

# INTERIM RESPONSE CONSTRUCTION SUMMARY REPORT FOR ASBESTOS CONTAINING BUILDING MATERIALS ABATEMENT

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



APRIL 2017

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 Asbestos Containing Building Materials Abatement* (CSR) as part of the Abandoned Mining Wastes – Torch Lake non-Superfund Site (Project) [http://www.michigan.gov/deq/0,4561,7-135-3311\\_4109\\_9846\\_76560---.00.html](http://www.michigan.gov/deq/0,4561,7-135-3311_4109_9846_76560---.00.html) (Site ID: 31000098). This CSR summarizes the asbestos containing building material (ACBM) abatement interim response (IR) completed at the Calumet & Hecla Lake Linden Operations Area (CHLL) Hubbell Processing Area Mineral Building and Coal Dock properties. The IR entailed the removal and disposal of ACBM adjacent to the Mineral Building, including outside the fence line in the Michigan Department of Transportation (MDOT) right of way. 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. Depicted on *Figure 1, Project Location Map* are the CHLL and Calumet and Hecla Tamarack City Operations Area (CHTC) areas and their respective former industrial operations.

Centralized around Calumet & Hecla's copper mining and processing operations near 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 that 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 ACBM abatement was limited to two properties within the Hubbell Processing Area, the Mineral Building and Hubbell Coal Dock. *Figure 2, Roofing Material Debris Removal Area*, depicts features and the areas of ACBM abatement within the Hubbell Processing Area.

### 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 conducted from the mid-1860s to the 1960s, included the importation, 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) <https://cumulis.epa.gov/supercpad/cursites/csinfo.cfm?id=0503034> and a Great Lakes Area of Concern by the U.S./Canada Great Lakes Water Quality Agreement <https://www.epa.gov/torch-lake-aoc>. 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 during future investigations.

During 2014 and 2015, RRD conducted Site Investigation 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 Mineral Building and Coal Dock 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 asbestos; physical hazards; and, erosion and deposition of contaminated soils into Torch Lake. ACBM, specifically roofing material that had fallen and/or been blown off the roof of the Mineral Building was present on the ground surface, including outside of the fenced Hubbell Processing Area in a publically accessible right of way. The damaged and friable or potential to become friable ACBM posed a potential risk to human health as it related to the inhalation pathway. The adjacent publically accessible MDOT right of way includes a sidewalk used heavily by local residents.

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 removed and disposed of ACBM adjacent to the Mineral Building to mitigate potential risks to human health.

## **2.0 OBJECTIVE AND SCOPE OF WORK**

The objective of the IR was to abate ACBM adjacent to the Mineral Building, including the adjacent publically accessible right of way. To meet this objective MSG developed a Trade Contractor (TC) scope of work and assisted DEQ 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. The TC selected and retained by the State of Michigan was Upper Peninsula Abatement Company Inc. (UP Abatement) of Negaunee, Michigan. Refer to *Appendix B, Purchase Order*. UP Abatement completed the work in accordance with the TC procurement package included in *Appendix C, Hubbell Processing Area ACBM Abatement Project Revised Scope of Work* during June and July 2016. As required by the National Emission Standards for Hazardous Air Pollutants (NESHAP) for asbestos, the TC provided notice that is included in *Appendix D, Notification of Intent to Renovate/Demolish*. The TC also conducted personal air monitoring during the work, the data for which are included in *Appendix E, Air Sampling Results*. Documentation of ACBM disposal is included in *Appendix F, Waste Management Records*. Photographs of the IR operations are included in *Appendix G, Photographic Log*.

## **4.0 SUMMARY AND CONCLUSIONS**

The following ACBM Abatement IR operations were completed at the Mineral Building and Coal Dock properties within the Hubbell Processing Area:

- Picked-up, contained, and transported for disposal all visible pieces of ACBM/roofing material within Area A, Area B, and Area C adjacent to the Mineral Building totaling 11.81 tons of ACBM.

The completed IR operations temporarily met the objective of ACBM abatement to mitigate potential risks to human health.

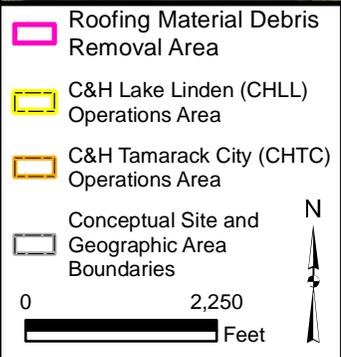
## 5.0 RECOMMENDATIONS

MSG has the following recommendation:

- Because roofing material continues to fall and blow off the Mineral Building periodic monitoring and ongoing ACBM abatement as required to maintain the IR's effectiveness.

FIGURES





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

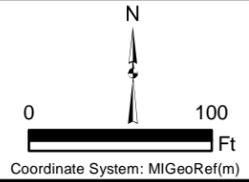
**Mannik Smith GROUP**  
 TECHNICAL SKILL. CREATIVE SPIRIT.  
 www.MannikSmithGroup.com

**Figure 1**  
 Project Location Map  
 Houghton County,  
 Michigan



FILE: C:\temp\Projects\MD\EQ0070\GIS\mxd\Planning\20170403-MineralBldg\_ACM\_Report\Fig2\_MineralBldg\_Debris\_Removal\_v20170403.mxd 11:01:23 AM 4/3/2017 KBrown

**Legend**  
 Roofing Material Debris Removal Area



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

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 Smith  
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**Figure 2**  
 Roofing Material Debris Removal Area  
 Hubbell Coal Dock and Mineral Building Properties  
 Hubbell, Houghton County, Michigan

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  
District Supervisor's Signature: Cliffon Clark 6/10/16

**Site Description:** The Hubbell Coal Dock and Mineral Building portion of the Calumet and Hecla Lake Linden Operations Area (CHLL) consists of a combined approximately 45-acre area where polychlorinated biphenyls (PCBs) and metals contaminated soil, asbestos containing building materials (ACBM), abandoned drums, coal pile residuals, and other mining wastes are present on the ground surface. Due to deterioration of a large mining-era structure, ACBM, primarily roofing material, is concentrated on the ground surface in an approximate eight-acre area around the structure. In early May 2016 ACBM was also observed up to the paved public roadway shoulder which is frequented by children and recreational users. The ACBM is also across from a residential area. Asbestos concentrations in one bulk black asphaltic roofing material sample contained asbestos fibers at concentrations greater than 1 percent (%). The damaged and friable or potential to become friable nature of the roofing material poses a potential risk to human health as it relates to the inhalation pathway. Although, asbestos fibers were not detected in a limited number of soil samples collected from the study area, the exposed nature of these materials, makes them subject to further degradation that could potentially impact surface soils at the Hubbell Coal Dock and Mineral Building properties. The identified conditions warrant an emergency response action to mitigate potential risks to human and ecological receptors. Failure to undertake an emergency response action will allow for the on-going potential exposure risk.

