

U.S. ENVIRONMENTAL PROTECTION AGENCY  
POLLUTION/SITUATION REPORT  
C & H Power Plant - Removal Polrep  
Final Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region V

**Subject:** POLREP #8  
Final  
C & H Power Plant  
  
Lake Linden, MI  
Latitude: 47.1940924 Longitude: -88.4073392

**To:**  
**From:** Andrew Maguire, OSC  
**Date:** 8/1/2016  
**Reporting Period:**

## 1. Introduction

### 1.1 Background

<b>Site Number:</b>	B5WF	<b>Contract Number:</b>	
<b>D.O. Number:</b>		<b>Action Memo Date:</b>	
<b>Response Authority:</b>	CERCLA	<b>Response Type:</b>	PRP Oversight
<b>Response Lead:</b>	PRP	<b>Incident Category:</b>	Removal Action
<b>NPL Status:</b>	Non NPL	<b>Operable Unit:</b>	Site wide
<b>Mobilization Date:</b>	10/24/2011	<b>Start Date:</b>	10/24/2011
<b>Demob Date:</b>	11/1/2014	<b>Completion Date:</b>	8/31/2016
<b>CERCLIS ID:</b>	MIN000510600	<b>RCRIS ID:</b>	
<b>ERNS No.:</b>		<b>State Notification:</b>	MDEQ Notified
<b>FPN#:</b>		<b>Reimbursable Account #:</b>	

#### 1.1.1 Incident Category

CERCLA Incident Category: Inactive Production Facility

#### 1.1.2 Site Description

The Site encompasses approximately 14 acres and contains one dilapidated building; the former C&H Power Plant building (the Power Plant). The Site historically contained several primary buildings including the power plant, a centrally located boiler house, and the "Hecla" Stamp Mill along the water front. Smaller buildings located north of the power plant and boiler house included a "Filter House" and a "Still House." The Site currently contains foundations and floors from these buildings which no longer exist, although remnants of some of the buildings remain. The Site also contains former rock bins and bermed rubble and debris piles.

The Power Plant was established in 1905 to meet the electrical demands of the evolving industrial complex and mining operations. The Power Plant was one of two electrical generating stations that operated in parallel and supplied electricity throughout the region. By 1931, the Power Plant was connected to the electrical grid through transformers and eight outgoing feeders that exited the west side of the building overhead.

The topography of the Site is relatively flat, with building foundations and debris scattered at various locations. The eastern Site boundary has a steep sloping grade towards Torch Lake, which is approximately twenty feet lower than the ground surface of the center of the Site, and below the elevation of the basement floor of the Plant. Groundwater flow in the Site area is unknown; however, based on the proximity of the Site to Torch Lake, EPA presumes that the groundwater flows east toward Torch Lake.

##### 1.1.2.1 Location

The Site is located on Highway M-26 south of the Village of Lake Linden, in Houghton County, Michigan. The geographical coordinates for the Site are latitude 47.1850924 North and longitude, -88.4133392 West. The Site is bounded to the east by Torch Lake; to the north by the Houghton County Historical Museum, a public park, and a marina; to the south by residential properties; and to the west by Highway M-26.

The Site is composed of a distinct parcel of property which was surveyed in 2002. EPA has adopted the legal description of the Property contained in the 2002 survey to establish the boundaries of the Site.

##### 1.1.2.2 Description of Threat

Widespread bulk Asbestos Containing Material (ACM) contamination has been detected throughout the Site and inside the Power Plant. Asbestos fibers have also been detected in surface soil and air samples. Contaminated soils contain concentrations of arsenic, antimony, copper, iron, and lead that exceed Michigan Department of Environmental Quality (MDEQ) Part 201 Residential Direct Contact Criteria (RDCC). Polychlorinated Biphenyls (PCBs) have also been detected in the water in the basement of the Power Plant.

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

At the request of the MDEQ, the EPA performed a three-phase site assessment (SA) beginning on April 15, 2010. The SA was composed of the following activities:

- A visual assessment of Site features, and exposed debris and materials;
- An asbestos survey consisting of collecting bulk samples, soil samples, and performing activity-based sampling of air;
- X-ray fluorescence analyzer soil screening for metals;
- A gamma radiation survey to screen for radiological contaminants; and,
- Soil and water sample collections for laboratory analysis for potential contaminants of concern (COC).

The SA indicates the presence of uncontrolled hazardous substances at the Site, including: inorganic COCs in surface soils; lead and ACM on the surface soil, interior building foundations and exterior debris piles; and, possible PCB contamination in the water and basement of the Power Plant.

## 2. Current Activities

### 2.1 Operations Section

#### 2.1.1 Narrative

In March 2012, EPA and Honeywell Specialty Materials, LLC entered into an Administrative Agreement and Order on Consent (AOC) that scoped out the assessment and removal work to be performed by Repondent and their contractors.

For information prior to this reporting period, see POLREPs 1-7.

Honeywell Specialty Materials, LLC and its contractors completed the removal action in 2015. A completion of work under the AOC memo was issued to Honeywell on 8/31/2016.

Details about the removal action are in the following sections.

#### 2.1.2 Response Actions to Date

Actions from prior reporting periods are summarized in POLREPs 1-7

Site work was completed from 2011 through 2015.

Below is a summary of activities completed during this time:

- Full assessment of extent of contamination of heavy metals, asbestos and PCBs
- Construction of a support zone and roadway
- Asbestos abatement and decontamination of Power Plant structure
- Consulted with MI SHPO and presented an Archaeological Monitoring Report & Historic Recordation Package
- Power Plant Demolition
- Dewatering of Power Plant Basement
  - treatment of water and discharge into Torch Lake complying with MDEQ NPDES substantive requirements
- Cleaning of Power Plant Basement
- Berm and Debris Pile Removal
- Soil Excavation
- Backfilled excavated areas and covered non-excavated areas
- Existing foundation cleaning to remove ACM
- Characterized, loaded, transported and disposed of all Hazardous and Non-Hazardous waste.
- Monitored air for worker and public health and safety
- Restored site with vegetative cover
- Recorded restrictive covenant on the deed to ensure only non-residential development may occur.

