

INTERIM RESPONSE CONSTRUCTION SUMMARY REPORT FOR FENCING

ABANDONED MINING WASTES – TORCH LAKE NON-SUPERFUND SITE
CHLL HUBBELL PROCESSING AREA
HOUGHTON COUNTY, MICHIGAN
SITE ID# 31000098



DECEMBER 2016

PREPARED FOR:
MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
REMEDIATION & REDEVELOPMENT DIVISION
CALUMET FIELD OFFICE
CALUMET, MICHIGAN



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Site ID: 31000098
Houghton County, Michigan

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1.0 INTRODUCTION

The Mannik & Smith Group, Inc. (MSG) has prepared this *Interim Response Construction Summary Report for Fencing* (CSR) as part of the Abandoned Mining Wastes – Torch Lake non-Superfund Site (Project http://www.michigan.gov/deq/0,4541,7_125_2211_4100_0046_74560_00.html (Site ID: 31000098). This CSR summarizes the fencing interim response (IR) completed at the Calumet & Hecla Lake Linden Operations Area (CHLL) Hubbell Processing Area Coal Dock and Mineral Building properties. The IR entailed the repair of breaches in the existing perimeter fence, installation and repair of gates at access points, and installation of signage. The Hubbell Processing Area is located in Hubbell, Houghton County, Michigan. This CSR was prepared in accordance with the *Indefinite Scope Indefinite Delivery (ISID) Discretionary Proposal for FS and Remedial Action Activities* (24 February 2016) prepared by MSG in response to a request from the Michigan Department of Environmental Quality (DEQ), Remediation and Redevelopment Division (RRD), Calumet Field Office under MSG's 2015 Environmental Services ISID Contract Number 00538 with the State of Michigan.

1.1 Project Location

The Project area is located along the shoreline and in Torch Lake, Houghton County, Michigan. Due to the complex nature and very large area RRD subdivided the Project into study areas based on past use and known issues. The CHLL and Calumet and Hecla Tamarack City Operations Area (CHTC) areas and their respective former industrial operations are depicted on *Figure 1, Project Location Map*.

The CHLL is centralized around Calumet & Hecla's copper mining and processing operations in the vicinity of Lake Linden and Hubbell, Michigan. The CHLL consists of approximately 155 acres of land extending approximately two miles along the shoreline of Torch Lake and incorporates over 40 different parcels with multiple property owners.

The CHLL Hubbell Processing Area is located between Lake Linden and Hubbell along the southeast side of Highway M-26 and is comprised of three mining era industrial properties including the Hubbell Coal Dock and Mineral Building that are vacant, and the Hubbell Smelter which is the location of an operating industrial facility. The Hubbell Processing Area is bordered by residential (single family residences and an apartment complex), commercial (restaurant and retail business), and industrial (sand and gravel pit, construction company, and manufacturing) land uses, and Torch Lake. The IR for fence and gate repair and gate installation was limited to only two properties within the Hubbell Processing Area; the Hubbell Coal Dock and the Mineral Building. *Figure 2, Hubbell Processing Area Features Map*, depicts the area encompassing the Hubbell Processing Area in addition to features and the existing and repaired or installed fence and gate locations.

1.2 Project Background

Copper mining was extensive in the Keweenaw and formed the backbone of the regional economy and society. Copper ore milling and smelting operations were conducted from the mid-1860s to the 1960s, including the importation and reprocessing and smelting of various scrap metals in the later years of operation. Consistent with past industrial practices, Torch Lake served as dumping grounds for virtually all mining industry related waste products produced, including tailings, slag, and various chemicals. It is estimated that at least 20 percent of the Torch Lake's volume was filled with tailings and other waste products.

The environmental legacy resulting from over 100 years of mining and reclamation led to Torch Lake and its western shoreline to be designated as a Superfund site by the United States Environmental Protection Agency (EPA) <http://www.epa.gov/superfund/sites/locations.cfm?id=0502024> and a Great Lakes Area of Concern by the U.S./Canada Great Lakes Water Quality Agreement <http://www.epa.gov/gla/torchlake.asp>. The EPA undertook cleanup activities to address some of the byproducts of the mining industry while others were not addressed or left to recover through natural processes.

The DEQ Project is addressing some of the remaining concerns in Houghton County not addressed by the EPA. The Project concerns involve groundwater, surface water, sediments, and "upland" media. Known or suspected problems which are being evaluated include: an unidentified, significant in-lake and/or terrestrial source of polychlorinated biphenyls (PCBs); uncharacterized waste deposits and >750 uncharacterized drums on the lake bottom; slag; landfills; industrial ruins; coal storage areas; underground storage tanks (USTs); residual process materials (RPM); asbestos containing materials (ACM); and any other waste materials identified in future investigations.

