U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Raritan Bay Slag Site - Removal Polrep

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region II

Subject: **POLREP #8**
Raritan Bay Slag Site
NJN000206276
Old Bridge, NJ
Latitude: 40.3879889 Longitude: -74.3352858

To: Tanya Mitchell, USEPA, Region 2, ERRD-SPB

From: Andrew L. Confortini, OSC
Date: 6/1/2015
Reporting Period: 5/21/2014 through 5/28/2015

1. Introduction

1.1 Background

Site Number:	A205	**Contract Number:**	EP-S2-10-03
D.O. Number:	0072	**Action Memo Date:**	12/3/2012
Response Authority:	CERCLA	**Response Type:**	
Response Lead:	EPA	**Incident Category:**	Removal Action
NPL Status:	NPL	**Operable Unit:**	Special Funding-Hurricane Sandy
Mobilization Date:	5/21/2014	**Start Date:**	11/27/2012
Demob Date:		**Completion Date:**	
CERCLIS ID:	NJN000206276	**RCRIS ID:**	
ERNS No.:		**State Notification:**	
FPN#:		**Reimbursable Account #:**	

1.1.1 Incident Category

On-going release of heavy metals into adjacent soil, sand and water. This release has impacted, and continues to impact nearby beaches and shoreline and sediment within this portion of Raritan Bay. The affected areas are currently being utilized by local fisherman, sun bathers and boaters.

1.1.2 Site Description

The Site is located in the Laurence Harbor section of Old Bridge and in Sayreville along the Raritan Bay. The Site includes Margaret's Creek, the Old Bridge Waterfront Park and the western jetty at the Cheesequake Creek Inlet. The portion of the Site that is situated in Laurence Harbor includes Margaret's Creek and the Old Bridge Waterfront Park. Margaret's Creek is open space consisting of wetland and upland areas. Portions of the upland area is reported to be filled with debris containing slag and battery carcasses. The Old Bridge Waterfront Park is made up of walking paths, a playground area, several public beaches, and three jetties, not including the two jetties at the Cheesequake Creek Inlet. The park waterfront is protected by a seawall, which is partially constructed with slag material. The western jetty at the Cheesequake Creek Inlet, and the adjoining waterfront area west of the jetty, contains slag as well. The slag was placed at the Site approximately 50 years ago. The seawall, jetties, beach area east of the Cheesequake Creek Inlet, and the western jetty at the Cheesequake Creek Inlet are popular fishing areas. The beaches east of the Cheesequake Creek Inlet and west of the seawall are the most popular for recreation.

EPA has conducted multiple sampling events at the site since 2008 under both the removal and remedial programs. The sampling activities included the collection of soil, sediment, water, biological, and waste samples along the seawall in Laurence Harbor, the western jetty at the Cheesequake Creek Inlet, the beaches situated near these two locations, and the developed portion of the park. Analytical results generated by EPA indicate that significantly elevated levels of lead and other heavy metals are present in the soils, sediment, and surface water in and around both the seawall in Laurence Harbor and the western jetty at the Cheesequake Creek Inlet. Analytical results for surface soil samples collected near the seawall were as high as: 142,000 mg/kg for lead, 12,900 mg/kg for antimony, 3,350 mg/kg for arsenic, and 3,590 mg/kg for copper. Soil samples collected on the western jetty at the Cheesequake Creek Inlet contained lead, at concentrations that ranged from 54,800 mg/kg to 198,000 mg/kg. The maximum concentrations of antimony, arsenic, and copper detected on the western jetty at the Cheesequake Creek Inlet were 3,120 mg/kg, 2,470 mg/kg, and 4,630 mg/kg, respectively. Nine of 13 soil samples collected in and around the seawall and the western jetty at the Cheesequake Creek Inlet exceeded the Resource Conservation and Recovery Act Toxicity Characteristic Leaching Procedure limit for lead (5 mg/l). The

TCLP results for the soil from the western jetty exceeded the limit by a magnitude of approximately 100 to 250 times.

Elevated levels of lead were also identified at several surface water locations on the first beach between the western end of the seawall and the first jetty in Old Bridge Waterfront Park. The average lead concentration of the four highest detections at this location was 1,365 ug/l, with a maximum lead concentration of 1,630 ug/l. Three activity-based water samples collected from the beach area situated between the western end of the seawall and the first jetty had an average total lead concentration of 1,179 ug/l, with a maximum total lead concentration of 1,450 ug/l.

Soil samples collected from upland areas in the Margaret's Creek area identified lead, antimony and arsenic at elevated concentrations.

