

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Hemlock Street Battery Site - Removal Polrep
Final Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region IV

Subject: POLREP #4
Final Pollution Report
Hemlock Street Battery Site
B4E8
Tampa, FL
Latitude: 27.9377824 Longitude: -82.4376082

To: Jim Webster, USEPA R4 ERRB

From: Chuck Berry, On Scene Coordinator

Date: 9/2/2013

Reporting Period: May 17 - August 23, 2013

1. Introduction

1.1 Background

Site Number:	B4E8	Contract Number:	
D.O. Number:		Action Memo Date:	
Response Authority:	CERCLA	Response Type:	Time-Critical
Response Lead:	EPA	Incident Category:	Removal Assessment
NPL Status:	Non NPL	Operable Unit:	
Mobilization Date:	4/16/2013	Start Date:	6/26/2012
Demob Date:	7/18/2013	Completion Date:	8/23/2013
CERCLIS ID:	FLN000410641	RCRIS ID:	
ERNS No.:		State Notification:	
FPN#:		Reimbursable Account #:	

1.1.1 Incident Category

Time-Critical Removal Action

1.1.2 Site Description

The Hemlock Street Battery Site (the Site) abuts the former Musselman Steel Corporation, formerly Musselman Steel Fabricators, Inc. (Musselman Steel). The site is currently owned by TECO Energy, a local utility corporation, and is part of their overhead transmission lines.

The area around the site is a mix of heavy industrial/commercial industries of Tampa, and includes a rail yard and the Port of Tampa. A petroleum tank farm and a petroleum pipeline terminal lie directly north of the site. Homes are located approximately 300 feet northeast of the Site, but a group of transients live directly next to the site, in a dilapidated corrugated tin shack.

1.1.2.1 Location

The Site is located at 1710 South 20th Street in Tampa, Hillsborough County, Florida. The Site is located on Hookers Point, a peninsula bound by McKay Bay to the east, Sparkman Channel to the west, and Hillsborough Bay to the south.

1.1.2.2 Description of Threat

The site was covered with a layer of lead-contaminated soil and debris from an illicit battery-cracking operation. The majority of contaminated soil was located within a poorly maintained fenced area with at least one observed breach that could be accessed by trespassers who could then be exposed to the soil. Anyone entering the Site may have been exposed via inhalation of airborne dust, inadvertent ingestion of contaminated soil, and direct contact with the contaminated surface soils. Off-site migration of lead via erosion or airborne dust may have led to the exposure of nearby residents.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

In April 1992, the Environmental Protection Commission of Hillsborough County (EPC) received an anonymous complaint regarding the Musselman Steel Site. During an investigation by EPC, large amounts of solid waste including empty drums and crushed battery casings were observed throughout the Site. These battery casings extended onto the TECO-owned property.

During the week of November 17, 2009, the United States Environmental Protection Agency (EPA) Region 4

Emergency Response and Removal Branch (ERRB) mobilized the Superfund Technical Assessment and Response Team (START) to perform a Removal Site Evaluation (RSE) of Hemlock Street Battery Site. All activities were undertaken pursuant to Section 300.410 of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). The purpose of the RSE was to delineate previously identified lead and arsenic contamination in the soil. A portable x-ray fluorescence (XRF) instrument was employed during field screening down to a maximum depth of 12 inches below ground surface (bgs).

Soil was screened for lead and arsenic at a total of 22 (11 surface and 11 subsurface) locations from 2 grids. Four samples were submitted to a laboratory for XRF confirmation purposes.

Confirmatory laboratory results for lead ranged from 2,250 mg/kg to 23,100 mg/kg. Analytical results for lead exceeded EPA's industrial/commercial removal action level (RAL) for lead of 2,000 mg/kg.

Confirmatory laboratory analytical results for arsenic ranged from 3.5 mg/kg to 18.8 mg/kg. The analytical results for arsenic did not exceed EPA's industrial/commercial removal action level (RAL) for arsenic of 177 mg/kg.