During 2014 and 2015 RRD conducted Site Investigation (SI) activities and confirmed the remaining concerns in the Project area involve groundwater, surface water, sediments, and "upland" media. Priority concerns which were evaluated and deemed to require IRs include: significant terrestrial sources of PCBs; ACM; RPM; abandoned mining era containers; seeps; limited areas of soil in which there are Direct Contact Criteria (DCC) and Particulate Soil Inhalation Criteria (PSIC) exceedances; and, physical hazards.

In the case of the Hubbell Processing Area Coal Dock and Mineral Building properties the identified risks pose potential threats to human and ecological receptors, including but not limited to human health risks in the event of direct contact with affected media and inhalation of particulates and ACM; and physical hazards. The existing fence along the north, west, and south sides of the Hubbell Coal Dock and Mineral Building properties had at least one un-gated entrance and had sustained damage/breaches due to fallen trees and snow removal efforts. The existing fence did not prevent recreational trespass and access to affected media as evidenced by numerous off-road vehicle tracks and pits dug by artifact hunters.

Based on these conditions the Upper Peninsula RRD staff prepared an Emergency Procurement Action Form included in *Appendix A, Emergency Procurement Action Form*. Upon authorization, RRD staff completed an IR that repaired or installed fencing and gates to reduce potential exposure of the public to contaminants and physical hazards.

2.0 OBJECTIVE AND SCOPE OF WORK

The objective of the IR for fencing was to reduce potential exposure of the public to contaminants and physical hazards at the Hubbell Processing Area Coal Dock and Mineral Building properties by better controlling access through fence and gate installation and or repairs. To meet this objective MSG developed a Trade Contractor (TC) scope of work and assisted MDEQ with soliciting bids in accordance with DEQ RRD Emergency Funding and Procurement Procedures.

3.0 INTERIM RESPONSE ACTIVITIES

MSG supported the DEQ RRD in the procurement and oversight of a TC during implementation of the IR. JCS Inc. of Baraga, Michigan, was selected and retained by the State of Michigan as the TC to conduct the IR. Refer to *Appendix B, Purchase Order*. JCS Inc. completed the work in accordance with the TC procurement package included in *Appendix C, Hubbell Processing Area Fence Repair Project Revised Scope of Work* during June and July 2016. Photographs of the IR operations are included in *Appendix D, Photographic Log*.

4.0 SUMMARY AND CONCLUSIONS

The following fencing IR operations were completed at the Coal Dock and Mineral Building portions of the Hubbell Processing Area:

- Repaired and replaced approximately 212 linear feet of fence including corner and intermediate braced posts, line posts, caps, top rail, chain-link fence, and aluminum wire ties.
- Removed small trees from atop the fence and as needed to complete fence and gate repairs.
- Installed a new gate at the middle property entrance.
- Installed a padlock to secure the new gate that is keyed to match the new lock on the north gate.

- Installed signage approximately every 100 feet on the fence, inclusive of one sign on each gate and one sign at the northeast end of the fence at the lake.

The completed IR operations met the objective of reducing potential exposure of the public to contaminants and physical hazards by better controlling access through fence and gate installation and or repairs.

5.0 RECOMMENDATIONS

MSG has the following recommendation:

- Periodic monitoring and maintenance as required of the fencing and gates to maintain the IR's effectiveness.

FIGURES



Image Source: MIS - Public Imagery



- Hubbell Coal Dock and Mineral Building Fence Line
- C&H Lake Linden (CHLL) Operations Area
- C&H Tamarack City (CHTC) Operations Area
- Conceptual Site and Geographic Area Boundaries
- 0 2,250 Feet
-

DEQ
Prepared for:
**Michigan Department of
Environmental Quality**

**Mannik
Smith
GROUP**
TECHNICAL SKILL.
CREATIVE SPIRIT.
www.MannikSmithGroup.com

Figure 1
Project Location Map
Houghton County,
Michigan



FILE: C:\temp\Projects\MDEQ\0070\GIS\mxd\Planning\20161215-Fencing_IR_Report\Fig2_FeaturesMap_v20161220.mxd 8:11:30 AM 12/20/2016 KBrown

APPENDIX A

Emergency Procurement Action Form



EMERGENCY PROCUREMENT ACTION FORM

Site Name: Abandoned Mining Wastes County: Houghton

Index: 44251 PCA: 30870 Project #: 456990

ERD Staff Contact: Amy Keranen Date of Emergency: May 2016

Contacted by:

District Supervisor's Signature: Cliffon Clark

Site Description: An approximate 45 acre site where PCBs, asbestos, lead, drums, and other mining wastes are present on the ground surface. There is also a large former mining structure with >20' deep pits along its entire length, on site. Securing the fencing and installing a gate will reduce access to the contaminants and physical threats present on site until the remedial plans can be implemented.

