contact.
<b>Local</b>		
Borough of Hamburg 61 North 3 <sup>rd</sup> Street Hamburg, PA 19562 (610) 562-7821	John Leinforte	Borough of Hamburg contact, granted access to city property.
Hamburg Area Water Authority (610) 562-7322	Keith Brobst	Provided information on sanitary sewer line locations
Berks County Soil Conservation District (610) 372-4657	NA	Provided information regarding soil and sediment erosion.
Hamburg Fire Department (610) 562-7838	Scott Thren Assistant Fire Chief	Provided Site access to field house property to be used as staging areas.
<b>Contractors</b>		
Weston Solutions, Inc. Superfund Technical Assessment and Response Team (START) Contractor 1400 Weston Way West Chester, PA 19380 (610) 416-9584	Dean Maser Senior Project Scientist	Provided technical assistance to EPA by providing photo documentation, reports, oversight of Emergency and Rapid Response Services (ERRS) and environmental monitoring during the removal.

**Table 1: Agencies, Organizations, and Individuals (Continued)**

Agency/Organization	Contact	Brief Description of Duties
Tetra Tech, Inc. START Contractor 240 Continental Drive, Ste 200 Newark, DE 19813 (302) 738-7551	Dean Maser Margot Shrift Senior Project Scientist	Provided technical assistance to EPA by providing photo documentation, reports, oversight of ERRS and environmental monitoring during the removal.
Environmental Restoration (ER), LLC ERRS Contractor 1666 Fabick Drive St. Louis, MO 63026	Ray Willis, Alvon Jackson Response Manager	Conducted Site preparation and excavation activities. Coordinated disposal of wastes. Conducted Site maintenance and restoration. Completed the environmental remediation.
<b>Subcontractors</b>		
A1 Portable Toilets 295 Drivehill Road Fleetwood, PA 19522 (610) 944-6111	Scott Wanamaker	Provided portable toilets and hand wash stations for use on Site.
JobSite Products 4321 Township Line Road Skippack, PA 19474 (800) 298-4900	Brooke Schiavone	Provided woven geotextile fabric, NAG P300, and other erosion control products.
Manmiller Electric 1205 Ridge Road Shoemakersville, PA 19555 (484) 824-1175	Doug Manmiller	Provided electrical hookup of the command post.
Berks Products/New Enterprise 5344 Pottsville Pike Leesport, PA 19533 (610) 916-7709	Not Applicable (NA)	Provided asphalt for parking lot repair and berm construction.
Pro Max Fence 2621 Centre Avenue Reading, PA 19605 (610) 685-4300	Todd Weaver	Provided guard rail installation services.
Capitol Environmental Services, Inc. 15 Trolley Square Wilmington, DE 19801-3354 (302) 652-8999	Kim Swann	Provided disposal manifesting and permitting.
Advanced Disposal / Waste Management 197 Swamp Creek Road Gilbertsville, PA 19525 (610) 367-1300	Cassandra Smith	Provided roll off and Site trash dumpsters.
Zwicky Recycling 202 Buena Vista Road Fleetwood, PA 19522 (484) 248-5300	Dave Zwicky	Recycled stumps and tree debris.
Elk Environmental Services 1420 Clarion Street Reading, PA 19601 (800) 851-7156	Jestyn Newswanger	Provided disposal services for the contaminated soil designated as regulated.

**Table 1: Agencies, Organizations, and Individuals (Continued)**

<b>Agency/Organization</b>	<b>Contact</b>	<b>Brief Description of Duties</b>
Strobert, Inc. 1806 Zebley Road Wilmington, DE 19810 (302) 656-6077	Chip Heyser	Provided land clearing and tree removal services to the ERRS contractor.
Martin Stone 1355 North Reading Avenue Bechtelsville, PA 19505 (610) 367-2011	Eric Gehman	Provided revetment stone.
Reading Tractor and Equipment 5538 Pottsville Pike Leesport, PA 19533 (610) 926-2441	Jesse Maurer	Provided rental equipment repairs.
Acton Mobile/William Scotsman 2700 Route 100 Macungie, PA 17050 (610) 966-5858	Karl Wagenhoffer	Provided command post trailers and work trailer onsite.
Berks Soil and Stone 1 Bellman's Church Road Leesport, PA 19533 (484) 277-7901	David Folino	Provided clean fill and topsoil onsite.
Best Line Equipment Rental 1315 Hausman Road Allentown, PA 18104 (484) 223-3814	Gene Yacapsin	Provided heavy equipment.
Hilltop Lawn Service Route 61 Hamburg, PA 19526 (610) 562-3124	Dave Gassert	Provided silt socks and hydroseed supplies.
Homewood Suites 2801 Papermill Road Wyomissing, PA 19610 (610) 736-3100	Jim Sieck	Provided lodging for the ERRS contractor.
Baker Pumps 43 Gilchrist Drive Swedesboro, NJ 08085 (856) 241-1770	Ryan Perry	Provided water diversion pumps, piping, and filter box.
Rain for Rent 1197 Aura Road Monroeville, NJ 08343 (856) 881-6162	Brian Smyth	Provided water diversion pumps, piping, and filter box.
Kuzan's Hardware (Action Rental) 1069 Pottsville Pike Shoemakersville, PA 19555 (610) 562-7186	Doug Heffner	Provided various saws, pressure washers, and equipment for use onsite.
Entech Engineering 201 Penn Avenue, Suite 300 Reading, PA 19603 (800) 825-1372	Jason Book	Provided engineering services during the removal/restoration work. Generated initial survey map, established property lines and final as-built maps.

**Table 1: Agencies, Organizations, and Individuals (Continued)**

Agency/Organization	Contact	Brief Description of Duties
Midlantic Machinery 2240 Bethlehem Pike Hatfield, PA 19440 (215) 822-0145	Jason Waslievski	Provided rental equipment for onsite activities.
EMSL 200 Route 130 North Cinnaminson, NJ 08077 (856) 303-2600	David Prince	Provided analytical services for ERRS.
SGS North America 2235 Route 130 Dayton, NJ 08810 (732) 329-0200	Jadon Schiller	Provided analytical services for ERRS.
Bonner Analytical Testing Co. 2703 Oak Grove Road Hattiesburg, MS 39402 (601) 264-2854	Max Bonner	Provided analytical services for sediment samples.
United Rentals 836 Cedar Crest Drive Lebanon, PA 17042 (717) 272-4658	Courtney Hughes-Brown	Provided rental equipment for on-Site activities.
Premier Magnesia 75 Giles Place Waynesville, NC 28786 (610) 551-9436	Bonnie Cassey	Provided Enviro-blend for stabilizing lead contaminated soil.
FCI 825 State Route 33 Freehold, NJ 07728-8431 (732) 462-1001	NA	Provided polychlorinated biphenyl (PCB) roll off.
Action Adam 121 Hill Drive Hamburg, PA 19526 610-587-8271	NA	Provided roll off for end of site disposal.
Met-ED 2800 Pottsville Pike Reading, PA 19605 (610) 921-6160	Tyler Sweigart	Coordinated with site personnel when working around utility poles and replaced guide wire.
Eaton Farms 455 White Oak Lane PO Box 775 Leesport, PA 19533 (484) 955-2402	Tom Eaton	Provided replacement trees.
Indian Valley Bulk Carriers Ridge Road Tylersport, PA 18971	NA	Transported non-hazardous soil off site.
J. Marlin Ernst and Sons 15 Pinedale Drive Orwigsburg, PA 17961	NA	Transported non-hazardous soil off site.

**Table 2: Disposal Methods and Quantities**

<b>Material</b>	<b>Quantity</b>	<b>Units</b>	<b>Disposal Facility</b>	<b>Disposal Method</b>
"Reportable Quantity (RQ)" Hazardous Waste, Solid, Not Otherwise Specified (NOS) (Lead)	8,375.49	Tons	Republic Environmental Services 2869 Sandstone Drive Hatfield, PA 19444 (215) 822-2676	Stabilized then deposited in landfill
Non-Department of Transportation (DOT), Non- Resource Conservation and Recovery Act (RCRA) Regulated Material, Solid	8,938.8	Tons	Lanchester Landfill 7224 Division Hwy Narvon, PA 17555 (800) 626-0067	Landfill
Polychlorinated Biphenyl (PCB) Waste Material	3.48	Tons	Wayne Disposal 36255 Michigan Ave Wayne, MI 48184 (734) 329-8000	Landfill

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**APPENDIX C – PHOTOGRAPHIC DOCUMENTATION LOG**

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**PHOTOGRAPHIC DOCUMENTATION LOG**

**Client:** EPA Region 3  
**Site Name:** Hamburg Kaercher Creek  
**Location:** Hamburg, Berks County, Pennsylvania

**Prepared by:** Tetra Tech, Inc.  
**TD No.:** T601-20-07-002  
**Dates:** April 2018 – August 2021

<p><b>Photograph No. 1</b></p> <p><b>Photographer:</b> Dean Maser</p> <p><b>Date:</b> 4/5/2018</p> <p><b>Description:</b> View of exposed geotextile fabric and general erosion damage along Kaercher Creek bank.</p>	
<p><b>Photograph No. 2</b></p> <p><b>Photographer:</b> Dean Maser</p> <p><b>Date:</b> 8/8/2019</p> <p><b>Description:</b> Installing 18-inch filter sock along creek bank.</p>	

**PHOTOGRAPHIC DOCUMENTATION LOG**

**Client:** EPA Region 3  
**Site Name:** Hamburg Kaercher Creek  
**Location:** Hamburg, Berks County, Pennsylvania

**Prepared by:** Tetra Tech, Inc.  
**TD No.:** T601-20-07-002  
**Dates:** April 2018 – August 2021

**Photograph No. 3**

**Photographer:**  
Dean Maser

**Date:** 8/20/2019

**Description:**  
Battery fragments in excavator bucket at east end.



**Photograph No. 4**

**Photographer:**  
Dean Maser

**Date:** 10/11/2019

**Description:**  
Installing coffer dam in Kaercher Creek prior to excavation.



**PHOTOGRAPHIC DOCUMENTATION LOG**

**Client:** EPA Region 3  
**Site Name:** Hamburg Kaercher Creek  
**Location:** Hamburg, Berks County, Pennsylvania

**Prepared by:** Tetra Tech, Inc.  
**TD No.:** T601-20-07-002  
**Dates:** April 2018 – August 2021

**Photograph No. 5**

**Photographer:**  
Dean Maser

**Date:** 10/18/2019

**Description:**  
First section of completed creek bank showing the Pine Street Bridge.



**Photograph No. 6**

**Photographer:**  
Dean Maser

**Date:** 3/11/2020

**Description:**  
View looking west showing coffer dam, leading edge of excavation, clay backfill, geotextile fabric, and revetment stone.



**PHOTOGRAPHIC DOCUMENTATION LOG**

**Client:** EPA Region 3  
**Site Name:** Hamburg Kaercher Creek  
**Location:** Hamburg, Berks County, Pennsylvania

**Prepared by:** Tetra Tech, Inc.  
**TD No.:** T601-20-07-002  
**Dates:** April 2018 – August 2021

<p><b>Photograph No. 7</b></p> <p><b>Photographer:</b> Dean Maser</p> <p><b>Date:</b> 3/18/2020</p> <p><b>Description:</b> View looking east showing excavator, pump, and next section of bank to be removed.</p>	
<p><b>Photograph No. 8</b></p> <p><b>Photographer:</b> Dean Maser</p> <p><b>Date:</b> 5/21/2020</p> <p><b>Description:</b> Hydroseed on restored area.</p>	

**PHOTOGRAPHIC DOCUMENTATION LOG**

**Client:** EPA Region 3  
**Site Name:** Hamburg Kaercher Creek  
**Location:** Hamburg, Berks County, Pennsylvania

**Prepared by:** Tetra Tech, Inc.  
**TD No.:** T601-20-07-002  
**Dates:** April 2018 – August 2021

**Photograph No. 9**

**Photographer:**  
Dean Maser

**Date:** 6/25/2020

**Description:**  
Newly installed concrete apron around storm drain inlet.



**Photograph No. 10**

**Photographer:**  
Dean Maser

**Date:** 7/17/2020

**Description:**  
Backfill clay being placed onto orange barrier fabric.



**PHOTOGRAPHIC DOCUMENTATION LOG**

**Client:** EPA Region 3  
**Site Name:** Hamburg Kaercher Creek  
**Location:** Hamburg, Berks County, Pennsylvania

**Prepared by:** Tetra Tech, Inc.  
**TD No.:** T601-20-07-002  
**Dates:** April 2018 – August 2021

**Photograph No. 11**

**Photographer:**  
Dean Maser

**Date:** 8/24/2020

**Description:**  
View of turbidity curtain  
installed downstream (west)  
of the rock check dam.



**Photograph No. 12**

**Photographer:**  
Dean Maser

**Date:** 9/29/2020

**Description:**  
Various stages of the bank  
restoration process looking  
east.



**PHOTOGRAPHIC DOCUMENTATION LOG**

**Client:** EPA Region 3  
**Site Name:** Hamburg Kaercher Creek  
**Location:** Hamburg, Berks County, Pennsylvania

**Prepared by:** Tetra Tech, Inc.  
**TD No.:** T601-20-07-002  
**Dates:** April 2018 – August 2021

<p><b>Photograph No. 13</b></p> <p><b>Photographer:</b> Dean Maser</p> <p><b>Date:</b> 4/20/2021</p> <p><b>Description:</b> Small excavator in the portion of diverted creek bed.</p>	
<p><b>Photograph No. 14</b></p> <p><b>Photographer:</b> Dean Maser</p> <p><b>Date:</b> 6/15/2021</p> <p><b>Description:</b> Excavating creek bank approaching field house.</p>	

**PHOTOGRAPHIC DOCUMENTATION LOG**

**Client:** EPA Region 3  
**Site Name:** Hamburg Kaercher Creek  
**Location:** Hamburg, Berks County, Pennsylvania

**Prepared by:** Tetra Tech, Inc.  
**TD No.:** T601-20-07-002  
**Dates:** April 2018 – August 2021

**Photograph No. 15**

**Photographer:**  
Dean Maser

**Date:** 6/15/2021

**Description:**  
View of raised manhole and temporary poly sheeting on bank.



**Photograph No. 16**

**Photographer:**  
Dean Maser

**Date:** 7/7/2021

**Description:**  
Removing stump from bank.



**PHOTOGRAPHIC DOCUMENTATION LOG**

**Client:** EPA Region 3  
**Site Name:** Hamburg Kaercher Creek  
**Location:** Hamburg, Berks County, Pennsylvania

**Prepared by:** Tetra Tech, Inc.  
**TD No.:** T601-20-07-002  
**Dates:** April 2018 – August 2021

**Photograph No. 17**

**Photographer:**  
Dean Maser

**Date:** 7/23/2021

**Description:**  
The shade structure completed. Concrete block retaining wall shown.



**Photograph No. 18**

**Photographer:**  
Dean Maser

**Date:** 8/12/2021

**Description:**  
Excavating the last section of creek bank. This is the western most point of creek bank removed.



**PHOTOGRAPHIC DOCUMENTATION LOG**

**Client:** EPA Region 3  
**Site Name:** Hamburg Kaercher Creek  
**Location:** Hamburg, Berks County, Pennsylvania

**Prepared by:** Tetra Tech, Inc.  
**TD No.:** T601-20-07-002  
**Dates:** April 2018 – August 2021

<p><b>Photograph No. 19</b></p> <p><b>Photographer:</b> Dean Maser</p> <p><b>Date:</b> 8/16/2021</p> <p><b>Description:</b> View of backfill clay after being compacted with a sheep's foot roller. Foundry seen in background.</p>	
<p><b>Photograph No. 20</b></p> <p><b>Photographer:</b> Dean Maser</p> <p><b>Date:</b> 8/27/21</p> <p><b>Description:</b> Hydro-seeding the area adjacent to the parking lot.</p>	

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**ATTACHMENT 1 - POLLUTION REPORTS**

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U.S. ENVIRONMENTAL PROTECTION AGENCY  
POLLUTION/SITUATION REPORT  
Hamburg Kaercher Creek Site - Field House - Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region III

**Subject:** POLREP #50  
Hamburg Kaercher Creek Site - Field House  
A3H8  
Hamburg, PA  
Latitude: 40.5537210 Longitude: -75.9803895

**To:**  
**From:** Todd Richardson, On Scene Coordinator  
**Date:** 7/19/2019  
**Reporting Period:** 6/5/2019 - 7/19/2019

## 1. Introduction

### 1.1 Background

<b>Site Number:</b>	A3H8	<b>Contract Number:</b>	
<b>D.O. Number:</b>		<b>Action Memo Date:</b>	
<b>Response Authority:</b>	CERCLA	<b>Response Type:</b>	Time-Critical
<b>Response Lead:</b>	EPA	<b>Incident Category:</b>	Removal Action
<b>NPL Status:</b>		<b>Operable Unit:</b>	
<b>Mobilization Date:</b>		<b>Start Date:</b>	6/5/2019
<b>Demob Date:</b>		<b>Completion Date:</b>	
<b>CERCLIS ID:</b>		<b>RCRIS ID:</b>	
<b>ERNS No.:</b>		<b>State Notification:</b>	
<b>FPN#:</b>		<b>Reimbursable Account #:</b>	

#### 1.1.1 Incident Category

#### 1.1.2 Site Description

A battery manufacturing facility operated in the Borough of Hamburg from 1920 to the mid 1990s. During operations, battery casings were split open and the lead plates inside the batteries were removed for resmelting. The battery casings were reused as ground fill material and deposited throughout the Hamburg area.

Kaercher Creek is listed as a warm-water fishery and ranges in width from 3 to 10 feet and in depth from 1 to 3 feet (Roy F. Weston, Inc. 2000). The creek banks vary from 2 to 20 feet high throughout the Borough of Hamburg, which contains industrial, commercial, and residential zones and is located in rural northeast Pennsylvania. Kaercher Creek flows through the Borough of Hamburg and the Price Battery facility property before it joins the Schuylkill River southwest of Hamburg.

In October 2001, the U.S. Environmental Protection Agency (EPA) was notified of the presence of battery casings along Kaercher Creek near the Hamburg Field House. In 2002, Tetra Tech EM Inc., under the direction of the EPA On-Scene Coordinator, performed removal assessments along Kaercher Creek from Kaercher Lake to Kaercher Creek's confluence with the Schuylkill River. The Agency for Toxic Substances and Disease Registry reviewed the site assessment reports and issued a Health Consultation that recommended an immediate Comprehensive Environmental Response, Compensation, and Liability Act removal action to protect human health.

In May 2003, EPA approved funding for a removal action at the Hamburg – Kaercher Creek site. EPA remediated a total of 5,470 feet of Kaercher Creek during the Hamburg – Kaercher

Creek removal action. Exide Corporation completed remediation of Kaercher Creek at the Price Battery facility.

On-site cleanup activities included excavating contaminated sediment and soil, transporting the lead-contaminated soil off site for disposal, and capping remaining areas of contamination. Soil capping activities included backfilling with clean soil, fertilizing and seeding the area with native grass seed, mulching with straw, and planting trees and shrubs as appropriate. Sediment capping activities included installing geotextile fabric and backfilling with rip rap stone.

Removal Activities associated with the 2003 - 2005 EPA lead clean-up, were completed in December 2004. However, in 2017, during an ecological assessment of Kaercher Creek, EPA remedial program contractors (CDM Federal) reported finding significant areas of erosion on the banks of Kaercher Creek adjacent to the Hamburg Fieldhouse and parking lot. EPA's remedial program (RPM, John Banks) then notified the removal program (OSC, Todd Richardson) of the erosion issues on the banks of Kaercher Creek. OSC Richardson conducted an initial site inspection on April 5, 2018. In May of 2018, OSC Richardson, along with Dean Maser (Weston Solutions, START) re-visited the Site, noting the erosion damaged creek bank, and screening surface soil in areas of erosion. Several areas of erosion were observed with visible battery casings and lead concentrations ranging from 2600 - 2800ppm.

For additional information, visit the Pollution/Situation Report ([Pol/Sitreps](#)) section.

**1.1.2.1 Location**

The intersection of Pine and Church Streets, Hamburg, PA 19562

**1.1.2.2 Description of Threat**

Direct exposure and migration of lead contamination. Lead contamination in creek back surface soil.

**1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results**

START and EPA visited site and observed erosion which exposed geotextile fabric and high visibility orange fencing in areas that had been remediated in the 2003 - 2005 period. There were also several ground hog holes exposing battery debris.

**2. Current Activities**

**2.1 Operations Section**

**2.1.1 Narrative**

EPA, ERRS, and START met on-Site to begin planning for procurement of materials and equipment, necessary for set-up of staging/command post area, and Site work area at the Field House property. Office trailers were delivered and installed at the 5th and Chestnut command post/staging area. An electrician was hired to set up and connect a temporary generator to power office trailers, until a local power can be connected. A preliminary (pre-removal) video of the Fieldhouse parking lot was taken. Clearing and grubbing operations began at the east end of the Site, and to facilitate land surveyor activities. Surveyor completed surveying the Site, up to and including the top of the bank, opposite the bank where removal activities are planned. The final survey including an E&S plan will be used to determine how the bank will be used to guide removal activities. Three buried manholes were located and uncovered in the work area. An 18" filter sock was installed around areas which were excavated during the location of the manholes. Temporary 6' security fencing was installed along the Fieldhouse parking lot, and orange construction fencing was installed along the top of the opposite bank of Kaercher Creek with signage. Large shale pile at the east end of parking lot was moved to facilitate a staging area for creek bank restoration materials.

**2.1.2 Response Actions to Date**

Site visit and initial screening (assessment)

Site survey complete

Set up of command post and staging areas.

Installation of construction and security fencing.

Clearing and grubbing activities (in progress)

**2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)**

**2.1.4 Progress Metrics**

<i>Waste Stream</i>	<i>Medium</i>	<i>Quantity</i>	<i>Manifest #</i>	<i>Treatment</i>	<i>Disposal</i>

**2.2 Planning Section**

**2.2.1 Anticipated Activities**

Excavate creek bank and revet with large rip rap stone.

Address field house parking lot issues as necessary.

**2.2.1.1 Planned Response Activities**

**2.2.1.2 Next Steps**

Finalize engineering and E&S plans.

Begin excavation and revetment operations.

**2.2.2 Issues**

**2.3 Logistics Section**

No information available at this time.

**2.4 Finance Section**

**2.4.1 Narrative**

On 05/22/2019 an initial task order was awarded to ER in the amount of \$2,000,000.00.

**Estimated Costs \***

	<b>Budgeted</b>	<b>Total To Date</b>	<b>Remaining</b>	<b>% Remaining</b>
<b>Extramural Costs</b>				
ERRS - Cleanup Contractor	\$2,000,000.00	\$63,898.36	\$1,936,101.64	96.81%
TAT/START	\$105,116.00	\$29,123.27	\$75,992.73	72.29%
<b>Intramural Costs</b>				
<b>Total Site Costs</b>	<b>\$2,105,116.00</b>	<b>\$93,021.63</b>	<b>\$2,012,094.37</b>	<b>95.58%</b>

\* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

#### **2.5 Other Command Staff**

No information available at this time.

### **3. Participating Entities**

#### **3.1 Unified Command**

#### **3.2 Cooperating Agencies**

**EPA, PADEP, and the Borough of Hamburg**

### **4. Personnel On Site**

EPA, ERRS, and START

### **5. Definition of Terms**

No information available at this time.

### **6. Additional sources of information**

No information available at this time.

### **7. Situational Reference Materials**

No information available at this time.

U.S. ENVIRONMENTAL PROTECTION AGENCY  
POLLUTION/SITUATION REPORT  
Hamburg Kaercher Creek Site - Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region III

**Subject:** POLREP #51  
Hamburg Kaercher Creek Site  
A3H8  
Hamburg, PA  
Latitude: 40.5537210 Longitude: -75.9803895

**To:**  
**From:** Todd Richardson, On Scene Coordinator  
**Date:** 9/13/2019  
**Reporting Period:** 07/20/2019 - 09/20/2019

## 1. Introduction

### 1.1 Background

<b>Site Number:</b>	A3H8	<b>Contract Number:</b>	
<b>D.O. Number:</b>		<b>Action Memo Date:</b>	
<b>Response Authority:</b>	CERCLA	<b>Response Type:</b>	Time-Critical
<b>Response Lead:</b>	EPA	<b>Incident Category:</b>	Removal Action
<b>NPL Status:</b>		<b>Operable Unit:</b>	
<b>Mobilization Date:</b>		<b>Start Date:</b>	6/5/2019
<b>Demob Date:</b>		<b>Completion Date:</b>	
<b>CERCLIS ID:</b>		<b>RCRIS ID:</b>	
<b>ERNS No.:</b>		<b>State Notification:</b>	
<b>FPN#:</b>		<b>Reimbursable Account #:</b>	

#### 1.1.1 Incident Category

#### 1.1.2 Site Description

A battery manufacturing facility operated in the Borough of Hamburg from 1920 to the mid 1990s. During operations, battery casings were split open and the lead plates inside the batteries were removed for resmelting. The battery casings were reused as ground fill material and deposited throughout the Hamburg area.

Kaercher Creek is listed as a warm-water fishery and ranges in width from 3 to 10 feet and in depth from 1 to 3 feet (Roy F. Weston, Inc. 2000). The creek banks vary from 2 to 20 feet high throughout the Borough of Hamburg, which contains industrial, commercial, and residential zones and is located in rural northeast Pennsylvania. Kaercher Creek flows through the Borough of Hamburg and the Price Battery facility property before it joins the Schuylkill River southwest of Hamburg.

In October 2001, the U.S. Environmental Protection Agency (EPA) was notified of the presence of battery casings along Kaercher Creek near the Hamburg Field House. In 2002, Tetra Tech EM Inc., under the direction of the EPA On-Scene Coordinator, performed removal assessments along Kaercher Creek from Kaercher Lake to Kaercher Creek's confluence with the Schuylkill River. The Agency for Toxic Substances and Disease Registry reviewed the site assessment reports and issued a Health Consultation that recommended an immediate Comprehensive Environmental Response, Compensation, and Liability Act removal action to protect human health.

In May 2003, EPA approved funding for a removal action at the Hamburg – Kaercher Creek site. EPA remediated a total of 5,470 feet of Kaercher Creek during the Hamburg – Kaercher

Creek removal action. Exide Corporation completed remediation of Kaercher Creek at the Price Battery facility.

On-site cleanup activities included excavating contaminated sediment and soil, transporting the lead-contaminated soil off site for disposal, and capping remaining areas of contamination. Soil capping activities included backfilling with clean soil, fertilizing and seeding the area with native grass seed, mulching with straw, and planting trees and shrubs as appropriate. Sediment capping activities included installing geotextile fabric and backfilling with rip rap stone.

Removal Activities associated with the 2003 - 2005 EPA lead clean-up, were completed in December 2004. However, in 2017, during an ecological assessment of Kaercher Creek, EPA remedial program contractors (CDM Federal) reported finding significant areas of erosion on the banks of Kaercher Creek adjacent to the Hamburg Fieldhouse and parking lot. EPA's remedial program (RPM, John Banks) then notified the removal program (OSC, Todd Richardson) of the erosion issues on the banks of Kaercher Creek. OSC Richardson conducted an initial site inspection on April 5, 2018. In May of 2018, OSC Richardson, along with Dean Maser (Weston Solutions, START) re-visited the Site, noting the erosion damaged creek bank, and screening surface soil in areas of erosion. Several areas of erosion were observed with visible battery casings and lead concentrations ranging from 2600 - 2800ppm.

For additional information, visit the Pollution/Situation Report ([Pol/Sitreps](#)) section.

**1.1.2.1 Location**

The intersection of Pine and Church Streets, Hamburg, PA 19562

**1.1.2.2 Description of Threat**

Direct exposure and migration of lead contamination. Lead contamination in creek back surface soil.

**1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results**

START and EPA visited site and observed erosion which exposed geotextile fabric and high visibility orange fencing in areas that had been remediated in the 2003 - 2005 period. There were also several ground hog holes exposing battery debris.

**2. Current Activities**

**2.1 Operations Section**

**2.1.1 Narrative**

The local township was able to use the majority of the shale stockpiled at the east end of the site. The site will use the rest. A layer of fabric and modified 2A stone was placed around the rear entrance of the foundry, which is where their employees take breaks, as a temporary measure to prevent direct contact exposure to elevated lead concentrations in the surface soil in that area. The eastern portion of the creek bank was cleared and grubbed to 500' downstream. An 18" filter sock was installed along the creek edge for the 500' cleared per the E & S plan. Samples were obtained and laboratory analyzed of the proposed backfill clay and topsoil. They all passed the PA clean fill regulations. Written access agreements were obtained from the two private residences whose property will be impacted by site activities. Collected 31 sediment samples from the creek plus two duplicates and analyzed them ex-situ with the XRF. All lead levels were well below the action level. GPS points were collected at each location and an overview map was created showing the sample point and corresponding lead result. EPA BTAG personnel conducted a macro benthic survey on the creek and indicated that there was abundant life in the creek. Ten test pits were dug to four feet and analyzed in-situ with the XRF. This area was the east end of site between Pine Street, parking lot and Kaercher Creek. There were some pits that showed battery debris with elevated lead levels, but most were below the AL. These areas will be addressed when that area is remediated. Received draft E & S Plan and site drawings from engineering firm. Once all concerns have been addresses the final copies will be submitted. Five of the overhead lights and four poles were removed along with the wire. The Hamburg Fire Department plans to replace and install new poles. EPA CIC, Amada Miles visited the site and distributed a fact sheet to nearby residents and posted the fact sheet at the Municipal Building and the Hamburg Public Library.

**2.1.2 Response Actions to Date**

- Site visit and initial screening (assessment)
- Site survey complete
- Set up of command post and staging areas.
- Installation of construction and security fencing.
- Clearing and grubbing activities (in progress)
- Access agreements received

**2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)**

**2.1.4 Progress Metrics**

<i>Waste Stream</i>	<i>Medium</i>	<i>Quantity</i>	<i>Manifest #</i>	<i>Treatment</i>	<i>Disposal</i>

**2.2 Planning Section**

**2.2.1 Anticipated Activities**

- Excavate creek bank andrevet with large rip rap stone.
- Address field house parking lot issues as necessary.

**2.2.1.1 Planned Response Activities**

**2.2.1.2 Next Steps**

- Finalize engineering and E&S plans.
- Begin excavation and revetment operations.

**2.2.2 Issues**

**2.3 Logistics Section**

No information available at this time.

**2.4 Finance Section**

**2.4.1 Narrative**

On 08/30/2019 \$158,532.00 was added to the START TDD.

**Estimated Costs \***

	<b>Budgeted</b>	<b>Total To Date</b>	<b>Remaining</b>	<b>% Remaining</b>
<b>Extramural Costs</b>				
ERRS - Cleanup Contractor	\$2,000,000.00	\$454,042.40	\$1,545,957.60	77.30%

TAT/START	\$263,648.00	\$72,984.15	\$190,663.85	72.32%
<b>Intramural Costs</b>				
<b>Total Site Costs</b>	\$2,263,648.00	\$527,026.55	\$1,736,621.45	76.72%

\* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

**2.5 Other Command Staff**

No information available at this time.

**3. Participating Entities**

**3.1 Unified Command**

**3.2 Cooperating Agencies**

EPA, PADEP, and the Borough of Hamburg

**4. Personnel On Site**

EPA, ERRS, and START

**5. Definition of Terms**

No information available at this time.

**6. Additional sources of information**

No information available at this time.

**7. Situational Reference Materials**

No information available at this time.

U.S. ENVIRONMENTAL PROTECTION AGENCY  
POLLUTION/SITUATION REPORT  
Hamburg Kaercher Creek Site - Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region III

**Subject:** POLREP #52  
Hamburg Kaercher Creek Site  
A3H8  
Hamburg, PA  
Latitude: 40.5537210 Longitude: -75.9803895

**To:**  
**From:** Todd Richardson, On Scene Coordinator  
**Date:** 10/16/2019  
**Reporting Period:** 09/21/2019 - 10/21/2019

## 1. Introduction

### 1.1 Background

<b>Site Number:</b>	A3H8	<b>Contract Number:</b>	
<b>D.O. Number:</b>		<b>Action Memo Date:</b>	
<b>Response Authority:</b>	CERCLA	<b>Response Type:</b>	Time-Critical
<b>Response Lead:</b>	EPA	<b>Incident Category:</b>	Removal Action
<b>NPL Status:</b>		<b>Operable Unit:</b>	
<b>Mobilization Date:</b>		<b>Start Date:</b>	6/5/2019
<b>Demob Date:</b>		<b>Completion Date:</b>	
<b>CERCLIS ID:</b>		<b>RCRIS ID:</b>	
<b>ERNS No.:</b>		<b>State Notification:</b>	
<b>FPN#:</b>		<b>Reimbursable Account #:</b>	

#### 1.1.1 Incident Category

#### 1.1.2 Site Description

A battery manufacturing facility operated in the Borough of Hamburg from 1920 to the mid 1990s. During operations, battery casings were split open and the lead plates inside the batteries were removed for resmelting. The battery casings were reused as ground fill material and deposited throughout the Hamburg area.

Kaercher Creek is listed as a warm-water fishery and ranges in width from 3 to 10 feet and in depth from 1 to 3 feet (Roy F. Weston, Inc. 2000). The creek banks vary from 2 to 20 feet high throughout the Borough of Hamburg, which contains industrial, commercial, and residential zones and is located in rural northeast Pennsylvania. Kaercher Creek flows through the Borough of Hamburg and the Price Battery facility property before it joins the Schuylkill River southwest of Hamburg.

In October 2001, the U.S. Environmental Protection Agency (EPA) was notified of the presence of battery casings along Kaercher Creek near the Hamburg Field House. In 2002, Tetra Tech EM Inc., under the direction of the EPA On-Scene Coordinator, performed removal assessments along Kaercher Creek from Kaercher Lake to Kaercher Creek's confluence with the Schuylkill River. The Agency for Toxic Substances and Disease Registry reviewed the site assessment reports and issued a Health Consultation that recommended an immediate Comprehensive Environmental Response, Compensation, and Liability Act removal action to protect human health.

In May 2003, EPA approved funding for a removal action at the Hamburg – Kaercher Creek site. EPA remediated a total of 5,470 feet of Kaercher Creek during the Hamburg – Kaercher

Creek removal action. Exide Corporation completed remediation of Kaercher Creek at the Price Battery facility.

On-site cleanup activities included excavating contaminated sediment and soil, transporting the lead-contaminated soil off site for disposal, and capping remaining areas of contamination. Soil capping activities included backfilling with clean soil, fertilizing and seeding the area with native grass seed, mulching with straw, and planting trees and shrubs as appropriate. Sediment capping activities included installing geotextile fabric and backfilling with rip rap stone.

