

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Lake Erie Smelting Corp Removal Action (BB) - Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region II

Subject: POLREP #6
Excavations Re-Commence
Lake Erie Smelting Corp Removal Action (BB)
A24R
Buffalo, NY
Latitude: 42.8826144 Longitude: -78.8576690

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From: Keith Glenn, OSC/Environmental Scientist
Date: 4/30/2020
Reporting Period: December 7, 2019 through April 24, 2020

1. Introduction

1.1 Background

Site Number:	A24R	Contract Number:	
D.O. Number:		Action Memo Date:	
Response Authority:	CERCLA	Response Type:	Time-Critical
Response Lead:	PRP	Incident Category:	Removal Action
NPL Status:	Non NPL	Operable Unit:	
Mobilization Date:	9/16/2019	Start Date:	9/16/2019
Demob Date:		Completion Date:	
CERCLIS ID:	NYN000206590	RCRIS ID:	
ERNS No.:		State Notification:	08/14/2019
FPN#:		Reimbursable Account #:	

1.1.1 Incident Category

Due to the release of CERCLA hazardous substances, a time-critical removal action is necessary to address threats associated with the conditions at the Lake Erie Smelting Corp. Site (Site). The United States Environmental Protection Agency (EPA) entered into an Administrative Settlement Agreement and Order on Consent (AOC) with a court-appointed receiver, who is facilitating the removal of contaminated soil identified in the Order and generated Work Plans. Contractors for the receiver mobilized to the Site on September 16, 2019 to begin the work specified in the AOC. Field operations were temporarily suspended for the winter/cold season on November 26, 2019. Personnel and resources returned to the Site and excavations re-commenced on April 20, 2020. EPA is providing oversight of the removal action.

1.1.2 Site Description

The Site was included on a list of hundreds of locations nationwide where secondary lead smelting or alloying may have been conducted between 1931 and 1964, according to entries in historical trade publications. The list was originally compiled by William P. Eckel in a doctoral dissertation for George Mason University, and the research was summarized in the article entitled, "Discovering Unrecognized Lead-Smelting Sites by Historical Methods" (Eckel et al, 2001). In total, 89 of the sites on this list are in New York State. The New York State Department of Environmental Conservation (NYSDEC) assessed the majority of these sites and ultimately referred 40 of these sites, including the Lake Erie Smelting Corp. Site, to EPA for further assessment.

Samples collected as part of the Removal Site Evaluation (RSE) and further delineation activities, indicate a release of lead, cobalt and copper, all CERCLA designated hazardous substances, has occurred at the Site. Based on available information, a removal action is warranted to mitigate threats to public health or



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welfare or the environment associated with the release of hazardous substances.

The property historically located at 29 Superior Street was occupied by a junkyard owned and operated by Hyman Goldman in 1925. By 1930 the business changed names to Goldman and Sons junkyard. Goldman and Sons Smelter operated from approximately 1935 to 1940 and Lake Erie Smelting from 1941 to 1959. By the mid-1960s all businesses and residences had been removed and the area was leveled. Lake Erie Smelting moved operations to 127 Fillmore Avenue and 29 Superior Street no longer exists.

Lake Erie Smelting conducted secondary lead smelting operations at 29 Superior Street. Secondary lead smelting is the recovery of lead metal and alloys from scrap, including lead-acid batteries, lead cable coverings, plumbing and wheel weights. The chief alloy recovered by secondary smelters was antimonial lead. In addition to batteries, sources of scrap potentially included Babbitt metal, which are a group of lead-tin-antimony alloys used as antifriction metals in wheel bearings. Secondary lead smelting produced a number of wastes that may have become environmental contaminants, including air emissions and solid waste. Concentrations of lead in soil near stationary smelting sources can be elevated and may persist in surface soils. Given the past workings of the land, elevated concentrations of lead could be found at deeper locations as well.

1.1.2.1 Location

The Lake Erie Smelting Corporation is the location of a former secondary lead smelter that occupied approximately 13,000 square feet at the historical address of 29 Superior Street in Buffalo, Erie County, New York. The facility was in operation from approximately 1935 through approximately 1959. The smelter was surrounded by residential properties until the neighborhood was razed, leveled and redeveloped for residential apartment living. Superior Street was removed and no longer exists. The footprint of the former facility lies north of Clinton Street and west of Jefferson Street, within the Towne Gardens apartment complex. The footprint of the former smelter is now occupied by two residential apartment buildings.