**Cause of Emergency:** Roofing material containing asbestos has blown off of a large deteriorating mining-era structure. The ACBM is present on the ground surface in publically accessible areas and is subject to being blown around inside and outside the short perimeter fence.

**Specific Threats:** ACBM is present on the ground surface across from a residential area and readily available to recreational users of the adjacent well-used paved roadway shoulder, as well as people accessing the properties. The area is generally open and the ACBM is subject to being blown around. Some asbestos is also present in grassy shoulder areas subject to seasonal mowing, which could break-down and spread the material further. The damaged and friable or potential to become friable nature of these materials pose a potential risk to human health as it relates to the inhalation pathway.

**Action Taken:** Because of the imminent threat the emergency procurement process is being utilized to contract ACBM removal from the ground surface and proper disposal. The presence of publically accessible asbestos was observed in early May 2016 and budget estimates were obtained to judge funding needs. Specifications have been developed and a Pre-Bid Meeting is scheduled for June 2, 2016 to obtain firm bids for the work. Bids obtained on June 9, 2016 have been evaluated and U.P. Abatement Company, Inc has been notified they are the successful bidder at \$22,026.00

**Additional Information:**

**Funding Source:** Contingency Funds allocated to #31000098 Abandoned Mining Wastes project

**Authorized by:**

**Responsible Party:**

**Cost Recovery:**

APPENDIX B

Purchase Order



STATE OF MICHIGAN

FORM DMB-287  
(REV 11/94)

PURCHASE ORDER

PURCHASE ORDER |-----|  
NUMBER | 761P6600475

-----  
REQUESTING DEPARTMENT OR AGENCY : RD - CONTRACTS I  
MICHIGAN DEPT OF ENVIRONMENTAL QUALITY

CONSTITUTION HALL, 4TH FLOOR  
525 WEST ALLEGAN  
LANSING MI 48933

-----  
CONTACT: TRACEY CURTIS | DELIVERY REQUIRED | AGENCY REF # | REQ NO. | ORDER DATE  
517 284-5083 EXT: | 06/17/16 | 76120100 | 761R6600549 | 06/17/16

-----  
UPPER PENINSULA ABATEMENT COMPANY INC  
349 US HWY 41 EAST  
NEGAUNEE MI 49866

CASH DISCOUNT : NET 30 DAYS  
DELIVERY REQUIRED :  
FREIGHT CARRIER :  
F.O.B. : DELIVERED

-----  
VENDOR PHONE : -

-----  
SHIP TO:  
MICHIGAN DEPT OF ENVIRONMENTAL QUALIT  
CALUMET FIELD OFFICE - RRD  
55195 U.S. 41  
CALUMET MI 49913

BILL TO:  
MICHIGAN DEPT OF ENVIRONMENTAL QUALIT  
REMEDATION AND REDEVELOPMENT DIVISIO  
ADMINISTRATION 5TH FLOOR SOUTH TOWER  
PO BOX 30426  
LANSING MI 48909-7926

-----  
ITEM COMMODITY ID QUANTITY UNIT UNIT PRICE TOTAL PRICE  
COMMODITY NAME/SPECIFICATIONS

1 912-68 1.00 EA 22,026.0000 22,026.00

MANAGEMENT, CONSTRUCTION #

FURNISH ALL LABOR, MATERIALS, EQUIPMENT AND RELATED WORK REQUIRED TO  
PERFORM ABESTOS ABBATEMENT ON ~18,900 SQUARE FEET OF GROUND SURFACE  
AT THE ABANDONED MINING WASTES SITE #31000098

PM: A. KERANEN START: 6/13/16 END: 8/30/16

-----  
GRAND TOTAL 22,026.00

-----  
ADDITIONAL REQUIREMENTS :

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

*Michael Churchey*  
\_\_\_\_\_  
AUTHORIZED SIGNATURE

STATE OF MICHIGAN

PAGE : 2

FORM DMB-287  
(REV 11/94)

PURCHASE ORDER

PURCHASE ORDER  
NUMBER | 761P6600475

ACCOUNTING INFORMATION :

SX	AGY	Y	INDEX	PCA	COBJ	AOBJ	GRANT	PH	PROJ	PH	AG1	AG2	AG3	TOTAL
01	761	4	44251	30744		6127			45699000					22026.00

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

--- END OF DOCUMENT ---

APPENDIX C

Hubbell Processing Area ACBM Abatement  
Project Revised Scope of Work



## Hubbell Coal Dock and Mineral Building Interim Response

### Revised Asbestos Containing Building Materials Removal Scope of Work

The Michigan Department of Environmental Quality (MDEQ) identified the presence of asbestos containing building materials (ACBM) around the Mineral Building at the Hubbell Coal Dock and Mineral Building properties in Hubbell, Michigan. **Figure 1** depicts the project location.

To reduce potential exposure to the public, MDEQ will remove and properly dispose pieces of ACBM, specifically pieces of roofing materials which have apparently fallen off of the roof of the Mineral Building. **Figure 2** depicts the approximate limits of the work along with existing sample results. Removal will consist of picking up pieces of roofing material, either by-hand and/or through use of an appropriate vacuum with high-efficiency particulate air (HEPA) filter as may be appropriate to the material size. The short duration work in the Michigan Department of Transportation (MDOT) right of way (ROW) does not require a permit per communication from MDOT. However, use of a high visibility traffic vest is required along with other personal protective equipment (PPE). Work in the MDOT ROW should occur between 9:00 am and 11:00 am.

Cutting branches off the shrubs on the northwest side of the Mineral Building up to a height not to exceed four feet to facilitate access for material removal is acceptable. Pruning shall be kept to the minimum necessary to access the area for removing roofing material. Clean and smooth thinning cuts shall be used to remove branches at their points of origin, leaving the bark at the edges of the cuts firmly attached to the wood. Do not leave stubs. Cuts shall be just outside the branch bark ridge and the outer portion of the collar, which is the enlarged area at the branch attachment point. On larger branches a three-cut process shall be used to remove the weight of the branch (first two cuts) prior to making the final cut.

The Contractor is responsible for compliance with the National Emission Standards for Hazardous Air Pollutants (NESHAP) for asbestos. This includes providing notice to MDEQ and the Michigan Department of Licensing and Regulatory Affairs (LARA). It also includes work practices and engineering controls to prevent asbestos release and visible emissions such as using a water spray as needed. Refer to <http://www.michigan.gov/deq/0,4561,7-135-3310-11856--,00.html>. All visible pieces of ACBM/roofing material shall be removed from the ground surface and readily reachable tree branches within the areas depicted on **Figure 2**. Suspect and actual ACBM encountered during clean-up activities shall be picked up for disposal such that the clean-up activities do not crush or pulverize the observed material. It is understood that some large material pieces may be broken during pick-up but actions shall be taken to minimize potential asbestos release.