Cause of Emergency: unrestricted access to contaminated property formerly used by the mining industry. The fence surrounding the property has a few breaches to be repaired a gate is to be installed to prevent vehicle and pedestrian access to the site. Evidence and observation of young children in areas of contamination has been made. Securing the property while cleanup options are considered and funding sources are secured is critical.

Specific Threats: PCBs, lead, and asbestos present at concentrations posing direct contact risks on ground surface at a site where unrestricted access exists. Securing the property will minimize the exposure while remedial plans are made.

Action Taken: Bids obtained for fence repair and gate installation. Bid for \$7920.00 is planned to be accepted and site work completed by June 30, 2016.

Additional Information:

Funding Source:

Authorized by:

Responsible Party:

Cost Recovery:

APPENDIX B

Purchase Order



STATE OF MICHIGAN

PAGE : 1

FORM DMB-287
(REV 11/94)

PURCHASE ORDER

PURCHASE ORDER
NUMBER 761P6600443REQUESTING DEPARTMENT OR AGENCY : RD - CONTRACTS I
MICHIGAN DEPT OF ENVIRONMENTAL QUALITYCONSTITUTION HALL, 4TH FLOOR
525 WEST ALLEGAN
LANSING

MI 48933

CONTACT: TRACEY CURTIS | DELIVERY REQUIRED | AGENCY REF # | REQ NO. | ORDER DATE
517 284-5083 EXT: | 05/31/16 | 76120100 | 761R6600523 | 05/27/16JCS INC
PO BOX 247
BARAGA MI 49908CASH DISCOUNT : NET 30 DAYS
DELIVERY REQUIRED :
FREIGHT CARRIER :
F.O.B. : DELIVERED

VENDOR PHONE : (906) 353-8828

SHIP TO:
MICHIGAN DEPT OF ENVIRONMENTAL QUALIT
CALUMET FIELD OFFICE - RRD55195 U.S. 41
CALUMET MI 49913BILL TO:
MICHIGAN DEPT OF ENVIRONMENTAL QUALIT
REMEDIATION AND REDEVELOPMENT DIVISIO
ADMINISTRATION 5TH FLOOR SOUTH TOWER
PO BOX 30426
LANSING MI 48909-7926

ITEM	COMMODITY ID	QUANTITY	UNIT	UNIT PRICE	TOTAL PRICE
1	912-68	1.00	EA	7,920.0000	7,920.00

MANAGEMENT, CONSTRUCTION #

FURNISH ALL LABOR, MATERIALS, EQUIPMENT AND RELATED WORK REQUIRED TO
REPAIR 212' OF FENCING, INSTALL A GATE TO THE PROPERTY, PROVIDE LOCKS
AND INSTALL SIGNAGE TO SECURE THE PROPERTY TO MINIMIZE THE EXPOSURE
OF THE CONTAMINATION WHILE REMEDIAL PLANS ARE MADE.

PM: A. KERANEN

START: 5/31/16

END: 6/30/16

GRAND TOTAL 7,920.00

ADDITIONAL REQUIREMENTS :

AUTHORITY: ACT 431 OF 1984. RESPONSE: REQUIRED. PENALTY: FAILURE TO
DELIVER MAY RESULT IN CANCELLATION OF ORDER OR CONTRACT.
AUTHORIZED SIGNATURE

STATE OF MICHIGAN

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FORM DMB-287
(REV 11/94)

PURCHASE ORDER

PURCHASE ORDER
NUMBER 761P6600443-----
ACCOUNTING INFORMATION :

SX	AGY	Y	INDEX	PCA	COBJ	AOBJ	GRANT	PH	PROJ	PH	AG1	AG2	AG3	TOTAL
01	761	4	44251	30872		6127			45699000					7920.00

-----PENALTY: FAILURE TO DELIVER MAY RESULT IN CANCELLATION OF ORDER OR CONTRACT

--- END OF DOCUMENT ---

APPENDIX C

Hubbell Processing Area Fence Repair Project Revised Scope of Work



Hubbell Processing Area Fence Repair Project

Revised Scope of Work

The Michigan Department of Environmental Quality (MDEQ) has identified the presence of asbestos containing materials (ACM), polychlorinated biphenyls (PCBs), and metals on parcels known as the Hubbell Coal Dock and Mineral Building properties in Hubbell, Michigan (**Figure 1**). The existing perimeter fence has been damaged in several places and vehicle access points are uncontrolled. MDEQ is soliciting bids for fence repairs, improvements, and installation of signage.