Removal Activities associated with the 2003 - 2005 EPA lead clean-up, were completed in December 2004. However, in 2017, during an ecological assessment of Kaercher Creek, EPA remedial program contractors (CDM Federal) reported finding significant areas of erosion on the banks of Kaercher Creek adjacent to the Hamburg Fieldhouse and parking lot. EPA's remedial program (RPM, John Banks) then notified the removal program (OSC, Todd Richardson) of the erosion issues on the banks of Kaercher Creek. OSC Richardson conducted an initial site inspection on April 5, 2018. In May of 2018, OSC Richardson, along with Dean Maser (Weston Solutions, START) re-visited the Site, noting the erosion damaged creek bank, and screening surface soil in areas of erosion. Several areas of erosion were observed with visible battery casings and lead concentrations ranging from 2600 - 2800ppm.

For additional information, visit the Pollution/Situation Report ([Pol/Sitreps](#)) section.

**1.1.2.1 Location**

The intersection of Pine and Church Streets, Hamburg, PA 19562

**1.1.2.2 Description of Threat**

Direct exposure and migration of lead contamination. Lead contamination in creek back surface soil.

**1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results**

START and EPA visited site and observed erosion which exposed geotextile fabric and high visibility orange fencing in areas that had been remediated in the 2003 - 2005 period. There were also several ground hog holes exposing battery debris.

**2. Current Activities**

**2.1 Operations Section**

**2.1.1 Narrative**

All incoming clean fill clay and backfill was screened with an XRF and was confirmed to meet clean fill standards. The Hamburg Fire Department hired a electrical contractor to install new light poles, to replace the old ones taken down for the excavation. All contaminated soil generated during the light pole installation, was placed on the pile for disposal, and holes were backfilled with clean shale. Parking lot LED lights were purchased and installed on the new poles. A contractor for Hamburg Fire Department wired them electrically. Removed tree stumps were screened with the XRF and any found to exceed action levels were power washed until clean. After stumps were verified clean, two truck loads of stumps were transported to a local mulch producer for beneficial re-use. The flat area at the east end of the Site between the parking lot and Pine Street was excavated and screened with XRF. High visibility fabric was placed in areas where the action level was not met, prior to backfilling. Approximately 100' of coffer dam consisting of sand bags and poly sheeting was placed in creek beginning at the Pine Street Bridge. The pump and filter box were set up. Roughly the first 40' of creek bank was excavated and restored with clay, fabric and revetment stone (rip rap).

**2.1.2 Response Actions to Date**

- Site visit and initial screening (assessment)
- Site survey complete
- Set up of command post and staging areas.
- Installation of construction and security fencing.
- Clearing and grubbing activities (in progress)
- Access agreements received
- Creek bank excavation and restoration begins
- Finalization and distribution of first Fact Sheet
- Finalization of engineering and E&S plans.

**2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)**

**2.1.4 Progress Metrics**

<i>Waste Stream</i>	<i>Medium</i>	<i>Quantity</i>	<i>Manifest #</i>	<i>Treatment</i>	<i>Disposal</i>

**2.2 Planning Section**

**2.2.1 Anticipated Activities**

- Continue excavation of creek bank and revetment with large rip rap stone.
- Address field house parking lot issues as necessary.

**2.2.1.1 Planned Response Activities**

**2.2.1.2 Next Steps**

- Continue excavation and revetment operations.

**2.2.2 Issues**

**2.3 Logistics Section**

No information available at this time.

**2.4 Finance Section**

**Estimated Costs \***

	<b>Budgeted</b>	<b>Total To Date</b>	<b>Remaining</b>	<b>% Remaining</b>
<b>Extramural Costs</b>				
ERRS - Cleanup Contractor	\$2,000,000.00	\$776,360.19	\$1,223,639.81	61.18%
TAT/START	\$263,648.00	\$114,453.76	\$149,194.24	56.59%
<b>Intramural Costs</b>				

<b>Total Site Costs</b>	\$2,263,648.00	\$890,813.95	\$1,372,834.05	60.65%
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\* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

#### **2.5 Other Command Staff**

No information available at this time.

### **3. Participating Entities**

#### **3.1 Unified Command**

#### **3.2 Cooperating Agencies**

**EPA, PADEP, and the Borough of Hamburg**

### **4. Personnel On Site**

EPA, ERRS, and START

### **5. Definition of Terms**

No information available at this time.

### **6. Additional sources of information**

No information available at this time.

### **7. Situational Reference Materials**

No information available at this time.

U.S. ENVIRONMENTAL PROTECTION AGENCY  
POLLUTION/SITUATION REPORT  
Hamburg Kaercher Creek Site - Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region III

**Subject:** POLREP #53  
Hamburg Kaercher Creek Site  
A3H8  
Hamburg, PA  
Latitude: 40.5537210 Longitude: -75.9803895

**To:**  
**From:** Todd Richardson, On Scene Coordinator  
**Date:** 12/9/2019  
**Reporting Period:** 10/22/2019 - 12/09/2019

## 1. Introduction

### 1.1 Background

<b>Site Number:</b>	A3H8	<b>Contract Number:</b>	
<b>D.O. Number:</b>		<b>Action Memo Date:</b>	
<b>Response Authority:</b>	CERCLA	<b>Response Type:</b>	Time-Critical
<b>Response Lead:</b>	EPA	<b>Incident Category:</b>	Removal Action
<b>NPL Status:</b>		<b>Operable Unit:</b>	
<b>Mobilization Date:</b>		<b>Start Date:</b>	6/5/2019
<b>Demob Date:</b>		<b>Completion Date:</b>	
<b>CERCLIS ID:</b>		<b>RCRIS ID:</b>	
<b>ERNS No.:</b>		<b>State Notification:</b>	
<b>FPN#:</b>		<b>Reimbursable Account #:</b>	

#### 1.1.1 Incident Category

#### 1.1.2 Site Description

A battery manufacturing facility operated in the Borough of Hamburg from 1920 to the mid 1990s. During operations, battery casings were split open and the lead plates inside the batteries were removed for resmelting. The battery casings were reused as ground fill material and deposited throughout the Hamburg area.

Kaercher Creek is listed as a warm-water fishery and ranges in width from 3 to 10 feet and in depth from 1 to 3 feet (Roy F. Weston, Inc. 2000). The creek banks vary from 2 to 20 feet high throughout the Borough of Hamburg, which contains industrial, commercial, and residential zones and is located in rural northeast Pennsylvania. Kaercher Creek flows through the Borough of Hamburg and the Price Battery facility property before it joins the Schuylkill River southwest of Hamburg.

In October 2001, the U.S. Environmental Protection Agency (EPA) was notified of the presence of battery casings along Kaercher Creek near the Hamburg Field House. In 2002, Tetra Tech EM Inc., under the direction of the EPA On-Scene Coordinator, performed removal assessments along Kaercher Creek from Kaercher Lake to Kaercher Creek's confluence with the Schuylkill River. The Agency for Toxic Substances and Disease Registry reviewed the site assessment reports and issued a Health Consultation that recommended an immediate Comprehensive Environmental Response, Compensation, and Liability Act removal action to protect human health.

In May 2003, EPA approved funding for a removal action at the Hamburg – Kaercher Creek site. EPA remediated a total of 5,470 feet of Kaercher Creek during the Hamburg – Kaercher

Creek removal action. Exide Corporation completed remediation of Kaercher Creek at the Price Battery facility.

On-site cleanup activities included excavating contaminated sediment and soil, transporting the lead-contaminated soil off site for disposal, and capping remaining areas of contamination. Soil capping activities included backfilling with clean soil, fertilizing and seeding the area with native grass seed, mulching with straw, and planting trees and shrubs as appropriate. Sediment capping activities included installing geotextile fabric and backfilling with rip rap stone.

Removal Activities associated with the 2003 - 2005 EPA lead clean-up, were completed in December 2004. However, in 2017, during an ecological assessment of Kaercher Creek, EPA remedial program contractors (CDM Federal) reported finding significant areas of erosion on the banks of Kaercher Creek adjacent to the Hamburg Fieldhouse and parking lot. EPA's remedial program (RPM, John Banks) then notified the removal program (OSC, Todd Richardson) of the erosion issues on the banks of Kaercher Creek. OSC Richardson conducted an initial site inspection on April 5, 2018. In May of 2018, OSC Richardson, along with Dean Maser (Weston Solutions, START) re-visited the Site, noting the erosion damaged creek bank, and screening surface soil in areas of erosion. Several areas of erosion were observed with visible battery casings and lead concentrations ranging from 2600 - 2800ppm.

For additional information, visit the Pollution/Situation Report ([Pol/Sitreps](#)) section.

**1.1.2.1 Location**

The intersection of Pine and Church Streets, Hamburg, PA 19562

**1.1.2.2 Description of Threat**

Direct exposure and migration of lead contamination. Lead contamination in creek back surface soil.

**1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results**

START and EPA visited site and observed erosion which exposed geotextile fabric and high visibility orange fencing in areas that had been remediated in the 2003 - 2005 period. There were also several ground hog holes exposing battery debris.

**2. Current Activities**

**2.1 Operations Section**

**2.1.1 Narrative**

Approximately 220 linear feet of Kaercher Creek bank was excavated and restored with clay, fabric and revetment stone or rip rap. This area is equivalent to approximately 7,000 square feet which also includes the flat area adjacent to the creek bank. The flat areas are restored with clay, topsoil, grass seed and straw matting. High visibility fabric was placed in areas where the action level was not met, prior to backfilling. Approximately 100' of coffer dam, consisting of sand bags and poly sheeting was placed in the creek prior to any excavation work. As each section of excavation is completed, the coffer dam is relocated to the next section of excavation, along with the sediment pump and filter box. Clearing, grubbing, and chipping operations continue to move forward. A representative from the contracted engineering firm was on site to observe the operations and was satisfied that all conditions of the E & S Plan were being met.

**2.1.2 Response Actions to Date**

Site visit and initial screening (assessment)  
 Site survey complete  
 Set up of command post and staging areas.  
 Installation of construction and security fencing.  
 Clearing and grubbing activities (in progress)  
 Access agreements received  
 Creek bank excavation and restoration begins  
 Finalization and distribution of first Fact Sheet  
 Finalization of engineering and E&S plans.

**2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)**

**2.1.4 Progress Metrics**

<i>Waste Stream</i>	<i>Medium</i>	<i>Quantity</i>	<i>Manifest #</i>	<i>Treatment</i>	<i>Disposal</i>

**2.2 Planning Section**

**2.2.1 Anticipated Activities**

Continue excavation of creek bank and revetment with large rip rap stone.  
 Address field house parking lot issues as necessary.

**2.2.1.1 Planned Response Activities**

**2.2.1.2 Next Steps**

Continue excavation and revetment operations.

**2.2.2 Issues**

**2.3 Logistics Section**

No information available at this time.

**2.4 Finance Section**

**Estimated Costs \***

	<b>Budgeted</b>	<b>Total To Date</b>	<b>Remaining</b>	<b>% Remaining</b>
<b>Extramural Costs</b>				
ERRS - Cleanup Contractor	\$2,000,000.00	\$1,168,825.46	\$831,174.54	41.56%
TAT/START	\$263,648.00	\$143,115.99	\$120,532.01	45.72%
<b>Intramural Costs</b>				
<b>Total Site Costs</b>	<b>\$2,263,648.00</b>	<b>\$1,311,941.45</b>	<b>\$951,706.55</b>	<b>42.04%</b>

\* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this

report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

#### **2.5 Other Command Staff**

No information available at this time.

### **3. Participating Entities**

#### **3.1 Unified Command**

#### **3.2 Cooperating Agencies**

**EPA, PADEP, and the Borough of Hamburg**

### **4. Personnel On Site**

EPA, ERRS, and START

### **5. Definition of Terms**

No information available at this time.

### **6. Additional sources of information**

No information available at this time.

### **7. Situational Reference Materials**

No information available at this time.

U.S. ENVIRONMENTAL PROTECTION AGENCY  
POLLUTION/SITUATION REPORT  
Hamburg Kaercher Creek Site - Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region III

**Subject:** POLREP #54  
Hamburg Kaercher Creek Site  
A3H8  
Hamburg, PA  
Latitude: 40.5537210 Longitude: -75.9803895

**To:**  
**From:** Todd Richardson, On Scene Coordinator  
**Date:** 1/28/2020  
**Reporting Period:** 12/10/2019 - 01/29/2020

## 1. Introduction

### 1.1 Background

<b>Site Number:</b>	A3H8	<b>Contract Number:</b>	
<b>D.O. Number:</b>		<b>Action Memo Date:</b>	
<b>Response Authority:</b>	CERCLA	<b>Response Type:</b>	Time-Critical
<b>Response Lead:</b>	EPA	<b>Incident Category:</b>	Removal Action
<b>NPL Status:</b>		<b>Operable Unit:</b>	
<b>Mobilization Date:</b>		<b>Start Date:</b>	6/5/2019
<b>Demob Date:</b>		<b>Completion Date:</b>	
<b>CERCLIS ID:</b>		<b>RCRIS ID:</b>	
<b>ERNS No.:</b>		<b>State Notification:</b>	
<b>FPN#:</b>		<b>Reimbursable Account #:</b>	

#### 1.1.1 Incident Category

#### 1.1.2 Site Description

A battery manufacturing facility operated in the Borough of Hamburg from 1920 to the mid 1990s. During operations, battery casings were split open and the lead plates inside the batteries were removed for resmelting. The battery casings were reused as ground fill material and deposited throughout the Hamburg area.

Kaercher Creek is listed as a warm-water fishery and ranges in width from 3 to 10 feet and in depth from 1 to 3 feet (Roy F. Weston, Inc. 2000). The creek banks vary from 2 to 20 feet high throughout the Borough of Hamburg, which contains industrial, commercial, and residential zones and is located in rural northeast Pennsylvania. Kaercher Creek flows through the Borough of Hamburg and the Price Battery facility property before it joins the Schuylkill River southwest of Hamburg.

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Creek removal action. Exide Corporation completed remediation of Kaercher Creek at the Price Battery facility.

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For additional information, visit the Pollution/Situation Report ([Pol/Sitreps](#)) section.

**1.1.2.1 Location**

The intersection of Pine and Church Streets, Hamburg, PA 19562

**1.1.2.2 Description of Threat**

Direct exposure and migration of lead contamination. Lead contamination in creek back surface soil.

**1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results**

START and EPA visited site and observed erosion which exposed geotextile fabric and high visibility orange fencing in areas that had been remediated in the 2003 - 2005 period. There were also several ground hog holes exposing battery debris.

**2. Current Activities**

**2.1 Operations Section**

**2.1.1 Narrative**

An additional approximately 120 linear feet of Kaercher Creek bank was excavated and restored with clay, fabric and rip rap. This area is equivalent to approximately 6,000 square feet which includes the flat area adjacent to the creek bank, which had been covered with a 12" - 18" clean fill cap, during the previous EPA removal action. The 12" - 18" clay cap was scraped off and reused as beneficial backfill. The clay that was removed was screened with the XRF to insure it was below the action level. The flat areas are restored with clay, topsoil, grass seed and straw matting. High visibility fabric was placed in areas where the action level was not met, prior to backfilling. Approximately 100' of coffer dam, consisting of sand bags and poly sheeting was placed in the creek prior to any excavation work. As each section of excavation is completed, the coffer dam is relocated to the next section of excavation, along with the sediment pump and filter box. The CP trailers were hardwired to the power grid and the generator was taken off site. The remaining stumps staged at the CP area were pressure washed, screened with the XRF to insure all contamination was removed, and they were loaded off site for disposal. Worked with Hamburg Municipal Utilities Authority personnel for the installation of a 3' extension to the man way located in the flat area at the top and adjacent to the creek bank. This would bring the manhole access flush with the ground as they were buried upon our arrival and inaccessible. Perimeter air sampling was also conducted during a soil load out and the samples were shipped to the EPA laboratory in Ft. Meade, MD.

**2.1.2 Response Actions to Date**

- Site visit and initial screening (assessment)
- Site survey complete
- Set up of command post and staging areas.
- Installation of construction and security fencing.
- Clearing and grubbing activities (in progress)
- Access agreements received
- Creek bank excavation and restoration begins
- Finalization and distribution of first Fact Sheet
- Finalization of engineering and E&S plans.

**2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)**

**2.1.4 Progress Metrics**

<i>Waste Stream</i>	<i>Medium</i>	<i>Quantity</i>	<i>Manifest #</i>	<i>Treatment</i>	<i>Disposal</i>

**2.2 Planning Section**

**2.2.1 Anticipated Activities**

- Continue excavation of creek bank and revetment with large rip rap stone.
- Address field house parking lot issues as necessary.

**2.2.1.1 Planned Response Activities**

**2.2.1.2 Next Steps**

- Continue excavation and revetment operations.

**2.2.2 Issues**

**2.3 Logistics Section**

No information available at this time.

**2.4 Finance Section**

**Estimated Costs \***

	<b>Budgeted</b>	<b>Total To Date</b>	<b>Remaining</b>	<b>% Remaining</b>
<b>Extramural Costs</b>				
ERRS - Cleanup Contractor	\$5,626,494.00	\$1,580,753.50	\$4,045,740.50	71.91%
TAT/START	\$263,648.00	\$173,426.45	\$90,221.55	34.22%
<b>Intramural Costs</b>				

<b>Total Site Costs</b>	\$5,890,142.00	\$1,754,179.95	\$4,135,962.05	70.22%

\* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

**2.5 Other Command Staff**

No information available at this time.

**3. Participating Entities**

**3.1 Unified Command**

**3.2 Cooperating Agencies**

**EPA, PADEP, and the Borough of Hamburg**

**4. Personnel On Site**

EPA, ERRS, and START

**5. Definition of Terms**

No information available at this time.

**6. Additional sources of information**

No information available at this time.

**7. Situational Reference Materials**

No information available at this time.

U.S. ENVIRONMENTAL PROTECTION AGENCY  
POLLUTION/SITUATION REPORT  
Hamburg Kaercher Creek Site - Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region III

**Subject:** POLREP #55  
Hamburg Kaercher Creek Site  
A3H8  
Hamburg, PA  
Latitude: 40.5537210 Longitude: -75.9803895

**To:**  
**From:** Todd Richardson, On Scene Coordinator  
**Date:** 2/21/2020  
**Reporting Period:** 1/30/2020 - 2/21/2020

## 1. Introduction

### 1.1 Background

<b>Site Number:</b>	A3H8	<b>Contract Number:</b>	
<b>D.O. Number:</b>		<b>Action Memo Date:</b>	
<b>Response Authority:</b>	CERCLA	<b>Response Type:</b>	Time-Critical
<b>Response Lead:</b>	EPA	<b>Incident Category:</b>	Removal Action
<b>NPL Status:</b>		<b>Operable Unit:</b>	
<b>Mobilization Date:</b>		<b>Start Date:</b>	6/5/2019
<b>Demob Date:</b>		<b>Completion Date:</b>	
<b>CERCLIS ID:</b>		<b>RCRIS ID:</b>	
<b>ERNS No.:</b>		<b>State Notification:</b>	
<b>FPN#:</b>		<b>Reimbursable Account #:</b>	

#### 1.1.1 Incident Category

#### 1.1.2 Site Description

A battery manufacturing facility operated in the Borough of Hamburg from 1920 to the mid 1990s. During operations, battery casings were split open and the lead plates inside the batteries were removed for resmelting. The battery casings were reused as ground fill material and deposited throughout the Hamburg area.

Kaercher Creek is listed as a warm-water fishery and ranges in width from 3 to 10 feet and in depth from 1 to 3 feet (Roy F. Weston, Inc. 2000). The creek banks vary from 2 to 20 feet high throughout the Borough of Hamburg, which contains industrial, commercial, and residential zones and is located in rural northeast Pennsylvania. Kaercher Creek flows through the Borough of Hamburg and the Price Battery facility property before it joins the Schuylkill River southwest of Hamburg.

In October 2001, the U.S. Environmental Protection Agency (EPA) was notified of the presence of battery casings along Kaercher Creek near the Hamburg Field House. In 2002, Tetra Tech EM Inc., under the direction of the EPA On-Scene Coordinator, performed removal assessments along Kaercher Creek from Kaercher Lake to Kaercher Creek's confluence with the Schuylkill River. The Agency for Toxic Substances and Disease Registry reviewed the site assessment reports and issued a Health Consultation that recommended an immediate Comprehensive Environmental Response, Compensation, and Liability Act removal action to protect human health.

In May 2003, EPA approved funding for a removal action at the Hamburg – Kaercher Creek site. EPA remediated a total of 5,470 feet of Kaercher Creek during the Hamburg – Kaercher

Creek removal action. Exide Corporation completed remediation of Kaercher Creek at the Price Battery facility.

On-site cleanup activities included excavating contaminated sediment and soil, transporting the lead-contaminated soil off site for disposal, and capping remaining areas of contamination. Soil capping activities included backfilling with clean soil, fertilizing and seeding the area with native grass seed, mulching with straw, and planting trees and shrubs as appropriate. Sediment capping activities included installing geotextile fabric and backfilling with rip rap stone.

Removal Activities associated with the 2003 - 2005 EPA lead clean-up, were completed in December 2004. However, in 2017, during an ecological assessment of Kaercher Creek, EPA remedial program contractors (CDM Federal) reported finding significant areas of erosion on the banks of Kaercher Creek adjacent to the Hamburg Fieldhouse and parking lot. EPA's remedial program (RPM, John Banks) then notified the removal program (OSC, Todd Richardson) of the erosion issues on the banks of Kaercher Creek. OSC Richardson conducted an initial site inspection on April 5, 2018. In May of 2018, OSC Richardson, along with Dean Maser (Weston Solutions, START) re-visited the Site, noting the erosion damaged creek bank, and screening surface soil in areas of erosion. Several areas of erosion were observed with visible battery casings and lead concentrations ranging from 2600 - 2800ppm.

For additional information, visit the Pollution/Situation Report ([Pol/Sitreps](#)) section.

**1.1.2.1 Location**

The intersection of Pine and Church Streets, Hamburg, PA 19562

**1.1.2.2 Description of Threat**

Direct exposure and migration of lead contamination. Lead contamination in creek back surface soil.

**1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results**

START and EPA visited site and observed erosion which exposed geotextile fabric and high visibility orange fencing in areas that had been remediated in the 2003 - 2005 period. There were also several ground hog holes exposing battery debris.

**2. Current Activities**

**2.1 Operations Section**

**2.1.1 Narrative**

To date ERRS crew has completed approximately one quarter of the impacted bank of Kaercher Creek. Since the last reporting period, approximately 60 linear feet of coffer dam was relocated to the current work area, and an additional 3,150 square feet of bank stabilization has been completed. Since the start of this removal action, during routine excavation operations, from time to time debris material, usually demolition debris and slag has been encountered. Among this debris, to date, ten drums, containing what appeared to be a solidified, waxy/sand-like material (which appeared to be inert), was also encountered. These drums were staged and sampled for disposal, as contents were unknown. Analytical results of samples collected from this material revealed a total PCB concentration of 537 ppm. Based on this PCB concentration, and the deteriorating state of the drums, it is necessary to address and dispose of these drums as PCB remediation waste, in accordance with 40 CFR 761.61. As PCB remediation waste was not anticipated when the April, 2019 Action Memo was drafted, it is now necessary to amend the Action memo to include a change in scope to allow for sampling and disposal of PCB waste. During current excavation operations, a light tan colored sand material was encountered. Clor-N-Soil screening kits were used to screen this material. Results of the screening indicated the presence of PCB concentrations above 50 ppm. A sample of this material was sent to a lab for more comprehensive PCB analysis. ERRS has been instructed to hand dig, and stage separately, and similar material encountered to avoid co-mingling waste streams. On 2/4/2020, EPA and START met with the the Entech engineer on Site. The Entech engineer observed completed bank stabilization areas, a cross section of the an open excavation, and E&S measures across the Site. The engineer indicated that the implementation of the remedy appeared to be proceeding in accordance with established plans, and E&S measures were adequate and effective. During the meeting, it was agreed upon that an asphalt or concrete berm, would be installed to channel storm water from the parking lot area into existing storm drains, to protect the stabilized bank from erosion. In addition tree clearing and chipping was conducted. Tree stumps were also pressures washed and screened with an XRF, prior to being transported off site to be recycled as mulch. Approximately 530 linear feet of 18" filter sock was installed along the bottom of the creek bank. On 2/19/20 Cain Stone, a new PADEP project manager visited the site to familiarize himself with the project. He did not indicate any concerns during the visit. Drafft results from air sampling conducted during the previous reporting period indicated no exceedance of air quality action levels.

**2.1.2 Response Actions to Date**

- Site visit and initial screening (assessment)
- Site survey complete
- Set up of command post and staging areas.
- Installation of construction and security fencing.
- Clearing and grubbing activities (in progress)
- Access agreements received
- Creek bank excavation and restoration begins
- Finalization and distribution of first Fact Sheet
- Finalization of engineering and E&S plans.

**2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)**

**2.1.4 Progress Metrics**

<i>Waste Stream</i>	<i>Medium</i>	<i>Quantity</i>	<i>Manifest #</i>	<i>Treatment</i>	<i>Disposal</i>

**2.2 Planning Section**

**2.2.1 Anticipated Activities**

Continue excavation of creek bank and revetment with large rip rap stone.  
Address field house parking lot drainage issues as necessary.

**2.2.1.1 Planned Response Activities**

**2.2.1.2 Next Steps**

Continue excavation and revetment operations.  
Finalize Action Memo Amendment (Change in Scope to address PCB contamination)

**2.2.2 Issues**

PCB waste encountered

**2.3 Logistics Section**

No information available at this time.

**2.4 Finance Section**

**Estimated Costs \***

	Budgeted	Total To Date	Remaining	% Remaining
<b>Extramural Costs</b>				
ERRS - Cleanup Contractor	\$5,626,494.00	\$1,793,121.87	\$3,833,372.13	68.13%
TAT/START	\$263,648.00	\$186,623.47	\$77,024.53	29.21%
<b>Intramural Costs</b>				
<b>Total Site Costs</b>	<b>\$5,890,142.00</b>	<b>\$1,979,745.34</b>	<b>\$3,910,396.66</b>	<b>66.39%</b>

\* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

**2.5 Other Command Staff**

No information available at this time.

**3. Participating Entities****3.1 Unified Command****3.2 Cooperating Agencies**

EPA, PADEP, and the Borough of Hamburg

**4. Personnel On Site**

EPA, ERRS, and START

**5. Definition of Terms**

No information available at this time.

**6. Additional sources of information**

No information available at this time.

**7. Situational Reference Materials**

No information available at this time.

U.S. ENVIRONMENTAL PROTECTION AGENCY  
POLLUTION/SITUATION REPORT  
Hamburg Kaercher Creek Site - Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region III

**Subject:** POLREP #56  
Hamburg Kaercher Creek Site  
A3H8  
Hamburg, PA  
Latitude: 40.5537210 Longitude: -75.9803895

**To:**  
**From:** Todd Richardson, On Scene Coordinator  
**Date:** 3/31/2020  
**Reporting Period:** 2/22/2020 - 03/31/2020

## 1. Introduction

### 1.1 Background

<b>Site Number:</b>	A3H8	<b>Contract Number:</b>	
<b>D.O. Number:</b>		<b>Action Memo Date:</b>	
<b>Response Authority:</b>	CERCLA	<b>Response Type:</b>	Time-Critical
<b>Response Lead:</b>	EPA	<b>Incident Category:</b>	Removal Action
<b>NPL Status:</b>		<b>Operable Unit:</b>	
<b>Mobilization Date:</b>		<b>Start Date:</b>	6/5/2019
<b>Demob Date:</b>		<b>Completion Date:</b>	
<b>CERCLIS ID:</b>		<b>RCRIS ID:</b>	
<b>ERNS No.:</b>		<b>State Notification:</b>	
<b>FPN#:</b>		<b>Reimbursable Account #:</b>	

#### 1.1.1 Incident Category

#### 1.1.2 Site Description

A battery manufacturing facility operated in the Borough of Hamburg from 1920 to the mid 1990s. During operations, battery casings were split open and the lead plates inside the batteries were removed for resmelting. The battery casings were reused as ground fill material and deposited throughout the Hamburg area.

Kaercher Creek is listed as a warm-water fishery and ranges in width from 3 to 10 feet and in depth from 1 to 3 feet (Roy F. Weston, Inc. 2000). The creek banks vary from 2 to 20 feet high throughout the Borough of Hamburg, which contains industrial, commercial, and residential zones and is located in rural northeast Pennsylvania. Kaercher Creek flows through the Borough of Hamburg and the Price Battery facility property before it joins the Schuylkill River southwest of Hamburg.

In October 2001, the U.S. Environmental Protection Agency (EPA) was notified of the presence of battery casings along Kaercher Creek near the Hamburg Field House. In 2002, Tetra Tech EM Inc., under the direction of the EPA On-Scene Coordinator, performed removal assessments along Kaercher Creek from Kaercher Lake to Kaercher Creek's confluence with the Schuylkill River. The Agency for Toxic Substances and Disease Registry reviewed the site assessment reports and issued a Health Consultation that recommended an immediate Comprehensive Environmental Response, Compensation, and Liability Act removal action to protect human health.

In May 2003, EPA approved funding for a removal action at the Hamburg – Kaercher Creek site. EPA remediated a total of 5,470 feet of Kaercher Creek during the Hamburg – Kaercher

Creek removal action. Exide Corporation completed remediation of Kaercher Creek at the Price Battery facility.

On-site cleanup activities included excavating contaminated sediment and soil, transporting the lead-contaminated soil off site for disposal, and capping remaining areas of contamination. Soil capping activities included backfilling with clean soil, fertilizing and seeding the area with native grass seed, mulching with straw, and planting trees and shrubs as appropriate. Sediment capping activities included installing geotextile fabric and backfilling with rip rap stone.

Removal Activities associated with the 2003 - 2005 EPA lead clean-up, were completed in December 2004. However, in 2017, during an ecological assessment of Kaercher Creek, EPA remedial program contractors (CDM Federal) reported finding significant areas of erosion on the banks of Kaercher Creek adjacent to the Hamburg Fieldhouse and parking lot. EPA's remedial program (RPM, John Banks) then notified the removal program (OSC, Todd Richardson) of the erosion issues on the banks of Kaercher Creek. OSC Richardson conducted an initial site inspection on April 5, 2018. In May of 2018, OSC Richardson, along with Dean Maser (Weston Solutions, START) re-visited the Site, noting the erosion damaged creek bank, and screening surface soil in areas of erosion. Several areas of erosion were observed with visible battery casings and lead concentrations ranging from 2600 - 2800ppm.

For additional information, visit the Pollution/Situation Report ([Pol/Sitreps](#)) section.

**1.1.2.1 Location**

The intersection of Pine and Church Streets, Hamburg, PA 19562

**1.1.2.2 Description of Threat**

Direct exposure and migration of lead contamination. Lead contamination in creek back surface soil.

**1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results**

START and EPA visited site and observed erosion which exposed geotextile fabric and high visibility orange fencing in areas that had been remediated in the 2003 - 2005 period. There were also several ground hog holes exposing battery debris.

**2. Current Activities**

**2.1 Operations Section**

**2.1.1 Narrative**

Since the last reporting period, approximately 60 linear feet of coffer dam was relocated to the current work area, and an additional 3,655 square feet of bank stabilization has been completed. The reported total square feet also includes the adjacent flat area at the top of the bank. An additional waste staging area for potential PCB contaminated soil was constructed, adjacent to the field house parking lot. Approximately 10, 5yd-loads of excavated soil were staged there. During this period, along with screening the excavation floor with XRF for lead, confirmation samples were collected for PCBs screening. Cloro-n-soil analysis kits were used to screen these samples. With the exception of the initial sample, all of the subsequent Clor-n-soil screened samples indicated PCB concentrations of less than 50 ppm. The potential PCB soil pile was also sampled for off-site laboratory analysis. Lab analysis results indicated a less than 1 ppm total PCB concentration. Based on these results, and XRF lead concentrations above 1250 ppm, this pile will be considered probable hazardous waste for lead only (pending disposal sampling). Three loads of stumps and miscellaneous debris was shipped off site for disposal. The non-hazardous soil pile was sampled for a second round of off site disposal and it failed for TCLP lead. This was unusual since the total lead was only 954 ppm (a concentration at which waste soil historically passes TCLP). In an effort to more accurately separate waste soil likely to pass TCLP from that which would likely fail TCLP, the non-hazardous soil pile was re-sorted, excavator bucket by excavator bucket using an in-situ XRF reading of 1250 ppm as the screening cut off instead of 5,000 ppm, as had been the procedure previously followed. Both waste piles were re-sampled for disposal, and both again failed TCLP analysis, and will require disposal as hazardous waste.

As of 3/27/2020, removal Site operations were temporarily stopped due to COVID-19 concerns, and related Pennsylvania public health advisories.

**2.1.2 Response Actions to Date**

Site visit and initial screening (assessment)

Site survey complete

Set up of command post and staging areas.

Installation of construction and security fencing.

Clearing and grubbing activities (in progress)

Access agreements received

Creek bank excavation and restoration begins

Finalization and distribution of first Fact Sheet

Finalization of engineering and E&S plans.

**2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)**

**2.1.4 Progress Metrics**

<i>Waste Stream</i>	<i>Medium</i>	<i>Quantity</i>	<i>Manifest #</i>	<i>Treatment</i>	<i>Disposal</i>

**2.2 Planning Section**

**2.2.1 Anticipated Activities**

Continue excavation of creek bank and revetment with large rip rap stone.

Address field house parking lot drainage issues as necessary.

**2.2.1.1 Planned Response Activities**

**2.2.1.2 Next Steps**

Continue excavation and revetment operations.

Finalize Action Memo Amendment (Change in Scope to address PCB contamination)

**2.2.2 Issues**

PCB waste encountered

**2.3 Logistics Section**

No information available at this time.

**2.4 Finance Section**

**Estimated Costs \***

	<b>Budgeted</b>	<b>Total To Date</b>	<b>Remaining</b>	<b>% Remaining</b>
<b>Extramural Costs</b>				

ERRS - Cleanup Contractor	\$5,626,494.00	\$2,090,015.81	\$3,536,478.19	62.85%
TAT/START	\$263,648.00	\$0.00	\$263,648.00	100.00%
<b>Intramural Costs</b>				
<b>Total Site Costs</b>	<b>\$5,890,142.00</b>	<b>\$2,090,015.81</b>	<b>\$3,800,126.19</b>	<b>64.52%</b>

\* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

**2.5 Other Command Staff**

No information available at this time.

**3. Participating Entities**

**3.1 Unified Command**

**3.2 Cooperating Agencies**

**EPA, PADEP, and the Borough of Hamburg**

**4. Personnel On Site**

EPA, ERRS, and START

**5. Definition of Terms**

No information available at this time.

**6. Additional sources of information**

No information available at this time.