The Town Gardens apartment complex is located at 440 Clinton Street (Tax Map ID: 111.15-1-3) and consists of 36 buildings on approximately 18 acres of land. With the exception of a rental office, all buildings are for residential use. Approximately 360 individual apartment units house people of varying demographics including infants, children, women of child-bearing age and the elderly. Housing stock varies as the turnover rate is relatively high. The housing units are surrounded by grass-covered lawns, concrete sidewalks and asphalt-paved parking lots. The Towne Gardens apartment complex is bounded to the south by Clinton Street, to the east by Jefferson Street and to the west by Hickory Street. Residential properties line all of these streets. Byrd and McNeely Way bound the property to the north, beyond which is a partially vacant shopping center and residential properties.

1.1.2.2 Description of Threat

Findings of the removal assessment field work indicate that there has been a release of CERCLA-designated hazardous substances as defined in Section 101(14) of CERCLA, 42 U.S.C. § 9601(14), in several locations on and near the Site. The Site is a "facility" as defined under Section 101(9) of CERCLA.

It should be noted that because secondary smelter facilities typically only process a limited number of metals to generate specialized alloy products, rather than a wide variety of metals, it is characteristic for secondary lead smelter emissions to contain lead, antimony, tin and arsenic. Because the former smelting facility potentially utilized, manufactured, recycled or retort solder and battery plates, it is likely that any emissions related to the former operations at this facility would also include the constituents of other metals including cobalt, copper, lead, antimony and tin.

The historic footprint of the smelter facility includes residential dwellings with soil that contains lead levels which exceed the EPA Removal Management Level (RML) in every depth interval that was sampled. In the 12 sample locations at or near the footprint of the historic facility, lead was present in samples at concentrations up to 4,100 mg/kg in the 0-1 inch interval, up to 570 mg/kg in the 1-6 inch interval, up to 7,400 in the 6-12 inch interval, up to 76,000 mg/kg in the 12-18 inch interval and up to 10,000 in the 18-24 inch interval. In addition, elevated concentrations of cobalt were detected in samples collected at or near the former smelter footprint. Cobalt was detected at a concentration of 180 mg/kg in sample location SS010 in the 0-1 inch interval and 220 mg/kg in the 1-6 inch interval. Concentrations of cobalt were also detected at 220 mg/kg at location SS009 in the 6-12 inch interval. Exposed soil was observed throughout the Towne Gardens apartment complex during the September 2015 Site visit and sampling event. During the sampling event, children and other sensitive populations were observed walking, playing and sitting in bare soil throughout the apartment complex, including the footprint of the former smelting facility.

Direct contact with elevated levels of heavy metals within the upper 12 inches of soil may occur through common recreational activities, gardening and when children touch or dig into contaminated soil. Contaminated soil may be ingested or tracked inside the apartments on footwear or clothing. Soil may also be transported off-site when residents traverse the complex to go to the shopping center, stores, bus stops or school buses. In addition, contaminated soil may be disturbed and become airborne and available for inhalation as a result of gardening, recreational activities or general disturbance of the material.

Contact with the contaminated soil, or inhalation of contaminated soil particles, may present a health risk to those utilizing the outdoor areas of the apartment complex, particularly young children. The effects of exposure to lead are the same whether it enters the body through breathing or swallowing. The main target for lead toxicity is the nervous system, both in adults and children. Lead is a cumulative poison where increasing amounts can build up in the body, eventually reaching a point where symptoms and disability occur. Particularly sensitive populations are children and women of child-bearing age, because of the fetal transfer of lead. Cognitive deficits are associated with fetal and childhood exposure to lead. An increase in blood pressure is the most sensitive, adverse health effect from lead exposure in adults.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

EPA's Pre-remedial Site files, which included a Pre-Comprehensive Environmental Response, Compensation and Liability Information System Screening Form for the Site as well as historic city directories and Sanborn maps, were reviewed as part of the RSE. In addition, an internet search for historic articles, maps and photographs was conducted, and historic aerial photographs and online Erie County property records were reviewed. On September 15, 2015, the Removal Action Branch (RAB) conducted an initial Site reconnaissance. Exposed soil was observed throughout the apartment complex, including directly in front of apartment entrance areas. Vegetable gardens were observed in front of several apartments. School buses pickup and drop-off children along Clinton and Jefferson Streets, causing kids to traverse the apartment complex. Following school hours, children were observed playing in the grassy

areas, dirt patches, along the sidewalks and within the parking areas. Pregnant women and those of childbearing age were observed walking the grounds and relaxing on stoops. Elderly people were also observed relaxing in chairs outside and along the entrance stoops. People and children of all ages were observed to be playing, relaxing and picnicking outside throughout the morning and afternoon hours.