To inhibit trespassing and warn entrants of hazards at the properties, MDEQ intends to repair breaches in the existing perimeter fence, install and repair gates at access points, and install signage. Existing breaches, points of access, and limits of fencing are depicted on **Figure 2**.

The fence is near but is not known to be within the Michigan Department of Transportation (MDOT) Right of Way for Highway M-26. The work is to be performed by **30 June 2016**.

The following tasks will be required of the Contractor to complete the work at the locations identified on **Figure 2**, inclusive of all materials, equipment, tools, labor, and incidentals:

<u>Base Bid Work Item</u>	<u>Contractor Quote</u>
1. Repair and replace as needed approximately 212 linear feet of fence including corner and intermediate braced posts, line posts, caps, top rail, chain-link fence, and aluminum wire ties equal to or better than existing materials. Also includes removal of one tree from atop the fence. The fence corner replacement in the northwest corner of the property shall be at a 45-degree angle as discussed during the pre-bid meeting on 5-18-16.	\$ _____
2. Remove small trees as needed and repair existing north gate. Provide a padlock to secure the gate.	\$ _____
3. Provide and install a new gate at the middle property entrance per Attachment A . Provide a padlock to secure the gate that is keyed to match the new lock on the north gate.	\$ _____
4. Provide and install signage approximately every 100 feet (34 locations) on the fence per Attachment B , inclusive of one sign on each gate (3 locations) and one sign at the northeast end of the fence at the lake.	\$ _____
TOTAL	\$ _____

Alternate Work Item

Contractor Quote

Alternate 1. Repair/replace other damaged sections of fence with in-kind materials such as provide/attach caps, straighten and reattach top rail, and wire tie fence fabric to top rail. Alternate 1 is for 120 linear feet of fence repair by the Mineral Building.

\$_____

Alternate 2. Wire tie fence fabric to top rail. Alternate 2 is for 50 linear feet of wire tying by the Mineral Building.

\$_____

FIGURES



Former Calumet &
Torch Lake R. R.

0 0.75
Miles
Coordinate System: MIGeoRef(m)



Source: Draft Site Inspection (SI)
Report for C&H Lake Linden Operations,
Lake Linden, Michigan, 49945 -
March 2013. Prepared by the MDEQ-RRD
Superfund Section, Pre-remedial Group,
Site Evaluation Unit (Pre-remedial Group)

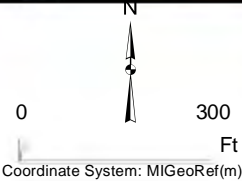


Prepared for:
**Michigan Department of
Environmental Quality**

Figure 1
Site Location Map
Hubbell Coal Dock and
Mineral Building Properties
Hubbell, Houghton County,
Michigan



- Install "Keep Out" Sign Every 100 feet - typical
- Fence Repair Area
- × × Current Hubbell Coal Dock and Mineral Building Fence Line



DES
Prepared for:
Michigan Department of
Environmental Quality

Figure 2
Proposed Fence Repairs
Hubbell Coal Dock and Mineral Building Properties
Hubbell, Houghton County, Michigan

ATTACHMENT A

The new gate across the middle entrance shall be a double-leaf swing gate totaling 32 feet in width constructed of 4-foot tall chain link fence. The frames shall be amply braced considering the length of the leafs and winter snow load. Chain link fence fabric shall be 9 gauge 2-inch mesh aluminized or hot dip galvanized. Gate posts shall be at least 4-inches outside diameter and weigh at least 9.1 pounds per linear foot. Posts shall be capped with caps of the manufacturer's standard material. The gate shall be provided with a latch to provide for locking and center bolt with center gate stop. All posts, rails, and other supports and appurtenances shall be hot dip galvanized. The existing fence ends north and south of the driveway shall be repaired and extended to connect to the new gate posts. The gate shall be provided with a padlock keyed to match the new padlock provided by the Contractor for the existing northern gate. Gate installation includes removal of the existing soil berm across the driveway and stockpiling of the material at a nearby location on the property to be determined by MDEQ. The Contractor shall provide a sketch of the proposed gate with their bid.

ATTACHMENT B



APPENDIX D

Photographic Log





Photo 1: Middle Coal Dock entrance prior to gate installation. Photo taken on 5/6/16.



Photo 2: Middle Coal Dock entrance after fencing repairs and gate installation. Photo taken on 6/27/16.



Photo 3: Damaged/missing fencing in northwest corner of Coal Dock. Photo taken on 5/6/16.



Photo 4: New fencing in northwest corner of Coal Dock. Photo taken on 6/23/16.



Photo 5: Breach in fence near north Coal Dock gate prior to repairs. Photo taken on 6/23/16.



Photo 6: View of north Coal Dock gate following repairs. Photo taken on 6/27/16.

