

U.S. ENVIRONMENTAL PROTECTION AGENCY  
POLLUTION/SITUATION REPORT  
Chemetco Superfund Site Removal Action - Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region V

**Subject:** POLREP #4  
Progress  
Chemetco Superfund Site Removal Action  
B5HB  
Hartford, IL  
Latitude: 38.7969510 Longitude: -90.0998470

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**From:** Kevin Turner, OSC

**Date:** 12/21/2015

**Reporting Period:** 4/28/2015 through 12/22/2015

## 1. Introduction

### 1.1 Background

<b>Site Number:</b>	B5HB	<b>Contract Number:</b>	
<b>D.O. Number:</b>		<b>Action Memo Date:</b>	6/14/2013
<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>	NPL	<b>Operable Unit:</b>	
<b>Mobilization Date:</b>	10/4/2013	<b>Start Date:</b>	10/4/2013
<b>Demob Date:</b>		<b>Completion Date:</b>	
<b>CERCLIS ID:</b>	ILD 048843809	<b>RCRIS ID:</b>	
<b>ERNS No.:</b>		<b>State Notification:</b>	
<b>FPN#:</b>		<b>Reimbursable Account #:</b>	

#### 1.1.1 Incident Category

Time Critical Removal Action – Copper smelting slag and residual products remain from the former operations at the Chemetco Superfund Site. This facility was a secondary copper smelting and recycling operation that left remnant metal bearing materials in the environment.

#### 1.1.2 Site Description

Please refer to Initial POLREP for details.

##### 1.1.2.1 Location

Please refer to Initial POLREP for details.

##### 1.1.2.2 Description of Threat

Please refer to Initial POLREP for details.

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

## 2. Current Activities

### 2.1 Operations Section

#### 2.1.1 Narrative

The time-critical removal response actions will be conducted by the bankruptcy Trustee and Paradigm Minerals, in accordance with Section 104(a)(1) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. § 9604(a)(1) and Section 300.415 of the National Oil

and Hazardous Substance Pollution Contingency Plan (NCP, 40CFR 300.415, to abate or eliminate the immediate threat posed to public health and/or the environment by the presence of the hazardous substances on the Site.

### 2.1.2 Response Actions to Date

Following all final approvals of the CD, the Estate of Chemetco and Paradigm Minerals mobilized a contractor (All Purpose Steel, formerly known as Precision Crushing) to the site at the end of September 2013. In working with the OSC, the contractor began some minor site clean-up (house keeping); scrap metal recycling, skull removals and sales and mobilizing heavy equipment.

On November 14, 2013, U.S. EPA mobilized START contractors to perform oversight of approved site activities previously initiated by the Estate of Chemetco that include renting and leasing of dozers, tracked excavators, cranes, articulated dump trucks and magnetized metal handling equipment used for:

- On-going demolition work of facility plant production equipment and buildings previously used for copper smelting and product processing have been temporarily suspended due to the low value of scrap metal pricing.
- The location, excavation, loading and recovery of “skulls” and “reverts” containing higher copper or other metal content henceforth will be called unprocessed metal bearing material (UMBM). This recovery is another important step to aid in the financing for future work performed by the Estate. Please note that a hand-held X-ray fluorescence (XRF) instrument has been used to determine the copper, bronze, tin and zinc percentages or other heavy metal concentrations.
- Loading the UMBM into containers for shipment to over-seas businesses that will recover and refine the copper, tin, bronze and zinc.
- Relocating slag materials to create a work area to be used for future work.
- Relocating slag materials to construct a haul road from the slag pile to the work area.
- On December 6, 2013, the Estate contractors initiated the construction of a loading dock adjacent to the Tank House that will be used as part of a UMBM container loading operation. It was completed on December 13, 2013.
- On December 9, 2013, the Estate contractors assembled a series of material conveyor circuits in the Tank House to be used as a part of a material bagging (Super-sack) operations.
- On December 14, 2013, the Estate submitted to the agency the following documents:
  - CHEMETCO Health and Safety Form;
  - Site Safety Briefing Form;
  - Estate Safety Briefing – Winter;
  - CHEMETCO Site Emergency Evacuation Plan;
  - IEPA Seal Order Handout;
  - MSDS – Copper Slag and copper products.

From December 2014 through December 2015 the following activities occurred:

- The Estate took delivery of five particulate monitoring instruments that are used for the perimeter air monitoring activities. A metrological station was also delivered. The estate will electronically store the air monitoring data results.
- The loading-dock next to the “Tank” building construction was completed.
- Precision Crushing, Inc., completed a “bump” test of the crushing circuit as a preliminary step to access the crushing output goal to meet the 1-inch minus product requirement set forth by the buyer at that time.
- The Estate of Chemetco purchased two additional cameras to supplement the eight existing plant security cameras.
- On January 15, 2015, the DJL Mining/PMES/Estate contractor, All Purpose Steel Construction Company, initiated the construction assembly of a wet processing system that will be used for the separation of recoverable metallic materials and further concentrate several metals to enhance the commodity value of recoverable metals.
- On April 23, 2015, DJL Mining employees and PMES/Estate contractors initiated

calibration of a particle separation component to the wet processing system.