**7. Situational Reference Materials**

No information available at this time.

U.S. ENVIRONMENTAL PROTECTION AGENCY  
POLLUTION/SITUATION REPORT  
Hamburg Kaercher Creek Site - Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region III

**Subject:** POLREP #57  
Hamburg Kaercher Creek Site  
A3H8  
Hamburg, PA  
Latitude: 40.5537210 Longitude: -75.9803895

**To:**  
**From:** Todd Richardson, On Scene Coordinator  
**Date:** 5/29/2020  
**Reporting Period:** 03/28/2020 - 05/29/2020

## 1. Introduction

### 1.1 Background

<b>Site Number:</b>	A3H8	<b>Contract Number:</b>	
<b>D.O. Number:</b>		<b>Action Memo Date:</b>	
<b>Response Authority:</b>	CERCLA	<b>Response Type:</b>	Time-Critical
<b>Response Lead:</b>	EPA	<b>Incident Category:</b>	Removal Action
<b>NPL Status:</b>		<b>Operable Unit:</b>	
<b>Mobilization Date:</b>		<b>Start Date:</b>	6/5/2019
<b>Demob Date:</b>		<b>Completion Date:</b>	
<b>CERCLIS ID:</b>		<b>RCRIS ID:</b>	
<b>ERNS No.:</b>		<b>State Notification:</b>	
<b>FPN#:</b>		<b>Reimbursable Account #:</b>	

#### 1.1.1 Incident Category

#### 1.1.2 Site Description

A battery manufacturing facility operated in the Borough of Hamburg from 1920 to the mid 1990s. During operations, battery casings were split open and the lead plates inside the batteries were removed for resmelting. The battery casings were reused as ground fill material and deposited throughout the Hamburg area.

Kaercher Creek is listed as a warm-water fishery and ranges in width from 3 to 10 feet and in depth from 1 to 3 feet (Roy F. Weston, Inc. 2000). The creek banks vary from 2 to 20 feet high throughout the Borough of Hamburg, which contains industrial, commercial, and residential zones and is located in rural northeast Pennsylvania. Kaercher Creek flows through the Borough of Hamburg and the Price Battery facility property before it joins the Schuylkill River southwest of Hamburg.

In October 2001, the U.S. Environmental Protection Agency (EPA) was notified of the presence of battery casings along Kaercher Creek near the Hamburg Field House. In 2002, Tetra Tech EM Inc., under the direction of the EPA On-Scene Coordinator, performed removal assessments along Kaercher Creek from Kaercher Lake to Kaercher Creek's confluence with the Schuylkill River. The Agency for Toxic Substances and Disease Registry reviewed the site assessment reports and issued a Health Consultation that recommended an immediate Comprehensive Environmental Response, Compensation, and Liability Act removal action to protect human health.

In May 2003, EPA approved funding for a removal action at the Hamburg – Kaercher Creek site. EPA remediated a total of 5,470 feet of Kaercher Creek during the Hamburg – Kaercher

Creek removal action. Exide Corporation completed remediation of Kaercher Creek at the Price Battery facility.

On-site cleanup activities included excavating contaminated sediment and soil, transporting the lead-contaminated soil off site for disposal, and capping remaining areas of contamination. Soil capping activities included backfilling with clean soil, fertilizing and seeding the area with native grass seed, mulching with straw, and planting trees and shrubs as appropriate. Sediment capping activities included installing geotextile fabric and backfilling with rip rap stone.

Removal Activities associated with the 2003 - 2005 EPA lead clean-up, were completed in December 2004. However, in 2017, during an ecological assessment of Kaercher Creek, EPA remedial program contractors (CDM Federal) reported finding significant areas of erosion on the banks of Kaercher Creek adjacent to the Hamburg Fieldhouse and parking lot. EPA's remedial program (RPM, John Banks) then notified the removal program (OSC, Todd Richardson) of the erosion issues on the banks of Kaercher Creek. OSC Richardson conducted an initial site inspection on April 5, 2018. In May of 2018, OSC Richardson, along with Dean Maser (Weston Solutions, START) re-visited the Site, noting the erosion damaged creek bank, and screening surface soil in areas of erosion. Several areas of erosion were observed with visible battery casings and lead concentrations ranging from 2600 - 2800ppm.

For additional information, visit the Pollution/Situation Report ([Pol/Sitreps](#)) section.

**1.1.2.1 Location**

The intersection of Pine and Church Streets, Hamburg, PA 19562

**1.1.2.2 Description of Threat**

Direct exposure and migration of lead contamination. Lead contamination in creek bank surface soil.

**1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results**

START and EPA visited site and observed erosion which exposed geotextile fabric and high visibility orange fencing in areas that had been remediated in the 2003 - 2005 period. There were also several ground hog holes exposing battery debris.

**2. Current Activities**

**2.1 Operations Section**

**2.1.1 Narrative**

The site resumed operations, following temporary work stoppage due to the COVID 19 Pandemic, at a reduced capacity starting on May 12, 2020. A reduced ERRS crew was mobilized on May 12 to begin T&D operations for a hazardous and non-hazardous lead contaminated soil. There was a total of 95 truck loads of non-hazardous soil and debris, totaling 2,175 tons, and 38 truck loads of hazardous soil and debris, at 878 tons. The last area restored at the end of March wasn't completed before the closure due to COVID 19. During the initial weeks of the restart of removal operations, restoration of this area was completed, as 2RC stone was placed and rolled, and a layer of top soil was added. The area was then hydroseeded. The rip rap stone pile which was staged in the NE corner of the site occupying a portion of the flat area was relocated to the staging area near the fire training building, to allow for excavation of the flat area where the rip rap was originally staged. This area is currently being excavated, and there is a possibility that additional buried drums containing PCBs contaminated material may be encountered. The majority of the PCB containing drums, previously excavated, were from this area. If PCB containing drummed material is found, the material and the surrounding soils will be sampled in accordance with appropriate PCB regulations. Once the rip rap was removed from this area, the top foot of clean backfill was scraped off and staged off to the side for re-use as backfill. This soil was screened with the XRF to ensure no lead was introduced during the removal process. A chlor-n-soil field screen test for PCBs was performed on the material just below the clean layer. It showed dark, discolored soil with miscellaneous debris, and out of an abundance of caution we checked for PCBs. The chlor-n-soil test indicated that the PCB concentration was at least less than 50 ppm. Excavation of this area will continue.

**2.1.2 Response Actions to Date**

- Site visit and initial screening (assessment)
- Site survey complete
- Set up of command post and staging areas.
- Installation of construction and security fencing.
- Clearing and grubbing activities (in progress)
- Access agreements received
- Creek bank excavation and restoration begins
- Finalization and distribution of first Fact Sheet
- Finalization of engineering and E&S plans.

**2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)**

**2.1.4 Progress Metrics**

<i>Waste Stream</i>	<i>Medium</i>	<i>Quantity</i>	<i>Manifest #</i>	<i>Treatment</i>	<i>Disposal</i>
Haz Waste	Soil	878tons			878tons
Non-Haz Waste	Soil	2,175tons			2,175tons

**2.2 Planning Section**

**2.2.1 Anticipated Activities**

- Continue excavation of creek bank and revetment with large rip rap stone.
- Address field house parking lot drainage issues as necessary.
- Collect additional soil and sediment samples and analyze for lead and PCBs

**2.2.1.2 Next Steps**

- Continue excavation and revetment operations.
- Finalize Action Memo Amendment (Change in Scope to address PCB contamination)

**2.2.2 Issues**

**2.3 Logistics Section**

No information available at this time.

**2.4 Finance Section**

**2.4.1 Narrative**

The START figures reflect a refund of \$10,241.86.

**Estimated Costs \***

	<b>Budgeted</b>	<b>Total To Date</b>	<b>Remaining</b>	<b>% Remaining</b>
<b>Extramural Costs</b>				

ERRS - Cleanup Contractor	\$5,626,494.00	\$2,374,343.48	\$3,252,150.52	57.80%
TAT/START	\$263,648.00	\$217,997.30	\$45,650.70	17.32%
<b>Intramural Costs</b>				
<b>Total Site Costs</b>	<b>\$5,890,142.00</b>	<b>\$2,592,340.78</b>	<b>\$3,297,801.22</b>	<b>55.99%</b>

\* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

**2.5 Other Command Staff**

No information available at this time.

**3. Participating Entities**

**3.1 Unified Command**

**3.2 Cooperating Agencies**

**EPA, PADEP, and the Borough of Hamburg**

**4. Personnel On Site**

EPA, ERRS, and START

**5. Definition of Terms**

No information available at this time.

**6. Additional sources of information**

No information available at this time.

**7. Situational Reference Materials**

No information available at this time.

U.S. ENVIRONMENTAL PROTECTION AGENCY  
POLLUTION/SITUATION REPORT  
Hamburg Kaercher Creek Site - Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region III

**Subject:** POLREP #58  
Hamburg Kaercher Creek Site  
A3H8  
Hamburg, PA  
Latitude: 40.5537210 Longitude: -75.9803895

**To:**  
**From:** Todd Richardson, On Scene Coordinator  
**Date:** 6/30/2020  
**Reporting Period:** 05/30/2020 - 06/30/2020

## 1. Introduction

### 1.1 Background

<b>Site Number:</b>	A3H8	<b>Contract Number:</b>	
<b>D.O. Number:</b>		<b>Action Memo Date:</b>	
<b>Response Authority:</b>	CERCLA	<b>Response Type:</b>	Time-Critical
<b>Response Lead:</b>	EPA	<b>Incident Category:</b>	Removal Action
<b>NPL Status:</b>		<b>Operable Unit:</b>	
<b>Mobilization Date:</b>		<b>Start Date:</b>	6/5/2019
<b>Demob Date:</b>		<b>Completion Date:</b>	
<b>CERCLIS ID:</b>		<b>RCRIS ID:</b>	
<b>ERNS No.:</b>		<b>State Notification:</b>	
<b>FPN#:</b>		<b>Reimbursable Account #:</b>	

#### 1.1.1 Incident Category

#### 1.1.2 Site Description

A battery manufacturing facility operated in the Borough of Hamburg from 1920 to the mid 1990s. During operations, battery casings were split open and the lead plates inside the batteries were removed for resmelting. The battery casings were reused as ground fill material and deposited throughout the Hamburg area.

Kaercher Creek is listed as a warm-water fishery and ranges in width from 3 to 10 feet and in depth from 1 to 3 feet (Roy F. Weston, Inc. 2000). The creek banks vary from 2 to 20 feet high throughout the Borough of Hamburg, which contains industrial, commercial, and residential zones and is located in rural northeast Pennsylvania. Kaercher Creek flows through the Borough of Hamburg and the Price Battery facility property before it joins the Schuylkill River southwest of Hamburg.

In October 2001, the U.S. Environmental Protection Agency (EPA) was notified of the presence of battery casings along Kaercher Creek near the Hamburg Field House. In 2002, Tetra Tech EM Inc., under the direction of the EPA On-Scene Coordinator, performed removal assessments along Kaercher Creek from Kaercher Lake to Kaercher Creek's confluence with the Schuylkill River. The Agency for Toxic Substances and Disease Registry reviewed the site assessment reports and issued a Health Consultation that recommended an immediate Comprehensive Environmental Response, Compensation, and Liability Act removal action to protect human health.

In May 2003, EPA approved funding for a removal action at the Hamburg – Kaercher Creek site. EPA remediated a total of 5,470 feet of Kaercher Creek during the Hamburg – Kaercher

Creek removal action. Exide Corporation completed remediation of Kaercher Creek at the Price Battery facility.

On-site cleanup activities included excavating contaminated sediment and soil, transporting the lead-contaminated soil off site for disposal, and capping remaining areas of contamination. Soil capping activities included backfilling with clean soil, fertilizing and seeding the area with native grass seed, mulching with straw, and planting trees and shrubs as appropriate. Sediment capping activities included installing geotextile fabric and backfilling with rip rap stone.

Removal Activities associated with the 2003 - 2005 EPA lead clean-up, were completed in December 2004. However, in 2017, during an ecological assessment of Kaercher Creek, EPA remedial program contractors (CDM Federal) reported finding significant areas of erosion on the banks of Kaercher Creek adjacent to the Hamburg Fieldhouse and parking lot. EPA's remedial program (RPM, John Banks) then notified the removal program (OSC, Todd Richardson) of the erosion issues on the banks of Kaercher Creek. OSC Richardson conducted an initial site inspection on April 5, 2018. In May of 2018, OSC Richardson, along with Dean Maser (Weston Solutions, START) re-visited the Site, noting the erosion damaged creek bank, and screening surface soil in areas of erosion. Several areas of erosion were observed with visible battery casings and lead concentrations ranging from 2600 - 2800ppm.

For additional information, visit the Pollution/Situation Report ([Pol/Sitreps](#)) section.

**1.1.2.1 Location**

The intersection of Pine and Church Streets, Hamburg, PA 19562

**1.1.2.2 Description of Threat**

Direct exposure and migration of lead contamination. Lead contamination in creek bank surface soil.

**1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results**

START and EPA visited site and observed erosion which exposed geotextile fabric and high visibility orange fencing in areas that had been remediated in the 2003 - 2005 period. There were also several ground hog holes exposing battery debris.

**2. Current Activities**

**2.1 Operations Section**

**2.1.1 Narrative**

The flat area in the NE corner of the site excavation area described in Polrep 57 was completed. The area was backfilled, top-soiled and hydroseeded. The total area remediated was 2,365 sf. During the excavation two drums were uncovered with contents which were dissimilar to the contents of PCB drums found earlier. Cloro-n-soil tests were performed and they returned a <50 ppm PCB. A drum containing the solid clay-like material was located in the creek approximately 500' downstream. Cloro-n-soil test were performed and they returned a >50ppm PCB result. The drum was removed from the creek and placed into the PCB waste roll-off on site. All of the chips that came off during removal were hand picked out of the creek. The next section of creek bank was excavated including the flat area between the creek bank and parking lot. The total area excavated was 4,215 sf. This area involved a storm drain with a discharge pipe to the creek. There was a broken concrete apron around the storm drain inlet and this was removed and replaced. There were four grassy protrusions into the parking lot from the flat area which the Hamburg FD requested we restore/cap with asphalt instead of grass. All four were excavated, final XRF results obtained from excavation floor and they were backfilled with 2RC stone. All four were then covered with asphalt and the edges sealed. The total area of the grassy protrusions was approximately 1,100 sf. The total square footage excavated during this period was approximately 7,700 sf. at a depth of approximately 2 feet. Of note: the START contract is transitioning from Weston to Tetra Tech as of 7/1/2020.

**2.1.2 Response Actions to Date**

- Site visit and initial screening (assessment)
- Site survey complete
- Set up of command post and staging areas.
- Installation of construction and security fencing.
- Clearing and grubbing activities (in progress)
- Access agreements received
- Creek bank excavation and restoration begins
- Finalization and distribution of first Fact Sheet
- Finalization of engineering and E&S plans.

**2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)**

**2.1.4 Progress Metrics**

Waste Stream	Medium	Quantity	Manifest #	Treatment	Disposal
Haz Waste	Soil	878tons			878tons
Non-Haz Waste	Soil	2,175tons			2,175tons

**2.2 Planning Section**

**2.2.1 Anticipated Activities**

- Continue excavation of creek bank and revetment with large rip rap stone.
- Address field house parking lot drainage issues as necessary.
- Collect additional soil and sediment samples and analyze for lead and PCBs

**2.2.1.2 Next Steps**

- Continue excavation and revetment operations.
- Finalize Action Memo Amendment (Change in Scope to address PCB contamination)

**2.2.2 Issues**

**2.3 Logistics Section**

No information available at this time.

**2.4 Finance Section**

**2.4.1 Narrative**

The START contract will be transitioning to Tetra Tech from Weston Solutions beginning on 07/01/2020

**Estimated Costs \***

	Budgeted	Total To Date	Remaining	% Remaining
<b>Extramural Costs</b>				
ERRS - Cleanup Contractor	\$5,626,494.00	\$2,618,089.45	\$3,008,404.55	53.47%
TAT/START	\$263,648.00	\$230,999.25	\$32,648.75	12.38%

<b>Intramural Costs</b>				
<b>Total Site Costs</b>	\$5,890,142.00	\$2,849,088.70	\$3,041,053.30	51.63%

\* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

**2.5 Other Command Staff**

No information available at this time.

**3. Participating Entities**

**3.1 Unified Command**

**3.2 Cooperating Agencies**

**EPA, PADEP, and the Borough of Hamburg**

**4. Personnel On Site**

EPA, ERRS, and START

**5. Definition of Terms**

No information available at this time.

**6. Additional sources of information**

No information available at this time.

**7. Situational Reference Materials**

No information available at this time.

U.S. ENVIRONMENTAL PROTECTION AGENCY  
POLLUTION/SITUATION REPORT  
Hamburg Kaercher Creek Site - Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region III

**Subject:** POLREP #59  
Hamburg Kaercher Creek Site  
A3H8  
Hamburg, PA  
Latitude: 40.5537210 Longitude: -75.9803895

**To:**  
**From:** Todd Richardson, On Scene Coordinator  
**Date:** 8/14/2020  
**Reporting Period:** 07/01/2020 - 08/14/2020

## 1. Introduction

### 1.1 Background

<b>Site Number:</b>	A3H8	<b>Contract Number:</b>	
<b>D.O. Number:</b>		<b>Action Memo Date:</b>	
<b>Response Authority:</b>	CERCLA	<b>Response Type:</b>	Time-Critical
<b>Response Lead:</b>	EPA	<b>Incident Category:</b>	Removal Action
<b>NPL Status:</b>		<b>Operable Unit:</b>	
<b>Mobilization Date:</b>		<b>Start Date:</b>	6/5/2019
<b>Demob Date:</b>		<b>Completion Date:</b>	
<b>CERCLIS ID:</b>		<b>RCRIS ID:</b>	
<b>ERNS No.:</b>		<b>State Notification:</b>	
<b>FPN#:</b>		<b>Reimbursable Account #:</b>	

#### 1.1.1 Incident Category

#### 1.1.2 Site Description

A battery manufacturing facility operated in the Borough of Hamburg from 1920 to the mid 1990s. During operations, battery casings were split open and the lead plates inside the batteries were removed for resmelting. The battery casings were reused as ground fill material and deposited throughout the Hamburg area.

Kaercher Creek is listed as a warm-water fishery and ranges in width from 3 to 10 feet and in depth from 1 to 3 feet (Roy F. Weston, Inc. 2000). The creek banks vary from 2 to 20 feet high throughout the Borough of Hamburg, which contains industrial, commercial, and residential zones and is located in rural northeast Pennsylvania. Kaercher Creek flows through the Borough of Hamburg and the Price Battery facility property before it joins the Schuylkill River southwest of Hamburg.

In October 2001, the U.S. Environmental Protection Agency (EPA) was notified of the presence of battery casings along Kaercher Creek near the Hamburg Field House. In 2002, Tetra Tech EM Inc., under the direction of the EPA On-Scene Coordinator, performed removal assessments along Kaercher Creek from Kaercher Lake to Kaercher Creek's confluence with the Schuylkill River. The Agency for Toxic Substances and Disease Registry reviewed the site assessment reports and issued a Health Consultation that recommended an immediate Comprehensive Environmental Response, Compensation, and Liability Act removal action to protect human health.

In May 2003, EPA approved funding for a removal action at the Hamburg – Kaercher Creek site. EPA remediated a total of 5,470 feet of Kaercher Creek during the Hamburg – Kaercher

Creek removal action. Exide Corporation completed remediation of Kaercher Creek at the Price Battery facility.

On-site cleanup activities included excavating contaminated sediment and soil, transporting the lead-contaminated soil off site for disposal, and capping remaining areas of contamination. Soil capping activities included backfilling with clean soil, fertilizing and seeding the area with native grass seed, mulching with straw, and planting trees and shrubs as appropriate. Sediment capping activities included installing geotextile fabric and backfilling with rip rap stone.

Removal Activities associated with the 2003 - 2005 EPA lead clean-up, were completed in December 2004. However, in 2017, during an ecological assessment of Kaercher Creek, EPA remedial program contractors (CDM Federal) reported finding significant areas of erosion on the banks of Kaercher Creek adjacent to the Hamburg Fieldhouse and parking lot. EPA's remedial program (RPM, John Banks) then notified the removal program (OSC, Todd Richardson) of the erosion issues on the banks of Kaercher Creek. OSC Richardson conducted an initial site inspection on April 5, 2018. In May of 2018, OSC Richardson, along with Dean Maser (Weston Solutions, START) re-visited the Site, noting the erosion damaged creek bank, and screening surface soil in areas of erosion. Several areas of erosion were observed with visible battery casings and lead concentrations ranging from 2600 - 2800ppm.

For additional information, visit the Pollution/Situation Report ([Pol/Sitreps](#)) section.

**1.1.2.1 Location**

The intersection of Pine and Church Streets, Hamburg, PA 19562

**1.1.2.2 Description of Threat**

Direct exposure and migration of lead contamination. Lead contamination in creek bank surface soil.

**1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results**

START and EPA visited site and observed erosion which exposed geotextile fabric and high visibility orange fencing in areas that had been remediated in the 2003 - 2005 period. There were also several ground hog holes exposing battery debris.

**2. Current Activities**

**2.1 Operations Section**

**2.1.1 Narrative**

On July 1, 2020 the START contractor changed from Weston Solutions to Tetra Tech. The total area remediated during this period was approximately 8,150 sf, which included 120 linear feet of creek bank. The Hamburg Municipal Utilities Authority needed to install extensions on two manholes in the contaminated area. ERRS assisted them in the excavation of contaminated soil from around the manholes and hauled the excavated soil to the hazardous soil stock pile. A 35' x 25' section of flat area between the parking lot and top of creek bank was top-soiled and hydroseeded. In preparation to a tropical storm that was approaching, a rock check dam was installed approximately 75' down stream to help trap any sediment that may enter the creek. It appears that the coffer dam and sand bags were mostly effective in containing eroded soil which resulted from the heavy precipitation, but the sediment in the creek will be sampled to determine if any lead contamination entered the creek. The PCB material containing roll off was taken off site which was approximately 7,700 lbs. Disposal amounts to date are approximately 2,174 tons of non-hazardous soil and 2,214 tons of hazardous soil.

**2.1.2 Response Actions to Date**

- Site visit and initial screening (assessment)
- Site survey complete
- Set up of command post and staging areas.
- Installation of construction and security fencing.
- Clearing and grubbing activities (in progress)
- Access agreements received
- Creek bank excavation and restoration begins
- Finalization and distribution of first Fact Sheet
- Finalization of engineering and E&S plans
- Finalized Action Memo Amendment (Change in Scope to address PCB contamination)

**2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)**

**2.1.4 Progress Metrics**

<i>Waste Stream</i>	<i>Medium</i>	<i>Quantity</i>	<i>Manifest #</i>	<i>Treatment</i>	<i>Disposal</i>
Haz Waste	Soil	2,214 tons			2,214 tons
Non-Haz Waste	Soil	2,175tons			2,175tons
PCB Waste	Waste	3.85 tons			3.85 tons

**2.2 Planning Section**

**2.2.1 Anticipated Activities**

- Continue excavation of creek bank and revetment with large rip rap stone.
- Address field house parking lot drainage issues as necessary.
- Collect additional soil and sediment samples and analyze for lead and PCBs

**2.2.1.2 Next Steps**

Continue excavation and revetment operations.

**2.2.2 Issues**

Potential migration of lead contamination from excavation area into Kaercher Creek resulting from heavy precipitation before and during Tropical Storm Isaias. Sediment sampling will be conducted to determine need for sediment cleanup in Kaercher Creek.

**2.3 Logistics Section**

No information available at this time.

**2.4 Finance Section**

**2.4.1 Narrative**

The START contract transitioned to Tetra Tech from Weston Solutions beginning on 07/01/2020

**Estimated Costs \***

	<b>Budgeted</b>	<b>Total To Date</b>	<b>Remaining</b>	<b>% Remaining</b>
<b>Extramural Costs</b>				
ERRS - Cleanup Contractor	\$5,626,494.00	\$3,125,485.44	\$2,501,008.56	44.45%

TAT/START	\$132,316.00	\$13,843.23	\$118,472.77	89.54%
<b>Intramural Costs</b>				
<b>Total Site Costs</b>	\$5,758,810.00	\$3,139,328.67	\$2,619,481.33	45.49%

\* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

**2.5 Other Command Staff**

No information available at this time.

**3. Participating Entities**

**3.1 Unified Command**

**3.2 Cooperating Agencies**

EPA, PADEP, and the Borough of Hamburg

**4. Personnel On Site**

EPA, ERRS, and START

**5. Definition of Terms**

No information available at this time.

**6. Additional sources of information**

No information available at this time.

**7. Situational Reference Materials**

No information available at this time.

U.S. ENVIRONMENTAL PROTECTION AGENCY  
POLLUTION/SITUATION REPORT  
Hamburg Kaercher Creek Site - Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region III

**Subject:** POLREP #60  
Hamburg Kaercher Creek Site  
A3H8  
Hamburg, PA  
Latitude: 40.5537210 Longitude: -75.9803895

**To:**  
**From:** Todd Richardson, On Scene Coordinator  
**Date:** 9/21/2020  
**Reporting Period:** 08/15/2020 - 09/21/2020

## 1. Introduction

### 1.1 Background

<b>Site Number:</b>	A3H8	<b>Contract Number:</b>	
<b>D.O. Number:</b>		<b>Action Memo Date:</b>	
<b>Response Authority:</b>	CERCLA	<b>Response Type:</b>	Time-Critical
<b>Response Lead:</b>	EPA	<b>Incident Category:</b>	Removal Action
<b>NPL Status:</b>		<b>Operable Unit:</b>	
<b>Mobilization Date:</b>		<b>Start Date:</b>	6/5/2019
<b>Demob Date:</b>		<b>Completion Date:</b>	
<b>CERCLIS ID:</b>		<b>RCRIS ID:</b>	
<b>ERNS No.:</b>		<b>State Notification:</b>	
<b>FPN#:</b>		<b>Reimbursable Account #:</b>	

#### 1.1.1 Incident Category

#### 1.1.2 Site Description

A battery manufacturing facility operated in the Borough of Hamburg from 1920 to the mid 1990s. During operations, battery casings were split open and the lead plates inside the batteries were removed for resmelting. The battery casings were reused as ground fill material and deposited throughout the Hamburg area.

Kaercher Creek is listed as a warm-water fishery and ranges in width from 3 to 10 feet and in depth from 1 to 3 feet (Roy F. Weston, Inc. 2000). The creek banks vary from 2 to 20 feet high throughout the Borough of Hamburg, which contains industrial, commercial, and residential zones and is located in rural northeast Pennsylvania. Kaercher Creek flows through the Borough of Hamburg and the Price Battery facility property before it joins the Schuylkill River southwest of Hamburg.

In October 2001, the U.S. Environmental Protection Agency (EPA) was notified of the presence of battery casings along Kaercher Creek near the Hamburg Field House. In 2002, Tetra Tech EM Inc., under the direction of the EPA On-Scene Coordinator, performed removal assessments along Kaercher Creek from Kaercher Lake to Kaercher Creek's confluence with the Schuylkill River. The Agency for Toxic Substances and Disease Registry reviewed the site assessment reports and issued a Health Consultation that recommended an immediate Comprehensive Environmental Response, Compensation, and Liability Act removal action to protect human health.

In May 2003, EPA approved funding for a removal action at the Hamburg – Kaercher Creek site. EPA remediated a total of 5,470 feet of Kaercher Creek during the Hamburg – Kaercher

Creek removal action. Exide Corporation completed remediation of Kaercher Creek at the Price Battery facility.

On-site cleanup activities included excavating contaminated sediment and soil, transporting the lead-contaminated soil off site for disposal, and capping remaining areas of contamination. Soil capping activities included backfilling with clean soil, fertilizing and seeding the area with native grass seed, mulching with straw, and planting trees and shrubs as appropriate. Sediment capping activities included installing geotextile fabric and backfilling with rip rap stone.

Removal Activities associated with the 2003 - 2005 EPA lead clean-up, were completed in December 2004. However, in 2017, during an ecological assessment of Kaercher Creek, EPA remedial program contractors (CDM Federal) reported finding significant areas of erosion on the banks of Kaercher Creek adjacent to the Hamburg Fieldhouse and parking lot. EPA's remedial program (RPM, John Banks) then notified the removal program (OSC, Todd Richardson) of the erosion issues on the banks of Kaercher Creek. OSC Richardson conducted an initial site inspection on April 5, 2018. In May of 2018, OSC Richardson, along with Dean Maser (Weston Solutions, START) re-visited the Site, noting the erosion damaged creek bank, and screening surface soil in areas of erosion. Several areas of erosion were observed with visible battery casings and lead concentrations ranging from 2600 - 2800ppm.

For additional information, visit the Pollution/Situation Report ([Pol/Sitreps](#)) section.

**1.1.2.1 Location**

The intersection of Pine and Church Streets, Hamburg, PA 19562

**1.1.2.2 Description of Threat**

Direct exposure and migration of lead contamination. Lead contamination in creek bank surface soil.

**1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results**

START and EPA visited site and observed erosion which exposed geotextile fabric and high visibility orange fencing in areas that had been remediated in the 2003 - 2005 period. There were also several ground hog holes exposing battery debris.

**2. Current Activities**

**2.1 Operations Section**

**2.1.1 Narrative**

Added erosion and sediment control measures were installed to address potential future heavy precipitation events. Two turbidity curtains were installed downstream from the rock check dam to enhance stream protection from any fugitive contaminated sediment. The total area remediated during this period was approximately 6,080 sf, which included 88 linear feet of creek bank. The entire process on the bank involves excavation, orange barrier fabric installation, backfill clay, Mirifi 1100N fabric installed on clay, revetment stone on the Mirifi 1100N. The flat area process is orange barrier fabric, clay, topsoil and hydroseed. During the bank excavation a large vein of slag was encountered which screened at >10% with the XRF. This was removed and sent to the hazardous soil pile for load out. A 35' x 70' section of flat area between the parking lot and top of creek bank was top-soiled and hydroseeded. A section of bank measuring approximately 100' was cleared and grubbed in preparation for excavation. A Field Sampling Plan and Addendum was completed and sent to EPA for review and comments.

**2.1.2 Response Actions to Date**

- Site visit and initial screening (assessment)
- Site survey complete
- Set up of command post and staging areas.
- Installation of construction and security fencing.
- Clearing and grubbing activities (in progress)
- Access agreements received
- Creek bank excavation and restoration begins
- Finalization and distribution of first Fact Sheet
- Finalization of engineering and E&S plans
- Finalized Action Memo Amendment (Change in Scope to address PCB contamination)

**2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)**

**2.1.4 Progress Metrics**

<i>Waste Stream</i>	<i>Medium</i>	<i>Quantity</i>	<i>Manifest #</i>	<i>Treatment</i>	<i>Disposal</i>
Haz Waste	Soil	2,214 tons			2,214 tons
Non-Haz Waste	Soil	2,175tons			2,175tons
PCB Waste	Waste	3.85 tons			3.85 tons

**2.2 Planning Section**

**2.2.1 Anticipated Activities**

- Continue excavation of creek bank and revetment with large rip rap stone.
- Address field house parking lot drainage issues as necessary.
- Collect additional soil and sediment samples and analyze for lead and PCBs

**2.2.1.2 Next Steps**

Continue excavation and revetment operations.

**2.2.2 Issues**

Potential migration of lead contamination from excavation area into Kaercher Creek resulting from heavy precipitation before and during Tropical Storm Isaias. Sediment sampling will be conducted to determine need for sediment cleanup in Kaercher Creek.

**2.3 Logistics Section**

No information available at this time.

**2.4 Finance Section**

**2.4.1 Narrative**

On August 5, 2020, ERRS received an additional \$1,000,000.00.

**Estimated Costs \***

	<b>Budgeted</b>	<b>Total To Date</b>	<b>Remaining</b>	<b>% Remaining</b>
<b>Extramural Costs</b>				
ERRS - Cleanup Contractor	\$6,626,494.00	\$3,557,812.97	\$3,068,681.03	46.31%

TAT/START	\$132,316.00	\$28,369.05	\$103,946.95	78.56%
<b>Intramural Costs</b>				
<b>Total Site Costs</b>	\$6,758,810.00	\$3,586,182.02	\$3,172,627.98	46.94%

\* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

**2.5 Other Command Staff**

No information available at this time.

**3. Participating Entities**

**3.1 Unified Command**

**3.2 Cooperating Agencies**

EPA, PADEP, and the Borough of Hamburg

**4. Personnel On Site**

EPA, ERRS, and START

**5. Definition of Terms**

No information available at this time.

**6. Additional sources of information**

No information available at this time.

**7. Situational Reference Materials**

No information available at this time.

U.S. ENVIRONMENTAL PROTECTION AGENCY  
POLLUTION/SITUATION REPORT  
Hamburg Kaercher Creek Site - Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region III

**Subject:** POLREP #61  
Hamburg Kaercher Creek Site  
A3H8  
Hamburg, PA  
Latitude: 40.5537210 Longitude: -75.9803895

**To:**  
**From:** Todd Richardson, On Scene Coordinator  
**Date:** 10/29/2020  
**Reporting Period:** 09/22/2020 - 10/30/2020

## 1. Introduction

### 1.1 Background

<b>Site Number:</b>	A3H8	<b>Contract Number:</b>	
<b>D.O. Number:</b>		<b>Action Memo Date:</b>	
<b>Response Authority:</b>	CERCLA	<b>Response Type:</b>	Time-Critical
<b>Response Lead:</b>	EPA	<b>Incident Category:</b>	Removal Action
<b>NPL Status:</b>		<b>Operable Unit:</b>	
<b>Mobilization Date:</b>		<b>Start Date:</b>	6/5/2019
<b>Demob Date:</b>		<b>Completion Date:</b>	
<b>CERCLIS ID:</b>		<b>RCRIS ID:</b>	
<b>ERNS No.:</b>		<b>State Notification:</b>	
<b>FPN#:</b>		<b>Reimbursable Account #:</b>	

#### 1.1.1 Incident Category

#### 1.1.2 Site Description

A battery manufacturing facility operated in the Borough of Hamburg from 1920 to the mid 1990s. During operations, battery casings were split open and the lead plates inside the batteries were removed for resmelting. The battery casings were reused as ground fill material and deposited throughout the Hamburg area.

Kaercher Creek is listed as a warm-water fishery and ranges in width from 3 to 10 feet and in depth from 1 to 3 feet (Roy F. Weston, Inc. 2000). The creek banks vary from 2 to 20 feet high throughout the Borough of Hamburg, which contains industrial, commercial, and residential zones and is located in rural northeast Pennsylvania. Kaercher Creek flows through the Borough of Hamburg and the Price Battery facility property before it joins the Schuylkill River southwest of Hamburg.