The Contractor shall provide all required waste characterization and profiling, including all sampling and analysis that may be required by the disposal facility for waste acceptance.

The MDEQ shall be provided all waste characterization and disposal documents for review and approval at least two business days in advance of when they are needed. MDEQ will sign all disposal documents as the waste generator.

40-hour Hazardous Waste Operations and Emergency Response (HAZWOPER) training is required for all on-site persons that may encounter contaminated media. A summary of existing data is provided in **Attachment A**. The Contractor is responsible for their own health and safety, including compliance with 29 Code of Federal Regulations (CFR) Part 1910 and 29 CFR Part 1926.

Refer to **Attachment B** for Conditions for Emergency Bids that will apply to the work. In addition, the selected Contractor must supply the following written information within five business days after receiving a telephone authorization from the MDEQ district Project Manager to start the work:

- Copy of Certificate of Awardability, for contracts over \$100,000.
- Proof of 40-hour hazardous waste safety training for on-site personnel.

Schedule:

- ACBM removal from Area A identified on **Figure 2** shall be completed by 30 June 2016.
- ACBM removal from Area B and Area C identified on **Figure 2** shall be completed by 15 July 2016.
- No on-site work shall occur from 2 July through 4 July 2016.

Hubbell Coal Dock and Mineral Building Interim Response  
 Asbestos Containing Building Materials Removal Scope of Work

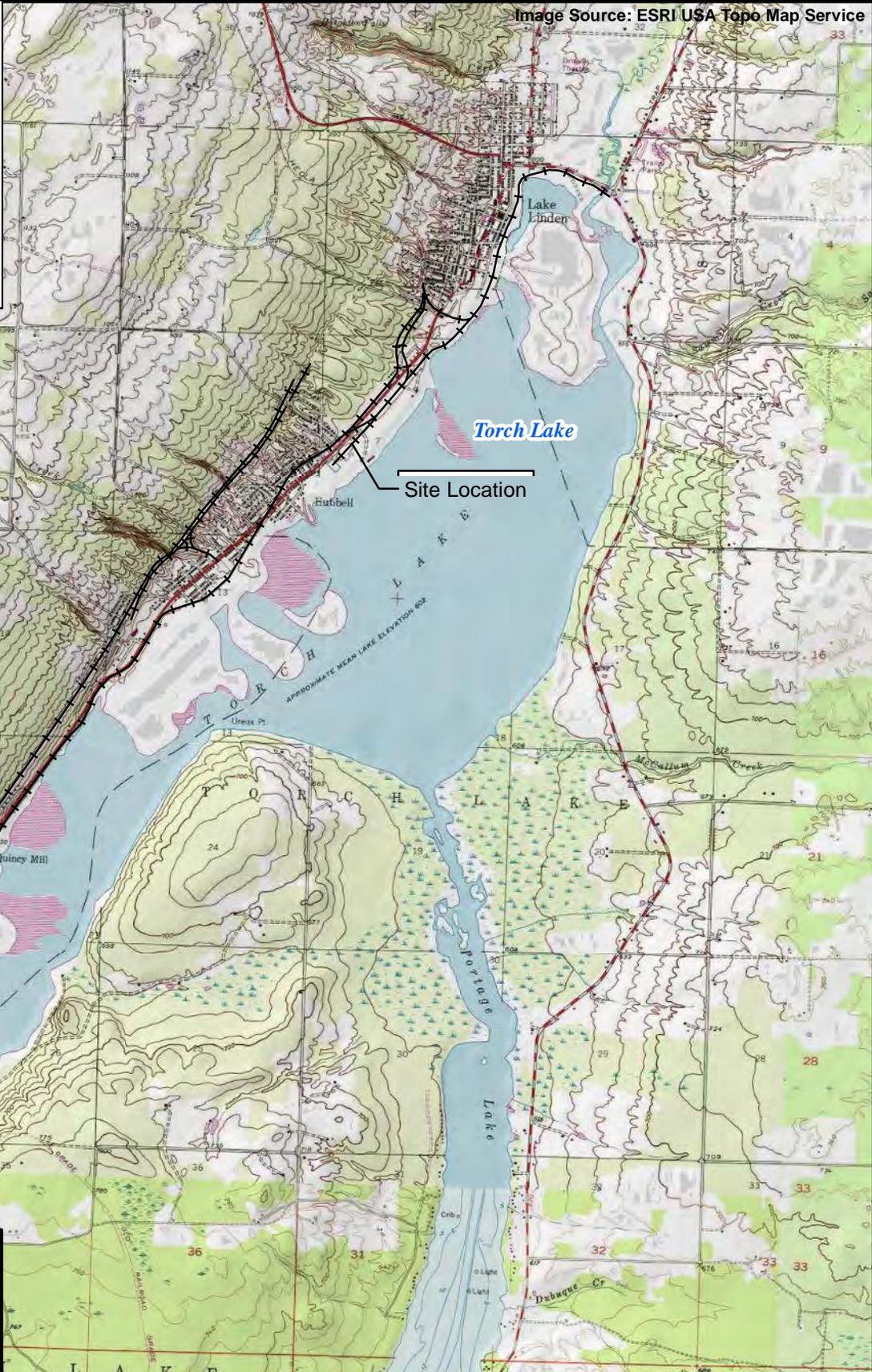
The following tasks will be required of the Contractor to complete the work. Note that if Work Items 2 and/or 3 are awarded they will be additive to Work Item 1 and will be awarded at the time of Contract award.

<u>Work Item</u>	<u>Contractor Quote</u>
1. Pick-up, contain, and transport for disposal all visible pieces of ACBM/roofing material within <b>Area A</b> identified on <b>Figure 2</b> . This includes all required notifications, PPE, materials, tools, supplies, equipment, power, water, personnel, mobilization/demobilization, transport, waste characterization, profiles, and manifesting required to complete the material pick-up and transportation.	\$ _____
2. Unit rate for <b>Area A</b> disposal from Waste Management = \$40.00 per ton or \$120.00 minimum per load for non-friable ACBM.*	\$ 120.00 _____ (assuming minimum charge)
3. Pick-up, contain, and transport for disposal all visible pieces of ACBM/roofing material within <b>Area B</b> identified on <b>Figure 2</b> . This includes all required notifications, PPE, materials, tools, supplies, equipment, power, water, personnel, mobilization/demobilization, transport, waste characterization, profiles, and manifesting required to complete the material pick-up and transportation.	\$ _____
4. Unit rate for <b>Area B</b> disposal from Waste Management = \$40.00 per ton or \$120.00 minimum per load for non-friable ACBM.*	\$ 360.00 _____ (Assuming 9 tons)
5. Pick-up, contain, and transport for disposal all visible pieces of ACBM/roofing material within <b>Area C</b> identified on <b>Figure 2</b> . This includes all required notifications, PPE, materials, tools, supplies, equipment, power, water, personnel, mobilization/demobilization, transport, waste characterization, profiles, and manifesting required to complete the material pick-up and transportation.	\$ _____
6. Unit rate for <b>Area C</b> disposal from Waste Management = \$40.00 per ton or \$120.00 minimum per load for non-friable ACBM.*	\$ 480.00 _____ (Assuming 12 tons)
7. Budgeted amount for other Waste Management charges of tax at \$0.36 per ton, \$20.00 per load environmental fee, and \$100.00 profile fee.*	\$ 150.00 _____
<b>TOTAL</b>	<b>\$ _____</b>

\* = Payment for Items 2, 4, and 6 will be on a per-ton or per load basis. Payment for Item 7 will be for actual taxes and fees. The number of tons/loads is estimated and may be more or less than the estimated value. Payment to the Contractor for disposal will be at the stated unit rates for the actual quantities disposed to complete the project for the combined number of Areas awarded.