- In May 2015, the Estate submitted a revised perimeter air monitoring program plan and QAAP.
- PMES no longer maintains a proprietary technology but will continue to engineer the wet processing system in conjunction with DJL Mining LLC. In the fall of 2015, All Purpose Steel Construction in concert with DJL Mining completed a significant upgrade to the water jig density separator including new hammer mills and conveyors.
- On September 17, 2015, the Estate contractors acquired a water truck to be used for the control of fugitive dusts that emanate from traffic lanes of heavy equipment used to load or process the MBM.
- To date, a total of 1013 ocean-tight containers of crushed and separated “Mixed Copper Tin Material” was loaded and trans-shipped to a refinery at the Northeast Yejin Co., Ltd. Facility in Chenzhou City, Hunan Province, China along with a second facility, Trung Nhat Bao Thang Viet Nam Co., LTD, located in Lau Thuon Village, Vietnam. Due to lower than expected copper concentrations, these refineries suspended delivery of this product stream. PMES has set about finding new buyers for this product stream.
- On October 20, 2015, PMES shipped 38,000 metric tons of processed materials to a new buyer refinery in China

On May 8, 2015, PMES initiated shipments of Processed Metal Bearing Material arranged by the brokerage arm, DJL Mining LLC, of South El Monte, CA, with delivery to the refinery, Trung Nhat Bao Thang Viet Nam Co., LTD, Lau Thuon Village, in Vietnam with a total of 15,307.36 metric tons to date.

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

U.S DOJ, U.S. EPA, State of Illinois, the Estate of Chemetco and Paradigm Minerals negotiated a Consent Decree to govern the removal activities.

### 2.1.4 Progress Metrics

<u><b>Product Stream</b></u> <u><b>Recyclable</b></u> <u><b>Metal Bearing</b></u> <u><b>Material</b></u> <u><b>(RMBM)</b></u>	<u><b>Medium</b></u>	<u><b>Quantity</b></u>	<u><b>No. of</b></u> <u><b>Containers</b></u> <u><b>or Loads</b></u>	<u><b>Treatment</b></u>	<u><b>Reclamation</b></u> <u><b>Destination</b></u>
Cupro, Reverts and Higher Grades of Copper, and other Metals Bearing Materials (UMBM)	Recyclable Copper, Tin and Bronze UMBM	29,188.97 Metric Tons	1490	Recycle	DJL Mining Brea, CA Hong Kong, Kaohsiung, Gaolan, China  Interco Trading Co. Madison, IL Aurubis Group, Lunen, Germany Bremerhaven and  CMAC Northeast Yejin Co., Ltd., Liyu Jiang Town, Chenzhou City, China  Interco Trading Co. Madison, IL Aurubis Group, Lunen, Germany
North Polishing Pond Zinc Sludge (Dry) UMBM	Recyclable Zinc Oxide	1,087.21 Metric Tons	55	Recycle	CMAC Northeast Yejin Co., Ltd., Liyu Jiang Town, Chenzhou City, China

Zinc Oxide Bunker Materials (Dry) UMBM	Recyclable Zinc Oxide	37,411.29 Metric Tons	1231	Recycle	DJL Mining LLC, South El Monte, CA Kaohsiung, Gaoloan, China Trung Nhat Bao Thang Vietnam Co., LTD, Lau Thuon Village, Vietnam
Copper Block PMBM	Recyclable copper, tin and bronze	15,716.155 Metric Tons	722	Recycle	DJL Mining LLC, South El Monte, CA, Kaohsiung, Gaolan, China  Trung Nhat Bao Thang Vietnam Co., LTD, Lau Thuon Village, Vietnam
Scrap Steel	Recyclable Steel	131 Tons	19	Recycle	Grossman Iron & Steel St. Louis, MO

<u>Waste Stream</u>	<u>Medium</u>	<u>Quantity</u>	<u>No. of Loads</u>	<u>Treatment</u>	<u>Disposition</u>
Special Waste (Non-Hazardous)	RCRA Empty Super-Sacks/55-gallon poly-drums	17.24 tons	7	Land Disposal	Republic Waste Services. Inc. Roxana, IL
General Refuse 64 cubic yards/month	Garbage	320 cubic yards	NA	Land Disposal	Republic Waste Services. Inc. Roxana, IL
Construction/Demolition Debris (Non-Hazardous)	C&D, General Refuse	8.43 Tons	NA	Land Disposal	Republic Waste Services. Inc. Roxana, IL
White-goods, computers, office equipment, etc.	Recyclable Steel	3.32 tons	NA	Recycle	Component Level Recycling Sauget, IL
Hydraulic oil spill materials	Sorbent pads / PPE	2 drums	1	Land Disposal	Heritage Enviro. Services, Indianapolis, Indiana
Waste oil	All waste oil	1780 gallons	1	Recycle	Future Environmental, Peoria, IL
Refractory Brick	Broken refractory	15.24 tons	1	Land Disposal	Heritage Enviro. Services, Indianapolis, Indiana
Contaminated Concrete	General Refuse	tons	-	Land Disposal	Unknown at this time
Contaminated Wood	General Refuse	tons	-	Land Disposal	Unknown at this time
Waste Tires	Scrap Tires		-	Recycle Thermal	Unknown at this time
Miscellaneous Debris (Hazardous)	General Refuse	8.43 Tons	-	Land Disposal	Heritage Enviro. Services, Indianapolis, Indiana