In October 2001, the U.S. Environmental Protection Agency (EPA) was notified of the presence of battery casings along Kaercher Creek near the Hamburg Field House. In 2002, Tetra Tech EM Inc., under the direction of the EPA On-Scene Coordinator, performed removal assessments along Kaercher Creek from Kaercher Lake to Kaercher Creek's confluence with the Schuylkill River. The Agency for Toxic Substances and Disease Registry reviewed the site assessment reports and issued a Health Consultation that recommended an immediate Comprehensive Environmental Response, Compensation, and Liability Act removal action to protect human health.

In May 2003, EPA approved funding for a removal action at the Hamburg – Kaercher Creek site. EPA remediated a total of 5,470 feet of Kaercher Creek during the Hamburg – Kaercher

Creek removal action. Exide Corporation completed remediation of Kaercher Creek at the Price Battery facility.

On-site cleanup activities included excavating contaminated sediment and soil, transporting the lead-contaminated soil off site for disposal, and capping remaining areas of contamination. Soil capping activities included backfilling with clean soil, fertilizing and seeding the area with native grass seed, mulching with straw, and planting trees and shrubs as appropriate. Sediment capping activities included installing geotextile fabric and backfilling with rip rap stone.

Removal Activities associated with the 2003 - 2005 EPA lead clean-up, were completed in December 2004. However, in 2017, during an ecological assessment of Kaercher Creek, EPA remedial program contractors (CDM Federal) reported finding significant areas of erosion on the banks of Kaercher Creek adjacent to the Hamburg Fieldhouse and parking lot. EPA's remedial program (RPM, John Banks) then notified the removal program (OSC, Todd Richardson) of the erosion issues on the banks of Kaercher Creek. OSC Richardson conducted an initial site inspection on April 5, 2018. In May of 2018, OSC Richardson, along with Dean Maser (Weston Solutions, START) re-visited the Site, noting the erosion damaged creek bank, and screening surface soil in areas of erosion. Several areas of erosion were observed with visible battery casings and lead concentrations ranging from 2600 - 2800ppm.

For additional information, visit the Pollution/Situation Report ([Pol/Sitreps](#)) section.

**1.1.2.1 Location**

The intersection of Pine and Church Streets, Hamburg, PA 19562

**1.1.2.2 Description of Threat**

Direct exposure and migration of lead contamination. Lead contamination in creek bank surface soil.

**1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results**

START and EPA visited site and observed erosion which exposed geotextile fabric and high visibility orange fencing in areas that had been remediated in the 2003 - 2005 period. There were also several ground hog holes exposing battery debris.

**2. Current Activities**

**2.1 Operations Section**

**2.1.1 Narrative**

During this reporting period approximately 800' of 24" filter sock was installed along the remaining portion of the creek. The total area remediated during this period was approximately 6,600 sf, which included 80 linear feet of creek bank. There were also two rounds of hazardous soil disposal load out, which consisted of 26 triaxle dump trucks, transporting approximately 593 tons of waste off-site. The Field Sampling Plan (FSP) and Addendum were also finalized. Conducted on-Site meeting with the Hamburg Fire Department to discuss site restoration of disturbed areas. The rock check dam closest to the excavation area was removed and reinstalled farther downstream across from the field house. The turbidity curtain is still in place. A subcontractor, tree removal service, was brought in and all but one of the remaining trees on the bank were removed. The remaining tree will need to have Met-Ed personnel assisting as it has wires attached to/through it. The non-haz soil pile failed for TCLP lead so the pile was sorted bucket by bucket. Any bucket with an XRF reading above 1, 250 was transferred over to the haz pile.

**2.1.2 Response Actions to Date**

- Site visit and initial screening (assessment)
- Site survey complete
- Set up of command post and staging areas.
- Installation of construction and security fencing.
- Clearing and grubbing activities (complete)
- Access agreements received
- Creek bank excavation and restoration begins
- Finalization and distribution of first Fact Sheet
- Finalization of engineering and E&S plans
- Finalized Action Memo Amendment (Change in Scope to address PCB contamination)
- Finalization of FSP

**2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)**

**2.1.4 Progress Metrics**

<i>Waste Stream</i>	<i>Medium</i>	<i>Quantity</i>	<i>Manifest #</i>	<i>Treatment</i>	<i>Disposal</i>
Haz Waste	Soil	4,151 tons			4,151 tons
Non-Haz Waste	Soil	2,175tons			2,175tons
PCB Waste	Waste	3.85 tons			3.85 tons

**2.2 Planning Section**

**2.2.1 Anticipated Activities**

- Continue excavation of creek bank and revetment with large rip rap stone.
- Address field house parking lot drainage issues as necessary.
- Collect additional soil and sediment samples and analyze for lead and PCBs

**2.2.1.2 Next Steps**

Continue excavation and revetment operations.

**2.2.2 Issues**

Potential migration of lead contamination from excavation area into Kaercher Creek resulting from heavy precipitation before and during Tropical Storm Isaias. Sediment sampling will be conducted to determine need for sediment cleanup in Kaercher Creek.

**2.3 Logistics Section**

No information available at this time.

**2.4 Finance Section**

**2.4.1 Narrative**

On October 21, 2020, START received an additional \$89,433.00.

**Estimated Costs \***

	<b>Budgeted</b>	<b>Total To Date</b>	<b>Remaining</b>	<b>% Remaining</b>
<b>Extramural Costs</b>				
ERRS - Cleanup Contractor	\$6,626,494.00	\$4,149,146.05	\$2,477,347.95	37.39%

TAT/START	\$221,749.00	\$47,233.99	\$174,515.01	78.70%
<b>Intramural Costs</b>				
<b>Total Site Costs</b>	\$6,848,243.00	\$4,196,380.04	\$2,651,862.96	38.72%

\* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

**2.5 Other Command Staff**

No information available at this time.

**3. Participating Entities**

**3.1 Unified Command**

**3.2 Cooperating Agencies**

**EPA, PADEP, and the Borough of Hamburg**

**4. Personnel On Site**

EPA, ERRS, and START

**5. Definition of Terms**

No information available at this time.

**6. Additional sources of information**

No information available at this time.

**7. Situational Reference Materials**

No information available at this time.

U.S. ENVIRONMENTAL PROTECTION AGENCY  
POLLUTION/SITUATION REPORT  
Hamburg Kaercher Creek Site - Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region III

**Subject:** POLREP #62  
Hamburg Kaercher Creek Site  
A3H8  
Hamburg, PA  
Latitude: 40.5537210 Longitude: -75.9803895

**To:**  
**From:** Todd Richardson, On Scene Coordinator  
**Date:** 12/10/2020  
**Reporting Period:** 11/02/2020 - 12/11/2020

## 1. Introduction

### 1.1 Background

<b>Site Number:</b>	A3H8	<b>Contract Number:</b>	
<b>D.O. Number:</b>		<b>Action Memo Date:</b>	
<b>Response Authority:</b>	CERCLA	<b>Response Type:</b>	Time-Critical
<b>Response Lead:</b>	EPA	<b>Incident Category:</b>	Removal Action
<b>NPL Status:</b>		<b>Operable Unit:</b>	
<b>Mobilization Date:</b>		<b>Start Date:</b>	6/5/2019
<b>Demob Date:</b>		<b>Completion Date:</b>	
<b>CERCLIS ID:</b>		<b>RCRIS ID:</b>	
<b>ERNS No.:</b>		<b>State Notification:</b>	
<b>FPN#:</b>		<b>Reimbursable Account #:</b>	

#### 1.1.1 Incident Category

#### 1.1.2 Site Description

A battery manufacturing facility operated in the Borough of Hamburg from 1920 to the mid 1990s. During operations, battery casings were split open and the lead plates inside the batteries were removed for resmelting. The battery casings were reused as ground fill material and deposited throughout the Hamburg area.

Kaercher Creek is listed as a warm-water fishery and ranges in width from 3 to 10 feet and in depth from 1 to 3 feet (Roy F. Weston, Inc. 2000). The creek banks vary from 2 to 20 feet high throughout the Borough of Hamburg, which contains industrial, commercial, and residential zones and is located in rural northeast Pennsylvania. Kaercher Creek flows through the Borough of Hamburg and the Price Battery facility property before it joins the Schuylkill River southwest of Hamburg.

In October 2001, the U.S. Environmental Protection Agency (EPA) was notified of the presence of battery casings along Kaercher Creek near the Hamburg Field House. In 2002, Tetra Tech EM Inc., under the direction of the EPA On-Scene Coordinator, performed removal assessments along Kaercher Creek from Kaercher Lake to Kaercher Creek's confluence with the Schuylkill River. The Agency for Toxic Substances and Disease Registry reviewed the site assessment reports and issued a Health Consultation that recommended an immediate Comprehensive Environmental Response, Compensation, and Liability Act removal action to protect human health.

In May 2003, EPA approved funding for a removal action at the Hamburg – Kaercher Creek site. EPA remediated a total of 5,470 feet of Kaercher Creek during the Hamburg – Kaercher

Creek removal action. Exide Corporation completed remediation of Kaercher Creek at the Price Battery facility.

On-site cleanup activities included excavating contaminated sediment and soil, transporting the lead-contaminated soil off site for disposal, and capping remaining areas of contamination. Soil capping activities included backfilling with clean soil, fertilizing and seeding the area with native grass seed, mulching with straw, and planting trees and shrubs as appropriate. Sediment capping activities included installing geotextile fabric and backfilling with rip rap stone.

Removal Activities associated with the 2003 - 2005 EPA lead clean-up, were completed in December 2004. However, in 2017, during an ecological assessment of Kaercher Creek, EPA remedial program contractors (CDM Federal) reported finding significant areas of erosion on the banks of Kaercher Creek adjacent to the Hamburg Fieldhouse and parking lot. EPA's remedial program (RPM, John Banks) then notified the removal program (OSC, Todd Richardson) of the erosion issues on the banks of Kaercher Creek. OSC Richardson conducted an initial site inspection on April 5, 2018. In May of 2018, OSC Richardson, along with Dean Maser (Weston Solutions, START) re-visited the Site, noting the erosion damaged creek bank, and screening surface soil in areas of erosion. Several areas of erosion were observed with visible battery casings and lead concentrations ranging from 2600 - 2800ppm.

For additional information, visit the Pollution/Situation Report ([Pol/Sitreps](#)) section.

#### 1.1.2.1 Location

The intersection of Pine and Church Streets, Hamburg, PA 19562

#### 1.1.2.2 Description of Threat

Direct exposure and migration of lead contamination. Lead contamination in creek bank surface soil.

#### 1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

START and EPA visited site and observed erosion which exposed geotextile fabric and high visibility orange fencing in areas that had been remediated in the 2003 - 2005 period. There were also several ground hog holes exposing battery debris.

## 2. Current Activities

### 2.1 Operations Section

#### 2.1.1 Narrative

During this reporting period the engineering subcontract was approved through Tetra Tech to complete all remaining engineering requirements. The total area remediated during this period was approximately 2,100 sf, which included 40 linear feet of creek bank. All of the stockpiled concrete pieces previously excavated from areas of concern were pressure washed and re-buried in the excavation. The suspected non-hazardous soil was treated with a 2% soil amendment (Enviro Blend - active ingredients: magnesium oxide and magnesium hydroxide) to bind the lead, reducing its leachability. Analytical results indicate that the treatment was successful. The large revetment stone pile was relocated from the west side of the HFD training building to the east side. The westside still needs to be excavated and the east side has been completed. All of the stockpiled stumps have been pressure washed, screened with an XRF and sent off site for disposal. An asphalt cap was installed on the west, east, and north side of the HFD training building. This created a permanent cap of the effected areas, eliminated the need to excavate, dispose of the soil, and backfill these areas. A soil and sediment sampling event occurred which involved the collection of 31 PCB samples and 21 lead samples. All of the PCB samples were shipped to a CLP laboratory for analysis. The lead samples were processed into XRF cups and analyzed ex-situ on an XRF stand. Nine of the 21 lead samples analyzed ex-situ were sent to the EPA laboratory for analysis. All of the sample point locations were collected on GPS and a map was generated. Sample results indicated that PCBs were not detected, and some elevated lead concentrations were detected in an isolated area of Kaercher Creek sediment, and on the south bank of Kaercher Creek. These areas will be further evaluated for potential inclusion in the removal action.

#### 2.1.2 Response Actions to Date

Site visit and initial screening (assessment)  
Site survey complete  
Set up of command post and staging areas.  
Installation of construction and security fencing.  
Clearing and grubbing activities (complete)  
Access agreements received  
Creek bank excavation and restoration begins  
Finalization and distribution of first Fact Sheet  
Finalization of engineering and E&S plans  
Finalized Action Memo Amendment (Change in Scope to address PCB contamination)  
Finalization of FSP  
Soil and sediment sampling event complete

#### 2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)

#### 2.1.4 Progress Metrics

<i>Waste Stream</i>	<i>Medium</i>	<i>Quantity</i>	<i>Manifest #</i>	<i>Treatment</i>	<i>Disposal</i>
Haz Waste	Soil	4,151 tons			4,151 tons
Non-Haz Waste	Soil	2,175tons			2,175tons
PCB Waste	Waste	3.85 tons			3.85 tons

### 2.2 Planning Section

#### 2.2.1 Anticipated Activities

Continue excavation of creek bank and revetment with large rip rap stone.  
Address field house parking lot drainage issues as necessary.

#### 2.2.1.2 Next Steps

Continue excavation and revetment operations.

#### 2.2.2 Issues

Potential migration of lead contamination from excavation area into Kaercher Creek resulting from heavy precipitation before and during Tropical Storm Isaias. Sediment sampling was conducted to determine need for sediment cleanup in Kaercher Creek. An isolated area of sediment was determined to have elevated concentrations of lead in the vicinity of the area which suffered a wash out Tropical Storm Isaias. Removal alternatives area currently being evaluated to address this area. Also, during the recent sampling event, elevated lead concentrations were also detected on the south bank in an isolated area, however due to the steep topography, and heavy vegetation, exposure risk is minimal, and removal action will not likely be required.

### 2.3 Logistics Section

No information available at this time.

## 2.4 Finance Section

### Estimated Costs \*

	Budgeted	Total To Date	Remaining	% Remaining
<b>Extramural Costs</b>				
ERRS - Cleanup Contractor	\$6,626,494.00	\$4,590,686.94	\$2,035,807.06	30.72%
TAT/START	\$221,749.00	\$69,810.72	\$151,938.28	68.52%
<b>Intramural Costs</b>				
<b>Total Site Costs</b>	<b>\$6,848,243.00</b>	<b>\$4,660,497.66</b>	<b>\$2,187,745.34</b>	<b>31.95%</b>

\* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

## 2.5 Other Command Staff

No information available at this time.

## 3. Participating Entities

### 3.1 Unified Command

### 3.2 Cooperating Agencies

EPA, PADEP, and the Borough of Hamburg

## 4. Personnel On Site

EPA, ERRS, and START

## 5. Definition of Terms

No information available at this time.

## 6. Additional sources of information

No information available at this time.

## 7. Situational Reference Materials

No information available at this time.

U.S. ENVIRONMENTAL PROTECTION AGENCY  
POLLUTION/SITUATION REPORT  
Hamburg Kaercher Creek Site - Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region III

**Subject:** POLREP #63  
Hamburg Kaercher Creek Site  
A3H8  
Hamburg, PA  
Latitude: 40.5537210 Longitude: -75.9803895

**To:**  
**From:** Todd Richardson, On Scene Coordinator  
**Date:** 3/5/2021  
**Reporting Period:** 12/12/2020 - 03/5/2021

## 1. Introduction

### 1.1 Background

<b>Site Number:</b>	A3H8	<b>Contract Number:</b>	
<b>D.O. Number:</b>		<b>Action Memo Date:</b>	
<b>Response Authority:</b>	CERCLA	<b>Response Type:</b>	Time-Critical
<b>Response Lead:</b>	EPA	<b>Incident Category:</b>	Removal Action
<b>NPL Status:</b>		<b>Operable Unit:</b>	
<b>Mobilization Date:</b>		<b>Start Date:</b>	6/5/2019
<b>Demob Date:</b>		<b>Completion Date:</b>	
<b>CERCLIS ID:</b>		<b>RCRIS ID:</b>	
<b>ERNS No.:</b>		<b>State Notification:</b>	
<b>FPN#:</b>		<b>Reimbursable Account #:</b>	

#### 1.1.1 Incident Category

#### 1.1.2 Site Description

A battery manufacturing facility operated in the Borough of Hamburg from 1920 to the mid 1990s. During operations, battery casings were split open and the lead plates inside the batteries were removed for resmelting. The battery casings were reused as ground fill material and deposited throughout the Hamburg area.

Kaercher Creek is listed as a warm-water fishery and ranges in width from 3 to 10 feet and in depth from 1 to 3 feet (Roy F. Weston, Inc. 2000). The creek banks vary from 2 to 20 feet high throughout the Borough of Hamburg, which contains industrial, commercial, and residential zones and is located in rural northeast Pennsylvania. Kaercher Creek flows through the Borough of Hamburg and the Price Battery facility property before it joins the Schuylkill River southwest of Hamburg.

In October 2001, the U.S. Environmental Protection Agency (EPA) was notified of the presence of battery casings along Kaercher Creek near the Hamburg Field House. In 2002, Tetra Tech EM Inc., under the direction of the EPA On-Scene Coordinator, performed removal assessments along Kaercher Creek from Kaercher Lake to Kaercher Creek's confluence with the Schuylkill River. The Agency for Toxic Substances and Disease Registry reviewed the site assessment reports and issued a Health Consultation that recommended an immediate Comprehensive Environmental Response, Compensation, and Liability Act removal action to protect human health.

In May 2003, EPA approved funding for a removal action at the Hamburg – Kaercher Creek site. EPA remediated a total of 5,470 feet of Kaercher Creek during the Hamburg – Kaercher

Creek removal action. Exide Corporation completed remediation of Kaercher Creek at the Price Battery facility.

On-site cleanup activities included excavating contaminated sediment and soil, transporting the lead-contaminated soil off site for disposal, and capping remaining areas of contamination. Soil capping activities included backfilling with clean soil, fertilizing and seeding the area with native grass seed, mulching with straw, and planting trees and shrubs as appropriate. Sediment capping activities included installing geotextile fabric and backfilling with rip rap stone.

Removal Activities associated with the 2003 - 2005 EPA lead clean-up, were completed in December 2004. However, in 2017, during an ecological assessment of Kaercher Creek, EPA remedial program contractors (CDM Federal) reported finding significant areas of erosion on the banks of Kaercher Creek adjacent to the Hamburg Fieldhouse and parking lot. EPA's remedial program (RPM, John Banks) then notified the removal program (OSC, Todd Richardson) of the erosion issues on the banks of Kaercher Creek. OSC Richardson conducted an initial site inspection on April 5, 2018. In May of 2018, OSC Richardson, along with Dean Maser (Weston Solutions, START) re-visited the Site, noting the erosion damaged creek bank, and screening surface soil in areas of erosion. Several areas of erosion were observed with visible battery casings and lead concentrations ranging from 2600 - 2800ppm.

For additional information, visit the Pollution/Situation Report ([Pol/Sitreps](#)) section.

**1.1.2.1 Location**

The intersection of Pine and Church Streets, Hamburg, PA 19562

**1.1.2.2 Description of Threat**

Direct exposure and migration of lead contamination. Lead contamination in creek bank surface soil.

**1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results**

START and EPA visited site and observed erosion which exposed geotextile fabric and high visibility orange fencing in areas that had been remediated in the 2003 - 2005 period. There were also several ground hog holes exposing battery debris.

**2. Current Activities**

**2.1 Operations Section**

**2.1.1 Narrative**

During this reporting period the total area remediated was approximately 13,405 sf, which included 143 linear feet of creek bank. The suspected non-hazardous soil was treated with a 2% soil amendment (Enviro Blend - active ingredients: magnesium oxide and magnesium hydroxide) to bind the lead, reducing its leachability. Analytical results indicate that the treatment was successful. The hazardous soil waste pile, RCRA - D008, was treated with the same material except with a higher percentage (3%). The results of this treatment have proven to be successful in binding the lead and therefore this soil was able to be disposed of as non-regulated. There were 65 loads of treated soil and 19 loads of the regulated D008 soil shipped off-site. See waste stream table below for totals. Two loads of stumps have been pressure washed, screened with an XRF and sent off site for disposal.

**2.1.2 Response Actions to Date**

- Site visit and initial screening (assessment)
- Site survey complete
- Set up of command post and staging areas.
- Installation of construction and security fencing.
- Clearing and grubbing activities (complete)
- Access agreements received
- Creek bank excavation and restoration begins
- Finalization and distribution of first Fact Sheet
- Finalization of engineering and E&S plans
- Finalized Action Memo Amendment (Change in Scope to address PCB contamination)
- Finalization of FSP
- Soil and sediment sampling event complete

**2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)**

**2.1.4 Progress Metrics**

<i>Waste Stream</i>	<i>Medium</i>	<i>Quantity</i>	<i>Manifest #</i>	<i>Treatment</i>	<i>Disposal</i>
Haz Waste	Soil	5,585 tons			5,585 tons
Non-Haz Waste	Soil	3,647tons			3,647tons
PCB Waste	Waste	3.85 tons			3.85 tons

**2.2 Planning Section**

**2.2.1 Anticipated Activities**

- Continue excavation of creek bank and revetment with large rip rap stone.
- Address field house parking lot drainage issues as necessary.

**2.2.1.2 Next Steps**

Continue excavation and revetment operations.

**2.2.2 Issues**

Potential migration of lead contamination from excavation area into Kaercher Creek resulting from heavy precipitation before and during Tropical Storm Isaias. Sediment sampling was conducted to determine need for sediment cleanup in Kaercher Creek. An isolated area of sediment was determined to have elevated concentrations of lead in the vicinity of the area which suffered a wash out Tropical Storm Isaias. Removal alternatives area currently being evaluated to address this area. Also, during the recent sampling event, elevated lead concentrations were also detected on the south bank in an isolated area, however due to the steep topography, and heavy vegetation, exposure risk is minimal, and removal action will not likely be required.

**2.3 Logistics Section**

No information available at this time.

**2.4 Finance Section**

**Estimated Costs \***

	<b>Budgeted</b>	<b>Total To Date</b>	<b>Remaining</b>	<b>% Remaining</b>
<b>Extramural Costs</b>				

ERRS - Cleanup Contractor	\$6,626,494.00	\$5,287,819.92	\$1,338,674.08	20.20%
TAT/START	\$221,749.00	\$89,535.68	\$132,213.32	59.62%
<b>Intramural Costs</b>				
<b>Total Site Costs</b>	<b>\$6,848,243.00</b>	<b>\$5,377,355.60</b>	<b>\$1,470,887.40</b>	<b>21.48%</b>

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**2.5 Other Command Staff**

No information available at this time.

**3. Participating Entities**

**3.1 Unified Command**

**3.2 Cooperating Agencies**

**EPA, PADEP, and the Borough of Hamburg**

**4. Personnel On Site**

EPA, ERRS, and START

**5. Definition of Terms**

No information available at this time.

**6. Additional sources of information**

No information available at this time.

**7. Situational Reference Materials**

No information available at this time.

U.S. ENVIRONMENTAL PROTECTION AGENCY  
POLLUTION/SITUATION REPORT  
Hamburg Kaercher Creek Site - Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region III

**Subject:** POLREP #64  
Hamburg Kaercher Creek Site  
A3H8  
Hamburg, PA  
Latitude: 40.5537210 Longitude: -75.9803895

**To:**  
**From:** Todd Richardson, On Scene Coordinator  
**Date:**  
**Reporting Period:** 03/06/2021 - 05/14/2021

## 1. Introduction

### 1.1 Background

<b>Site Number:</b>	A3H8	<b>Contract Number:</b>	
<b>D.O. Number:</b>		<b>Action Memo Date:</b>	
<b>Response Authority:</b>	CERCLA	<b>Response Type:</b>	Time-Critical
<b>Response Lead:</b>	EPA	<b>Incident Category:</b>	Removal Action
<b>NPL Status:</b>		<b>Operable Unit:</b>	
<b>Mobilization Date:</b>		<b>Start Date:</b>	6/5/2019
<b>Demob Date:</b>		<b>Completion Date:</b>	
<b>CERCLIS ID:</b>		<b>RCRIS ID:</b>	
<b>ERNS No.:</b>		<b>State Notification:</b>	
<b>FPN#:</b>		<b>Reimbursable Account #:</b>	

#### 1.1.1 Incident Category

#### 1.1.2 Site Description

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Kaercher Creek is listed as a warm-water fishery and ranges in width from 3 to 10 feet and in depth from 1 to 3 feet (Roy F. Weston, Inc. 2000). The creek banks vary from 2 to 20 feet high throughout the Borough of Hamburg, which contains industrial, commercial, and residential zones and is located in rural northeast Pennsylvania. Kaercher Creek flows through the Borough of Hamburg and the Price Battery facility property before it joins the Schuylkill River southwest of Hamburg.

In October 2001, the U.S. Environmental Protection Agency (EPA) was notified of the presence of battery casings along Kaercher Creek near the Hamburg Field House. In 2002, Tetra Tech EM Inc., under the direction of the EPA On-Scene Coordinator, performed removal assessments along Kaercher Creek from Kaercher Lake to Kaercher Creek's confluence with the Schuylkill River. The Agency for Toxic Substances and Disease Registry reviewed the site assessment reports and issued a Health Consultation that recommended an immediate Comprehensive Environmental Response, Compensation, and Liability Act removal action to protect human health.

In May 2003, EPA approved funding for a removal action at the Hamburg – Kaercher Creek site. EPA remediated a total of 5,470 feet of Kaercher Creek during the Hamburg – Kaercher

Creek removal action. Exide Corporation completed remediation of Kaercher Creek at the Price Battery facility.

On-site cleanup activities included excavating contaminated sediment and soil, transporting the lead-contaminated soil off site for disposal, and capping remaining areas of contamination. Soil capping activities included backfilling with clean soil, fertilizing and seeding the area with native grass seed, mulching with straw, and planting trees and shrubs as appropriate. Sediment capping activities included installing geotextile fabric and backfilling with rip rap stone.

Removal Activities associated with the 2003 - 2005 EPA lead clean-up, were completed in December 2004. However, in 2017, during an ecological assessment of Kaercher Creek, EPA remedial program contractors (CDM Federal) reported finding significant areas of erosion on the banks of Kaercher Creek adjacent to the Hamburg Fieldhouse and parking lot. EPA's remedial program (RPM, John Banks) then notified the removal program (OSC, Todd Richardson) of the erosion issues on the banks of Kaercher Creek. OSC Richardson conducted an initial site inspection on April 5, 2018. In May of 2018, OSC Richardson, along with Dean Maser (Weston Solutions, START) re-visited the Site, noting the erosion damaged creek bank, and screening surface soil in areas of erosion. Several areas of erosion were observed with visible battery casings and lead concentrations ranging from 2600 - 2800ppm.

For additional information, visit the Pollution/Situation Report ([Pol/Sitreps](#)) section.

#### 1.1.2.1 Location

The intersection of Pine and Church Streets, Hamburg, PA 19562

#### 1.1.2.2 Description of Threat

Direct exposure and migration of lead contamination. Lead contamination in creek bank surface soil.

#### 1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

START and EPA visited site and observed erosion which exposed geotextile fabric and high visibility orange fencing in areas that had been remediated in the 2003 - 2005 period. There were also several ground hog holes exposing battery debris.

## 2. Current Activities

### 2.1 Operations Section

#### 2.1.1 Narrative

During this reporting period the total area remediated was approximately 12,000 sf, which included 170 linear feet of creek bank. There was a section of the south bank that was found to be contaminated during a sampling event back in November 2020. Initially, it was thought that remediation of this section would not be necessary, however when the excavation activities were across from it, access seemed plausible. A bridge of tree trunks and barrier fabric was constructed and the excavator was able to easily access it. This section was remediated and it measured approximately 336 sf. The suspected non-hazardous stockpiled soil was treated with a 2% soil amendment (Enviro Blend - active ingredients: magnesium oxide and magnesium hydroxide) to bind the lead, reducing its leachability. Analytical results indicate that the treatment was successful. The hazardous soil waste pile, RCRA - D008, was treated with the same material except with a higher percentage (3%). The results of this treatment have proven to be successful in binding the lead and therefore this soil was able to be disposed of as non-regulated. During this time there was approximately 1,931 tons of treated soil shipped off site as non-regulated. There was a load of stumps washed, screened with XRF and shipped off-site for recycling (processed for mulch). The last remaining tree was removed by a contractor as it was growing around power lines supplying the foundry. Another storm drain adjacent to the parking lot was encountered in this section. The concrete apron around it was redone to provide better drainage from the parking lot. The flat area from the manhole located east of the HFD new training building west to the end of current excavation was top-soiled and then hydro-seeded. To facilitate the remediation contaminated sediment, resulting from the washout of an open area of excavation (in August, 2020), a dam was constructed upstream using preformed concrete blocks, sand bags and plastic sheeting. Two diesel pumps were set up to discharge some 200' downstream. The pumps were run continuously for two weeks while the identified area of contamination was addressed. As recommended by BTAG, a 50/50 mixture of sand and leaf compost was placed in bed followed by river stone of varying sizes to restore the creek bed.

#### 2.1.2 Response Actions to Date

Site visit and initial screening (assessment)  
Site survey complete  
Set up of command post and staging areas.  
Installation of construction and security fencing.  
Clearing and grubbing activities (complete)  
Access agreements received  
Creek bank excavation and restoration begins  
Finalization and distribution of first Fact Sheet  
Finalization of engineering and E&S plans  
Finalized Action Memo Amendment (Change in Scope to address PCB contamination)  
Finalization of FSP  
Soil and sediment sampling event complete  
Remediated impacted area of the creek sediment

#### 2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)

#### 2.1.4 Progress Metrics

<i>Waste Stream</i>	<i>Medium</i>	<i>Quantity</i>	<i>Manifest #</i>	<i>Treatment</i>	<i>Disposal</i>
Haz Waste	Soil	5,585 tons			5,585 tons
Non-Haz Waste	Soil	5,578tons			5,578tons
PCB Waste	Waste	3.85 tons			3.85 tons

## 2.2 Planning Section

### 2.2.1 Anticipated Activities

Continue excavation of creek bank and revetment with large rip rap stone.  
Address field house parking lot drainage issues as necessary.  
Address contaminated sediment in creek.

#### 2.2.1.2 Next Steps

Continue excavation and revetment operations.

### 2.2.2 Issues

Potential migration of lead contamination from excavation area into Kaercher Creek resulting from heavy precipitation before and during Tropical Storm Isaias. Sediment sampling was conducted to determine need for sediment cleanup in Kaercher Creek. An isolated area of sediment was determined to have elevated concentrations of lead in the vicinity of the area which suffered a wash out Tropical Storm Isaias. Removal alternatives area currently being evaluated to address this area. Also, during the recent sampling event,

elevated lead concentrations were also detected on the south bank in an isolated area, however due to the steep topography, and heavy vegetation, exposure risk is minimal, and removal action will not likely be required.

**2.3 Logistics Section**

No information available at this time.

**2.4 Finance Section**

**2.4.1 Narrative**

The START TD was amended so the hours and money reflected the site situation. On April 19, 2021, ERRS was given an additional \$1.5 million.

**Estimated Costs \***

	<b>Budgeted</b>	<b>Total To Date</b>	<b>Remaining</b>	<b>% Remaining</b>
<b>Extramural Costs</b>				
ERRS - Cleanup Contractor	\$8,126,494.00	\$6,221,246.57	\$1,905,247.43	23.44%
TAT/START	\$215,818.00	\$118,983.41	\$96,834.59	44.87%
<b>Intramural Costs</b>				
<b>Total Site Costs</b>	<b>\$8,342,312.00</b>	<b>\$6,340,229.98</b>	<b>\$2,002,082.02</b>	<b>24.00%</b>

\* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

**2.5 Other Command Staff**

No information available at this time.

**3. Participating Entities**

**3.1 Unified Command**

**3.2 Cooperating Agencies**

**EPA, PADEP, and the Borough of Hamburg**

**4. Personnel On Site**

EPA, ERRS, and START

**5. Definition of Terms**

No information available at this time.

**6. Additional sources of information**

No information available at this time.

**7. Situational Reference Materials**

No information available at this time.

U.S. ENVIRONMENTAL PROTECTION AGENCY  
POLLUTION/SITUATION REPORT  
Hamburg Kaercher Creek Site - Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region III

**Subject:** POLREP #65  
Hamburg Kaercher Creek Site  
A3H8  
Hamburg, PA  
Latitude: 40.5537210 Longitude: -75.9803895

**To:**  
**From:** Todd Richardson, On Scene Coordinator  
**Date:** 6/30/2021  
**Reporting Period:** 05/15/21 - 06/30/21

## 1. Introduction

### 1.1 Background

<b>Site Number:</b>	A3H8	<b>Contract Number:</b>	
<b>D.O. Number:</b>		<b>Action Memo Date:</b>	
<b>Response Authority:</b>	CERCLA	<b>Response Type:</b>	Time-Critical
<b>Response Lead:</b>	EPA	<b>Incident Category:</b>	Removal Action
<b>NPL Status:</b>		<b>Operable Unit:</b>	
<b>Mobilization Date:</b>		<b>Start Date:</b>	6/5/2019
<b>Demob Date:</b>		<b>Completion Date:</b>	
<b>CERCLIS ID:</b>		<b>RCRIS ID:</b>	
<b>ERNS No.:</b>		<b>State Notification:</b>	
<b>FPN#:</b>		<b>Reimbursable Account #:</b>	

#### 1.1.1 Incident Category

#### 1.1.2 Site Description

A battery manufacturing facility operated in the Borough of Hamburg from 1920 to the mid 1990s. During operations, battery casings were split open and the lead plates inside the batteries were removed for resmelting. The battery casings were reused as ground fill material and deposited throughout the Hamburg area.

Kaercher Creek is listed as a warm-water fishery and ranges in width from 3 to 10 feet and in depth from 1 to 3 feet (Roy F. Weston, Inc. 2000). The creek banks vary from 2 to 20 feet high throughout the Borough of Hamburg, which contains industrial, commercial, and residential zones and is located in rural northeast Pennsylvania. Kaercher Creek flows through the Borough of Hamburg and the Price Battery facility property before it joins the Schuylkill River southwest of Hamburg.

In October 2001, the U.S. Environmental Protection Agency (EPA) was notified of the presence of battery casings along Kaercher Creek near the Hamburg Field House. In 2002, Tetra Tech EM Inc., under the direction of the EPA On-Scene Coordinator, performed removal assessments along Kaercher Creek from Kaercher Lake to Kaercher Creek's confluence with the Schuylkill River. The Agency for Toxic Substances and Disease Registry reviewed the site assessment reports and issued a Health Consultation that recommended an immediate Comprehensive Environmental Response, Compensation, and Liability Act removal action to protect human health.