## **FIGURES**

Houghton Co  
Site Location



FILE: W:\Projects\Projects K-OMDEQ0070\ENG\GAPP\GIS\mxd\Planning\20160422-MineralBldg\_ACM\Fig1\_Site\_Location\_v20160425.mxd 3:49:28 PM 4/25/2016 KBrown

Former Calumet & Torch Lake R. R.



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)



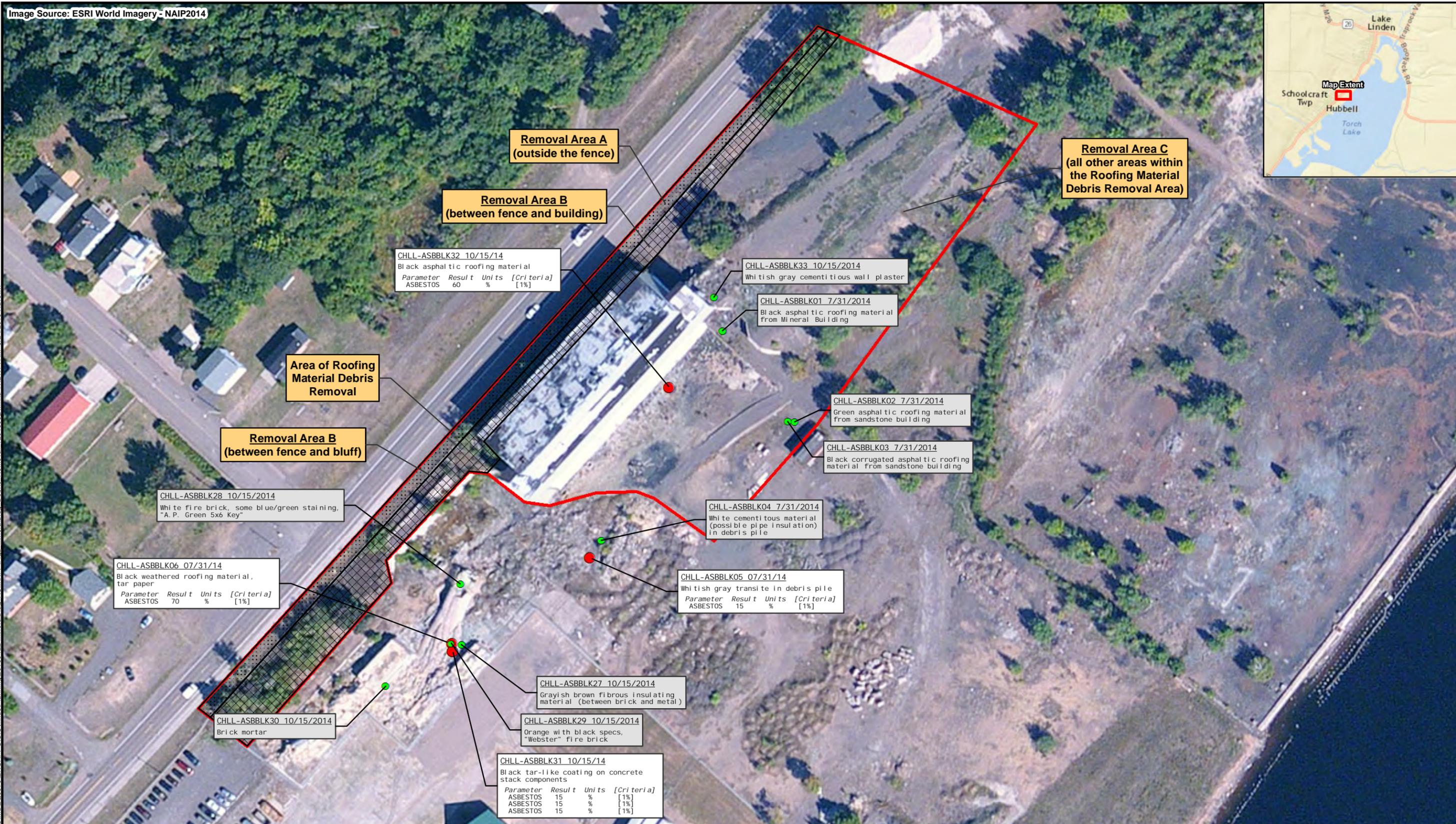
Prepared for:  
**Michigan Department of  
Environmental Quality**



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



FILE: \\P:\Projects\Projects\_K\0\MDE0070\ENR\APP\GIS\mxd\Planning\20160422-MineralBldg\_Debris Removal\_v20160524.mxd 11:21:14 AM 5/24/2016 KBrown



0 10 20 Ft  
Coordinate System: MGeoRef(m)

Environmental Quality



**ATTACHMENT A**

FILE: W:\Projects\Projects-K-OMDECO0070\ENGAPP\GIS\Simxds\Planning\20160503-WasteManagement\Fig09\_2\_RPMetc\_Results\_v20160219.mxd 3:32:59 PM 5/3/2016 KBrown

Image Source: MIS - Public Imagery



**CHLL-WP01 10/15/14**

Depth	Parameter	Result	Units	[Criteria]
0-0.5	ARSENIC	77	mg/kg	[10, 17]
0-0.5	LEAD	1800	mg/kg	[10, 17]
0-0.5	TOTAL PCBS	72000	J ug/kg	[10, 17]

**CHLL-ASBBLK26 10/15/14**

Parameter	Result	Units	[Criteria]
ASBESTOS	20	%	[1%]
ASBESTOS	20	%	[1%]
ASBESTOS	20	%	[1%]

**CHLL-ASBBLK32 10/15/14**

Parameter	Result	Units	[Criteria]
ASBESTOS	60	%	[1%]