In 2010, EPA initiated a fund-lead CERCLA removal action on the Musselman Steel property. However, the TECO property was not included in the scope of the fund-lead removal.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

2.1.2 Response Actions to Date

On April 15, TECO mobilized Envirotek (construction crew) and ECT (technical consultant) to the site to remove soil with lead levels greater than 1,400 milligrams per kilogram (mg/kg), the Florida Department of Environmental Protection's Soil Cleanup Target Level. Envirotek's first task was to remove the debris scattered throughout the site. Envirotek used an excavator and skid-steer to remove and carry debris to several piles. Envirotek also built a containment area for mixing diammonium phosphate (DAP) with contaminated soil, and they placed the debris in this cell to treat it prior to off-site shipment. However, the large amount of debris quickly filled the containment and debris piles spilled out into the rest of the site. Rain caused most of the debris to be muddy, and Envirotek was concerned about the efficacy of the proposed treatment process with so much soil on the debris. A rotating screen was brought in to remove the muddy soil from the debris. The debris included railroad ties, fencing, stumps, and large amounts of battery casings and chips. The casings and chips were segregated separately.

During debris removal and segregation, it was noted that the initial surface of the lot was incredibly uneven due to the piles of debris. It was unclear in most areas where the debris ended and the ground surface began. Additionally, the large amount of debris taken out of the ground further altered and obscured the original ground surface. This made achievement of a 2-foot excavation functionally impossible as one could not tell the original datum from which to measure. TECO agreed to over-excavate to account for the uneven surface.

It took approximately two weeks to complete debris segregation. Several hundred cubic yards of debris were generated, and the parts heavily-laden with battery chips were set aside for intensive treatment with DAP prior to sampling for off-site disposal. After testing for Toxicity Characteristic Leachate Procedure (TCLP), about half of the debris failed initial testing and required further treatment or segregation.

During site set-up activities, TECO's surveyors identified two swaths of property on the north and south sides of the lot that were identified as City of Tampa property for a planned street and alleyway (at one time the area was planned for a residential subdivision). There was some confusion as to the actual ownership of the property, with the City claiming TECO still owned the land and TECO unsure of its legal obligation and authority to perform the removal action on these two strips of land. EPA's lawyers worked with TECO and City officials to resolve the issue. The City abandoned its claim to the southern right of way a number of years ago after it was realized the residential development would never occur and the proposed street would never be built. Thus, the property reverted wholly to TECO. However, the abandonment was never recorded in the deed book, and TECO was never notified. Based on this evidence, TECO assumed control of the 25-foot section to the south and agreed to excavate the entire 10-foot area to the north under its access agreement with that property owner, the Rodriguez estate.

During the week of April 22, Envirotek began soil excavation, removing soil from 2 cells, B3 and C3, and treated the soil with DAP. TECO began shipping off soil and debris the week of April 29. As the removal progressed, Envirotek ceased wholesale excavation of grids and instead allowed excavation to be guided by XRF readings in real time.

During the next several weeks, TECO's contractor continued to excavate, treat, sample, and ship off soil. However, delays in debris treatment and disposal caused a tightening of available space, which hindered and slowed down progress. Eventually, another screen was brought on site, and debris which did not initially pass TCLP was rescreened to remove additional soil and was retreated with DAP. Subsequent testing on the twice-treated debris showed the levels fell below the RCRA standards for nonhazardous waste. This debris was removed from the site and is included in the totals below.