In May 2003, EPA approved funding for a removal action at the Hamburg – Kaercher Creek site. EPA remediated a total of 5,470 feet of Kaercher Creek during the Hamburg – Kaercher

Creek removal action. Exide Corporation completed remediation of Kaercher Creek at the Price Battery facility.

On-site cleanup activities included excavating contaminated sediment and soil, transporting the lead-contaminated soil off site for disposal, and capping remaining areas of contamination. Soil capping activities included backfilling with clean soil, fertilizing and seeding the area with native grass seed, mulching with straw, and planting trees and shrubs as appropriate. Sediment capping activities included installing geotextile fabric and backfilling with rip rap stone.

Removal Activities associated with the 2003 - 2005 EPA lead clean-up, were completed in December 2004. However, in 2017, during an ecological assessment of Kaercher Creek, EPA remedial program contractors (CDM Federal) reported finding significant areas of erosion on the banks of Kaercher Creek adjacent to the Hamburg Fieldhouse and parking lot. EPA's remedial program (RPM, John Banks) then notified the removal program (OSC, Todd Richardson) of the erosion issues on the banks of Kaercher Creek. OSC Richardson conducted an initial site inspection on April 5, 2018. In May of 2018, OSC Richardson, along with Dean Maser (Weston Solutions, START) re-visited the Site, noting the erosion damaged creek bank, and screening surface soil in areas of erosion. Several areas of erosion were observed with visible battery casings and lead concentrations ranging from 2600 - 2800ppm.

For additional information, visit the Pollution/Situation Report ([Pol/Sitreps](#)) section.

#### 1.1.2.1 Location

The intersection of Pine and Church Streets, Hamburg, PA 19562

#### 1.1.2.2 Description of Threat

Direct exposure and migration of lead contamination. Lead contamination in creek bank surface soil.

#### 1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

START and EPA visited site and observed erosion which exposed geotextile fabric and high visibility orange fencing in areas that had been remediated in the 2003 - 2005 period. There were also several ground hog holes exposing battery debris.

## 2. Current Activities

### 2.1 Operations Section

#### 2.1.1 Narrative

During this reporting period the total area remediated was approximately 7,020 sf, which included 135 linear feet of creek bank. There was also a small section of a grass (separation area) of the parking lot that warranted removal based on results from a November 2020 sampling event. This area totaled 624 sf and was restored to grass after placing orange barrier fabric in excavation. The excavated soils being treated with a product whose active ingredients are: magnesium oxide and magnesium hydroxide) to bind the lead, reducing its leachability. Analytical results indicate that the treatment was successful. The hazardous soil waste pile, RCRA - D008, was treated with the same material except with a higher percentage (3%). The results of this treatment have proven to be successful in binding the lead and therefore this soil was able to be disposed of as non-regulated. During this time there was approximately 647 tons of treated soil shipped off site as non-regulated. There were two loads of stumps washed, screened with XRF and shipped off-site for recycling (processed for mulch). Another storm drain adjacent to the parking lot was encountered in this section. The concrete apron around it was repaired to provide better drainage from the parking lot. A creek sediment sampling event, to evaluate current lead concentrations following the remediation of a section of creek sediment impacted during the August 2020 storm wash out event, was conducted during this timeframe. Five sample locations were selected with a surface and sub surface sample collected at each point. The data will be placed in a report and provided to the EPA Remedial Program for review.

#### 2.1.2 Response Actions to Date

Site visit and initial screening (assessment)

Site survey complete

Set up of command post and staging areas.

Installation of construction and security fencing.

Clearing and grubbing activities (complete)

Access agreements received

Creek bank excavation and restoration (On-going)

Finalization and distribution of first Fact Sheet

Finalization of engineering and E&S plans

Finalized Action Memo Amendment (Change in Scope to address PCB contamination)

Finalization of FSP

Soil and sediment sampling event complete

Remediated impacted area of the creek sediment

#### 2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)

#### 2.1.4 Progress Metrics

<i>Waste Stream</i>	<i>Medium</i>	<i>Quantity</i>	<i>Manifest #</i>	<i>Treatment</i>	<i>Disposal</i>
Haz Waste	Soil	5,585 tons			5,585 tons
Non-Haz Waste	Soil	6,625tons			6,625tons
PCB Waste	Waste	3.85 tons			3.85 tons

### 2.2 Planning Section

#### 2.2.1 Anticipated Activities

Continue excavation of creek bank and revetment with large rip rap stone.

Address field house parking lot drainage issues as necessary.

#### 2.2.1.2 Next Steps

Continue excavation and revetment operations.

Conduct final Site restoration

#### 2.2.2 Issues

Potential migration of lead contamination from excavation area into Kaercher Creek resulting from heavy precipitation before and during Tropical Storm Isaias. Sediment sampling was conducted to determine need for sediment cleanup in Kaercher Creek. An isolated area of sediment was determined to have elevated concentrations of lead in the vicinity of the area which suffered a wash out Tropical Storm Isaias. Removal alternatives area currently being evaluated to address this area. Also, during the recent sampling event, elevated lead concentrations were also detected on the south bank in an isolated area, however due to the steep topography, and heavy vegetation, exposure risk is minimal, and removal action will not likely be required.

**2.3 Logistics Section**

No information available at this time.

**2.4 Finance Section**

**2.4.1 Narrative**

The START TD was amended to add \$21,344 on June 22, 2021.

**Estimated Costs \***

	<b>Budgeted</b>	<b>Total To Date</b>	<b>Remaining</b>	<b>% Remaining</b>
<b>Extramural Costs</b>				
ERRS - Cleanup Contractor	\$8,126,494.00	\$6,725,842.18	\$1,400,651.82	17.24%
TAT/START	\$237,162.00	\$140,495.01	\$96,666.99	40.76%
<b>Intramural Costs</b>				
<b>Total Site Costs</b>	<b>\$8,363,656.00</b>	<b>\$6,866,337.19</b>	<b>\$1,497,318.81</b>	<b>17.90%</b>

\* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

**2.5 Other Command Staff**

No information available at this time.

**3. Participating Entities**

**3.1 Unified Command**

**3.2 Cooperating Agencies**

**EPA, PADEP, and the Borough of Hamburg**

**4. Personnel On Site**

EPA, ERRS, and START

**5. Definition of Terms**

No information available at this time.

**6. Additional sources of information**

No information available at this time.

**7. Situational Reference Materials**

No information available at this time.

U.S. ENVIRONMENTAL PROTECTION AGENCY  
POLLUTION/SITUATION REPORT  
Hamburg Kaercher Creek Site - Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region III

**Subject:** POLREP #66  
Hamburg Kaercher Creek Site  
A3H8  
Hamburg, PA  
Latitude: 40.5537210 Longitude: -75.9803895

**To:**  
**From:** Todd Richardson, On Scene Coordinator  
**Date:** 10/13/2021  
**Reporting Period:** 07/01/2021 - 10/13/2021

## 1. Introduction

### 1.1 Background

<b>Site Number:</b>	A3H8	<b>Contract Number:</b>	
<b>D.O. Number:</b>		<b>Action Memo Date:</b>	
<b>Response Authority:</b>	CERCLA	<b>Response Type:</b>	Time-Critical
<b>Response Lead:</b>	EPA	<b>Incident Category:</b>	Removal Action
<b>NPL Status:</b>		<b>Operable Unit:</b>	
<b>Mobilization Date:</b>		<b>Start Date:</b>	6/5/2019
<b>Demob Date:</b>		<b>Completion Date:</b>	
<b>CERCLIS ID:</b>		<b>RCRIS ID:</b>	
<b>ERNS No.:</b>		<b>State Notification:</b>	
<b>FPN#:</b>		<b>Reimbursable Account #:</b>	

#### 1.1.1 Incident Category

#### 1.1.2 Site Description

A battery manufacturing facility operated in the Borough of Hamburg from 1920 to the mid 1990s. During operations, battery casings were split open and the lead plates inside the batteries were removed for resmelting. The battery casings were reused as ground fill material and deposited throughout the Hamburg area.

Kaercher Creek is listed as a warm-water fishery and ranges in width from 3 to 10 feet and in depth from 1 to 3 feet (Roy F. Weston, Inc. 2000). The creek banks vary from 2 to 20 feet high throughout the Borough of Hamburg, which contains industrial, commercial, and residential zones and is located in rural northeast Pennsylvania. Kaercher Creek flows through the Borough of Hamburg and the Price Battery facility property before it joins the Schuylkill River southwest of Hamburg.

In October 2001, the U.S. Environmental Protection Agency (EPA) was notified of the presence of battery casings along Kaercher Creek near the Hamburg Field House. In 2002, Tetra Tech EM Inc., under the direction of the EPA On-Scene Coordinator, performed removal assessments along Kaercher Creek from Kaercher Lake to Kaercher Creek's confluence with the Schuylkill River. The Agency for Toxic Substances and Disease Registry reviewed the site assessment reports and issued a Health Consultation that recommended an immediate Comprehensive Environmental Response, Compensation, and Liability Act removal action to protect human health.

In May 2003, EPA approved funding for a removal action at the Hamburg – Kaercher Creek site. EPA remediated a total of 5,470 feet of Kaercher Creek during the Hamburg – Kaercher

Creek removal action. Exide Corporation completed remediation of Kaercher Creek at the Price Battery facility.

On-site cleanup activities included excavating contaminated sediment and soil, transporting the lead-contaminated soil off site for disposal, and capping remaining areas of contamination. Soil capping activities included backfilling with clean soil, fertilizing and seeding the area with native grass seed, mulching with straw, and planting trees and shrubs as appropriate. Sediment capping activities included installing geotextile fabric and backfilling with rip rap stone.

Removal Activities associated with the 2003 - 2005 EPA lead clean-up, were completed in December 2004.

However, in 2017, during an ecological assessment of Kaercher Creek, EPA remedial program contractors (CDM Federal) reported finding significant areas of erosion on the banks of Kaercher Creek adjacent to the Hamburg Fieldhouse and parking lot. EPA's remedial program (RPM, John Banks) then notified the removal program (OSC, Todd Richardson) of the erosion issues on the banks of Kaercher Creek. OSC Richardson conducted an initial site inspection on April 5, 2018. In May of 2018, OSC Richardson, along with Dean Maser (Weston Solutions, START) re-visited the Site, noting the erosion damaged creek bank, and screening surface soil in areas of erosion. Several areas of erosion were observed with visible battery casings and lead concentrations ranging from 2600 - 2800ppm.

For additional information, visit the Pollution/Situation Report ([Pol/Sitreps](#)) section.

**1.1.2.1 Location**

The intersection of Pine and Church Streets, Hamburg, PA 19562

**1.1.2.2 Description of Threat**

Direct exposure and migration of lead contamination. Lead contamination in creek bank surface soil.

**1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results**

START and EPA visited site and observed erosion which exposed geotextile fabric and high visibility orange fencing in areas that had been remediated in the 2003 - 2005 period. There were also several ground hog holes exposing battery debris.

**2. Current Activities**

**2.1 Operations Section**

**2.1.1 Narrative**

During this reporting period the total area remediated was approximately 21,740 sf, which included 375 linear feet of creek bank. This completes the bank removal and restoration activities. Orange barrier fabric was placed in excavation prior to backfilling. The excavated soils being treated with a product whose active ingredients are: magnesium oxide and magnesium hydroxide) to bind the lead, reducing its leachability. Analytical results indicate that the treatment was successful. The hazardous soil waste pile, RCRA - D008, was treated with the same material except with a higher percentage (3%). The results of this treatment have proven to be successful in binding the lead and therefore this soil was able to be disposed of as non-regulated. During this time there was approximately 1713.11 tons of treated soil shipped off site as non-regulated. There were 2660.66 tons of regulated soil sent off site for disposal. The area adjacent to the rear of the foundry was excavated and restored with crushed stone. A 10' X 10' shade structure was constructed in this area after restoration activities were complete. This was done to accommodate the foundry employees with a break area with shade since all of the trees providing the shade were removed to remediate the area. Eight replacement trees were installed on the HFD property near the field house to compensate for the trees removed during the remediation. Large boulders were placed along the access road with spacing so that a car would not fit. This was to ensure no one would drive off the road and end up in the creek. The trees that were removed accomplished this function prior. A subcontractor surveyor was on site and performed a site survey for the final as-built plans.

**2.1.2 Response Actions to Date**

- Site visit and initial screening (assessment)
- Site survey complete
- Set up of command post and staging areas.
- Installation of construction and security fencing.
- Clearing and grubbing activities (complete)
- Access agreements received
- Creek bank excavation and restoration (On-going)
- Finalization and distribution of first Fact Sheet
- Finalization of engineering and E&S plans
- Finalized Action Memo Amendment (Change in Scope to address PCB contamination)
- Finalization of FSP
- Soil and sediment sampling event complete
- Remediated impacted area of the creek sediment
- Site removal activities complete

**2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)**

**2.1.4 Progress Metrics**

<i>Waste Stream</i>	<i>Medium</i>	<i>Quantity</i>	<i>Manifest #</i>	<i>Treatment</i>	<i>Disposal</i>
Haz Waste	Soil	8,246 tons			8,246 tons
Non-Haz Waste	Soil	8,338tons			8,338tons
PCB Waste	Waste	3.85 tons			3.85 tons

**2.2 Planning Section**

**2.2.1 Anticipated Activities**

- Continue excavation of creek bank and revetment with large rip rap stone.
- Address field house parking lot drainage issues as necessary.

### 2.2.1.2 Next Steps

Continue excavation and revetment operations.  
Conduct final Site restoration

### 2.2.2 Issues

Potential migration of lead contamination from excavation area into Kaercher Creek resulting from heavy precipitation before and during Tropical Storm Isaias. Sediment sampling was conducted to determine need for sediment cleanup in Kaercher Creek. An isolated area of sediment was determined to have elevated concentrations of lead in the vicinity of the area which suffered a wash out Tropical Storm Isaias. Removal alternatives area currently being evaluated to address this area. Also, during the recent sampling event, elevated lead concentrations were also detected on the south bank in an isolated area, however due to the steep topography, and heavy vegetation, exposure risk is minimal, and removal action will not likely be required.

### 2.3 Logistics Section

No information available at this time.

### 2.4 Finance Section

#### Estimated Costs \*

	Budgeted	Total To Date	Remaining	% Remaining
<b>Extramural Costs</b>				
ERRS - Cleanup Contractor	\$8,126,494.00	\$7,977,188.22	\$149,305.78	1.84%
TAT/START	\$237,162.00	\$184,785.10	\$52,376.90	22.08%
<b>Intramural Costs</b>				
<b>Total Site Costs</b>	<b>\$8,363,656.00</b>	<b>\$8,161,973.32</b>	<b>\$201,682.68</b>	<b>2.41%</b>

\* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

### 2.5 Other Command Staff

No information available at this time.

### 3. Participating Entities

#### 3.1 Unified Command

#### 3.2 Cooperating Agencies

EPA, PADEP, and the Borough of Hamburg

### 4. Personnel On Site

EPA, ERRS, and START

### 5. Definition of Terms

No information available at this time.

### 6. Additional sources of information

No information available at this time.

### 7. Situational Reference Materials

No information available at this time.

U.S. ENVIRONMENTAL PROTECTION AGENCY  
POLLUTION/SITUATION REPORT  
Hamburg Kaercher Creek Site - Removal Polrep  
Final Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region III

**Subject:** POLREP #67  
Hamburg Kaercher Creek Site  
A3H8  
Hamburg, PA  
Latitude: 40.5537210 Longitude: -75.9803895

**To:**  
**From:** Todd Richardson, On Scene Coordinator  
**Date:** 2/24/2021  
**Reporting Period:** 10/13/2021-2/24/2021

## 1. Introduction

### 1.1 Background

<b>Site Number:</b>	A3H8	<b>Contract Number:</b>	
<b>D.O. Number:</b>		<b>Action Memo Date:</b>	
<b>Response Authority:</b>	CERCLA	<b>Response Type:</b>	Time-Critical
<b>Response Lead:</b>	EPA	<b>Incident Category:</b>	Removal Action
<b>NPL Status:</b>		<b>Operable Unit:</b>	
<b>Mobilization Date:</b>		<b>Start Date:</b>	6/5/2019
<b>Demob Date:</b>		<b>Completion Date:</b>	
<b>CERCLIS ID:</b>		<b>RCRIS ID:</b>	
<b>ERNS No.:</b>		<b>State Notification:</b>	
<b>FPN#:</b>		<b>Reimbursable Account #:</b>	

#### 1.1.1 Incident Category

#### 1.1.2 Site Description

A battery manufacturing facility operated in the Borough of Hamburg from 1920 to the mid 1990s. During operations, battery casings were split open and the lead plates inside the batteries were removed for resmelting. The battery casings were reused as ground fill material and deposited throughout the Hamburg area.

Kaercher Creek is listed as a warm-water fishery and ranges in width from 3 to 10 feet and in depth from 1 to 3 feet (Roy F. Weston, Inc. 2000). The creek banks vary from 2 to 20 feet high throughout the Borough of Hamburg, which contains industrial, commercial, and residential zones and is located in rural northeast Pennsylvania. Kaercher Creek flows through the Borough of Hamburg and the Price Battery facility property before it joins the Schuylkill River southwest of Hamburg.

In October 2001, the U.S. Environmental Protection Agency (EPA) was notified of the presence of battery casings along Kaercher Creek near the Hamburg Field House. In 2002, Tetra Tech EM Inc., under the direction of the EPA On-Scene Coordinator, performed removal assessments along Kaercher Creek from Kaercher Lake to Kaercher Creek's confluence with the Schuylkill River. The Agency for Toxic Substances and Disease Registry reviewed the site assessment reports and issued a Health Consultation that recommended an immediate Comprehensive Environmental Response, Compensation, and Liability Act removal action to protect human health.

In May 2003, EPA approved funding for a removal action at the Hamburg – Kaercher Creek site. EPA remediated a total of 5,470 feet of Kaercher Creek during the Hamburg – Kaercher

Creek removal action. Exide Corporation completed remediation of Kaercher Creek at the Price Battery facility.

On-site cleanup activities included excavating contaminated sediment and soil, transporting the lead-contaminated soil off site for disposal, and capping remaining areas of contamination. Soil capping activities included backfilling with clean soil, fertilizing and seeding the area with native grass seed, mulching with straw, and planting trees and shrubs as appropriate. Sediment capping activities included installing geotextile fabric and backfilling with rip rap stone.

Removal Activities associated with the 2003 - 2005 EPA lead clean-up, were completed in December 2004. However, in 2017, during an ecological assessment of Kaercher Creek, EPA remedial program contractors (CDM Federal) reported finding significant areas of erosion on the banks of Kaercher Creek adjacent to the Hamburg Fieldhouse and parking lot. EPA's remedial program (RPM, John Banks) then notified the removal program (OSC, Todd Richardson) of the erosion issues on the banks of Kaercher Creek. OSC Richardson conducted an initial site inspection on April 5, 2018. In May of 2018, OSC Richardson, along with Dean Maser (Weston Solutions, START) re-visited the Site, noting the erosion damaged creek bank, and screening surface soil in areas of erosion. Several areas of erosion were observed with visible battery casings and lead concentrations ranging from 2600 - 2800ppm.

For additional information, visit the Pollution/Situation Report ([Pol/Sitreps](#)) section.

#### **1.1.2.1 Location**

The intersection of Pine and Church Streets, Hamburg, PA 19562

#### **1.1.2.2 Description of Threat**

Direct exposure and migration of lead contamination. Lead contamination in creek bank surface soil.

#### **1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results**

START and EPA visited site and observed erosion which exposed geotextile fabric and high visibility orange fencing in areas that had been remediated in the 2003 - 2005 period. There were also several ground hog holes exposing battery debris.

## **2. Current Activities**

### **2.1 Operations Section**

#### **2.1.1 Narrative**

All site activities were concluded during this reporting period. This included demobilization of START, ERRS, and EPA. The trailers and portable toilets were removed. The as-built was submitted by the subcontracted surveyor.

From June 2019 to the completion of site activities in October 2021, approximately 104,640 square feet of Kaercher Creek banks were remediated, including the flat area adjacent to the bank and grassy areas. In total, 8,375.49 tons of soil and slag was removed and disposed as hazardous waste; 8,938.8 tons of soil was removed and disposed as non-hazardous waste; and 3.48 tons were removed and disposed as PCB waste.

Lead batteries and slag was encountered in various places along the site. PCBs were focused around drums encountered in the northeast flat area adjacent to the bank.

Significant storm events in August 2020 influenced some sediment washout, surpassing the dam created to catch fugitive contaminated sediment. XRF results indicated that some contaminated soil had entered the creek.

In April 2021 to facilitate the remediation of contaminated sediment resulting from the washout, a dam was constructed upstream using preformed concrete blocks, sandbags, and plastic sheeting. Two diesel pumps and hoses were set up to reroute the water approximately 250 feet downstream. The pumps were run continuously for two weeks while the identified area of contamination was addressed with an excavator. Most of the contaminated sediment was recovered. However, in situ and ex situ XRF screening of the sediment remaining on top of the geotextile fabric continued to reveal elevated levels of lead contamination. The source of the lead-contaminated sediment directly above the geotextile fabric could not be definitively determined.

Following the excavation, the excavated creek bed was divided into five sections. Two sediment samples were collected from each section (one surface and one subsurface) and screened in situ and ex situ with an XRF. Following this sampling event, EPA determined that additional excavation could potentially damage the geotextile liner; and therefore, the disturbed portion of the creek bed was "capped" with clean sand amended with leaf litter for organic content and covered with river rock.

In May 20, 2021, surface and subsurface sediment samples were collected for ex situ XRF analysis. The XRF cups were then sent to a lab for confirmation. See the Trip Report for additional sampling information and data tables.

The goal of the November 2020 sampling event was to delineate the contamination of lead and PCBs on the north bank, with some sampling in the creek bed and on the south bank. The event involved the collection of 31 PCB samples and 21 lead samples. Results indicated that PCBs were not detected, and some elevated lead concentrations were detected in an isolated area of Kaercher Creek sediment, and on the south bank of Kaercher Creek.

The AL used on the Site was 400 ppm for surface soil (300 ppm for soil in situ to account for variations in accuracy of XRF readings due to moisture levels and heterogeneity). Analytical data have been separated into categories according to the property owners of the areas that comprise the Site removal action. Soil sampling was implemented to determine the areas that needed to be excavated, capped, and restored.

Post-removal soil screening was performed to determine whether (1) remaining contaminated soil and debris was below the AL of 300 ppm in situ or (2) barrier fabric needed to be installed to identify areas with residual lead contamination.

All soil and sediment samples for the Site removal action were screened for total lead concentration by XRF in the field in accordance with SW-846 Test Method 6200, Field Portable X-Ray Fluorescence Spectrometry for the Determination of Elemental Concentrations in Soil and Sediment (EPA 2007). Ten percent of the ex-situ samples collected during Site removal activities were dried and processed into XRF cups. Ten percent of the processed samples were sent to the EPA laboratory in Fort Meade, Maryland for total lead analysis to confirm the lead results obtained through XRF screening. The START Senior Chemist provided a data validation package for the XRF lead results obtained in the field.

Post-removal confirmation screening was implemented in situ using an XRF, and the results were entered onto a site diagram. The high and low range values were entered into a logbook.

Other site restoration activities included the extension on two manholes in the contaminated area, the reconstruction of an existing concrete apron, the installation of 8 replacement trees to compensate for removed trees, the placement of large boulders as a barrier between the parking lot and the bank, and the construction of a shade structure near the Foundry to replace shade once provided by removed trees.

**2.1.2 Response Actions to Date**

- Site visit and initial screening (assessment)
- Site survey complete
- Set up of command post and staging areas.
- Installation of construction and security fencing.
- Clearing and grubbing activities (complete)
- Access agreements received
- Creek bank excavation and restoration (On-going)
- Finalization and distribution of first Fact Sheet
- Finalization of engineering and E&S plans
- Finalized Action Memo Amendment (Change in Scope to address PCB contamination)
- Finalization of FSP
- Soil and sediment sampling event complete
- Remediated impacted area of the creek sediment
- Site removal activities complete
- Demobilization of personnel and command post

**2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)**

**2.1.4 Progress Metrics**

<i>Waste Stream</i>	<i>Medium</i>	<i>Quantity</i>	<i>Manifest #</i>	<i>Treatment</i>	<i>Disposal</i>
Haz Waste	Soil	8,375.49 tons			8,375.49 tons
Non-Haz Waste	Soil	8,938.8 tons			8,938.8 tons
PCB Waste	Waste	3.48 tons			3.48 tons

Final waste metrics were confirmed with invoices by ERRS.

**2.2 Planning Section**

**2.2.1 Anticipated Activities**

None at this time

**2.2.1.2 Next Steps**

None at this time

**2.2.2 Issues**

None at this time

**2.3 Logistics Section**

No information available at this time.

**2.4 Finance Section**

**Estimated Costs \***

	<b>Budgeted</b>	<b>Total To Date</b>	<b>Remaining</b>	<b>% Remaining</b>
<b>Extramural Costs</b>				
ERRS - Cleanup Contractor	\$8,126,494.00	\$8,083,954.42	\$42,539.58	0.52%

TAT/START	\$242,610.00	\$203,760.72	\$38,849.28	16.01%
<b>Intramural Costs</b>				
<b>Total Site Costs</b>	\$8,369,104.00	\$8,287,715.14	\$81,388.86	0.97%

\* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

**2.5 Other Command Staff**

No information available at this time.

**3. Participating Entities**

**3.1 Unified Command**

**3.2 Cooperating Agencies**

EPA, PADEP, and the Borough of Hamburg

**4. Personnel On Site**

None at this time

**5. Definition of Terms**

No information available at this time.

**6. Additional sources of information**

No information available at this time.

**7. Situational Reference Materials**

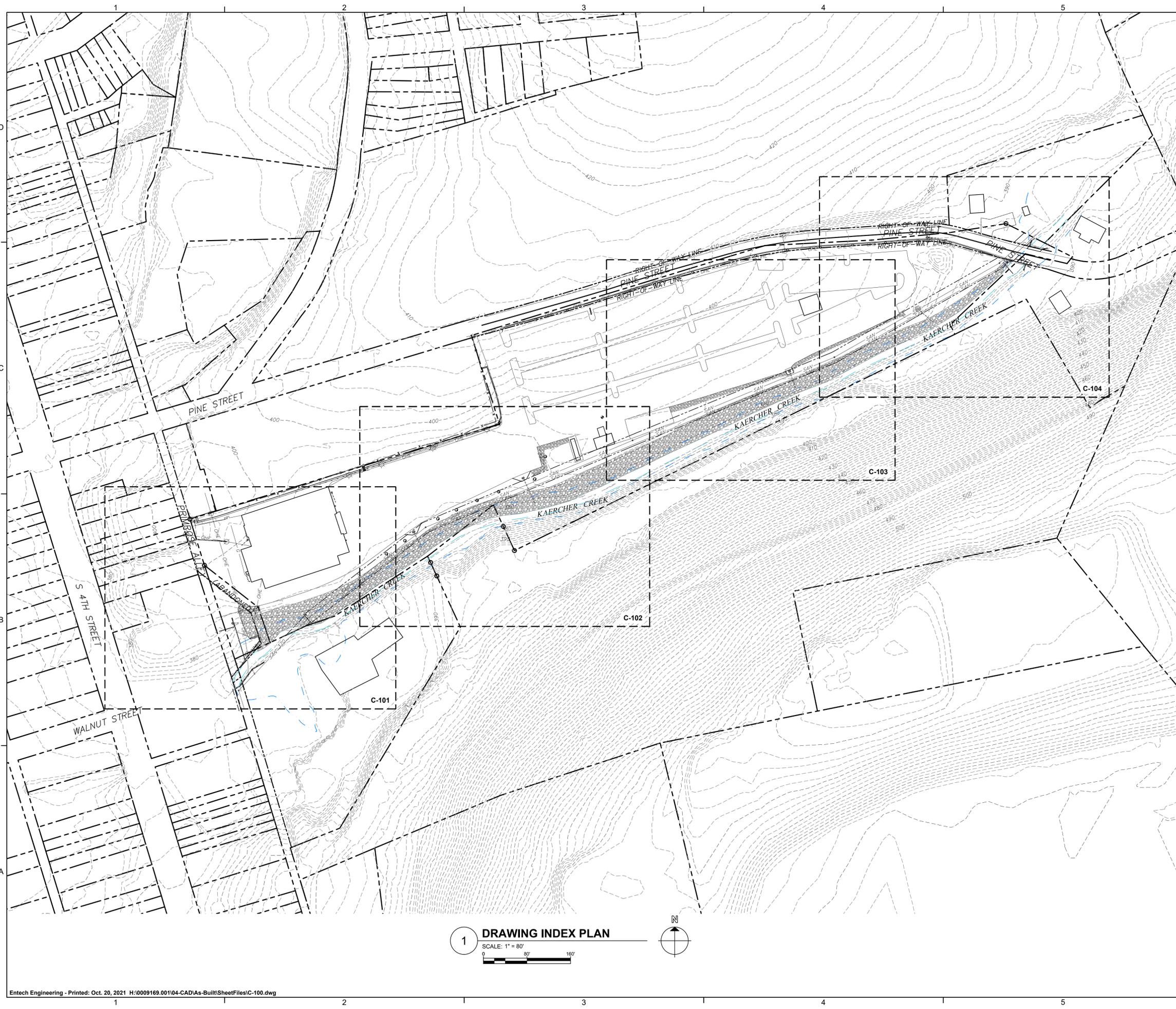
No information available at this time.

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**ATTACHMENT 2 – AS-BUILT ENGINEERING REPORT**

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### GENERAL NOTES

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- W --- EXISTING WATERLINE
- SAN --- EXISTING SANITARY LINE
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10/20/21		RECORD DRAWINGS	KLK

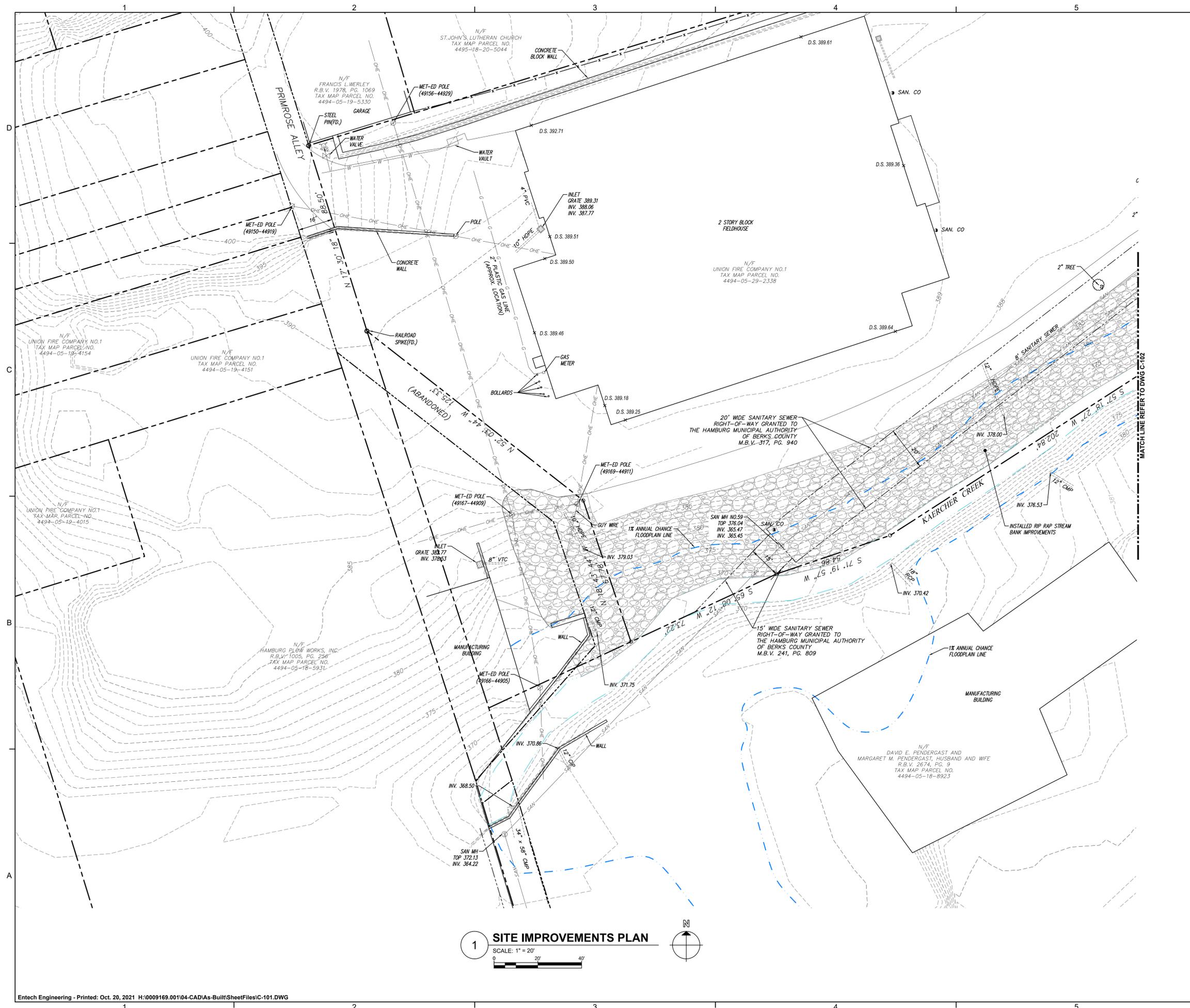
TETRA TECH, INC.  
HAMBURG FIELD HOUSE/KAERCHER CREEK  
STREAMBANK REHABILITATION  
HAMBURG BOROUGH, BERKS COUNTY, PENNSYLVANIA  
RECORD DRAWINGS  
CIVIL  
DRAWING INDEX PLAN

SCALE:	AS NOTED
PREPARED BY:	GEM
CHECKED BY:	KLK
APPROVED BY:	KLK
PROJECT NO.:	0009106.001
DRAWING NO.:	

C-100

**1** DRAWING INDEX PLAN

SCALE: 1" = 80'



**1 SITE IMPROVEMENTS PLAN**  
 SCALE: 1" = 20'  
 0 20 40

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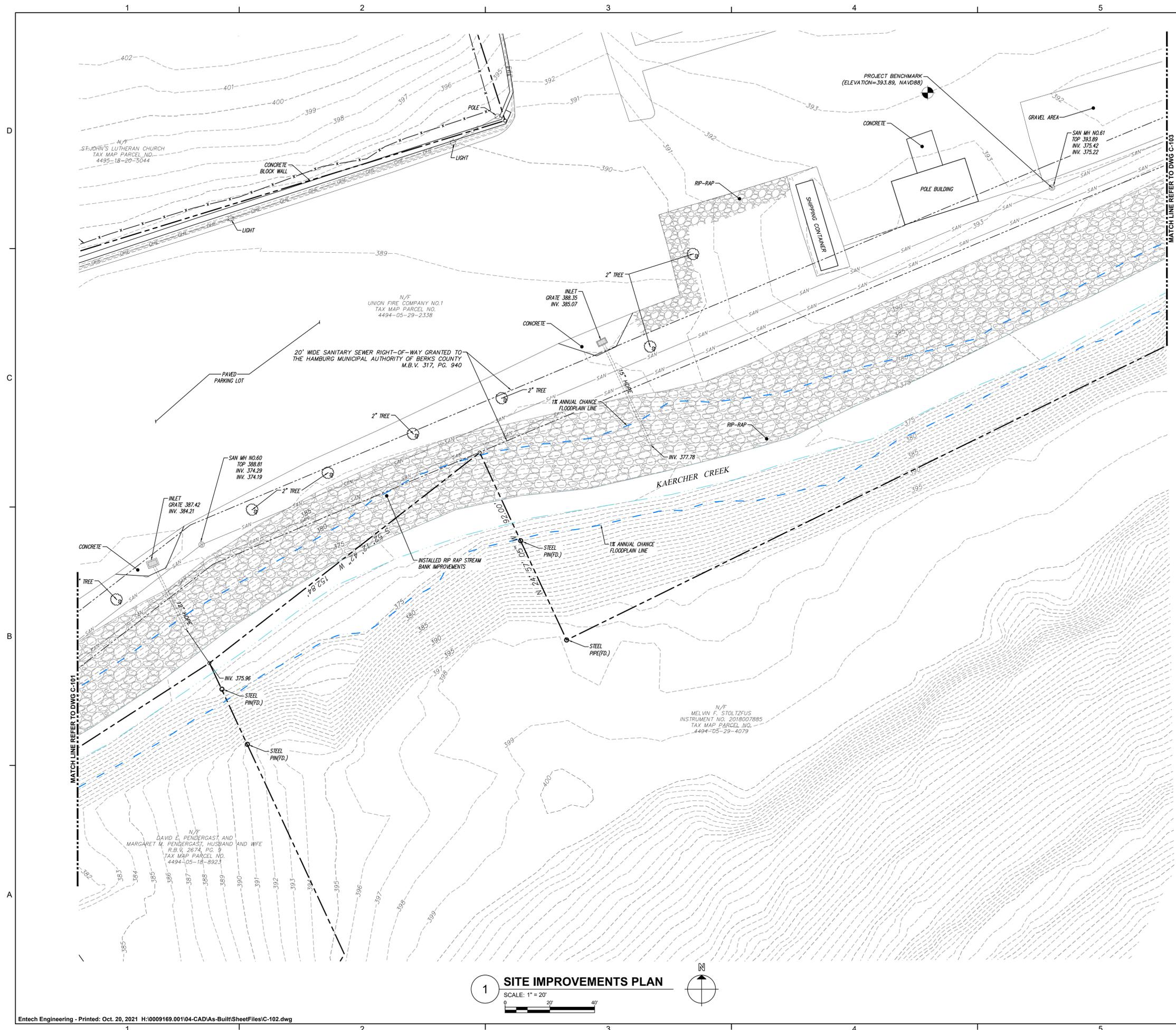
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	KLG		APPD
	RECORD DRAWINGS		ISSUED FOR REVISION
	10/20/21		DATE
	REV.		REV.