**CHLL-WP03 10/15/14**

Depth	Parameter	Result	Units	[Criteria]
0-0.5	ARSENIC	100	mg/kg	[10, 17]
0-0.5	COPPER	22000	mg/kg	[10]
0-0.5	LEAD	2200	mg/kg	[10, 17]
0-0.5	TOTAL PCBS	1570	J ug/kg	[10, 17]
0-0.5	FLUORANTHRENE	8200	ug/kg	[2]
0-0.5	PHENANTHRENE	3100	ug/kg	[2]
0-0.5	1,2,4-TRIMETHYLBENZENE	610	J ug/kg	[2]
0-0.5	BENZENE	240	J ug/kg	[4, 11]
0-0.5	NAPHTHALENE (VOC)	1500	J ug/kg	[2]
0-0.5	XYLENE - TOTAL	2770	J ug/kg	[2]

**CHLL-ASBBLK05 07/31/14**

Parameter	Result	Units	[Criteria]
ASBESTOS	15	%	[1%]

**CHLL-ASBBLK06 07/31/14**

Parameter	Result	Units	[Criteria]
ASBESTOS	70	%	[1%]

**CHLL-ASBBLK31 10/15/14**

Parameter	Result	Units	[Criteria]
ASBESTOS	15	%	[1%]
ASBESTOS	15	%	[1%]
ASBESTOS	15	%	[1%]

**CHLL-WP02 10/15/14**

Depth	Parameter	Result	Units	[Criteria]
0-0.5	ARSENIC	92	mg/kg	[10, 17]
0-0.5	COPPER	25000	mg/kg	[10]
0-0.5	CYANIDE	0.33	mg/kg	[2]
0-0.5	LEAD	1100	mg/kg	[10, 17]

**CHLL-DM04 08/20/15**

Parameter	Result	[Criteria]
ARSENIC	520	[10, 17]
CYANIDE	0.19	[2]
IRON	240000	J [10]
LEAD	1200	[10, 17]

**CHLL-DM03 08/20/15**

Parameter	Result	[Criteria]
ARSENIC	230	[10, 17]
COPPER	220000	[9, 10, 16, 17]
LEAD	13000	[10, 17]
TOTAL PCBS	1500	J [10, 17]
PHENANTHRENE	2700	[2]

**CHLL-ASBBLK09 10/14/14**

Parameter	Result	Units	[Criteria]
ASBESTOS	20	%	[1%]
ASBESTOS	20	%	[1%]
ASBESTOS	20	%	[1%]

**CHLL-ASBBLK08 10/14/14**

Parameter	Result	Units	[Criteria]
ASBESTOS	8	%	[1%]
ASBESTOS	20	%	[1%]

**CHLL-ASBBLK07 10/14/14**

Parameter	Result	Units	[Criteria]
ASBESTOS	20	%	[1%]
ASBESTOS	2	%	[1%]
ASBESTOS	8	%	[1%]

**CHLL-ASBBLK19 10/14/14**

Parameter	Result	Units	[Criteria]
ASBESTOS	20	%	[1%]
ASBESTOS	20	%	[1%]
ASBESTOS	20	%	[1%]

**CHLL-RPM-01 10/15/14**

Parameter	Result	Units	[Criteria]
TOTAL PCBS	18300	J ug/kg	[10, 17]

**CHLL-RPM-02 10/15/14**

Parameter	Result	Units	[Criteria]
TOTAL PCBS	860000	ug/kg	[6, 10, 13, 17]

**CHLL-RPM-03 10/15/14**

Parameter	Result	Units	[Criteria]
TOTAL PCBS	230000	J ug/kg	[10, 17]

**CHLL-ASBBLK22 10/14/14**

Parameter	Result	Units	[Criteria]
ASBESTOS	90	%	[1%]
ASBESTOS	90	%	[1%]
ASBESTOS	90	%	[1%]

**CHLL-ASBBLK37 10/15/14**

Parameter	Result	Units	[Criteria]
ASBESTOS	90	%	[1%]
ASBESTOS	45	%	[1%]

**CHLL-ASBBLK24 10/14/14**

Parameter	Result	Units	[Criteria]
ASBESTOS	90	%	[1%]

**CHLL-DM01 08/20/14**

Parameter	Result	Units	[Criteria]
ANTI MONY	1900	mg/kg	[10, 17]
ARSENIC	51	mg/kg	[10, 17]
LEAD	230000	mg/kg	[9, 10, 16, 17]

**CHLL-DM02 08/20/14**

Parameter	Result	Units	[Criteria]
ANTI MONY	590	mg/kg	[10]
ARSENIC	65	mg/kg	[10, 17]
COPPER	23000	mg/kg	[10]
LEAD	110000	mg/kg	[9, 10, 16, 17]

**CHLL-DRUMWC 10/15/14**

Parameter	Result	Units	[Criteria]
Lead, TCLP	800	mg/L	[18]

MDEQ Part 201 Cleanup Criteria for Response Action

- 1=Statewide Default Background Level
- 2\*=Groundwater Surface Water Interface Protection Criteria
- 3=Soil Saturation Concentration Screening Levels
- 4\*=Residential Drinking Water Protection Criteria
- 5=Residential Soil Volatilization to Indoor Air Inhalation Criteria (VSIC)
- 6=Residential Infinite Source Volatile Soil Inhalation Criteria
- 7=Residential Finite VSIC for 5 Meter Source Thickness
- 8=Residential Finite VSIC for 2 Meter Source Thickness
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- 10=Residential Direct Contact Criteria
- 11\*=Nonresidential Drinking Water Protection Criteria
- 12=Nonresidential Soil Volatilization to Indoor Air Inhalation
- 13=Nonresidential Infinite Source Volatile Soil Inhalation Criteria
- 14=Nonresidential Finite VSIC for 5 Meter Source Thickness
- 15=Nonresidential Finite VSIC for 2 Meter Source Thickness
- 16=Nonresidential Particulate Soil Inhalation Criteria
- 17=Nonresidential Direct Contact Criteria
- 18=Hazardous Waste Toxicity Screening Value

\* Exceedances of criteria 2, 4, and 11 shown for organics and cyanide only

- Sampling locations with at least one exceedance
- Sampling locations with no exceedances
- Locations are included within a different geographical area boundary

- Locations Analyzed for PCBs**
- No Detections
  - At Least One Detection
  - Conceptual Site and Geographic Area Boundaries

Notes:  
mg/kg = milligrams per kilogram  
ug/kg = micrograms per kilogram

0 500 Ft  
Coordinate System: MlGeoRef(m)



**Figure 9-2**  
Sample Analytical Result Map  
Building Materials, Containers, and Wastes  
Hubbell Processing Area  
Lake Linden, Houghton County, Michigan



FILE: \\projects\Projects\_KO\MDEQ0070\ENGA\PPS\GIS\mxd\Planning\20160503-WasteManagement\Fig09\_3a\_HProcess\_Soil\_Results\_CoalDock\_v20160219.mxd 3:32:40 PM 5/3/2016 KBrown

Image Source: MIS - Public Imagery



**Legend:**

- Sampling locations with at least one exceedance
- Sampling locations with no exceedances
- Locations are included within a different geographical area boundary

**Locations Analyzed for PCBs**

- No Detections
- At Least One Detection
- Conceptual Site and Geographic Area Boundaries

**Notes:**  
 MG/KG = milligrams per kilogram  
 UG/KG = micrograms per kilogram  
 Sample depths shown in feet below ground surface.