Using the XRF to guide excavation in real-time, Envirotek was able to remove all of the surface contamination at the site. Although the original surface of the site was highly irregular, most of the contamination seemed confined to the first few feet of soil, less than 2 feet in most areas. In the few areas where contamination extended below the 2-foot level, TECO opted to remove the additional contamination as well as visible layers of battery chips and casings. Using this method, TECO effectively removed nearly all of the contaminated soil from the site, occasionally excavating to more than 5 feet below the original surface level. Because of this, TECO was not required to provide a barrier layer above any in situ

contamination deeper than 2 feet, nor was it required to provide 2 feet of clean backfill to serve as a cover for contaminated soil. What few small areas of contamination over 1,400 mg/kg remained were small (less than 25 square feet) and discontinuous. TECO opted to not bring in fill for most of the site, instead choosing to grade the remaining soil to prevent water from draining onto adjacent properties. By saving costs in backfill, TECO was able to remove a greater volume of contaminated soil from the site.

Once excavation neared completion, the OSC requested the excavated area be divided into 5 grids, and an exhaustive XRF survey of each grid was undertaken in the presence of the OSC. After XRF indicated the remediation goals were met, confirmation samples were collected. All samples passed analytical testing for total lead, with results of 1,100 ppm, 790 ppm, 290 ppm, 940 ppm, and 820 ppm, all below the site action level of 1,400 ppm.

Envirotek completed soil removal activities on June 17, 2013. Off-site disposal was completed on July 12, 2013, with the delivery of several piles of concrete and 2 empty steel gas cylinders to recycling facilities and shipment of railroad ties to the landfill.

Air monitoring and personal air sampling were performed by ECT throughout the removal action. After viewing the initial site set up, OSC Berry requested ECT place dust monitors at the east and north fence-lines, where the property abuts neighboring active parcels. These monitors remained in place throughout the removal. Personal dust air sampling data collected on the first 2 days indicated dust levels were well over the exposure limits. Envirotek brought in a water truck to spray down the soil, and no future readings were over the action levels. Additionally, Tampa experienced an unusually wet and humid spring and summer during 2013, and the nearly daily rain kept the dust levels down but hampered overall progress. No additional sampling indicated a need for respiratory protection, and perimeter monitoring did not show off-site fugitive dusts over the site action levels at any time during the removal action.

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

TECO was identified as a PRP based on their ownership of the property. It is not believed TECO caused the contamination to be released. TECO signed an AOC in 2012 and agreed to perform the removal action. Under the terms of the AOC, TECO was required to remove lead-contaminated soil from the property until the levels were below 1,400 mg/kg or a total excavated depth of 2 feet bgs was achieved. Any areas with lead levels above 1,400 mg/kg at the 2-foot bgs level were to be covered with 2 feet of clean backfill.

2.1.4 Progress Metrics

WASTE STREAM	QUANTITY	FACILITY
Lead-contaminated Soil	2,466.57 tons	Republic Waste / Cedar Trails Landfill
Creosote Timber	24.67 tons	Republic Waste / Cedar Trails Landfill
Concrete	36 cubic yards	Kimmins Recycling Corp.
Gas Cylinders	3 Cylinders	Trademark Metals Recycling
Tires	203 tires	C&M Mobile Tires, Inc.

2.2 Planning Section

2.2.1 Anticipated Activities

No additional response activities are anticipated at this time

2.2.1.1 Planned Response Activities

No additional response activities are anticipated at this time.

2.2.1.2 Next Steps

No additional response activities are anticipated at this time.

2.2.2 Issues

TECO's has removed all of the source material from the site, and there is currently no limitation on future use of the property.

2.3 Logistics Section

No information available at this time.

2.4 Finance Section

2.4 Finance Section

Under the terms of the AOC, TECO agreed to reimburse EPA for all past assessment costs as well as expenses incurred enforcing the AOC. As of the writing of this PolRep, TECO is in compliance with this element of the AOC. TECO reports that it has spent \$490,735 in response costs.

2.5 Other Command Staff

No information available at this time.

3. Participating Entities

TECO consulted with the Florida Department of Environmental Protection (FDEP) throughout the removal process. FDEP performed a site walk through with the OSC upon the completion of removal activities.

4. Personnel On Site

No information available 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.

POLREP #4 Last Updated 9/13/2013