**TETRA TECH, INC.**  
**HAMBURG FIELD HOUSE/KAERCHER CREEK**  
**STREAMBANK REHABILITATION**  
 HAMBURG BOROUGH, BERKS COUNTY, PENNSYLVANIA  
 RECORD DRAWINGS  
 CIVIL  
 SITE IMPROVEMENTS PLAN

SCALE: AS NOTED	
PREPARED BY: GEM	
CHECKED BY: KLG	
APPROVED BY: KLG	
PROJECT NO: 0009106.001	
DRAWING NO:	

C-101



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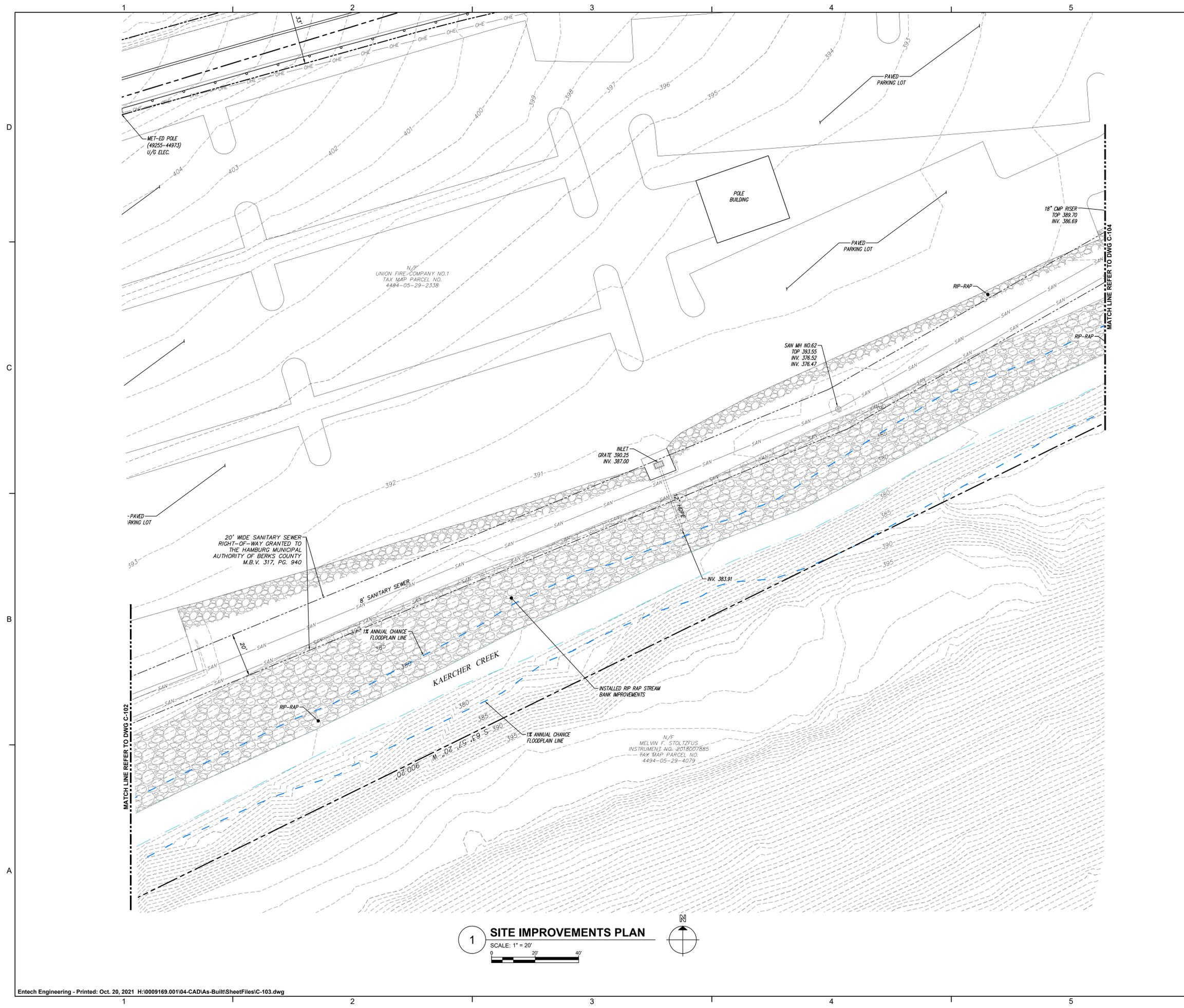
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**STREAM BANK REHABILITATION**  
 HAMBURG BOROUGH, BERKS COUNTY, PENNSYLVANIA  
 RECORD DRAWINGS  
 CIVIL  
 SITE IMPROVEMENTS PLAN

SCALE:	AS NOTED
PREPARED BY:	GEM
CHECKED BY:	KLK
APPROVED BY:	KLK
PROJECT NO.:	0009106.001
DRAWING NO.:	

C-102



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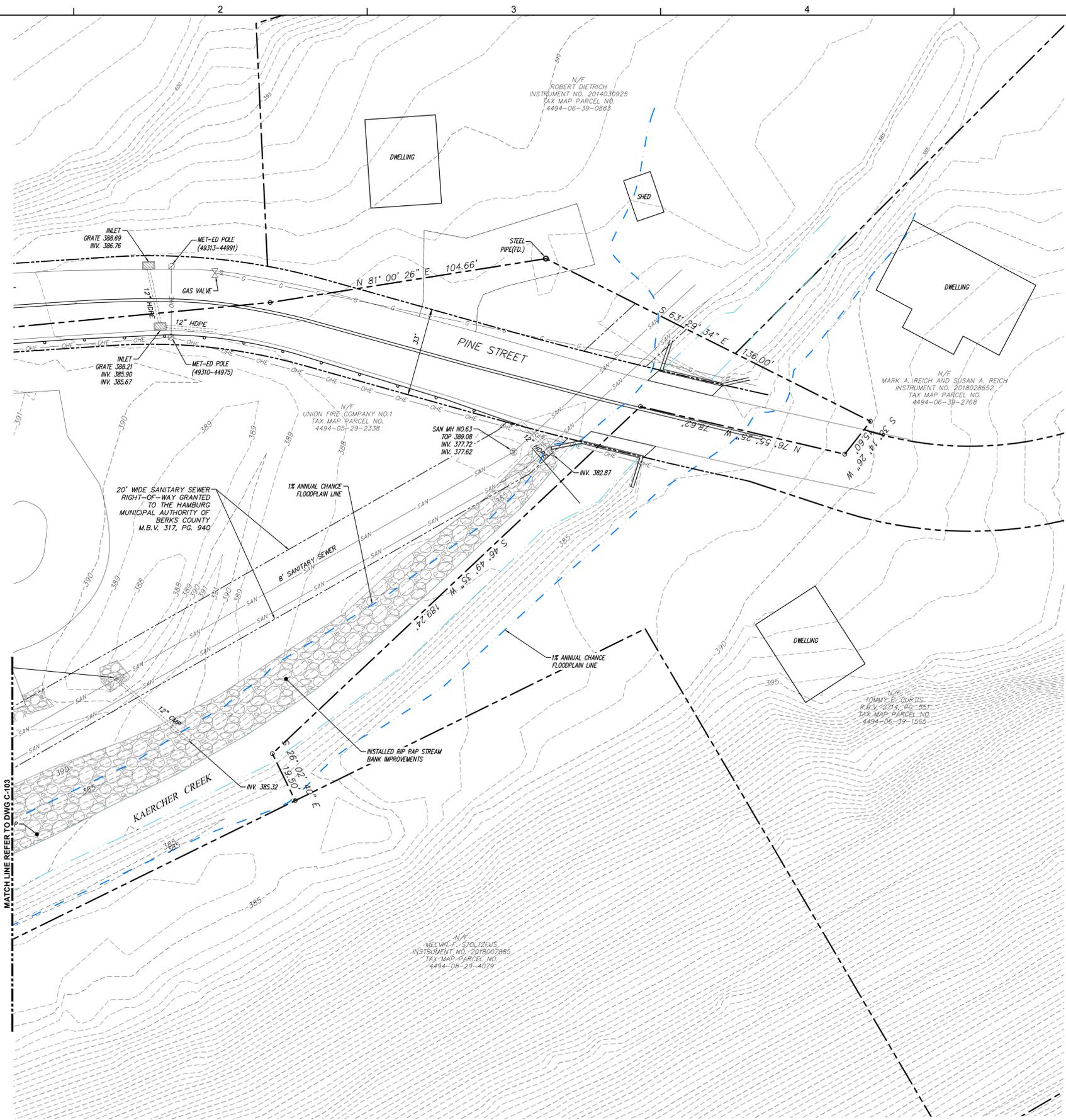
REV.	DATE	ISSUED FOR/REVISED	APPD.
	10/20/21	RECORD DRAWINGS	KLK

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SITE IMPROVEMENTS PLAN

SCALE:	AS NOTED
PREPARED BY:	GEM
CHECKED BY:	KLK
APPROVED BY:	KLK
PROJECT NO.:	0009106.001
DRAWING NO.:	C-103

**1 SITE IMPROVEMENTS PLAN**

SCALE: 1" = 20'



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**1 SITE IMPROVEMENTS PLAN**

SCALE: 1" = 20'

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**TETRA TECH, INC.**

**HAMBURG FIELD HOUSE/KAERCHER CREEK  
STREAM/BANK REHABILITATION**

HAMBURG BOROUGH, BERKS COUNTY, PENNSYLVANIA

RECORD DRAWINGS

CIVIL

SITE IMPROVEMENTS PLAN

SCALE:	AS NOTED
PREPARED BY:	GEM
CHECKED BY:	KLK
APPROVED BY:	KLK
PROJECT NO.:	0009106.001
DRAWING NO.:	C-104

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**ATTACHMENT 3 – EPA REGION III CERCLA REMOVAL ACTION FACT SHEET**

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**EPA REGION III  
CERCLA REMOVAL ACTION**

**FACT SHEET**

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SITE: Hamburg Kaercher Creek Site  
SIZE: 0.6 mile of Kaercher Creek in Hamburg, PA  
LOCATION: Hamburg, PA 19526  
APPROVAL DATE: April 2019

REMOVAL DATES: April 16, 2019, through October 22, 2021

DESCRIPTION: This action is intended to revisit and address erosion-damaged portions of the banks of Kaercher Creek near the Hamburg Fieldhouse and Hamburg Foundry Properties, and drainage issues associated with adjacent Hamburg Field House's asphalt parking lot, which drains into Kaercher Creek. The parking lot was resurfaced as part of EPA's 1993 — 1995 Hamburg Lead Site Removal Action, to address lead contaminated soil and battery debris in the surface and subsurface soils in the parking lot area at the Hamburg Field House in Hamburg, PA. Of note, while this Site is located within the study area of the Price Battery NPL Site (listed April 27, 2005), this Removal Action's primary source of contamination is lead-containing battery debris, as opposed to aerial depositional of lead from fallout of the smokestacks at the Price Battery facility. Historically, EPA Region III has used this source distinction (aerial depositional lead versus lead battery debris) in determining whether a Site is addressed as a remedial (Price Battery) operable unit or as a removal action. Since lead contamination at this Site has been determined to be from lead-containing battery debris, this Site will continue to be addressed as a removal Site.

Kaercher Creek is a stream that runs through Hamburg, near several lead Sites.

Historically, battery wastes were disposed of in many locations along the Creek, resulting in lead contamination on the Creek's banks and Creek bed. Figure 1 shows the approximate location of the areas to be addressed through this action. Kaercher Creek passes through many privately owned properties and some municipal properties. Portions of the Creek are accessible, while some areas have steep banks or are channelized. However, no portions of the Creek are completely inaccessible.

Kaercher Creek flows from Kaercher Creek Park, just outside the eastern boarder of Hamburg, past the Cornfield and Geary Drive Sites, past the Hamburg Fieldhouse, into town, under the former Price Battery Plant Site, and finally discharging into the Schuylkill River. EPA assessed these areas in the 2002 Removal Assessment and found them to have lead concentrations exceeding the established risk-based removal action level of 400 parts per million (except at the Geary Drive Site), resulting in EPA's performance of the May 2003 Action Memorandum. The proposed actions described in Section VI of this Action Memorandum would ensure that the erosion-damaged area of the lead-contaminated Creek bank (approximately 1,500 linear feet) will not act as a continuing or future source of lead contamination to other areas that have or will be addressed through future removal or remedial actions. The known impacted areas to be addressed through this Action Memorandum include the Hamburg Fieldhouse Property and the adjacent Hamburg Foundry Property (those portions of the creek banks located at these properties), as identified in Figure 1.

As discussed in the May 2004 Action Memorandum, there are approximately 567 homes within a 0.25-mile radius of the Site, making up a population of approximately 1,225 people who could potentially be impacted by lead contamination from the Site. About 1,104 houses are located within a 0.5-mile radius of the Site, with a potentially impacted population of 2,384 people.

NATIONAL PRIORITIES

LIST STATUS: The Site is not included on the National Priorities List.

HAZARDOUS MATERIALS: Primary Hazard: Lead

QUANTITIES REMOVED: A total of 16,600 tons of hazardous and non-hazardous, lead-contaminated soil and debris, including personal protective equipment, were removed for disposal. The hazardous amount was 8,246 tons and non-hazardous was 8,338 tons.

ON-SCENE

COORDINATOR: Todd Richardson

REMOVAL CONTRACTOR: Environmental Restoration, LLC

DISPOSAL LOCATIONS: Republic Environmental Systems  
2869 Sandstone Drive  
Hatfield, PA 19440

Lanchester Landfill  
7224 Division Highway  
Narvon, PA 17555

Wayne Disposal  
36255 Michigan Avenue  
Wayne, MI 48184

PROJECT CEILING: \$14,587,677

PROJECT COSTS: **\$15,814,252.57**

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Todd Richardson  
On-Scene Coordinator

---

**ATTACHMENT 4 – TRIP REPORT FOR HAMBURG KAERCHER CREEK  
SITE SEDIMENT SAMPLING**

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August 27, 2021

Mr. Todd Richardson  
On-Scene Coordinator  
U.S. Environmental Protection Agency, Region 3  
1650 Arch Street  
Philadelphia, Pennsylvania 19103

**Subject: Trip Report, Revision 0**  
**Hamburg Kaercher Creek Site – Sediment Sampling**  
**EPA Contract No. 68-HE-0320-D0003**  
**Technical Direction (TD) No. T601-20-07-002**  
**Document Control No. 0243**

Dear Mr. Richardson:

Tetra Tech, Inc. (Tetra Tech) is submitting the enclosed Trip Report, Revision 0, for the Hamburg Kaercher Creek Site (the Site) for your review and approval. This trip report summarizes the field activities and analytical results of the sediment sampling conducted at the Site on May 20, 2021 and the Weston Solutions sampling in August 2019.

If you have any questions regarding this report, please call me at (610) 416-9584.

Sincerely,

A handwritten signature in black ink that reads 'Dean E. Maser'.

Dean Maser  
TD Project Manager

Enclosure (1)

cc: TD File  
Maria Magilton, Tetra Tech

# TRIP REPORT

REVISION 0

## HAMBURG KAERCHER CREEK SITE HAMBURG, BERKS COUNTY, PENNSYLVANIA

EPA CONTRACT NO. 68-HE-0320-D0003  
TECHNICAL DIRECTION NO. T601-20-07-002  
DOCUMENT TRACKING NO. 0243

*Prepared For:*



**U.S. Environmental Protection Agency Region 3**  
Superfund and Emergency Management Division  
1650 Arch Street  
Philadelphia, PA 19103

*Prepared By:*



**Tetra Tech**  
240 Continental Drive, Suite 200  
Newark, DE 19713

**August 2021**



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## Appendix

A	FIGURES
B	TABLES
C	VALIDATED ANALYTICAL RESULTS PACKAGES

## **1.0 INTRODUCTION**

Under Superfund Technical Assessment and Response Team (START) Contract No. 68-HE-0320-D0003, Technical Direction (TD) No. T601-20-07-027, U.S. Environmental Protection Agency (EPA) Region 3 tasked Tetra Tech, Inc. (Tetra Tech) to conduct sediment sampling activities at the Hamburg Kaercher Creek Site (the Site) in Hamburg, Berks County, Pennsylvania.

The objective of the sampling event was to further delineate lead in sediment. The Site location is presented in Appendix A, Figure 1. Respective sampling locations are presented in Appendix A, Figures 2 and 3.

Field sampling consisted of collecting surface and subsurface sediment samples. The EPA On-Scene Coordinator (OSC) identified all sampling locations based on field conditions at the time of sampling and proximity to Site-related activity areas.

This trip report provides documentation of the Site activities conducted by START in accordance with the Field Sampling Plan (FSP) for the Hamburg Kaercher Creek Site (Tetra Tech 2020a) and the Tetra Tech Uniform Policy Program Quality Assurance Project Plan (QAPP), Revision 1 (Tetra Tech 2021). Specifically, this report presents Site background information in Section 2.0, describes Site activities in Section 3.0, provides analytical results in Section 4.0, and conclusions in Section 5.0. References cited in this report are listed in Section 6.0.

## **2.0 BACKGROUND**

This section describes the Site location and discusses the Site history.

### **2.1 SITE LOCATION**

Kaercher Creek is a stream that runs through Hamburg, Pennsylvania, near several lead sites. Historically, battery wastes were disposed of in many locations along the Creek, resulting in lead contamination on the Creek's banks and creek bed. Kaercher Creek passes through many privately-owned properties and some municipal properties. Portions of the creek are accessible, while some areas have steep banks or are channelized. Kaercher Creek flows from Kaercher Creek Park, just

outside the eastern border of Hamburg, past the Cornfield and Geary Drive Sites, past the Hamburg Fieldhouse, through the former Price Battery Plant Site, and finally discharging into the Schuylkill River.

## **2.2 SITE HISTORY**

In October 2001, EPA was notified of the presence of battery casings along Kaercher Creek near the Hamburg Fieldhouse Property. In 2002, Tetra Tech EM Inc., under the direction of the OSC, performed removal assessments along Kaercher Creek from Kaercher Lake to Kaercher Creek's confluence with the Schuylkill River. The Agency for Toxic Substances and Disease Registry (ATSDR) reviewed the Site assessment reports and issued a Health Consultation that recommended an immediate Comprehensive Environmental Response Compensation and Liability Act (CERCLA) removal action to protect human health.

EPA approved funding for the removal action (RA) at the Site, originally defined to include Kaercher Creek and Mill Creek, both streams that run thorough Hamburg Borough, pursuant to the May 2003 action memorandum. On August 5, 2003, EPA approved a change of scope of the RA that involved removing Mill Creek (to be addressed as a separate action) from the RA for the Site. The objective of the RA was to determine the extent of lead contamination in the sediment and surface soils of the creek bed and banks of Kaercher Creek, as well as to conduct limited removal and disposal of lead-contaminated soil and debris, to install a cover over the remaining lead-contaminated soil and debris, and to perform creek bank stabilization measures. Cover material consisted of clean soil, coir logs and/or matting, small rip rap, and other fill material.

Between August 2003 and May 2004, EPA addressed a total of 5,470 feet of Kaercher Creek during the RA. EPA approved the May 2004 action memorandum to allow for the completion of the RA in 2004. The RA entailed diversion of the creek and excavation of approximately 1 foot of the lead-contaminated creek bed sediments. Lead-contaminated sediments that remained after the excavation were left in place and capped with geotextile fabric and rip-rap stone. EPA's removal activities on Kaercher Creek are documented in the Federal On-Scene Coordinator's After-Action Report for the Hamburg – Kaercher Creek Site, dated June 16, 2005 (EPA 2005).

In June 2017 and November 2017, as part of a Focused Remedial Investigation for the Price Battery Plant Site, Operable Unit 3 (OU-3), the EPA Remedial Project Manager (RPM) directed remedial contractor CDM Smith (CDM) to assess the condition of the cover (rip rap, geotextile, soil, etc.) installed by EPA's Removal Program at the Site as part of the RA on the portion of Kaercher Creek between Schuylkill River and Kaercher Lake. CDM observed and documented that the rip rap, geotextile fabric, and soil cover were in poor condition in many areas, including the portion of Kaercher Creek at and near the Hamburg Fieldhouse, previously addressed through the RA.

From April through August 2018, the OSC conducted Site visits to confirm reported erosion-damaged areas of the creek bank and to screen some of these areas for lead contamination using an x-ray fluorescence (XRF) instrument. During these removal assessment Site visits, many areas of erosion damage and exposed battery debris were observed, and XRF screening of the erosion damaged areas revealed lead concentrations ranging from 2,600 to 2,800 parts per million (ppm).

In April 2019, EPA approved an action memorandum and funding to address a damaged portion of the RA at the Hamburg Kaercher Creek Site (specifically at the Hamburg Fieldhouse) performed pursuant to the May 2004 action memorandum.

### **3.0 SITE ACTIVITIES**

This section summarizes the surface and subsurface sediment sampling conducted at the Site and describes sample management procedures.

#### **3.1 SURFACE AND SUBSURFACE SEDIMENT SAMPLING**

In August 2019, START (Weston Solutions) collected 32 total surface sediment (SD) samples including two duplicates. The samples were collected in the creek bed at 50-foot intervals. The points were located on an aerial map using global positioning system (GPS) technology. These samples were dried in ovens, sieved through a 250-micron ( $\mu\text{m}$ ) mesh sieve, and placed in XRF cups. The samples were analyzed using an XRF instrument. The results of the XRF analysis revealed lead concentrations ranging from 29.1 to 207 ppm.

On August 2, 2020, approximately 6 inches of rain fell in the area after a series of thunderstorms. On August 4, 2020, a tropical storm hit the area and caused a washout of the edge of the excavation. Some sediment got past the cofferdam and into the creek. This material was screened with an XRF instrument to determine whether any contamination got past the cofferdam. The XRF results indicated that some contaminated soil did enter the creek. Most of the contaminated sediment was recovered at that time. After further discussions concerning the release of contaminated sediment into the creek, the decision was made to dam off approximately 250 feet of the creek, reroute the flow with pumps and hoses, and vacuum off the surficial sediment. The vacuum truck arrived on April 26, 2021, and vacuuming operations began. However, the hose for the vacuum truck constantly clogged and EPA determined that vacuuming the sediment was not going to work. The vacuum truck was demobilized from the Site the same day.

When the vacuum truck failed to remove the sediment, a small excavator was placed into the creek and used to scrape the sediment off the surface of the creek bed, taking care not to damage the underlying geotextile fabric installed during the 2004 RA. However, in situ and ex situ XRF screening of the sediment remaining on top of the geotextile fabric continued to reveal elevated levels of lead contamination. The source of the lead-contaminated sediment directly above the geotextile fabric could not be definitively determined, but EPA and START surmised that the contamination was a pre-existing condition and not associated with the washout.

On April 28, 2021, the excavated creek bed was divided into five sections. Two sediment samples were collected from each section (from one surface and one subsurface sampling point) and screened with XRF instrumentation in situ and ex situ. Results from this event are summarized in Table 1, Appendix B. Following the completion of this sampling event, EPA determined that additional excavation could potentially damage the geotextile liner; and therefore, the disturbed portion of the creek bed was “capped” with clean sand amended with leaf litter for organic content and covered with river rock.

During the first weeks of May 2021, EPA determined that sediment samples for laboratory analysis should be collected downstream and upstream of the washout point. This request was made because EPA’s Remedial Program is currently conducting a remedial investigation/feasibility

study (RI/FS) for Kaercher Creek as part of Price Battery OU-3, and the laboratory data would be necessary to incorporate and document the sediment results for finalizing the RI/FS. The samples were analyzed in situ and ex situ, and were sent to a Contract Laboratory Program (CLP) lab for confirmation of results.

On May 20, 2021, surface sediment samples were collected from 0 to 2 inches below grade surface (bgs) with a disposable plastic scoop. The sampling team collected sediment down to 2 inches bgs and transferred the sediment into a labeled resealable, plastic bag. Subsurface sediment samples were collected at 9 inches bgs. The sediment was then dried, sieved, and put in a XRF cup for ex situ analysis. The XRF cups were ultimately sent to a CLP lab for confirmation. Sediment samples were collected in accordance with Tetra Tech SOP No. 006-5, “Sediment and Sludge Sampling” (Tetra Tech 2020b).

Surface and subsurface sediment samples were submitted to the laboratory for CLP lead analysis. One field duplicate sample was collected from a surface sediment location from a depth of 0 to 2 inches bgs, (HKC-SD 31). The duplicate sample was collected in accordance with the quality control (QC) objectives defined in the FSP (Tetra Tech 2020a). All sampling locations and conditions were documented on field data sheets as well as in the Site logbook in accordance with Tetra Tech SOP No. 024-3, “Recording of Notes in Field Logbook” (Tetra Tech 2020c). START collected geographic information system (GIS) location data at each sediment sampling point and locations are presented on Figure 3, Appendix A. Analytical results for surface and subsurface sediment samples are discussed in Section 4.1.

### **3.2 SAMPLE MANAGEMENT**

All samples collected during the May 2021 sampling event were handled and packaged in accordance with Tetra Tech SOP No. 019-8, “Packaging and Shipping Samples” (Tetra Tech 2020d) and the *Contract Laboratory Program Guidance for Field Samplers* for samples shipped to CLP laboratory (EPA 2020). All shipping containers were properly labeled with EPA chain-of-custody seals and delivered with signed chain-of-custody forms. Copies of the chain-of-custody records are provided with the validated laboratory results packages in Appendix C.

## 4.0 ANALYTICAL RESULTS

This section summarizes the analytical results for the samples collected at the Site by START in August 2019 and April through May 2021. The May 2021 samples were analyzed under the EPA CLP in accordance with the EPA CLP Statement of Work (SOW) Superfund Inorganic Method SW-846 3050B, SFAM01.1 ICP-AES for sediment samples.

### 4.1 SURFACE AND SUBSURFACE SEDIMENT ANALYTICAL RESULTS

Surface and subsurface sediment analytical results were compared to the EPA Site-specific ecological risk-based effect level calculated specifically for Kaercher Creek as part of the Price Battery OU-3 RI/FS of 258 ppm. Weston Solutions (the then START contractor) conducted the initial sampling event in August 2019, collecting surface sediment every 50 feet (Figure 2, Appendix A). These samples were analyzed ex situ only.

Of the samples collected by Tetra Tech during the sampling event conducted on April 28, 2021, analytical results from 3 in situ samples and 10 ex situ samples revealed lead concentrations exceeding 258 ppm. Samples HKC-SD-14, HKC-SD-16, HKC-SD-17 and HKC-SD-18 exceeded 258 ppm both in situ and ex situ. Samples HKC-SD-10, HKC-SD-11, HKC-SD-12, HKC-SD-13, HKC-SD-15, and HKC-SD-19 exceeded 258 ppm ex situ only. During the sampling event on May 4, 2021, one in situ sample and three ex situ samples collected revealed lead concentrations exceeding 258 ppm. Sample HKC-SD-21 exceeded the lead action level both in situ and ex situ, and samples HKC-SD-20 and HKC-SD-22 exceeded only ex situ. The May 6, 2021 sampling event showed no sediment results above the threshold of 258 ppm. During the sampling event on May 20, 2021, 3 in situ samples, 5 ex situ samples, and 6 laboratory-analyzed samples were collected with lead concentrations exceeding 258 ppm. Samples HKC-SD-33, HKC-SD-35 and HKC-SD-36 exceeded 258 ppm in situ, ex situ, and laboratory. HKC-SD-31 exceeded 258 ppm ex situ and laboratory. HKC-SD-34 exceeded 258 ppm laboratory only.

## 5.0 CONCLUSIONS

The results from the initial sampling event conducted at the Site in August 2019 showed that no lead concentrations greater than 258 ppm were present in surface sediment. Analytical results from the April 28, May 4, and May 20, 2021 sampling events show lead concentrations above the Site-specific risk-based level of 258 ppm. The May 6, 2021 sampling event showed no lead levels above 258 in either in situ or ex situ screened samples. EPA selected sampling points to check upstream of the creek washout point, in the washout area, and downstream of washout. Some locations were co-located with points from a previous sampling event by CDM Smith to compare results. Based on the comparison of results from sampling events conducted in 2019 and 2021, the section of creek from 63 feet upstream of diversion dam west to sample point HKC-SD-31 appears to have been impacted by lead contamination above the 258 ppm Site-specific risk-based level.

## 6.0 REFERENCES

- Tetra Tech, Inc. (Tetra Tech). 2020a. Hamburg Kaercher Creek Field Sampling Plan. Revision 2. September.
- Tetra Tech. 2020b. "Sediment and Sludge Sampling." Standard Operating Procedure (SOP) No. 006-5. August.
- Tetra Tech. 2020c. "Recording of Notes in Field Logbook." SOP No. 024-3. July.
- Tetra Tech. 2020d. "Packaging and Shipping Samples." SOP No. 019-8. August.
- Tetra Tech. 2021. "Uniform Policy Program Quality Assurance Project Plan (QAPP), Revision 1." EPA Region III Superfund Technical Assessment and Response Team (START-6 Contract). August.
- U.S. Environmental Protection Agency (EPA). 2005. Federal On-Scene Coordinator's After-Action Report for the Hamburg – Kaercher Creek Site. June 16.
- EPA. 2019. "Hamburg Kaercher Creek Action Memorandum – Approval and Funding for a Time-Critical Removal Action at the Hamburg Kaercher Creek Site." EPA Region 3 Superfund and Emergency Management Division. April 2019.

EPA. 2020. *Contract Laboratory Program Guidance for Field Samplers*. Office of Superfund Remediation and Technology Innovation. OLEM 9240.0-51 USEPA 540-R-20-005. November.

## **APPENDIX A**

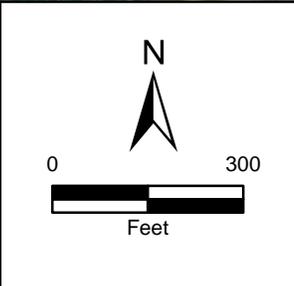
### **FIGURES**

- 1 Site Layout
- 2 Sediment Sampling Locations and Results – August 14, 2019
- 3 Sample Location Map



[1] Source: 2019 Sediment Sample Locations Map. Please note that Tetra Tech revised Weston Solutions Figure 1 of August 14, 2019 to Figure 2 so that it would logically fit into the Alter Action Report for Hamburg Kaercher Creek.