On September 22 and 23, 2015, EPA RAB collected samples to determine whether operations of the former smelting facility resulted in a release of Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) designated hazardous substances to the surrounding residential neighborhood at levels above EPA RMLs. Fifty-two soil boring locations were selected throughout the Towne Gardens apartment complex, including the location of the former smelter. A total of 260 grab soil samples were collected, including quality assurance/quality control samples. Samples were collected at the following five intervals in the upper two feet of soil within each boring: 0-1 inch, 1-6 inches, 6-12 inches, 12-18 inches and 18-24 inches below grade surface (bgs).

From September 24 through September 26, 2015, all samples were field screened for metals, particularly lead, utilizing X-Ray Fluorescence (XRF) technology. Each sample was screened a minimum of 4 times for a minimum of 60 seconds per screen. An average concentration of lead was calculated for each sample. Of the 260 samples that were field screened using XRF, 83 had average lead concentrations above the EPA RML of 400 mg/kg for lead in residential soil. The range of concentrations above 400 mg/kg was between 403 and 28,096 mg/kg. Of the 83 samples with average lead concentrations above 400 mg/kg, 38 of these samples are located in or near the former smelter footprint (defined as SS009-SS018, SS020 and SS023).

A subset of the samples screened using XRF were sent for laboratory analysis to confirm data results. Samples were selected based on lead average, distance from the former smelter footprint, and observed use by the residents. A total of 91 samples, from 43 locations, were submitted to the EPA Region 2 Laboratory for TAL Metals, plus tin, analysis.

The analytical results indicate that lead is present at levels above the applicable EPA RML of 400 mg/kg at varying depths in 32 samples from 19 locations. RMLs are generic, chemical-specific concentrations for individual contaminants that may be used to support the decision for EPA to undertake a removal action. All sampling results were compared to the respective EPA RMLs. All sample locations and the associated lead results exceeding the EPA RML by depth are depicted in Attachment A of the RSE.

A total of 28 samples, from 12 locations in or near the former smelter footprint, were identified for sample collection and laboratory analysis, SS009-SS018, SS020 and SS023. Lead was detected at concentrations greater than 400 mg/kg in a total of 17 samples, representing 11 out of the 12 locations. Concentrations of lead within the former smelter footprint were detected between 660 and 76,000 mg/kg. In the 0-1 inch interval at location SS016, concentrations of lead were detected at 4,100 mg/kg. Lead was detected in the 1-6 inch interval, at 570 mg/kg, from sample location SS018. Lead was detected at a concentration of 7,400 mg/kg within the 6-12 inch interval at location SS011. All other lead exceedances were detected in the 12-18 or 18-24 inch intervals.

Lead was detected at concentrations ranging from 540 to 2,200 mg/kg in a total of 8 samples, from 5 locations west of the former smelter footprint, SS041, SS046, SS048, SS049 and SS052. Elevated concentrations of lead were found in samples from 3 locations east of the former smelter footprint, SS005, SS006 and SS019. At these locations, a total of 5 samples had lead concentrations detected between 470 and 4,700 mg/kg. All samples collected south of the former smelter footprint had concentrations of lead below the 400 mg/kg threshold.

In addition to the elevated lead detections, there were 4 antimony detections, 1 copper detection and 11 cobalt detections that exceeded the respective EPA RML. All exceedances of the antimony EPA RML of 94 mg/kg were from locations within the footprint of the former smelter, SS012 – SS014 and SS018 at intervals of 12-18 and 18-24 inches bgs. Concentrations of antimony exceedances were detected between 130 and 2,700 mg/kg. All exceedances for cobalt and copper were located outside of the former smelter footprint. With the exception of location SS034, cobalt exceedances were found in samples located downwind of the former smelter footprint, at locations SS001-SS003, SS009 and SS010. All exceedances of the cobalt EPA RML of 70 mg/kg were found within all interval depths at these locations and detected between 95 and 220 mg/kg. Copper was detected in one sample at a concentration in excess of the EPA RML of 9,400. This was in the 1-6 inch interval at location SS019 which is located to the east and downwind of the former smelter footprint. No other metal detections exceeded EPA RMLs.

Elemental correlation analysis was utilized to assess whether any of the elevated detections could be related to the former smelter facility. This analysis determines whether contaminant detections are from a singular source, are characteristic of a release from the historic, former smelter facility or are a result of the presence of exogenous (i.e., non-native) fill material. The main premise of the analysis is that soil from the same parental material has similar elemental correlations which group together, whereas non-native fill material would show varying degrees of dissimilar elemental relationships and exhibit scattered, ungrouped distributions. Elemental correlation analysis was completed for the 12 locations that are in or near the footprint of the former facility in addition to the upwind/downwind locations. This analysis indicated that there are strong correlations between lead, tin and antimony, as would be expected from historic smelting emissions, in numerous locations within or near the facility footprint and at several upwind and downwind locations.

