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

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region V

Subject: **POLREP #3**
Chemetco Superfund Site Removal Action
B5HB
Hartford, IL
Latitude: 38.7969510 Longitude: -90.0998470

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From: Kevin Turner, OSC
Date: 5/4/2015
Reporting Period:

1. Introduction

1.1 Background

Site Number:	B5HB	**Contract Number:**	
D.O. Number:		**Action Memo Date:**	6/14/2013
Response Authority:	CERCLA	**Response Type:**	Time-Critical
Response Lead:	EPA	**Incident Category:**	Removal Action
NPL Status:	NPL	**Operable Unit:**	
Mobilization Date:	10/4/2013	**Start Date:**	10/4/2013
Demob Date:		**Completion Date:**	
CERCLIS ID:	ILD 048843809	**RCRIS ID:**	
ERNS No.:		**State Notification:**	
FPN#:		**Reimbursable Account #:**	

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

Please refer to Initial POLREP for details.

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 know 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. Please note that the current demolition work with resultant scrap metal recycling was a necessary step to help finance the needs of the Estate for future site work that will enhance the removal and recovery of metals commodities contained in the slag.

• 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 is used to determine the copper or other metal concentrations.

• Loading the UMBM into containers for shipment to over-seas businesses that will recover and refine the copper.

• 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 2013 through December 2014 the following activities occurred:

• The Estate took delivery of five particulate monitoring instruments that will be used for the perimeter air monitoring approach. A metrological station was also delivered. The estate will electronically store the air monitoring data results. An additional hand-held particulate meter was obtained on December 31, 2013.

• 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.

• Precision Crushing initiated full scale crushing and bagging operations. To date, approximately 3000 tons have been processed and 1272 one-ton bags have been either loaded or set aside for future loading into containers.

• The Estate of Chemetco purchased two additional cameras to supplement the eight existing plant security cameras.

• The Estate submitted a QAAP for the air monitoring program. However, at this time, the Agencies await the resubmittal of a more robust perimeter air monitoring plan.

• 425 Ocean-tight containers of crushed and separated "Mixed Copper Tin Material" was loaded and trans-shipped for metals recovery to the refinery at the Northeast Yejin Co., Ltd. Facility in Chenzhou City, Hunan Province, China. Due to lower than expected copper concentrations, the refinery suspended delivery of this product stream. PMES set about finding new buyers for this product stream.

On January 15, 2015, the PMES and Estate contractors initiated the construction of a wet processing system that will be used for the separation of recoverable metallic materials. In addition this process will further concentrate several metals to enhance the value of recoverable metals. This work has created a new partnership between DJL Mining LLC, PMES and the Estate of Chemetco. PMES continues to maintain proprietary technology for the "Paradigm Process" and will continue to engineer the wet processing system in conjunction with DJL Mining LLC.

On April 2, 2015, the Estate notified the agencies that an environmental consulting service company has

been retained to support in a variety of project needs.

On April 23, 2015, DJL Mining employees and PMES/Estate contractors initiated calibration of a particle separation component to the wet processing system. At this time, additional work to this wet processing system continues.

On January 21, 2015, PMES initiated shipments of UMBM arranged by the brokerage arm, DJL Mining LLC, of South El Monte, CA, with delivery to the refinery, Trung Nhat Bao Thang Vietnam Co., LTD, Lau Thuon Village, in Vietnam with a total of 20,634.88 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

Product Stream	***Medium***	***Quantity***	***No. of Containers***	***Treatment***	***ReclamationLocation***
Copper Spills	Recyclable Copper	88.81 Tons	7	Recycle	Interco Trading Co.Madison, ILAurubis Group, Lunen, Germany
Cupro	Recyclable Copper/Tin	43.66Tons	3	Recycle	Interco Trading Co.Madison, ILAurubis Group, Lunen, Germany
Copper Pot Slag	Recyclable Copper	1,276.05Tons	64	Recycle	Interco Trading Co.Madison, ILAurubis Group, Lunen, Germany
Copper Reverts	Recyclable Copper	502.95Tons	26	Recycle	Interco Trading Co.Madison, ILAurubis Group, Lunen, Germany
High-grade Copper	Recyclable Copper	21.27Tons	2	Recycle	Interco Trading Co.Madison, ILAurubis Group, Lunen, Germany
Non-crushable SteelShredder	RecyclableSteel	6.15 Tons	1	Recycle	Grossman Iron & SteelSt. Louis, MO
Scrap Steel	RecyclableSteel	932.07 Tons	47	Recycle	Grossman Iron & SteelSt. Louis, MO
Scrap Steel	RecyclableSteel	216.20 Tons	11	Recycle	PSC MetalsSt. Louis, MO
Foundry Fines	RecyclableIron	20.00	1	Recycle	Wallach Trading Co.
Mixed Copper Tin Material	Recyclable Steel	8,283.71Tons	420	Recycle	CMACNortheast Yejin Co., Ltd., Liyu Jiang Town, Chenzhou City, China
North Polishing Pond Zinc Sludge (Dry)	RecyclableZinc	1,083.20 Tons	55	Recycle	CMACNortheast Yejin Co., Ltd., Liyu Jiang Town, Chenzhou City, China
Zinc Oxide Bunker Materials (Dry)	RecyclableZinc	478.07Tons	25	Recycle	DJL Mining LLC, South El Monte, CATrung Nhat Bao Thang Vietnam Co., LTD, Lau Thuon Village, Vietnam
Copper Block Materials	Recyclable Copper and Tin	20,156.81 Tons	899	Recycle	DJL Mining LLC, South El Monte, CATrung Nhat Bao Thang Vietnam Co., LTD, Lau Thuon Village, Viet Nam