Source: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS

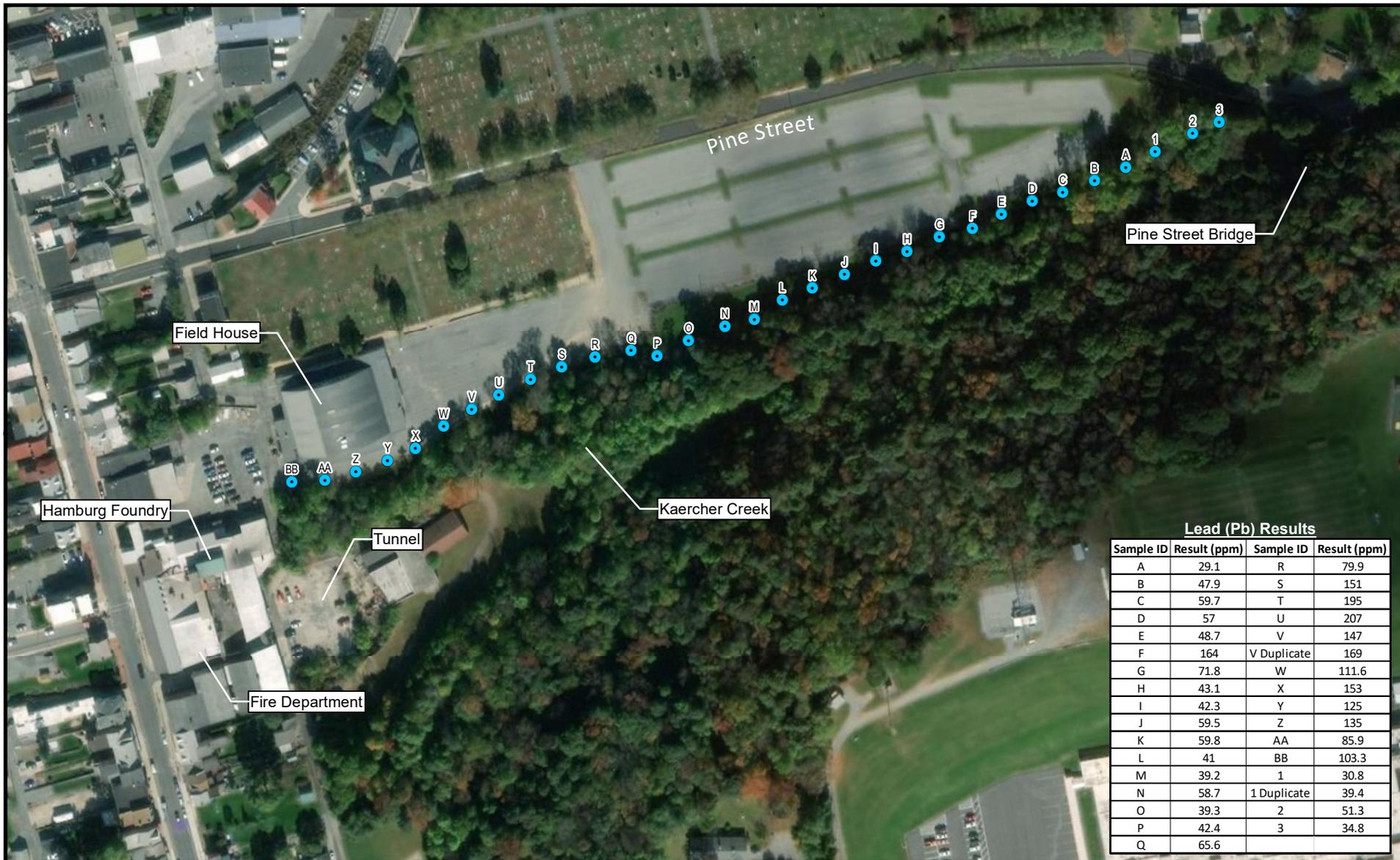


Hamburg Lead Kaercher Creek  
 Hamburg, Berks County, Pennsylvania

**Figure 1**  
**Site Layout**

Prepared For: R3 START VI | Prepared By: V.Petrov  
 Coordinate System: NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet

File Path: S:\06\_Technical\_Documents\903401\002\MXD\Figure 2\_Site Layout.mxd  
 Date Saved: 8/13/2020

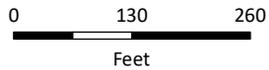


**Legend**

- Sediment Sample Locations



Coordinate System:  
WGS84 UTM Zone 18N Feet



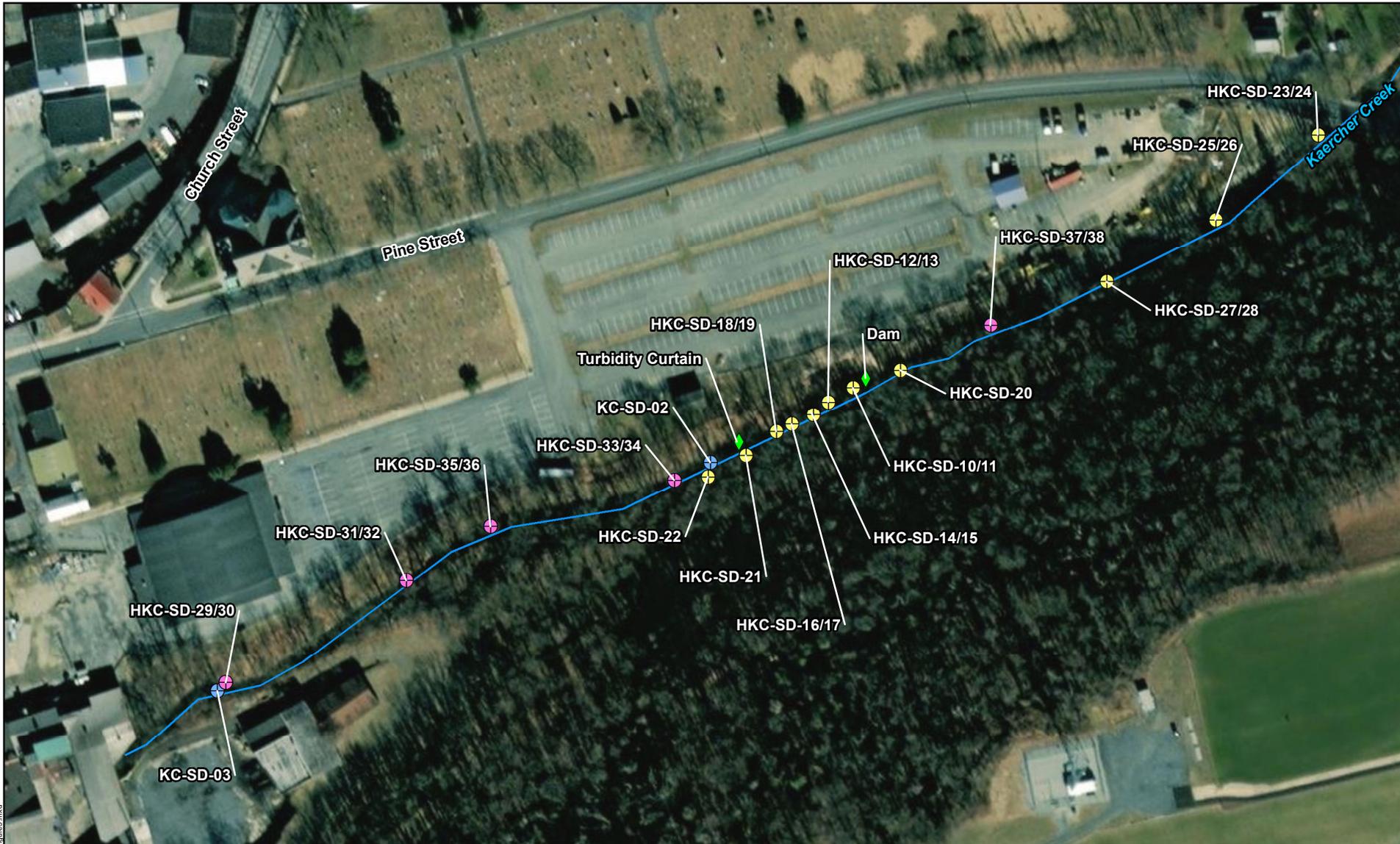
[1] Source: 2019 Sediment Sample Locations Map. Please note that Tetra Tech revised Weston Solutions Figure 1 of August 14, 2019 to Figure 2 so that it would logically fit into the After Action Report for Hamburg Kaercher Creek.

Hamburg Lead Kaercher Creek  
Hamburg, Berks County, Pennsylvania

Figure 2  
Sediment Sample Locations  
August 14, 2019

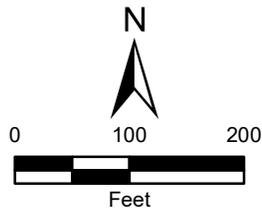
TDD#: WS01-19-04-006  
Contract: EP-53-15-02  
Prepared: 9/9/2019





**Legend**

- + CDM Location
- + Sediment Location - XRF Screening
- + Sediment Location - XRF Screening & Lab Analysis
- ◆ Other Features
- Streams



Hamburg Kaercher Creek  
Hamburg, Berks County, PA

**Figure 3**  
**Sample Location Map**



## **APPENDIX B**

### **TABLES**

**TABLE 1  
SURFACE AND SUBSURFACE SEDIMENT ANALYTICAL RESULTS**

**Note: The results shown in red are above the EPA Site-specific ecological risk-based effect level of 258 PPM**

<b>LOCATION</b>	<b>SAMPLE ID</b>	<b>RESULT (ppm)</b>	<b>LAB RESULT (ppm)</b>	<b>COMMENT</b>
<b>XRF CREEK SEDIMENT RESULTS FROM 04/28/21 (collected before backfilling in excavated area)</b>				
Section I - 1	HKC-SD-10	Insitu-111; Exsitu-758	N/A	Dam to 25'
Section I - II	HKC-SD-11	Insitu-107; Exsitu-374	N/A	
Section II - I	HKC-SD-12	Insitu-138; Exsitu-314	N/A	25' - 50'
Section II - II	HKC-SD-13	Insitu-114; Exsitu-380	N/A	
Section III - 1	HKC-SD-14	Insitu-263; Exsitu-860	N/A	50' - 75'
Section III - II	HKC-SD-15	Insitu-147; Exsitu-1760	N/A	
Section IV - 1	HKC-SD-16	Insitu-795; Exsitu-1607	N/A	75' - 100'
Section IV - II	HKC-SD-17	Insitu-295; Exsitu-1618	N/A	
Section V - I	HKC-SD-18	Insitu-260; Exsitu-847	N/A	100' to Turbidity Curtain
Section V - II	HKC-SD-19	Insitu-94; Exsitu-490		
<b>XRF CREEK SEDIMENT RESULTS FROM 05/04/21</b>				
Upstream of Dam	HKC-SD-20	Insitu-62; Exsitu-783,668	N/A	63' upstream of dam
Upstream of Turbidity Curtain	HKC-SD-21	Insitu-267; Exsitu-641	N/A	42' upstream of turbidity curtain
Downstream of Turbidity Curtain	HKC-SD-22	Insitu-94; Exsitu-389	N/A	28'downstream of turbidity curtain
<b>XRF CREEK SEDIMENT RESULTS FROM 05/06/21</b>				
Pine Street Bridge - Surface	HKC-SD-23	Insitu-25; Exsitu-56	N/A	Downstream of Pine Street Bridge
Pine Street Bridge - Subsurface	HKC-SD-24	Insitu-19; Exsitu-53	N/A	
Near outfall - Surface	HKC-SD-25	Insitu-13.8; Exsitu-38.4	N/A	Near metal outfall pipe
Near outfall - Subsurface	HKC-SD-26	Insitu-17; Exsitu-37.2	N/A	
Western most - Surface	HKC-SD-27	Insitu-35; Exsitu-147	N/A	Between the outfall and dam sample
Western most - Subsurface	HKC-SD-28	Insitu-40; Exsitu-138	N/A	

LOCATION	SAMPLE ID	RESULT (ppm)	LAB RESULT (ppm)	COMMENT
<b>XRF CREEK SEDIMENT RESULTS FROM 05/20/21</b>				
Co-located at KC-SD03 - surface	HKC-SD-29	Insitu-55; Exsitu-220	250	See Figure 3 map for locations
Co-located at KC-SD03 - 9" below bed surface	HKC-SD-30	Insitu-54; Exsitu-83	83	See Figure 3 map for locations
Between KC-SD-02 &03 - surface	HKC-SD-31	Insitu-114; Exsitu-376	390	See Figure 3 map for locations
Between KC-SD-02 &03 - surface	HKC-SD-31 Dup	NA; Exsitu-349	390	See Figure 3 map for locations
Between KC-SD-02 &03 - 9" below bed surface	HKC-SD-32	Insitu-39.4; Exsitu-159	190	See Figure 3 map for locations
Co-located at KC-SD-02 & turbidity curtain - surface	HKC-SD-33	Insitu-514; Exsitu-662	720	See Figure 3 map for locations
Co-located at KC-SD-02 & turbidity curtain - 9" below bed surface	HKC-SD-34	Insitu-71; Exsitu-246	330	See Figure 3 map for locations
Slag Area - surface	HKC-SD-35	Insitu-580; Exsitu-1247	1300	See Figure 3 map for locations
Slag Area - 9" below bed surface	HKC-SD-36	Insitu-490; Exsitu-613	810	See Figure 3 map for locations
Upstream of dam - surface	HKC-SD-37	Insitu-24; Exsitu-61	89	See Figure 3 map for locations
Upstream of dam - 9" below bed surface	HKC-SD-38	Insitu-54.8; Exsitu-106	160	See Figure 3 map for locations

**APPENDIX C**

**VALIDATED ANALYTICAL RESULTS PACKAGES**



ICF  
ESAT Region 3  
US Environmental Protection Agency Environmental Science Center  
701 Mapes Road Ft. Meade, MD 20755-5350  
Phone 410-305-3012

**Date:** July 1, 2021

**To:** ESAT Region 3 Project Officer

**From:** Lisa D. Penix  
Validator

Kurt Roby  
Reviewer

**Subject:** Inorganic Data Validation (S4VEM)  
Hamburg Kaercher Creek  
49475 MCT6P1

### **Overview**

This data package consisted of eleven (11) sediment samples, including a field duplicate sample, analyzed for lead (Pb) by ICP-AES.

Analyses were performed by Bonner Analytical Testing Company (BON) according to Contract Laboratory Program (CLP) Statement of Work (SOW) SFAM01.1.

Data were validated according to the National Functional Guidelines for Inorganic Superfund Methods Data Review and applicable USEPA Region 3 modifications. Electronic validation was performed by the Electronic Data eXchange & Evaluation System (EXES). The validation report has been assigned the Superfund Data Validation Level Stage\_4\_Validation\_Electronic\_Manual (S4VEM).

The following validation narrative is an evaluation of laboratory reported data based on the electronic data package available through the EXES Data Manager dated June 9, 2021.

### **Summary**

No data quality outliers or technical deficiencies were identified that would require rejection or estimation of sample results.

**Notes**

No detected concentrations were less than Contract Required Quantitation Limit (CRQL).

Laboratory blanks associated with the samples in this SDG were free from contamination.

Laboratory duplicate, serial dilution and Laboratory Control Sample analyses were within control limits.

The matrix spike recovery was outside control limits in sample MCOAE1. The initial concentration was greater than four times (>4X) the amount of the spike added. No data were qualified.

Results reported for field duplicate pair MCOAD9/MCOAE7 were comparable (within control limits of 25 Relative Percent Difference (RPD) or  $\pm$  CRQL). No data were qualified based on field duplicate precision.

A sample calculation check was performed on sample MCOAD7. The calculated result had an RPD less than 5% of the reported result. No sample data were qualified.

Validation qualifiers are only applied by the validator to field samples. Qualifiers may be applied by EXES electronic validation in addition to laboratory quality control samples.

**Glossary of Inorganic Data Qualifier Codes**


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Validation Qualifiers	In order of descending precedence. Only one of these qualifiers may apply to any result.
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R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
UJ	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
U	The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit
B	The result is presumed a blank contaminant. This qualifier is used for drinking water samples only.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.

# Sample Summary Report

**Project Name: HAMBURG LEAD - KAERCHER  
CREEK SITE Project**

**GroupID: 49475/68HERH20D0009/MCT6P1**

**Lab Name: Bonner Analytical Testing Co.**

Sample Number: LCS01	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture:		% Solids: 100	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Lead	Spike	2.0		mg/kg	2.0		1	YES	S4VEM

# Sample Summary Report

**Project Name: HAMBURG LEAD - KAERCHER  
CREEK SITE Project**

**GroupID: 49475/68HERH20D0009/MCT6P1**

**Lab Name: Bonner Analytical Testing Co.**

Sample Number: MC0AD7	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: HKC-SD-29	pH:	Sample Date: 05/20/2021	Sample Time: 13:30:00
% Moisture:		% Solids: 99	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Lead	Target	250		mg/kg	250		1	YES	S4VEM

# Sample Summary Report

**Project Name: HAMBURG LEAD - KAERCHER  
CREEK SITE Project**

**GroupID: 49475/68HERH20D0009/MCT6P1**

**Lab Name: Bonner Analytical Testing Co.**

Sample Number: MC0AD8	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: HKC-SD-30	pH:	Sample Date: 05/20/2021	Sample Time: 13:35:00
% Moisture:		% Solids: 99	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Lead	Target	83		mg/kg	83		1	YES	S4VEM

# Sample Summary Report

**Project Name: HAMBURG LEAD - KAERCHER  
CREEK SITE Project**

**GroupID: 49475/68HERH20D0009/MCT6P1**

**Lab Name: Bonner Analytical Testing Co.**

Sample Number: MC0AD9	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: HKC-SD-31	pH:	Sample Date: 05/20/2021	Sample Time: 13:52:00
% Moisture:		% Solids: 98	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Lead	Target	390		mg/kg	390		1	YES	S4VEM

# Sample Summary Report

**Project Name: HAMBURG LEAD - KAERCHER  
CREEK SITE Project**

**GroupID: 49475/68HERH20D0009/MCT6P1**

**Lab Name: Bonner Analytical Testing Co.**

Sample Number: MC0AE0	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: HKC-SD-32	pH:	Sample Date: 05/20/2021	Sample Time: 13:57:00
% Moisture:		% Solids: 99	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Lead	Target	190		mg/kg	190		1	YES	S4VEM

# Sample Summary Report

Project Name: HAMBURG LEAD - KAERCHER  
CREEK SITE Project

GroupID: 49475/68HERH20D0009/MCT6P1

Lab Name: Bonner Analytical Testing Co.

Sample Number: MC0AE1	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: HKC-SD-33	pH:	Sample Date: 05/20/2021	Sample Time: 14:03:00
% Moisture:		% Solids: 99	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Lead	Target	720		mg/kg	720		1	YES	S4VEM

# Sample Summary Report

**Project Name: HAMBURG LEAD - KAERCHER  
CREEK SITE Project**

**GroupID: 49475/68HERH20D0009/MCT6P1**

**Lab Name: Bonner Analytical Testing Co.**

Sample Number: MC0AE1D	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location:	pH:	Sample Date: 05/20/2021	Sample Time: 14:03:00
% Moisture:		% Solids: 99	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Lead	Target	740		mg/kg	740		1	YES	NV

# Sample Summary Report

Project Name: HAMBURG LEAD - KAERCHER  
CREEK SITE Project

GroupID: 49475/68HERH20D0009/MCT6P1

Lab Name: Bonner Analytical Testing Co.

Sample Number: MC0AE1L	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture:		% Solids: 99	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Lead	Target	670		mg/kg	670		5	YES	NV

# Sample Summary Report

Project Name: HAMBURG LEAD - KAERCHER  
CREEK SITE Project

GroupID: 49475/68HERH20D0009/MCT6P1

Lab Name: Bonner Analytical Testing Co.

Sample Number: MC0AE1S	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location:	pH:	Sample Date: 05/20/2021	Sample Time: 14:03:00
% Moisture:		% Solids: 99	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Lead	Spike	730		mg/kg	730		1	YES	NV

# Sample Summary Report

**Project Name: HAMBURG LEAD - KAERCHER  
CREEK SITE Project**

**GroupID: 49475/68HERH20D0009/MCT6P1**

**Lab Name: Bonner Analytical Testing Co.**

Sample Number: MC0AE2	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: HKC-SD-34	pH:	Sample Date: 05/20/2021	Sample Time: 14:08:00
% Moisture:		% Solids: 100	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Lead	Target	330		mg/kg	330		1	YES	S4VEM

# Sample Summary Report

**Project Name: HAMBURG LEAD - KAERCHER  
CREEK SITE Project**

**GroupID: 49475/68HERH20D0009/MCT6P1**

**Lab Name: Bonner Analytical Testing Co.**

Sample Number: MC0AE3	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: HKC-SD-35	pH:	Sample Date: 05/20/2021	Sample Time: 14:12:00
% Moisture:		% Solids: 97	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Lead	Target	1300		mg/kg	1300		1	YES	S4VEM

# Sample Summary Report

**Project Name: HAMBURG LEAD - KAERCHER  
CREEK SITE Project**

**GroupID: 49475/68HERH20D0009/MCT6P1**

**Lab Name: Bonner Analytical Testing Co.**

Sample Number: MC0AE4	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: HKC-SD-36	pH:	Sample Date: 05/20/2021	Sample Time: 14:20:00
% Moisture:		% Solids: 99	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Lead	Target	810		mg/kg	810		1	YES	S4VEM

# Sample Summary Report

**Project Name: HAMBURG LEAD - KAERCHER  
CREEK SITE Project**

**GroupID: 49475/68HERH20D0009/MCT6P1**

**Lab Name: Bonner Analytical Testing Co.**

Sample Number: MC0AE5	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: HKC-SD-37	pH:	Sample Date: 05/20/2021	Sample Time: 14:30:00
% Moisture:		% Solids: 99	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Lead	Target	89		mg/kg	89		1	YES	S4VEM

# Sample Summary Report

**Project Name: HAMBURG LEAD - KAERCHER  
CREEK SITE Project**

**GroupID: 49475/68HERH20D0009/MCT6P1**

**Lab Name: Bonner Analytical Testing Co.**

Sample Number: MC0AE6	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: HKC-SD-38	pH:	Sample Date: 05/20/2021	Sample Time: 14:37:00
% Moisture:		% Solids: 99	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Lead	Target	160		mg/kg	160		1	YES	S4VEM

# Sample Summary Report

**Project Name: HAMBURG LEAD - KAERCHER  
CREEK SITE Project**

**GroupID: 49475/68HERH20D0009/MCT6P1**

**Lab Name: Bonner Analytical Testing Co.**

Sample Number: MC0AE7	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: HKC-DUP-03	pH:	Sample Date: 05/20/2021	Sample Time: 16:00:00
% Moisture:		% Solids: 99	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Lead	Target	390		mg/kg	390		1	YES	S4VEM

# Sample Summary Report

**Project Name: HAMBURG LEAD - KAERCHER  
CREEK SITE Project**

**GroupID: 49475/68HERH20D0009/MCT6P1**

**Lab Name: Bonner Analytical Testing Co.**

Sample Number: PBS01	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture:		% Solids: 100	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Lead	Target	1.0	U	mg/kg	1.0	U	1	YES	S4VEM

# Sample Summary Report

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**Project Name: HAMBURG LEAD - KAERCHER  
CREEK SITE Project**

**GroupID: 49475/68HERH20D0009/MCT6P1**

**Lab Name: Bonner Analytical Testing Co.**

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**ATTACHMENT 5 – ACTION MEMO – APRIL 2019**

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

APR 11 2019

OFFICE OF LAND AND  
EMERGENCY MANAGEMENT

OFFICE OF EMERGENCY MANAGEMENT

MEMORANDUM

SUBJECT: Request for Additional Funding and a Change in Scope for a Removal Action at the Hamburg Kaercher Creek Site in Hamburg, Berks County, Pennsylvania.

FROM: Gilberto Irizarry, Director  
Preparedness and Response Operations Division 

THRU: Reggie Cheatham, Director   
Office of Emergency Management

TO: Barry Breen, Acting Assistant Administrator  
Office of Land and Emergency Management

The purpose of the attached Action Memorandum is to obtain your approval of a Time-Critical Removal Action from Region 3 at the Hamburg Kaercher Creek Site (Site) located in Berks County, PA. The proposed removal action exceeds the \$2 million exemption under Delegation 14-2 and requires OLEM Assistant Administrator approval. The Action Memorandum requests a funding ceiling increase of \$9,264,000, of which \$7,400,000 is from the Regional Removal Allowance. The total project ceiling, if approved, will be \$14,587,677, of which \$11,560,320 is from the Regional Removal Allowance.

Both the Site and the surrounding town of Hamburg have had previous EPA removal actions to address lead contamination. It should be noted that the Price Battery NPL Site, which was listed due to lead contamination associated with the former plant, is located near the removal action Site. The delineation of EPA's remedial and removal actions for lead cleanups in Hamburg has been based on the source of contamination. Historically, the remedial program has addressed lead contamination via aerial disposition from the Price Battery Plant, while the removal program has addressed lead contamination tied to lead battery casings. This proposed removal action follows this established arrangement for Hamburg, PA area.

The additional \$9,264,000 requested for the Removal Action is to address the discovery of further lead contamination at the Site as well as addressing the degradation of environmental controls from two previous removal actions in 1993-1995 and 2003-2005 at the Site. The funds will be used to remove lead contamination, stabilize the cleanup area to minimize future site maintenance, disposed of hazardous materials, and return the Site to a suitable condition.

This removal action is the third for the Site, which includes the original 1993-1995 removal action to address lead contamination at Hamburg Fieldhouse parking lot (\$1.7M) as well as a

2003-2005 removal action to address lead contamination at the adjoining Kaercher Creek (\$3.5M). Additional information on the Site can be found in the attached fact sheet, the Action Memorandum, Figure 1 (map of the Site), the Enforcement Confidential Memo, and the Applicable or Relevant and Appropriate Requirements table.

The attached Action Memorandum, in addition to OEM review, has been reviewed by OGC and OSRE with no objections raised to the funding increase. Based on information from the Action Memorandum and discussions with Region 3, OSRE and OGC, I recommend that you approve the Action Memorandum as requested.

Attachments



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION III  
1650 Arch Street  
Philadelphia, Pennsylvania 19103-2029

SUBJECT: Request for Additional Funding and a Change in Scope for a Removal Action at the Hamburg Kaercher Creek Site in Hamburg, Berks County, Pennsylvania.

FROM: Paul Leonard, Acting Division Director   
Hazardous Site Cleanup Division (3HSOO)

THRU: Reggie Cheatham, Director  
Office of Emergency Management (5104A)

TO: Barry Breen, Acting Assistant Administrator  
Office of Land and Emergency Management

I. PURPOSE

The purpose of this Action Memorandum is to request and document the need for additional funding and a change in scope in order to continue a removal action to mitigate the actual and threatened release of hazardous substances at the Hamburg Kaercher Creek Site (Site), located in Hamburg, Pennsylvania. The Site consists of portions of Kaercher Creek (Kaercher Creek or Creek), a stream that runs through Hamburg Borough, in close proximity to several lead sites in Hamburg. Battery wastes had been disposed of at several locations along the Creek, resulting in lead contamination on Creek banks and in the sediments. This Action Memo documents a Change in Scope to include as part of the Site a paved parking area located at the Hamburg Fieldhouse. This Action Memorandum is intended to address a damaged portion of the Removal Action at the Hamburg Kaercher Creek Site performed pursuant to the May 2004 Action Memorandum, as well as an increase in scope to address drainage problems associated with the nearby Hamburg Lead Site, pursuant to the August 1993 Action Memorandum.

Kaercher Creek was the subject of a Time-Critical Removal Action (Removal Action) undertaken by the U.S. Environmental Protection Agency (EPA) from 2003 to 2005, as documented in an Approval of a Funding Request for a Removal Action, dated May 13, 2003 (May 2003 Action Memorandum); a Change in Scope for a Removal Action, dated August 5, 2003; and a Request for Additional Funding, and Exemption from the 12-Month and \$2 Million Statutory Limits for a Removal Action, dated May 25, 2004 (May 2004 Action Memorandum). The Removal Action included removal and disposal of lead contaminated soils, sediment, and debris found at the surface of the Site, on Creek banks, and in stream beds; stabilization of environmentally sensitive areas from further exposure and effects from



lead waste, sediments and soils; and covering areas of the Site to prevent direct contact with lead-contaminated soils and debris below the surface if needed.

The Hamburg Fieldhouse parking area was the subject of a separate removal action conducted by EPA pursuant to a Funding Request for a Removal Action dated August 25, 1993 (August 1993 Action Memorandum) in connection with the nearby Hamburg Lead Site, to address lead contaminated soil and battery debris in the surface and sub-surface in the parking lot area at the Hamburg Field House.

On April 12, 2018, EPA conducted a removal site evaluation at the Site in accordance with Section 300.410 of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 C.F.R. § 300.410, and identified a release of a hazardous substance, notably lead, into the environment. Based upon information obtained from the removal site evaluation, continuance of the Removal Action is necessary to mitigate threats posed by the release and/or substantial threat of release of a hazardous substance and/or pollutant or contaminant from the Site and to protect public health, welfare, and/or the environment.

As stated above, this Action Memorandum is intended to address a damaged portion of the Removal Action at the Hamburg Kaercher Creek Site performed pursuant to the May 2004 Action Memorandum, as well as an increase in scope to address drainage problems associated with the nearby Hamburg Lead Site, pursuant to the August 1993 Action Memorandum. This Action Memorandum will correct parking lot drainage issues, so that surface water drainage can be integrated into the adjoining Kaercher Creek bank stabilization work.

The EPA On-Scene Coordinator (OSC) finds that the Site continues to pose threats that meet the criteria for a removal action set forth in Section 300.415 of the NCP. These threats are further described in Section III of this Action Memorandum. To mitigate the continuing threats and minimize the possibility of future threats of continued release or exposure to lead contamination, additional funding and actions as set forth in this Action Memorandum will be necessary. The OSC has determined that the Site continues to meet the criteria for emergency exemption from both the \$2 Million and the 12-Month Statutory Limits for a Removal Action identified within the Comprehensive Environmental Response Compensation and Liability Act of 1980, as amended, (CERCLA), 42 U.S.C § 9604(c)(1)(A).

Additional CERCLA funding in the amount of \$9,264,000 is requested, of which an estimated \$7,400,000 is from the Regional Removal Allowance. The total project ceiling will be \$14,587,677, of which \$11,560,320 is from the Regional Removal Allowance. This additional funding is necessary to mitigate the threats identified in this Action Memorandum.

## II. SITE DESCRIPTION AND BACKGROUND

### A. Site Description

This action is intended to revisit and address erosion-damaged portions of the banks of Kaercher Creek near the Hamburg Fieldhouse and Hamburg Foundry Properties, and drainage issues associated with adjacent Hamburg Field House's asphalt parking lot, which drains into Kaercher Creek. The parking lot was resurfaced as part of EPA's 1993 – 1995 Hamburg Lead Site Removal Action, to address lead contaminated soil and battery debris in the surface and sub-surface in the parking lot area at the Hamburg Field House in Hamburg, PA. Of note, while this Site is located within the study area of the Price Battery NPL Site (listed April 27, 2005), this Removal Action's primary source of contamination is lead-containing battery debris, as opposed to aerial depositional of lead from fallout of the smoke stacks at the Price Battery facility. Historically, EPA Region III has used this source distinction (aerial depositional lead versus lead battery debris) in determining whether a site is addressed as a remedial (Price Battery) operable unit or as a removal action. Since lead contamination at this Site has been determined to be from lead-containing battery debris, this Site will continue to be addressed as a removal Site.

Kaercher Creek is a stream that runs through Hamburg, near several lead sites. Historically, battery wastes were disposed of in many locations along the Creek, resulting in lead contamination on the Creek's banks and Creek bed. Figure 1 shows the approximate location of the areas to be addressed through this action. Kaercher Creek passes through many privately-owned properties and some municipal properties. Portions of the Creek are accessible, while some areas have steep banks or are channelized. However, no portions of the Creek are completely inaccessible.

Kaercher Creek flows from Kaercher Creek Park, just outside the eastern boarder of Hamburg, past the Cornfield and Geary Drive Sites, past the Hamburg Fieldhouse, into town, under the former Price Battery Plant Site, and finally discharging into the Schuylkill River. EPA assessed these areas in the 2002 Removal Assessment and found them to have lead concentrations exceeding the established risk-based removal action level of 400 parts per million (except at the Geary Drive Site), resulting in EPA's performance of the May 2003 Action Memorandum. The proposed actions described in Section VI of this Action Memorandum would ensure that the erosion-damaged area of the lead-contaminated Creek bank (approximately 1,500 linear feet) will not act as a continuing or future source of lead contamination to other areas that have or will be addressed through future removal or remedial actions. The known impacted areas to be addressed through this Action Memorandum include the Hamburg Fieldhouse Property and the adjacent Hamburg Foundry Property (those portions of the creek banks located at these properties), as identified in Figure 1.

As discussed in the May 2004 Action Memorandum, there are approximately 567 homes within a .25-mile radius of the Site, making up a population of approximately 1,225 people who could potentially be impacted by lead contamination from the Site. About 1,104 houses are located within a .5-mile radius of the Site, with a potentially impacted population of 2,384 people.

## B. Site Background

In October 2001, EPA was notified of the presence of battery casings along Kaercher Creek near the Hamburg Fieldhouse Property. In 2002, Tetra Tech EM Inc., under the direction of the OSC, performed removal assessments along Kaercher Creek from Kaercher Lake to Kaercher Creek's confluence with the Schuylkill River. The Agency for Toxic Substances and Disease Registry (ATSDR) reviewed the Site assessment reports and issued a Health Consultation that recommended an immediate CERCLA removal action to protect human health.

EPA approved funding for the Removal Action at the Site, originally defined to include Kaercher Creek and Mill Creek, both streams that run thorough Hamburg Borough, pursuant to the May 2003 Action Memorandum. On August 5, 2003, EPA approved a Change of Scope of the Removal Action, removing Mill Creek (to be addressed as a separate action) from the Removal Action for the Site. The objective of the Removal Action was to determine the extent of lead contamination in the sediment and surface soils of the Creek bed and banks of Kaercher Creek, as well as to conduct limited removal and disposal of lead contaminated soil and debris, to install a cover over the remaining lead contaminated soil and debris, and to perform Creek bank stabilization measures. Cover material consisted of clean soil, coir logs and/or matting, small rip rap, and other fill material.

Between August 2003 and May 2004, EPA addressed a total of 5,470 feet of Kaercher Creek during the Removal Action. EPA approved the May 2004 Action Memorandum in order to allow for the completion of the Removal Action in 2004. Between August 1993 and August 1995, EPA addressed the adjacent Hamburg Field House Parking Lot with the installation of a permanent asphalt cover to prevent exposure to lead-contaminated surface and subsurface soils.

In November 2017, as part of a Focused Remedial Investigation for the Price Battery Plant Site, Operable Unit 3 (OU-3), the EPA Remedial Project Manager (RPM) directed the remedial contractor, CDM Smith (CDM), to assess the condition of the cover (rip rap, geotextile, soil, etc.) installed by EPA's Removal Program at the Site as part of the Removal Action on the portion of Kaercher Creek between Route 61 and the Schuylkill River. CDM observed and documented that the rip rap, geotextile fabric, and soil cover were in poor condition in many areas, including the portion of Kaercher Creek at and near the Hamburg Fieldhouse, previously addressed through the Removal Action. Documentation of the erosion-damaged rip rap, soil, and geotextile cover is included in an August 17, 2018 email from EPA RPM John Banks to EPA OSC Todd Richardson with its attachments: Figures 1 and 2, and Attachment A. The drainage problems of the Fieldhouse parking lot are documented in the email correspondence of October 11, 2018 from Troy Hatt, Fire Code Official/Fire Marshal/Plans Examiner, Township of Spring, Borough of Wyomissing

From April through August 2018, the OSC conducted Site visits to confirm reported erosion-damaged areas of the Creek bank and to screen some of these areas for lead contamination using an X-ray fluorescence instrument (XRF). During these removal assessment Site visits, many areas of erosion damage and exposed battery debris were observed, and XRF screening of the erosion damaged areas revealed lead concentrations ranging from 2,600 ppm to 2,800 ppm. Photo documentation and XRF screening data are included in the August 14, 2018 Memo to File,

Documentation of Hamburg Kaercher Creek Fieldhouse – Bank Erosion Damage Evaluation document.