Total amount of waste disposed is in the table below.

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

In March 2012, EPA and Honeywell Specialty Materials, LLC entered into an Administrative Agreement and Order on Consent..

#### 2.1.4 Progress Metrics

<i>Waste Stream</i>	<i>Medium</i>	<i>Quantity</i>	<i>Manifest #</i>	<i>Treatment</i>	<i>Disposal</i>
Non-Haz Soil/Debris	Solid	11,843.85 tons		None	K & W Landfill
Non Haz Concrete Debris	Solid	2,768.75 tons		None	K & W Landfill

Non Haz Basement Debris	Solid	3,138.92 tons		None	K & W Landfill
Non-Friable ACM Debris	Solid	808.78 tons		None	K & W Landfill
Friable ACM Debris	Solid	186.1 tons		None	K & W Landfill
Bulk Asbestos	Solid	9,057.43 tons		None	K & W Landfill
Spent Media	Solid	40.28 tons		None	K & W Landfill
Haz PCB Debris (TSCA)	Solid	184 tons		None	Wayne Disposal
Haz PCB Sediment (TSCA)	Solid	6.82 tons		None	Wayne Disposal
Haz PCB Capacitors (TSCA)	Solid	3		Incinerate	Veolia
Scrap Metal	Solid	1,106.69 tons		recycle	Schneider's
Universal Waste	5 gal buckets	4		recycle	Veolia
Universal Waste	55 gal drum	4		recycle	Chief Waste

### Regional Metrics

	Miles of river systems cleaned and/or restored	N/A
This is an Integrated River Assessment. The numbers should overlap.	Cubic yards of contaminated sediments removed and/or capped	N/A
	Gallons of oil/water recovered	N/A
	Acres of soil/sediment cleaned up in floodplains and riverbanks	N/A
Stand Alone Assessment	Number of contaminated residential yards cleaned up	N/A
	Number of workers on site	15
Contaminant(s) of Concern	Asbestos, PCB, arsenic, copper, antimony, lead	

### Oil Response Tracking

Estimated volume	Initial amount released	N/A
	Final amount collected	N/A
	FPN Ceiling Amount	N/A
CANAPS Info	FPN Number	N/A
	Body of Water affected	N/A

### Administrative and Logistical Factors (Place X where applicable)

x	Precedent-Setting HQ Consultations (e.g., fracking, asbestos)	Community challenges or high involvement	Radiological
	More than one PRP	Endangered Species Act / Essential Fish Habitat issues	Explosives
x	AOC	x Historic preservation issues	Residential impacts
	UAO	NPL site	Relocation
	DOJ involved	Remote location	Drinking water impacted
	Criminal Charges Have Been Filed*	Extreme weather or abnormal field season	Environmental justice
x	Tribal consultation or coordination or other issues	Congressional involvement	High media interest
	Statutory Exemption for \$2 Million	Statutory Exemption for 1 Year	Active fire present
x	Hazmat Entry Conducted – Level A, B or C	Incident or Unified Command established	Actual air release (not threatened)

### Green Metrics

Metric	Amount	Units
Diesel Fuel Used	unk	gallons
Unleaded Fuel Used	unk	gallons
Alternative/E-85 Fuel Used	unk	gallons
Electricity from electric company	unk	kWh
Electric Company Name and Account #	unk	
Electricity from sources other than the electric company	unk	kWh

Solid waste reused		
Solid waste recycled	1,106.69	tons
Water Used	unk	gallons

## 2.2 Planning Section

### 2.2.1 Anticipated Activities

None

#### 2.2.1.1 Planned Response Activities

None

#### 2.2.1.2 Next Steps

Final closeout per the AOC and all files will be submitted to the record center.

#### 2.2.2 Issues

## 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

### 3.1 Unified Command

EPA  
Honeywell Specialty Materials, LLC

### 3.2 Cooperating Agencies

Michigan Department of Environmental Quality (MDEQ) - Remediation and Redevelopment Division (RRD)  
AMEC (Respondent's Environmental Consultant)  
EPA START Contractor  
Michigan State Historic Preservation Office (SHPO)

## 4. Personnel On Site

None currently

## 5. Definition of Terms

ACM	Asbestos-containing material
ACWM	Asbestos-containing waste material
C&H	Calumet and Hecla
COC	Chemical of concern
MDEQ	Michigan Department of Environmental Quality
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NESHAP	National Emission Standards for Hazardous Air Pollutants
OSC	On-Scene Coordinator
OSHA	Occupational Safety and Health Administration
PCB	Polychlorinated biphenyls
RACM	Regulated asbestos-containing material
RDCC	Residential Direct Contact Criteria
SA	Site assessment
START	Superfund Technical Assessment and Response Team
TSI	Thermal system insulation
U.S. EPA	United States Environmental Protection Agency
XRF	X-ray fluorescence

## 6. Additional sources of information

### 6.1 Internet location of additional information/report

For additional information refer to "Documents" on [www.epaosc.org/CHPowerPlant](http://www.epaosc.org/CHPowerPlant)

### 6.2 Reporting Schedule

This is the final POLREP

## 7. Situational Reference Materials

For additional information refer to "Documents" or "Images" on [www.epaosc.org/CHPowerPlant](http://www.epaosc.org/CHPowerPlant)