Based on the findings noted above an emergency removal action was implemented by EPA at the site in April and May of 2009 to secure the site and demarcate areas that contained hazardous substances that presented a threat to public heath through direct contact

On October 29, 2012, Hurricane Sandy made landfall along the New Jersey coast. The storm surge and high winds caused catastrophic damage along the entire NJ coast. The Site which is located on the Raritan Bay was severely impacted by the storm. The storm surge resulted in severe erosion to the peninsula at Margaret's Creek, erosion of cap material at numerous locations along the top of the seawall, destruction of approximately 2,000 feet of security fence installed to demark contaminated from non contaminated areas, loss of signage notifying the public of health concerns associated with lead and deposition of thousands of tons of sand/debris from potentially contaminated areas onto previously uncontaminated areas that are used by the public for recreation. Similar results were observed within the Margaret's Creek portion of the Site.

As a direct result of the damage caused by Hurricane Sandy, Federal funding was provided to address the impacts caused by the storm to this Site. The Pollution Report and the costs incurred to take corrective action due to this event are included herein.

1.1.2.1 Location

1.1.2.2 Description of Threat

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

Following Hurricane Sandy, large amounts of sand, bundled rubber and fragments, and other general debris were found to be strewn within much of the Margaret's Creek area. Due to wind and rain action, previously documented surficial crushed battery casing material have been redistributed.

The overall approach to this Removal Action is to take the necessary steps to remove the crushed battery casing material to prevent further migration and environmental impact.

2.1.2 Response Actions to Date

The following removal action tasks were completed during this reporting period:

* Removal of residual debris from the closed beach (May 21-21, 2014, August 6-7, 2014 and May 19-20, 2015)
* Sampling to characterize surface soils in the Margaret's Creek portion of the Site was conducted by the Remedial Program using DESA resources to collect TRW samples;
* From September 29 through October 7, 2014, the Removal Program conducted surface soil delineation sampling within areas of concern (AOCs) and TRW locations identified by the Remedial Program. As part of the sampling program, areas where slag kettle bottoms were observed were also investigated and delineated;
* From December 15 through December 17, 2014, 70 exploratory test pits were installed within the Margaret's Creek property to determine if slag material was present. Besides the previously documented areas of slag, no additional slag material was identified;
* From March 30 through May 14, 2015, the excavation and disposal of crushed battery casing mixed with soil was conducted in four (4) of the eight (8) AOCs. Site operations were temporarily suspended on May 15, 2015 to evaluate other disposal options;
* On May 26, 2015, a Site inspection was conducted. During the inspection, at least 12 female snapping turtles were observed building nests and laying eggs, some of which are in the stockpiled soil. As a result, Site operations were suspended due to the environmental impact of additional mitigation work to the local ecosystem. Based on Site documents, Federal and State listed Threatened and Endangered Species/Sensitive Environments exist within the Margaret's Creek area. These include the eastern box turtle, Northern diamondback turtle, spotted turtle, Fowler's toad, swamp pink, Osprey and Indiana bat. Turtle nesting season is at its peak from late May through early June. The turtles are expected to hatch in 60 to 85 days.
* At this time, approximately 250 cubic yards of lead-contaminated soil is stockpiled and covered on-site pending off-site disposal.

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

2.1.4 Progress Metrics

Waste Stream	*Medium*	*Quantity*	*Manifest #*	*Facility*	*Disposal*
Non-Hazardous, Non-Regulated Debris	Storm Debris	69 tons	N/A	Bayshore Recycling, Inc., Keasby, NJ	Recycled (2013)
Non-Hazardous, Non Regulated Soil	Soil	150 tons	N/A	Cumberland County Solid Waste Complex, Millville, NJ	Landfill (2013)
Hazardous Soil, D008	Soil	1,677		Envirite of PA, York, PA and/or Republic Environmental Systems, Hatfield, PA	Treatment/Landfill (2015)

2.2 Planning Section

2.2.1 Anticipated Activities

2.2.1.1 Planned Response Activities

* Continue Margaret's Creek soil mitigation activities in the fall 2015, following the turtle hatch.
* Monitor the condition of polyethylene sheeting covering stockpiled soil and battery chips.

2.2.1.2 Next Steps

To be determined based upon Site conditions and pending discussions with the Remedial Program.

2.2.2 Issues

None at this time.

2.3 Logistics Section

No information available at this time.

2.4 Finance Section

No information available at this time.

2.5 Other Command Staff

No information available at this time.

3. Participating Entities

No information available at this time.

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.