*See* May 2004 Action Memorandum, Section II.B., for additional Site Background information prior to the 2003-2004 Removal Action time period. Also, *see* August 1993 Action Memorandum, Section II.B. for Site Background information on the Fieldhouse parking lot.

### C. Quantities and Types of Substances Present

As documented in the May 2004 Action Memorandum and its supporting administrative record documents, lead contamination has occurred at this Site due to disposal of lead contaminated battery casings on properties along Kaercher Creek (including the area of the Creek near the Hamburg Fieldhouse) and from downstream migration of lead from other disposal areas and the former Price Battery Plant. Due to the heterogeneity of the battery debris fill material, an accurate approximation of contaminated material remains unknown, however, an estimated 10,000 to 15,000 tons of lead contaminated soil is present at or near the surface (in the first 2 ft. to 3 ft. below ground surface) along an approximate 1,500 linear foot stretch of Creek bank.

Also, as indicated in the May 2004 Action Memorandum, an extent of contamination evaluation conducted as part of a 2002 removal assessment for the Site included the collection of 86 soil samples and 38 sediment samples, of which, 49 soil samples and 21 sediment samples exceeded the 400 ppm risk-based action level for lead. The highest lead concentrations were found in samples collected near the Fieldhouse on the creek banks at 23,590 ppm, along the tops of the creek banks on the Fieldhouse Property at 45,184 ppm, and in the creek sediment at 2,148 ppm. As previously stated in Section II.B. of this Action Memorandum, while this area was addressed during the 2003-2004 Removal Action activities, through limited (minimal) excavation, cover and bank stabilization measures, extensive erosion has occurred since then, resulting in current and future potential threats of exposure to unsafe concentrations of lead contamination. The actions proposed in this Action Memorandum would repair the existing damage and provide a more durable and permanent remedy to protect against erosion and to prevent exposure to and migration of lead contamination. The August 1993 Action Memorandum discusses an assessment in 1992 that found lead concentrations exceeding 1,000 ppm in the parking lot. Results show levels as high as 28,900 ppm.

### D. Actions to Date

*See* May 2004 Action Memorandum, Section II.B., for additional Site Background information, and Section IV., for a description of actions undertaken prior to the 2003-2005 Removal Action. *See also* August 1993 Action Memorandum, Section II.B. for description of actions in the Fieldhouse area.

### E. State and Local Authorities

EPA has coordinated with the Pennsylvania Department of Environmental Protection (PADEP), as well as Borough of Hamburg officials, regarding the actions proposed to address the erosion damage at this Site. The Borough of Hamburg does not have the resources to address this Site. PADEP funding is also not available to address this Site, as funding is currently being utilized for other State priorities.

### III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT

Chronic exposure to lead concentrations present in surface soils at the Site poses a significant threat to human health. Section 300.415(b) of the NCP lists factors to be considered in determining the appropriateness of a Removal Action. Paragraphs (b)(2)(i), (iv), (v), and (vii) of Section 300.415 directly apply as follows to the conditions as they exist at the Site.

A. **300.415(b)(2)(i) Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants;**

There have been reports of children playing on the creek banks of the Fieldhouse property since the completion of the 2003-2004 removal action. Due to erosion, in several exposed areas along the Fieldhouse creek bank, with lead concentrations in the surface soil, far exceed the risk-based removal action level of 400 parts per million with concentrations detected during the 2018 assessment activities ranged between 2,600 ppm and 2,800 ppm. *See* May 2004 Action Memorandum, Section III.

B. **300.415 (b)(2)(iv) High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate;**

*See* May 2004 Action Memorandum, Section III. Due to extensive erosion since the completion of the 2003-2004 Removal Action, there is a significant risk of high levels of lead contaminated soil and debris, at or near the surface, to migrate.

C. **300.415 (b)(2)(v) Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released; and**

As previously stated in Section II.A. of this Action Memorandum, this Site requires additional actions to mitigate the threat posed by exposure to lead contaminated soil and debris that has resulted from significant erosion of the banks of Kaercher Creek near the Hamburg Fieldhouse, and Foundry properties. The erosion that has occurred at this Site has resulted from storm events and flooding to which this area is prone. Without adequate counter measures, erosion will continue to worsen, exposing larger areas of lead contamination and increasing the chances of this contamination migrating to other areas. In addition, if unaddressed, drainage problems associated with the parking lot may contribute to erosion of lead contaminated soils.

**D. 300.415 (b)(2)(vii) The availability of other appropriate Federal or State response mechanisms to respond to the release.**

EPA has coordinated with PADEP, as well as Borough of Hamburg officials, regarding the actions proposed to address the erosion damage at this Site. The Borough of Hamburg does not have the resources to address this Site. PADEP funding is also not available to address this Site.

**IV. ENDANGERMENT DETERMINATION**

This Site continues to release lead, a CERCLA hazardous substance, that if not addressed by implementing the response actions outlined in this Action Memorandum, may present an imminent and substantial endangerment to the public health, welfare or the environment.

**V. EXEMPTION FROM STATUTORY LIMITS**

This Removal Action continues to require exemptions from the \$2 Million funding ceiling and the 12-Month statutory limits in accordance with the emergency exemption criteria to protect public health and environment. The high levels of lead from the disposed battery casings pose an immediate risk to public health or welfare and demonstrate that the removal meets the emergency exemption under CERCLA Section 104(c)(1)(A), 42 U.S.C. § 9604(c)(1)(A).

**A. Emergency Exemption from the \$2 Million Statutory Limit**

**1. Section 104(c)(1)(A)(i) Continued response actions are immediately required to prevent, limit or mitigate an emergency.**

There is insufficient funding available under the previous Removal Action ceiling to mitigate the emergency associated with exposure to high levels of lead. Additional funding of this Removal Action will allow EPA to perform the proposed actions set forth in this Action Memorandum to eliminate the immediate threats posed to the public health and the environment from exposure to lead-contaminated soil, sediment, and debris, which has resulted from significant erosion of the banks of Kaercher Creek near the Hamburg Fieldhouse and Hamburg Foundry. There have been reports of children playing on the creek banks of the Fieldhouse property since the completion of the 2003-2004 removal action. In addition, Kaercher Creek has been subjected to increased flooding during significant seasonal storms. The storms have eroded EPA's protective cap. Unaddressed, the Site poses a significant threat to human health via direct exposure, as well as by presenting a potential threat of migration of contaminants downstream to other receptors, and ultimately the Schuylkill River. In addition, if

unaddressed, drainage problems associated with the parking lot may contribute to erosion of lead contaminated soils.

2. **Section 104(c)(1)(A)(ii) There is an immediate risk to public health or welfare or the environment.**

There is an immediate risk to public health or welfare due to current, ongoing potential exposure to high levels of lead at the Site. The maximum detected lead concentration is 45,100 ppm, which exceeds the Site-specific risk-based action level of 400 ppm by a factor of 100 times and is clearly unacceptable. Exposure to lead can have many health effects. Depending on the level of exposure, lead can harm the nervous system, kidney function, immune system, reproductive system, cognitive development, and cardiovascular system. Infants and young children are especially sensitive to low levels of lead, which may contribute to behavioral problems, learning deficits, and lowered IQ.

3. **Section 104(c)(1)(A)(iii) Assistance will not otherwise be provided on a timely basis.**

If this Action Memorandum is not approved, assistance will not otherwise be provided on a timely basis. The erosion of the lead contaminated banks of Kaercher Creek will persist and likely worsen, increasing the threat posed to surrounding populations from exposure to unsafe lead concentrations, as well as remaining a continuing source of lead contamination to downstream receptors via migration of lead contamination in surface water.

Neither the Borough of Hamburg, nor the State, nor any other federal programs or agencies are able to provide assistance on a timely basis. In addition, the EPA Removal Program is the most appropriate program to address this Site, as this action is intended to repair a previous EPA Removal Program Action.

## VI. PROPOSED ACTIONS AND ESTIMATED COSTS

The proposed action is intended to mitigate the threat posed to the public health and welfare and the environment by the release and continued threat of release of a hazardous substance from the Site. This Removal Action continues to require exemptions to exceed the \$2 Million funding ceiling and the 12-Month statutory limit, in accordance with the emergency exemption criteria as provided in CERCLA Section 104(a)(1)(A).

The type of action used for any area will necessarily depend upon specific conditions such as slope, ground cover (e.g., soil type), tree cover, environmental sensitivity (e.g., aquatic habitat), the presence of battery fragments, in-situ treatability and the concentration of hazardous substances. Additional characterization may be required prior to addressing certain areas of the Site. The proposed removal action will meet engineering specifications intended to withstand significant precipitation and/or flood events with minimal erosion and, therefore, post removal site

controls are expected to require mainly annual inspections and reports. Deed restrictions will be recorded to ensure the cover material is undisturbed by future owners.

#### **A. Proposed Actions**

1. Mobilize personnel/equipment to/from the Site;
2. Setup and maintain Command Post, and Staging Areas;
3. Provide for safety of public during non-working hours by securing hazardous substances from the public using covers, temporary high visibility construction fencing, and/or security guards during the Removal Action;
4. Install and maintain temporary erosion and sedimentation controls to minimize the potential for migration of hazardous substances from the Site, including damming and/or pumping the Creek as necessary;
5. Conduct additional removal assessment sampling (soil, sediment, groundwater, and surface water) to further delineate hazardous substances and Site conditions as necessary;
6. Conduct any additional necessary property survey, and/or prepare additional professional engineering plans/drawings including post removal as-built drawings;
7. Remove debris and vegetation impeding the implementation of the Removal Action;
8. If feasible, blend soil amendments/stabilizers with excavated soil contaminated with lead at concentrations exceeding 5000 ppm to stabilize the lead, reducing the leachability so that the soil can be disposed of as non-hazardous waste;
9. Excavate and remove contaminated soil to a minimum of 24 inches below ground surface from the Creek bank at areas: a) where visible erosion has occurred, or is likely to occur in the future; b) in Lead-Contaminated Areas, that is areas where lead concentrations are in excess of 400 mg/kg (300 ppm in-situ, to account for variations in accuracy of XRF readings due to in-situ soil variations, such as moisture content), and/or where visible battery fragments are located. Excavation and removal will be conducted as set forth in this paragraph where technically practicable based on considerations of slope, ground cover (e.g., soil type), tree cover, environmental sensitivity (e.g., aquatic habitat), the presence of battery fragments, and the concentration of hazardous substances;
10. In excavated areas and in Lead-Contaminated Areas where excavation is determined to be impracticable based on considerations (as discussed in Item #9), which may include areas where soils were treated and consolidated as described in Item #8, install a clean fill soil cover and/or permanently encapsulate, along with necessary erosion controls measures (e.g., erosion control mats, bank stabilization measures such as rip rap – up to R-5, low-permeability clay, and/or similar engineered material, clean backfill/cover, and vegetative cover);
11. Prepare the debris, battery fragments, and excavated soils for appropriate off-Site disposal pursuant to Section 121(d)(3) of CERCLA and 40 CFR 300.440;
12. Dispose off-Site all soils and battery fragments excavated from the Site in accordance with Section 121(d)(3) of CERCLA and 40 C.F.R. 300.440;
13. Re-grade the parking lot area and/or install additional drainage infrastructure (e.g. storm drains) to correct and improve surface water drainage into Kaercher Creek; and

14. Coordinate with State and local government to implement post-removal site controls and institutional controls to protect the integrity of the cover/engineered bank stabilization (e.g., soil, rip rap, erosion control matting) over the lead-contaminated areas and notify potential future owners of the presence of lead-contaminated areas and the cover. EPA will pursue an environmental covenant under the Pennsylvania Uniform Environmental Covenants Act to incorporate both the post removal site and institutional controls.

#### B. Contribution to Remedial Performance

The actions proposed in this Action Memorandum will not interfere with any remedial actions that may occur in the future and any actions will be consistent with the requirement of Section 104(a)(2) of CERCLA, 42 U.S.C. § 104(a)(2), which states that a removal action should contribute to the efficient performance of any long-term remedial action with respect to the release or threatened release concerned. Institutional controls will likely apply to this property.

#### C. Compliance with ARARs

The proposed Removal Action will comply with Federal and State applicable or relevant and appropriate requirements (ARARs) to the extent practicable considering the exigencies of the situation. All federal and state ARARs will be considered during this removal action.

The OSC will coordinate with PADEP in the installation of erosion and sedimentation controls in accordance with established practices in Pennsylvania. The OSC's PADEP contacts are aware of the scope of work to be completed for this removal action. PADEP provided ARARs in an email dated September 20, 2018. EPA has developed a list of site-specific Federal and State ARARs that are included in Attachment 2.

#### D. Estimated Cost

Extramural Costs	Hamburg Lead Site 1993	Hamburg Kaercher Creek Site 2003-2004	This Request	Ceiling
Regional Allowance Costs (This cost category includes estimates for ERRS contractors, subcontractors, letter contracts, orders for services, notices to proceed, alternative technology contracts, and inter-agency agreements with other Federal Agencies)	\$1,285,500 \$128,550- (%10 contingency ERCS)	\$2,746,270	\$7,400,000	\$11,560,320
Other Extramural Costs Not Funded from the Regional Allowance START Contractor	\$120,000	\$220,000	\$320,000	\$660,000
Subtotal, Extramural Costs	\$1,534,050	\$2,966,270	\$7,720,000	\$12,220,320
Extramural Costs Contingency (20% of Subtotal, Extramural Costs)	\$230,107 (%15 contingency)	\$593,250	\$1,544,000	\$2,367,357
<b>TOTAL REMOVAL PROJECT CEILING</b>	\$1,764,157	\$3,559,520	\$9,264,000	\$14,587,677

VII. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

If the actions described in this Action Memorandum are not conducted, the release and/or threat of release of hazardous substances or pollutants or contaminants will continue to exist at the Site. Without immediate actions to mitigate the release and potential release of hazardous substances or pollutants or contaminants at the Site, potential threats posed to human and ecological receptors may increase. Unaddressed, extremely high lead concentrations, confirmed to be present on the Site in surface soil on the eroding banks of Kaercher Creek near the Hamburg Fieldhouse, may continue to pose a significant potential threat to public health in and near Hamburg, PA.

VIII. OUTSTANDING POLICY ISSUES

There are no outstanding policy issues pertaining to the Site.

## IX. ENFORCEMENT STATUS

The OSC has provided the EPA HSCD Cost Recovery Branch with information available to pursue any and all enforcement actions pertaining to the Site. See attached Confidential Enforcement Addendum (Attachment 3).

The total cumulative EPA costs for this Removal Action, based on full cost accounting practices that will be eligible for cost recovery are estimated below as:

Direct Extramural Cost:	\$ 14,587,677
Direct Intramural Costs:	\$ 939,220
Subtotal	\$ 15,526,897
Indirect Costs (64.22% of above)	\$ 9,971,373
Estimated EPA Costs for the Removal Action:	\$ 25,498,270

The total EPA costs for this Removal Action based on full-cost accounting practices that will be eligible for cost recovery are estimated to be \$25,498,270.<sup>1</sup>

## X. RECOMMENDATION

This Action Memorandum represents the selected Removal Action for the Hamburg Kaercher Creek Site in Hamburg, Pennsylvania, developed in accordance with CERCLA and is not inconsistent with the NCP. This decision is based on the Administrative Record for the Site.

By signing this Action Memorandum, you are also hereby establishing the documents listed below as the Administrative Record supporting the issuance of this Action Memorandum, pursuant to Section 113 (k) of CERCLA and EPA Delegation No. 14-22.

1. Request for Additional Funding, and Exemption from the 12 Month Statutory Limits for a Removal Action, Hamburg Kaercher Creek Site, May 25, 2004;
2. Removal Action Change in Scope, Hamburg Lead Kaercher Creek Site, August 5, 2003;
3. Approval for Funding for a Removal Action, Hamburg Kaercher Creek, May 13, 2003;
4. Approval of a Funding Request for a Removal Action, Hamburg Lead Site, August 25, 1993;
5. Email correspondence of August 17, 2018 from J. Banks, EPA Region III, Background Information and Assumptions for Addressing the Optional Portion of Kaercher Creek at the Field House Property,

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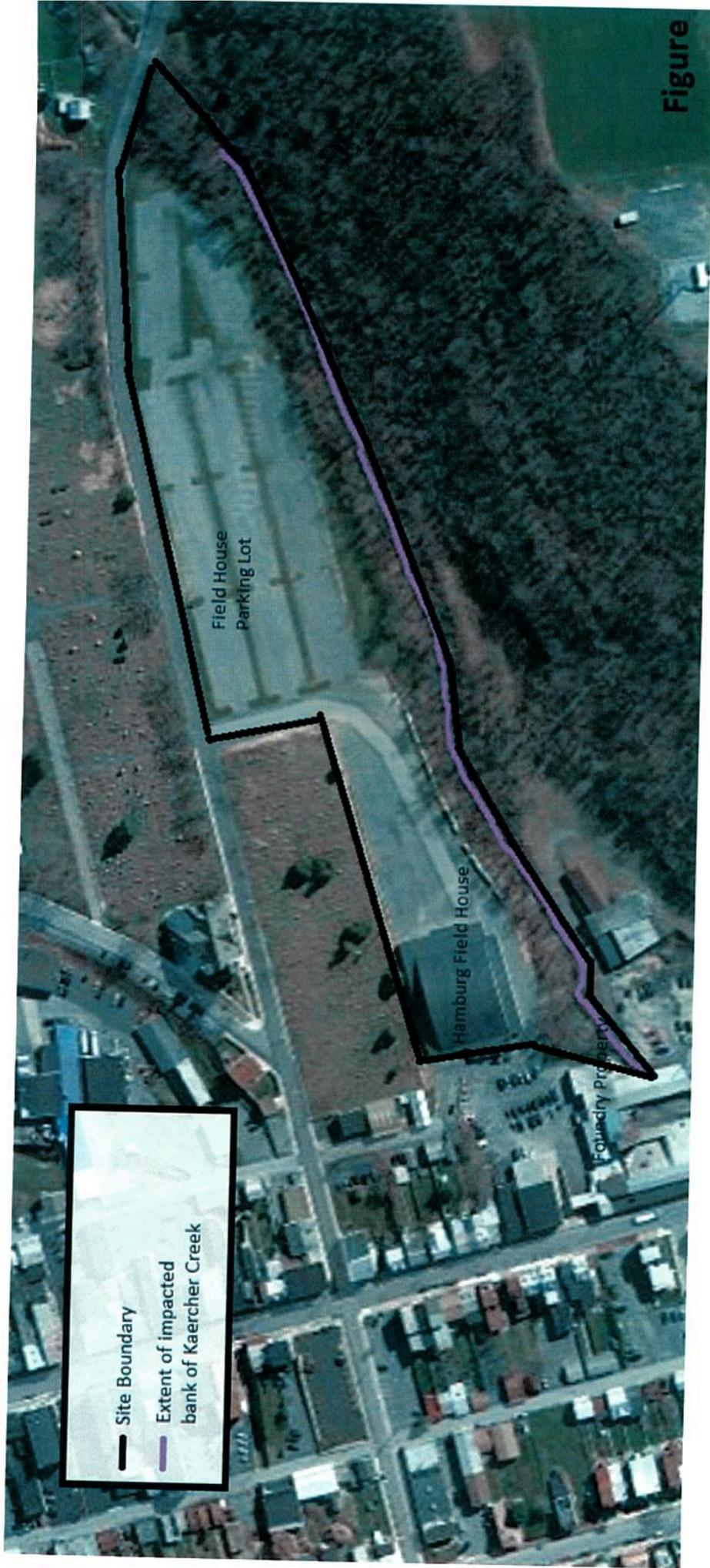
<sup>1</sup> Direct Costs include direct extramural and direct intramural costs. Indirect Costs are calculated based on an estimated indirect cost rate expressed as a percentage of site-specific direct costs, consistent with the full cost accounting methodology effective October 2, 2000. These estimates do not include pre-judgment interest, do not take into account other enforcement costs, including Department of Justice costs, and may be adjusted during the course of a Removal Action. The estimates are for illustrative purposes only and their use is not intended to create any rights for responsible parties. Neither the lack of a total cost estimate nor deviation of actual costs from this estimate will affect the United States' right to cost recovery.

6. Email correspondence of October 11, 2018 from Troy Hatt, Fire Code Official/Fire Marshal/Plans Examiner, Township of Spring, Borough of Wyomissing;
7. Memo to File, Documentation of Hamburg Kaercher Creek Fieldhouse – Bank Erosion Damage Evaluation – Photo Documentation and XRF Data, August 14, 2018;
8. PADEP representative David Hrobuchak’s email of September 20, 2018.

Because conditions at the Hamburg Kaercher Creek Site meet the removal action requirements of the NCP, I recommend your approval of the proposed Removal Action. The total Removal Action Project Ceiling, if approved, will be \$14,587,677. Of this, an estimated \$11,560,320 comes from the Regional Removal Allowance. Please indicate your approval or disapproval below.

Action by the Approving Official:

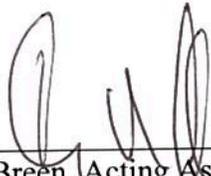
I have reviewed the above-stated facts and based upon those facts and the information compiled in the documents described above, I hereby determine that the release or threatened release of hazardous substances at and/or from the Site presents or may present an imminent and substantial endangerment to the public health or welfare or to the environment. I concur with the recommended removal action as outlined.







**APPROVED:** \_\_\_\_\_



Date 4/16/2019

Barry N. Breen, Acting Assistant Administrator  
Office of Land and Emergency Management

**DISAPPROVED:** \_\_\_\_\_

Date \_\_\_\_\_

Barry N. Breen, Acting Assistant Administrator  
Office of Land and Emergency Management

**ATTACHMENTS:**

1. Figure 1
2. Federal and State ARARs
3. Enforcement Confidential Memo

## Schlieger, Brian

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**From:** Ronquillo, Manuel  
**Sent:** Thursday, March 7, 2019 1:30 PM  
**To:** Kulpan, Bruce  
**Cc:** Schlieger, Brian  
**Subject:** RE: For Review: Action Memo for Hamburg Kaercher Creek Site (R3)

Brian,

My apologies for not getting back to you sooner on this. I spoke with Bruce yesterday, and we have no concerns with this moving forward. Thanks.

Manuel Ronquillo  
Ph: (202) 564-6065

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**From:** Kulpan, Bruce  
**Sent:** Thursday, February 28, 2019 10:59 AM  
**To:** Ronquillo, Manuel <Ronquillo.Manuel@epa.gov>  
**Cc:** Schlieger, Brian <schlieger.brian@epa.gov>; Kulpan, Bruce <Kulpan.Bruce@epa.gov>  
**Subject:** FW: For Review: Action Memo for Hamburg Kaercher Creek Site (R3)

Hi Manuel,

If you could please the review of the attached Enforcement Addendum to this ceiling increase for \$10 million and contact the R3 case attorney if you have any questions regarding the regions enforcement strategy for this site.

When you are finished reviewing the enforcement attachment please schedule half an hour with me to discuss your findings before sending a response to OEM. I am also available if you would like to discuss the Enforcement Addendum during your review.

Thanks,

Bruce

Bruce Kulpan  
Chief, Regions 3, 4 & 8 Branch  
Regional Supprt Division  
Office of Site Remediation Enforcement (Mail Code-2271A)  
1200 Pennsylvania Ave., N.W. (Room-WJC 5206)  
Washington, DC 20460  
202 564-4252 (Office Line)

This message is CONFIDENTIAL, and may contain legally privileged information. If you are not the intended recipient, or believe you received this communication in error, please delete it immediately, do not copy, and notify the sender. Thank you

**From:** Schlieger, Brian  
**Sent:** Thursday, February 28, 2019 10:23 AM  
**To:** Kulpan, Bruce <Kulpan.Bruce@epa.gov>  
**Cc:** Baldwin, Mark <Baldwin.Mark@epa.gov>  
**Subject:** FW: For Review: Action Memo for Hamburg Kaercher Creek Site (R3)

Bruce, please find the Hamburg Kaercher Creek AM for OSRE consultation, since it is increasing by \$10 MM. Sorry for the size of the attachments, but the site has been around since the early 90s and it is somewhat complex. Please let me know if you need anything additional from the Region.

Thanks,  
Brian

**From:** Baldwin, Mark  
**Sent:** Tuesday, February 19, 2019 9:59 AM  
**To:** Tyner, Lee <tyner.lee@epa.gov>  
**Cc:** Schlieger, Brian <schlieger.brian@epa.gov>  
**Subject:** For Review: Action Memo for Hamburg Kaercher Creek Site (R3)

Lee,

Attached, for your review, is the draft action memo (AM) for Hamburg Kaercher Creek Site located in Hamburg, PA from Region 3. The AM is requesting additional funding of \$9.26 million to address the deterioration of contamination controls from a previous removal actions at the site as well as addressing newly discovered lead contamination. An additional complexifier for the proposed removal action is that site is located nearby the former Price Battery Plant site, which is an NPL site listed for lead contamination.

As explained by R3, and noted in the AM, the delineation between the remedial cleanup and the removal actions is based on the deposition of the lead. Remedial has address all aerial deposited lead contamination while the removal program has addressed contamination attributable to lead battery debris. The lead contamination at the Kaercher Creek Site, the area subject to this AM, has been determined to be from lead battery debris.

In addition to the draft AM, I have attached the previous AMs for the Hamburg Kaercher Creek Site (note that there was a "change in scope" at the site during a previous removal action) as well as the enforcement confidential memo. As you know, the memo will need to be approved by OLEM AA (currently Barry Breen as the Acting AA) and thus SWERLO's leadership will need to signoff and OSRE will also get a chance to review.

Once you get a chance to look over the package please let me know when you might be able to complete your review.

Regards,

Mark Baldwin  
Preparedness and Removal Team  
U.S. EPA, Office of Emergency Management  
Desk: 202-564-4351  
Cell: 202-809-5911

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**ATTACHMENT 5 – CHANGE OF SCOPE MEMO–MARCH 2020**

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION III  
1650 Arch Street  
Philadelphia, Pennsylvania 19103-2029

MAR 16 2020

**SUBJECT:** Request for a Change in Scope of Work for a Removal Action at the Hamburg Kaercher Creek Site, Hamburg PA

**FROM:** Todd Richardson, On-Scene Coordinator  
Western Response Section (3SD32)

Handwritten signature of Todd Richardson in blue ink, with "for TK" written below it.

**TO:** Paul Leonard, Acting Director  
Superfund and Emergency Management Division (3SD00)

**THRU:** Fran Burns, Chief  
Western Response Section (3SD32)

Handwritten signature of Fran Burns in blue ink.

Mike Towle, Branch Chief  
Preparedness and Response Branch (3SD30)

Handwritten signature of Mike Towle in blue ink.

## I. PURPOSE

The purpose of this Action Memorandum (Memorandum) is to request approval for a change in the Scope of Work set forth in the *Request for Additional Funding and a Change in Scope for a Removal Action at the Hamburg Kaercher Creek Site in Hamburg, Berks County, Pennsylvania*, as approved April 30, 2019 (2019 Action Memorandum), which is attached as Attachment "A." The requested change in Scope of Work is based on the need to address an additional regulated waste stream, which was not identified during the development of the original Scope of Work set forth in the 2019 Action Memorandum. Therefore, this Memorandum shall serve as a supplement to the 2019 Action Memorandum.

This Memorandum is intended to add to the Scope of Work in the 2019 Action Memorandum, Section VI., A., Proposed Actions. In addition to activities associated with the excavation and disposal of lead contaminated soil and debris, as provided in the 2019 Action Memorandum, the approval of this change in the Scope of Work would allow for the excavation and disposal of PCB remediation waste, as defined in 40 C.F.R. § 761.3.

## II. SITE DESCRIPTION AND BACKGROUND

The Hamburg Kaercher Creek Site (Site) is located in Hamburg, Pennsylvania. The Site consists of portions of Kaercher Creek (Kaercher Creek or Creek), a stream that runs through Hamburg Borough, in close proximity to several lead sites in Hamburg. Battery wastes had been disposed of at several locations along the Creek, resulting in lead contamination on Creek banks and in the sediments. The 2019 Action Memorandum included

as part of the Site a paved parking area located at the Hamburg Fieldhouse, located near the Creek. The parking area drained into Creek. As set forth in the 2019 Action Memorandum, Section II., lead contamination has occurred at the Site due to the disposal of lead contaminated battery casings on properties along Kaercher Creek, and from downstream migration of lead from other disposal areas and the former Price Battery Plant.

The information below provides an update since the 2019 Action Memorandum.

EPA commenced the removal activities (Removal Activities) set forth in the Scope of Work, Section VI.A. of the 2019 Action Memorandum on April 16, 2019. During the excavation operations conducted as part of the ongoing Removal Activities, buried, and partially buried drums were encountered in the northeast work area of the site, in a flat area adjacent to the bank. These drums were rusted, and some were in deteriorating conditions. To date, ten drums have been excavated and staged for disposal. All the drums contained a solidified sandy, waxy material. Although the material was solid and appeared to be inert, as a precaution, the On Scene Coordinator (OSC) directed EPA's Emergency and Rapid Response Services contractor to perform disposal sampling on the drummed material. The analysis revealed a total PCB concentration of 537 parts per million (ppm). This waste is considered PCB remediation waste, as defined in 40 C.F.R. § 761.3, and must be disposed of in accordance with 40 C.F.R. § 761.61. While the discovery of these buried drums is considered incidental to the cleanup of lead contamination at the Site, based on the presence of these drums of PCB-containing materials, it has become necessary to incorporate PCB sampling and disposal into the approved Scope of Work for this removal action.

### **III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT**

See 2019 Action Memorandum, Section III. In addition to the information contained in Section III of the 2019 Action Memorandum, the information below provides an update since the 2019 Action Memorandum.

Section 300.415 of the NCP lists the factors to be considered in determining the appropriateness of a Removal Action. Paragraphs (b) (2) (i), (iii), (iv), and (vii) of Section 300.415 directly apply as follows to the conditions as they exist at the Hamburg Kaercher Creek Site.

- A. 300.415 (b) (2) (i) "Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants"

Polychlorinated biphenyls (PCBs) are a hazardous substance. The drum waste is considered PCB remediation waste, as defined in 40 C.F.R. § 761.3, and must be disposed of in accordance with 40 C.F.R. § 761.61. Trespassers and or visitors could be exposed to contaminated soil and PCB containing materials in deteriorating drums, encountered at or near the ground surface at the site.

- B. 300.415 (b) (2) (iii) "Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release"

During excavation operations, as part of the ongoing removal action, the OSC observed several deteriorating drums at the surface or partially buried at the site. A sample of the material

contained in the drums was analyzed, and determined to contain a total PCB concentration exceeding 500 ppm (537 ppm). This waste is considered PCB remediation waste, as defined in 40 C.F.R. § 761.3, and must be disposed of in accordance with 40 C.F.R. § 761.61. It is likely that additional drums, and or PCB containing materials are present at the Site.

- C. 300.415 (b) (2) (iv) “High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface that may migrate.”

PCBs were detected at concentrations exceeding the TSCA PCB cleanup level of 1 mg/kg in soil samples collected at the site. The area where the PCB contamination has been encountered is adjacent to Kaercher Creek. The proximity of PCB contamination to the creek could result in migration of PCB contamination off site via surface water run-off and creek flow.

#### **IV. ENDANGERMENT DETERMINATION**

See 2019 Action Memorandum, Section IV. In addition to the Endangerment Determination provided in the 2019 Action Memorandum, the Site contains PCB remediation waste, a CERCLA hazardous substance, which release, if not addressed by implementing the response action set forth in this Memorandum, may present an imminent and substantial endangerment to the public health, welfare or the environment.

#### **V. EXEMPTION FROM STATUTORY LIMITS**

See 2019 Action Memorandum, Section V. No additional exemptions are sought in this Memorandum.

#### **VI. PROPOSED ACTIONS AND ESTIMATED COSTS**

This Memorandum will amend the 2019 Action Memorandum by adding as a new line item to Section VI. A., Proposed Actions, as follows:

15. Stage and dispose of PCB remediation waste over 1 ppm, in accordance with 40 C.F.R. § 761.61, when/if encountered during excavation operations.

To date the following actions have been completed in accordance with the 2019 Action Memorandum:

- a. Obtained access agreements to conduct removal operations from the Hamburg Fire Company, Hamburg Manufacturing, and from two private land owners of properties adjacent to the active work areas;
- b. Set up of command post and staging areas;
- c. Clearing and grubbing operations of approximately 1,000 linear feet of the north bank of Kaercher Creek;
- d. XRF screening to confirm and further delineate lead contamination on the north bank of Kaercher Creek;
- e. Excavation of lead contaminated soil and debris – from approximately 23,500 square feet of creek bank and areas adjacent to the creek bank on the north area of

the Site;

- f. Disposal sampling, field screening of soils and debris excavated on site;
- g. Disposal of approximately 1,500 tons of RCRA non-regulated waste soil and debris

Approximately 65% of the creek bank, site restoration, and any necessary repair to the fieldhouse parking, lot including surface water drainage features, remains to be addressed as part of this removal action.

The proposed Change in Scope set forth in this Memorandum will result in no increase in the project ceiling as set forth in the 2019 Action Memorandum.

**VII. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN**

See 2019 Action Memorandum, Section VII.

**VIII. OUTSTANDING POLICY ISSUES**

There are no outstanding policy issues pertaining to the Site.

**IX. ENFORCEMENT STATUS**

See 2019 Action Memorandum, Section VIII. An updated Confidential Enforcement Addendum is attached as Attachment "B."

**X. RECOMMENDATION**

Conditions at the Site continue to meet the criteria for the CERCLA Section 104(c), 42 U.S.C. § 9604(c), emergency exemption, and I recommend that you approve a change in Scope of Work to include the staging and disposing of waste containing PCBs over 1 ppm, with no increase in the total project ceiling.

This Memorandum is based on the Administrative Record for the Site. By signing this Memorandum, you are also hereby establishing the documents listed below as the Administrative Record, Supporting the issuance of this Memorandum, pursuant to Section 113 (k) of CERCLA and EPA delegation 14-22.

1. Site Pollution Reports 50 through 55
2. Drum Disposal Sampling Analytical Results, January 2020

Approved:   
Paul Leonard, Acting Division Director  
Hazardous Site Cleanup Division

3-16-20  
Date