Waste Stream	***Medium***	***Quantity***	***Treatment***	**Reclamation**
Construction/Demolition Debris (Non-Hazardous)	General Refuse	12.36 Tons	Land Disposal	Republic Waste Services. Inc.Roxana, IL
White-goods, computers, office equipment, etc.	RecyclableSteel	3.32 Tons	Recycle	Component Level RecyclingSauget, IL
Hydraulic oil spill materials	Sorbent pads / PPE	2 drums	Land Disposal	Heritage Enviro. Services
Refractory Brick	Broken refractory	Tons	Land Disposal	Pending at this time
Contaminated Concrete	GeneralRefuse	Tons	Land Disposal	Unknown at this time
Contaminated Wood	GeneralRefuse	Tons	Land Disposal	Unknown at this time
Waste Tires	ScrapTires	Quantity	RecycleThermal	Unknown at this time
Universal Wastes	Light bulbs	200 pounds	Recycle	Heritage Enviro. Svs.Indianapolis, IN
Miscellaneous Lead Contaminated Debris (Hazardous)	General Refuse	8.43 Tons	Land Disposal	Heritage Enviro. Svs.Indianapolis, IN

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 & removal actions to take place in early 2014.

2.2.1 Anticipated Activities

1.

2. Oversee the site maintenance and enhancements to site security and access controls to the entire facility. Security cameras and recorders will be utilized. Additional security lights will be added and a guard service will be contracted for off-hours and weekend security needs.

Continue to manage on-site surface waters so that no off-site releases occur. Continue to sample for and maintain all NPDES requirements.

3.

4. Participate in monthly meetings with the Estate, Estate employees, Estate contractors and Estate Trustee.

5.

6. Review the Health and Safety Plan (HASP) assembled by the Estate related to all employees and its contractors.

7.

8. Plant Demolition – Conduct oversight of the ongoing demolition and resultant scrap metal recovery work as required.

9.

10. Perimeter Air Monitoring Program – Review the revised air monitoring plan to be used by the Estate to monitor fugitive dusts from materials handling and crushing operations.

11.

12. Oversee the implementation and approach to process crush, screen, wet separate, dry , load, containerize, and trans-ship unprocessed metal bearing materials (UMBM and Zinc sludge's) at the Site, which should include, at a minimum:

- Excavate/load and delivery of UMBM bearing delivered to the crushing circuit and wet separation processing;
- Product crushing circuit will include a jaw crusher, magnetic conveyor separator, screening tables along with several material conveyors. Generous water-spray and misting for dust suppression will be included in critical areas of jaw crushing UMBM size screening and wet separation processing;
- Operation and Maintenance of the UMBM wet processing systems;
- Freight forwarding transporting the loaded ocean-tight cargo containers to an Agency approved intermodal loading facility with ultimate destination to reclamation facility(s) in accordance with EPA's Off-Site Rule (40 CFR § 300.440) and the project Consent Decree (CD), up to and including oversea port destinations in Germany, China and Vietnam;
- Control access to the contaminated areas to prevent further migration of contamination, by fencing, traffic restrictions or other applicable means;
- The Estate has subcontract a street sweeping service to maintain clean roadway surfaces inside the facility and near the main gate;

- Load product into ocean-tight containers for freight forwarding trans-shipment to nearby rail terminals with destinations to domestic loading facilities with outbound oversea destinations to China, Vietnam and Germany.

.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 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. Logistical delays in transportation of the materials has been experienced due to the extreme cold weather throughout the East and Midwest along with a strike at the West Coast ports that created a shortage of available empty shipping containers. Additionally inbound shipments of specialized equipment that will be used to separate the UMBM has resulted delays.

Inclement weather may create weather delays to the project schedule.

Financing along with the engineering and construction of the forthcoming Paradigm process could delay future schedules.

2.3 Logistics Section

No information available at this time.

2.4 Finance Section

2.4.1 Narrative

The START Technical Directive Document was issued for $75,000 on 11/13/2013. TDD Amendment #1 for an additional $90,000 was approved on 4/17/15. A total of $98,877 has been spent as of 4/27/2015.

Estimated Costs *

	Budgeted	Total To Date	Remaining	% Remaining
Extramural Costs				
TAT/START	$25,000.00	$23,824.00	$1,176.00	4.70%
Intramural Costs				
Total Site Costs	$25,000.00	$23,824.00	$1,176.00	4.70%

* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

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

2.5.3 Information Officer

3. Participating Entities

3.1 Unified Command

US EPA is directing all work in the removal effort.

3.2 Cooperating Agencies

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

4. Personnel On Site

U.S. EPA – 1
START – 1
PMES – 7
Estate Employees - 5

Chemetco Estate Contractors:
DJL Mining Co. - 8
All Purpose Steel/Precision Crushing – 23
Fred Weber – 7

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 Statues
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
PMES – Paradigm Minerals & Environmental Services
PRP – Private Responsible Parties
RCRA – Resource Conservation and Recovery Act
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.