0 500 Ft  
 Coordinate System: MIGeoRef(m)

MDEQ Part 201 Cleanup Criteria for Response Action

- 1=Statewide Default Background Level
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\* Exceedances of criteria 2, 4, and 11 shown for organics and cyanide only

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

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

**Figure 9-3a**  
 Sample Analytical Result Map - Soil  
 Hubbell Processing Area - Coal Dock  
 Lake Linden, Houghton County, Michigan



FILE: \\pa\Projects\Projects\_KO\MDE0070\ENGA\PP\GIS\mxd\20160503-WasteManagement\Fig09\_3b\_HFProcess\_Soil\_MineralBldg\_v20160219.mxd 3:28:00 PM 5/3/2016 KBrown



**SB-14 10/11/11**

Depth	Parameter	Result	Units	[Criteria]
0-1.17	ARSENIC	41.5 J	mg/kg	[10, 17]
0-1.17	CYANIDE	0.15 J	mg/kg	[2]

**Mineral B-6 09/07/07**

Depth	Parameter	Result	Units	[Criteria]
0-0	ARSENIC	230	mg/kg	[10, 17]
0-0	COPPER	44000	mg/kg	[10]
0-0	LEAD	1900	mg/kg	[10, 17]

**Mineral B-11 09/07/07**

Depth	Parameter	Result	Units	[Criteria]
0-0	ARSENIC	52	mg/kg	[10, 17]

**CHLL-SB80 08/20/14**

Depth	Parameter	Result	Units	[Criteria]
0-0.5	ARSENIC	45	mg/kg	[10, 17]
0-0.5	ARSENIC (DUP)	37	mg/kg	[10]

**SB-12 10/11/11**

Depth	Parameter	Result	Units	[Criteria]
0.5-1	ARSENIC	8.6 J	mg/kg	[10]
0.5-1	CYANIDE	0.13 J	mg/kg	[2]

**SS-19 10/11/11**

Depth	Parameter	Result	Units	[Criteria]
0-0.33	ARSENIC	5600	J mg/kg	[9, 10, 16, 17]
0-0.33	COPPER	199000	J mg/kg	[9, 10, 16, 17]
0-0.33	CYANIDE	0.24	J mg/kg	[2]
0-0.33	LEAD	1610	J mg/kg	[10, 17]
0-0.33	HEXACHLOROBENZENE	850	ug/kg	[2]

**SS-20 10/11/11**

Depth	Parameter	Result	Units	[Criteria]
0-0.06	ARSENIC	66.9	J mg/kg	[10, 17]
0-0.06	COPPER	20300	J mg/kg	[10]
0-0.06	CYANIDE	0.14	J mg/kg	[2]
0-0.06	LEAD	1010	J mg/kg	[10, 17]

**SB-11 10/11/11**

Depth	Parameter	Result	Units	[Criteria]
0-1.33	ARSENIC	27.1 J	mg/kg	[10]

**CHLL-SB52 06/11/14**

Depth	Parameter	Result	Units	[Criteria]
0-0.5	ARSENIC	120	mg/kg	[10, 17]
0-0.5	COPPER	26900	mg/kg	[10]
0-0.5	LEAD	1700	mg/kg	[10, 17]

**SS-18 10/11/11**

Depth	Parameter	Result	Units	[Criteria]
0-0.5	ARSENIC	1220	mg/kg	[9, 10, 16, 17]
0-0.5	COPPER	26900	J mg/kg	[10]
0-0.5	CYANIDE	1.9	mg/kg	[2]
0-0.5	PHENANTHRENE	4400	ug/kg	[2]

MDEQ Part 201 Cleanup Criteria for Response Action

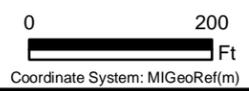
- 1=Statewide Default Background Level
- 2\*=Groundwater Surface Water Interface Protection Criteria
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\* Exceedances of criteria 2, 4, and 11 shown for organics and cyanide only

- Sampling locations with at least one exceedance
- Sampling locations with no exceedances
- Locations are included within a different geographical area boundary

- Locations Analyzed for PCLs**
- No Detections
  - At Least One Detection
  - Conceptual Site and Geographic Area Boundaries

Notes:  
 MG/KG = milligrams per kilogram  
 UG/KG = micrograms per kilogram  
 Sample depths shown in feet below ground surface.



**Figure 9-3b**  
 Sample Analytical Result Map - Soil  
 Hubbell Processing Area - Mineral Building  
 Lake Linden, Houghton County, Michigan

**ATTACHMENT B**



**Remediation and Redevelopment Division  
Department of Environmental Quality  
Conditions for Emergency Bids**

*Printed under the authority of the Natural Resources and Environmental Protection Act, PA 451, February 1995, as amended*

By your response to the Department of Environmental Quality request for bids on the \_\_\_\_\_ site, the contractor agrees to provide all labor, materials, equipment, tools and services required to complete the work and comply with the following conditions:

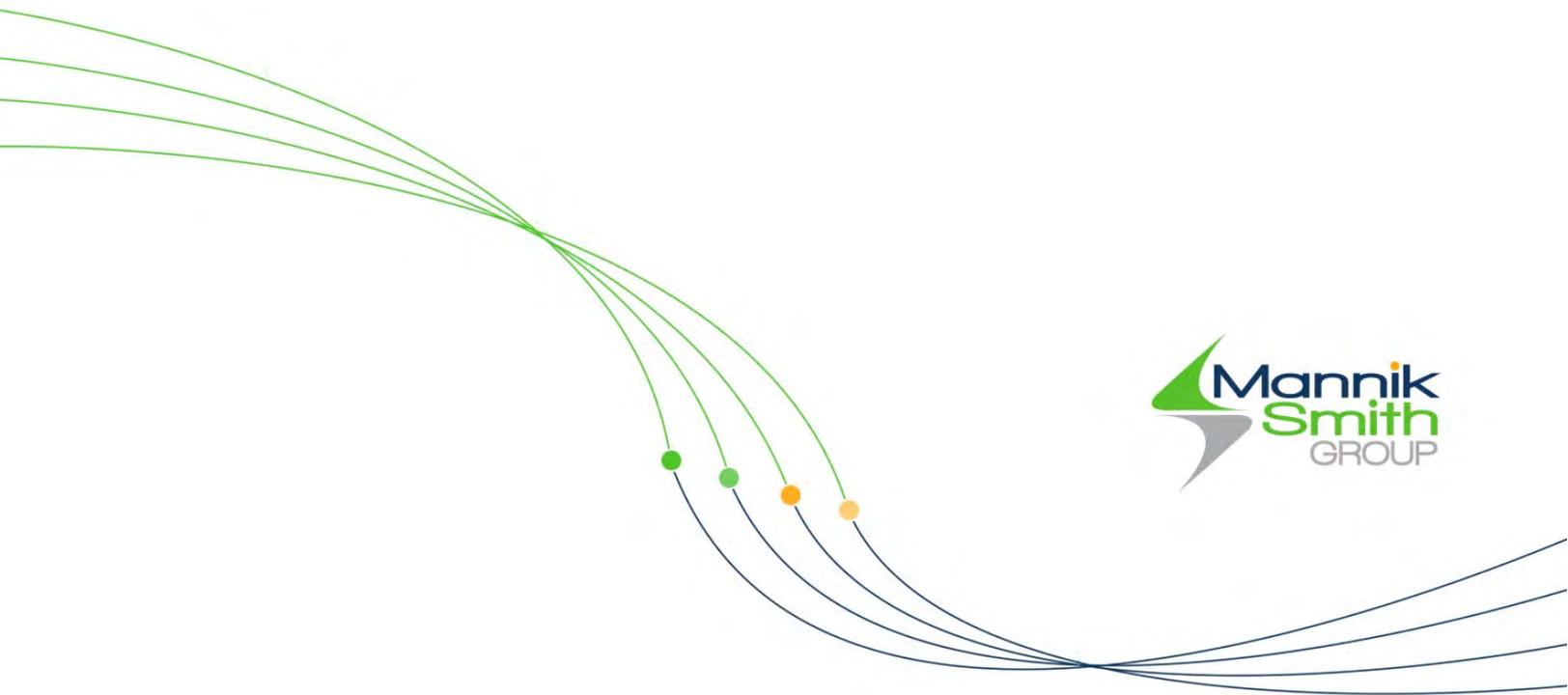
- 1. INSURANCE:** No work connected with this contract shall be started until the contractor has submitted evidence that (a) all workers are insured to protect him/her from claims for damages for personal injury or death which may arise from operations under this contract and that (b) he/she is covered by Property Damage Insurance in the amount of \$100,000 and Public Liability Insurance in the amount of \$100,000-\$300,000. All of the above insurances shall be maintained until final payment is made. The contractor shall assume full responsibility for any damage which may result from any cause including fire or other casualty until completion of the contract and final payment. Any casualties shall not relieve the contractor from performing the contract.
- 2. EMPLOYEES AND SUPERINTENDENT:** Contractor shall enforce good order among his/her employees and shall not employ on the work site any disorderly, intemperate, or unfit person or anyone not skilled in the work assigned to him/her. Contractor or a competent person having authority to act for him/her shall be at the work site at all times.
- 3. PROTECTION:** Contractor shall properly protect all new and existing work from damage. Proper safety provisions shall be made at all times for the protection of all persons.
- 4. ROYALTIES, PATENTS, NOTICES, AND FEES:** Contractor shall give all notices and pay all royalties, building permits, and fees. He/she shall defend all suits or claims for infringement of any patent rights and shall save the state harmless from loss on account thereof. He/she shall comply with all laws, ordinances, and codes applicable to any portion of the work.
- 5. EXAMINATION OF PREMISES:** Bidder shall familiarize himself/herself with local conditions affecting the job. He/she shall take his/her own measurements and be responsible for the correctness of same. Bidder shall be held to have made such examinations and no allowances will be made in his/her behalf by reason of error or omission on his/her part. If any part of the contractor's work depends upon existing work for proper results or the work of another contractor, the contractor shall notify the Department before commencing work of any defects that will affect the results. Failure to so notify will constitute his/her acceptance of the conditions.
- 6. OTHER CONTRACTS:** The state may let other contracts in connection with the work and the contractor shall properly connect and coordinate his/her work with the work of such other contractors. The state shall not be liable for any damages or increased costs occasioned by the failure of other contractors to execute their work as may be anticipated by these documents.
- 7. PAYMENT:** Payment for the work will be made in one sum upon completion of the work. When applying for payment, the contractor shall submit a statement based upon an itemized schedule. The work will not be considered complete until the work has been finally accepted by the Department of Environmental Quality and the contractor has furnished satisfactory evidence that all payrolls and other indebtedness connected with the work have been paid.

- 8. REGULATIONS:** The contractor shall comply with all authorities having jurisdiction over the work. This includes all applicable federal, state, and local laws, ordinances, rules and regulations.
- 9. PREVAILING WAGES.** The contractor shall comply with Michigan's Prevailing Wage Act, MCL 408.551 et seq. Shall ensure that all employees covered by this act are compensated at a rate not less than those established by the Michigan Department of Consumer and Industry Service as Prevailing Wage and Fringe Benefit rates.

The contractor shall secure all construction permits necessary for proper execution of the work prior to starting work on the project. All fees for securing the permits shall be paid by the contractor, including all inspection costs which may be legally assessed by the Bureau of Construction Codes in accordance with authority granted under 1980 PA 371. All work shall be executed in accordance with the state of Michigan's Construction Codes. If the contractor performs any work knowing it to be contrary to the state of Michigan's Construction Codes, the contractor shall assume full responsibility and shall bear all attributable costs.

The contractor shall conform to the provisions of the Michigan Right to Know law, 1986 PA 80 and all other applicable state and federal health and safety regulations, including U.S. Occupational Safety and Health Administration (29 CFR 1910).

The contractor shall follow all state and federal laws and regulations that govern the handling, transportation, and disposal of material and waste that are deemed part of the work and shall use licensed personnel where appropriate.



**NOTIFICATION OF INTENT TO RENOVATE/DEMOLISH**

**DEQ** MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY  
(MDEQ) AIR QUALITY DIVISION  
NESHAP, 40 CFR Part 61, Subpart M

**LARA** MICHIGAN DEPARTMENT OF LICENSING AND  
REGULATORY AFFAIRS (LARA), ASBESTOS PROGRAM,  
P.A. 135 OF 1986, AS AMENDED, Section 220 (1-4) or (8)