## **2.2 Planning Section**

U.S. EPA Emergency Response and Removals Branch will perform oversight to the recovery of metals bearing materials and the forthcoming UMBM metals processing reclamation and removal actions to take place at the site.

### **2.2.1 Anticipated Activities**

U.S. EPA Emergency Response and Removals Branch will perform oversight to the recovery of metals bearing materials and the forthcoming UMBM metals processing reclamation and removal actions to take place at the site.

#### **2.2.1.1 Planned Response Activities**

- Take all necessary steps to implement source control of the slag and scrubber sludge. Source control may include surface water and storm water control measures to control off-site migration of zinc oxides and other metals.
- Enhance the Site Security Plan elements by the purchase of addition security cameras and digital recorders.
- Prepare for the forthcoming PMES process work by which metals will be separated and concentrated to enhance the metals commodity value.
- Backfill any subgrade excavated areas with clean fill to effectuate storm water control and grade the Site as necessary.

#### **2.2.1.2 Next Steps**

Prepare for forthcoming modifications to wet processing, loading and shipping ocean-tight containers of all product streams for metals recycling either domestic or abroad.

### **2.2.2 Issues**

While full production to process, size, and load the “mixed copper, zinc and tin materials” into ocean-tight containers is possible, additional changes to the density separation system will be required. Logistical delays in transportation of the materials has continued to be of concern.

Inclement weather may create weather delays to the project schedule.

World commodities markets continue to fluctuate thereby causing instability in the receiving facilities and Chemetco's ability to ship mixed copper, zinc and tin materials (slag) on a routine and continuous basis.

## **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**

### **2.5.1 Safety Officer**

Safety Meetings and briefings are held before the beginning a new work assignment.

### **2.5.2 Liaison Officer**

US EPA is directing all work in the removal effort.

### **2.5.3 Information Officer**

## **3. Participating Entities**

### **3.1 Unified Command**

### **3.2 Cooperating Agencies**

U.S. Department of Justice and Illinois Environmental Protection Agency

## **4. Personnel On Site**

START – 1  
PMES – 7  
Chemetco Estate Employees – 5

Chemetco Estate Contractors:  
DJI Mining Co. - 8  
All Purpose Steel/Precision Crushing – 23

## 5. Definition of Terms

APPA – Asset Purchase and Processing Agreement  
ATSDR – Agency for Toxic Substances and Disease Registry  
CERCLA – Comprehensive Environmental Response, Compensation, and Liability Act  
CD – Consent Decree  
CFR – Code of Federal Regulations  
Chemetco – Chemetco Superfund Site, (“the Estate,” “Trustee for the Estate of bankruptcy Trustee” -- --- or, “Trustee”), previously d.b.a. Chemetco Metals Corporation  
Cupro – Copper containing (aka cupriferous, cupronickel)  
CWA – Clean Water Act, 33 U.S.C. §§ 1251-1387  
HASP – Health & Safety Plan  
IDPH - Illinois Department of Public Health  
IEPA – Illinois Environmental Protection Agency  
ILCS – Illinois Compiled Statutes  
MBM – Metal Bearing Materials  
NCP – National Oil and Hazardous Substance Pollution Contingency Plan  
NPL – National Priorities List  
PA/SI – Preliminary Assessment / Site Inspection  
Paradigm – Paradigm Minerals & Environmental Services  
Paradigm Process – A propriety chemical process used to separate metallic particles and concentrate by element  
PMBM – Processed Metal Bearing Material  
PMES – Paradigm Minerals & Environmental Services  
PRP – Private Responsible Parties  
RCRA – Resource Conservation and Recovery Act  
RMBM – Recyclable Metal Bearing Material  
Skulls – Slag with copper bearing commodity value  
START – Superfund Technical Assessment & Response Team  
Super-sack – 1 to 2-ton polypropylene woven bags used to store and handle bulk processed materials  
TCLP – Toxicity Characteristic Leaching Procedure  
UMBM – Unprocessed Metal Bearing Materials  
XRF – X-ray fluorescence

## 6. Additional sources of information

No information available at this time.

## 7. Situational Reference Materials

No information available at this time.