To further delineate the soils at the apartment complex for heavy metals, in November 2016 EPA collected additional samples. Focus was placed on areas to the west and southwest of the former smelter footprint. Concentrations of lead were found as high as 1100 mg/kg within the first 12 inches of soil. Additionally, concentrations of lead were found as high as 4500 mg/kg within the 12 - 24 inch interval.

Working with the property owner to develop a cleanup strategy, a third-party consultant was obtained, and additional soil samples were collected in April 2018. This sampling event was performed to further delineate the Site for lead and generate a conceptual proposal for removal of contaminated soils. The results of this supplemental sampling event aided in the design of the removal strategy.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

Personnel and equipment re-mobilized to the Site and commenced with the excavation of contaminated

soil. Guidance was developed to take precautionary measures due to COVID-19 and all field personnel are practicing appropriate safety procedures. EPA is remotely monitoring the progress of operations.

2.1.2 Response Actions to Date

In early March 2020 discussions on the recommencement of field activities were held between EPA, the removal contractor, the court-appointed receiver and the property management company. On March 24th a proposed schedule of activities was provided to EPA, which included a survey of completed areas, delivery of equipment, sequence of excavations and restoration activities.

As the SARS-CoV-2 novel coronavirus disease, known as COVID-19, started to impact global operations, EPA continued to communicate with all parties involved in the removal action. Following receipt of the proposed work schedule, EPA confirmed that parties were comfortable with continuing field operations. On April 2nd and April 7th, as the virus further intensified throughout New York State, EPA again confirmed that the removal contractor, court-appointed receiver, Fannie Mae and the property management company all wished to proceed with field operations. To address concerns associated with COVID-19, EPA requested a specific amendment to the HASP providing guidance to safeguard contractors, workers, tenants and the general community. The amendment was finalized on April 13th and shared with all field personnel. Additionally, EPA recommended that notification of field activities be provided to all tenants. Since other, non-EPA related activities are being performed at the Site, such as roof replacement, exterior door exchanges and interior weatherizing, EPA requested the property management company generate a noticed inclusive of all activities. A notice was generated and finalized on April 11th. The notification was subsequently translated into Spanish. On April 13th the notice was hand delivered to all occupied apartments at the Site.

Working with the Regional Public Affairs Office, language was developed to inform governmental partners of the upcoming activities and the precautionary measures developed due to COVID-19. On April 13th EPA updated the NYSDEC, NYSDOH, HUD, ECDoH and the City of Buffalo with the schedule of activities.

On April 14th a subcontractor performed a utility service survey throughout Areas 8 and 10, the first areas to be excavated. An on-site meeting was held with technical and construction personnel on April 15th to review logistical issues of accessing and addressing Areas 8 and 10. Restocking of supplies and movement of the staging area was performed on April 16th. Heavy equipment and hygiene support services were delivered on April 17th.

Field personnel arrived on April 20th and focus was placed on reviewing health and safety protocols. Additional equipment arrived and timber mats were installed to access Area 10. Excavation of Area 10 commenced on April 21st and was completed by April 22nd. Area 10 was backfilled along with the application of topsoil. Sod was installed on April 23rd. Timber mats were installed for heavy equipment to access Area 8. Excavations of Area 8 commenced on April 24th.

EPA is monitoring field operations remotely. A system is being implemented where daily progress is verbally provided to EPA and weekly written reports are delivered electronically. Site photos are provided frequently, and video calls are conducted to tour the progress.

An air monitoring network, utilizing DustTrak units, is deployed whenever excavation activities are scheduled. The monitors determine particulate measurements in the air and alarm at a specified result. To date, no measurements have exceeded the criteria outlined in the Community Air Monitoring Plan (CAMP).

For actions that occurred prior to this reporting period, please refer to previous POLREPs.

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

EPA has identified PRPs for the Site. The current property owner is a PRP by default of ownership and worked with EPA to provide an interim measure to limit exposure of contaminants. EPA generated 104e Information Request letters to the current property owner, a successor company to Lake Erie Smelting Co. and the City of Buffalo. The City of Buffalo owned the property when redevelopment of the neighborhood took place around 1959. The smelting company moved operations when the City acquired the neighborhood and had all structures demolished and streets altered.

The court-appointed receiver is not being viewed as a PRP.

2.1.4 Progress Metrics

Data from calendar year 2020 disposal activity was not available at the time of publication.

<i>Waste Stream</i>	<i>Medium</i>	<i>Quantity</i>	<i>Manifest #</i>	<i>Treatment</i>	<i>Disposal</i>
Heavy Metals	Soil	2,393.47 tons	Various	Landfill	Town of Tonawanda Landfill

2.2 Planning Section

2.2.1 Anticipated Activities

Field operations will continue to excavate and remove contaminated soil from Area 8 along with the application of backfill, topsoil and sod.

2.2.1.1 Planned Response Activities

With the completion of Area 10, personnel will continue to excavate Area 8 and continue to follow the sequence of activities outlined in the schedule. Disposal of contaminated material will continue as excavations progress. All contaminated soil will be live-loaded as to prevent a need for stock-piling in the apartment complex.

2.2.2 Issues

Additional health and safety precautions are being implemented due to COVID-19.

2.3 Logistics Section

All logistics will be handled and monitored by the appropriate contractor or agency.

2.4 Finance Section

2.4.1 Narrative

An Action Memorandum has not been generated for this project. The receiver is performing a voluntary removal action through a CERCLA Section 106 Administrative Settlement Agreement and Order on Consent

2.5 Other Command Staff

2.5.1 Safety Officer

Safety will be everyone's responsibility. Contractors for the property owner or the receiver will be responsible for their own personnel during the activities discussed herein. Andrew Benkleman has been designated as the Site Safety Officer and can be reached at 716-551-6281.

An addendum to the HASP was finalized on April 13, 2020. Specific to COVID-19, the addendum highlighted social distancing, sanitation practices, disinfection of materials, dedicated use of supplies, individual ownership of hand tools, car-pooling practices, use of barriers and other preventative and protective measures.

2.5.2 Liaison Officer

The EPA OSC is performing the activities of a Liaison Officer. The OSC is coordinating operations between the receiver, contractors, Erie County Department of Health, New York State Department of Health and New York State Department of Environmental Conservation. A public availability session was held on September 12, 2019.

An electronic correspondence was provided to governmental partners notifying of the re-commencement of activities. The notification discussed the precautionary measures developed as a result of COVID-19. The correspondence was shared on April 13, 2020.

2.5.3 Information Officer

Michael Basile is the designated Community Involvement Coordinator for the Site and can be reached at 716-551-4410.

The Public Affairs Office assisted with generating the electronic correspondence to governmental partners that was shared on April 13, 2020.

3. Participating Entities

3.1 Unified Command

Unified Command has not been activated for this action.

3.2 Cooperating Agencies

Court-appointed receiver
Property management contractor for the receiver
Environmental consultant for the receiver
United States Environmental Protection Agency
Erie County Department of Health
New York State Department of Environmental Conservation
New York State Department of Health
Department of Housing and Urban Development

4. Personnel On Site

The receiver has several contractors operating on-site.
The remediation contractor has 7 people at the Site.
EPA has one OSC dedicated to field operations, operating remotely.

5. Definition of Terms

Definition of Terms

AOC - Administrative Settlement Agreement and Order on Consent

AM - Action Memorandum, the decision document requesting funding for a removal action

CAMP - Community Air Monitoring Plan

CERCLA - Comprehensive Environmental Response, Compensation and Liability Act, commonly known as Superfund

CIC - Community Involvement Coordinator

EPA - United States Environmental Protection Agency

ECDoh - Erie County Department of Health

HASP - Health and Safety Plan

HUD - Housing and Urban Development, a federal agency

ICS - Incident Command System that establishes a unified response between organizations

NYSDEC - New York State Department of Environmental Conservation

POLREP - Pollution Report that documents the activities taking place per the removal action

QAPP - Quality Assurance Project Plan

RAB - Removal Action Branch located within EPA Region

Receiver - A court-appointed entity to run the daily operations of the property

RML – Removal Management Levels for Chemicals used for determining removal action eligibility

RSE – Removal Site Evaluation is the assessment performed to determine removal eligibility
Site - Lake Erie Smelting Corp. Site which encompasses the Towne Garden apartment complex

SO – Safety Officer designated for the project

U.S.C. – United States Code citation of a specific law

XRF - X-Ray Fluorescence field instrument for measuring heavy metals, particularly in soil

6. Additional sources of information

6.1 Internet location of additional information/report

response.epa.gov/LESRemovalAction

6.2 Reporting Schedule

Additional Pollution Reports will be generated as field operations continue.

7. Situational Reference Materials

For additional information relating to this event, refer to the Pollution Reports at <https://response.epa.gov/LakeErieSmelting>.