<p><b>1. NOTIFICATION:</b></p> <p>Date of Notification: _____ Document #: _____          Date of Original: _____ Original Document #: _____          Notification Type:   <input checked="" type="checkbox"/> Original   <input type="checkbox"/> Revised   <input type="checkbox"/> Canceled</p> <p><u>Mark appropriate boxes: (both DEQ and LARA may apply):</u></p> <p><b>DEQ (NESHAP) [260 ln. ft./160 sq. ft. or more is threshold]</b></p> <p><input checked="" type="checkbox"/> Planned Renovation - 10 <u>working</u> days notice  <input type="checkbox"/> Emergency Renovation  <input type="checkbox"/> Scheduled Demolition - 10 <u>working</u> days notice  <input type="checkbox"/> Intentional Burn - 10 <u>working</u> days notice  <input type="checkbox"/> Ordered Demolition</p> <p><b>LARA (MIOSHA) [Will not accept annual notifications]</b></p> <p><input checked="" type="checkbox"/> Demo, Reno, Encap. (&gt;10 ln. ft./15 sq. ft.) 10 <u>calendar</u> days notice  <input type="checkbox"/> Emergency Renovation/Encapsulation</p>	<p><b>4. DEMOLITION CONTRACTOR:</b> Internal Project #:          Name: _____          Mailing Address: _____          City/State/Zip: _____          E-mail: _____ Phone: _____          Contact: _____</p>																										
<p>Calculate LARA Asbestos Project Fee: (1% Project Fee)   <input type="checkbox"/> Time &amp; material          Total Project Cost: \$22,026.00                                   x 0.01 = \$220.26          Type of Contractor: Type II                                   License No: C39239          Licensing Authority: MIOSHA</p>	<p><b>5. FACILITY OWNER:</b> Internal Project #:          Name: SILVER SHORE ENTERPRISES, INC. WILLIAM SILER, PRESIDENT          Mailing Address: 45505 CHAMPION STREET          City/State/Zip: SOUTH RANGE, MI 49963          E-mail: JChrestensen@manniksmithgroup.com          Contact: Jed Chrestensen of Mannik &amp; Smith Group Phone: 906-487-7452</p>																										
<p><b>2. PROJECT SCHEDULE:</b></p> <p><input type="checkbox"/> Check here if this is a multi-phased project, attach a schedule showing the start/end date of each phase.</p> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th align="center">START DATE</th> <th align="center">END DATE</th> </tr> </thead> <tbody> <tr> <td>+ Renovation:</td> <td></td> <td></td> </tr> <tr> <td>+ Asb. Removal:</td> <td align="center">06/27/2016</td> <td align="center">07/01/2016</td> </tr> <tr> <td>+ Demolition:</td> <td></td> <td></td> </tr> </tbody> </table> <p>Encapsulation:          * Includes setup, build enclosure, asbestos removal, demobilizing, etc.          + Include <u>only</u> those dates you are conducting asbestos removal/demo.</p> <p><b>Work Schedule:</b> Please indicate the anticipated days of the week and work hours for the purpose of scheduling a compliance inspection.</p> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th align="center">Days of the Week</th> <th align="center">Work Hours</th> </tr> </thead> <tbody> <tr> <td>Asb. Removal:</td> <td align="center">M, Tu, W, Th, F</td> <td align="center">7:30 a.m. to 5:30 p.m.</td> </tr> <tr> <td>Demolition:</td> <td></td> <td></td> </tr> <tr> <td>Encapsulation:</td> <td></td> <td></td> </tr> </tbody> </table> <p><input type="checkbox"/> Check here if the work hours are not the same across the days of the week or vary from day to day and attach a document with Detailed Work Hours.</p>		START DATE	END DATE	+ Renovation:			+ Asb. Removal:	06/27/2016	07/01/2016	+ Demolition:				Days of the Week	Work Hours	Asb. Removal:	M, Tu, W, Th, F	7:30 a.m. to 5:30 p.m.	Demolition:			Encapsulation:			<p><b>6. FACILITY DESCRIPTION:</b></p> <p>Facility Name: HUBBELL MINERAL BUILDING PROPERTY          Location Address: M26          City/State/Zip: HUBBELL, MI 49934          County: Houghton                                   Age: 0          No. of Floors: 0                                   If Apt. # of units:          Nearest Crossroad:          Size: (sq. ft.) 5000                                   Floor No.:          Present Use: Vacant industrial property          Prior Use: Industrial          Specific Location(s) in Facility: On the ground on property</p>		
	START DATE	END DATE																									
+ Renovation:																											
+ Asb. Removal:	06/27/2016	07/01/2016																									
+ Demolition:																											
	Days of the Week	Work Hours																									
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Demolition:																											
Encapsulation:																											
<p><b>3. ABATEMENT CONTRACTOR:</b> Internal Project #:          Name: Upper Peninsula Abatement Company, Inc.          Mailing Address: 349 East U. S. 41 Highway          City/State/Zip: Negaunee, MI 49866          E-mail: dale@upabatementco.com          Contact: Dale Carrier                                   Phone: 906-475-4900</p>	<p><b>7. DISPOSAL SITE:</b>          Name: K &amp; W Landfill          Location Address: 11877 State Highway M38          City/State/Zip: Ontonagon, MI 49953</p>																										
<p><b>10. ASBESTOS INFORMATION</b></p> <p>Is asbestos present? (i.e. Assumed or identified in asbestos inspection report)   <input checked="" type="checkbox"/> Yes   <input type="checkbox"/> No   Will asbestos be removed prior to demolition?   <input type="checkbox"/> Yes   <input type="checkbox"/> No</p> <p><i>Estimate the amount of asbestos: include RACM (Regulated Asbestos Containing Material) to be removed, encapsulated, etc. Also include the amount and type (floor tile, roofing, etc.) of non-friable Category I and/or Category II ACM that <u>will not</u> be removed prior to demolition. (NOTE: in a demolition, cementitious ACM <u>cannot</u> remain in a structure, as it is likely to become regulated in the demolition/handling process. If <u>must</u> be removed prior to demolition. Also, all asbestos must be removed prior to an intentional burn.)</i></p> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2"></th> <th rowspan="2">RACM/ACM to be removed</th> <th rowspan="2">RACM to be Encapsulated</th> <th colspan="2">Non-friable ACM <u>not</u> removed prior to demo.</th> <th rowspan="2">Units of Measure</th> </tr> <tr> <th>Category I</th> <th>Category II</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td><input type="checkbox"/> Ln. Ft.   <input type="checkbox"/> Ln. M.</td> </tr> <tr> <td>Roofing material scattered on ground</td> <td></td> <td></td> <td align="center">5,000</td> <td></td> <td><input checked="" type="checkbox"/> Sq. Ft.   <input type="checkbox"/> Sq. M.</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td><input type="checkbox"/> Cu. Ft.*   <input type="checkbox"/> Cu. M.*</td> </tr> </tbody> </table> <p><small>*Volume (cubic ft./meters) should be used only if unable to measure by linear/square measure (example: asbestos has fallen off of surface).</small></p>		RACM/ACM to be removed	RACM to be Encapsulated	Non-friable ACM <u>not</u> removed prior to demo.		Units of Measure	Category I	Category II						<input type="checkbox"/> Ln. Ft. <input type="checkbox"/> Ln. M.	Roofing material scattered on ground			5,000		<input checked="" type="checkbox"/> Sq. Ft. <input type="checkbox"/> Sq. M.						<input type="checkbox"/> Cu. Ft.* <input type="checkbox"/> Cu. M.*	<p><b>8. WASTE TRANSPORTER(S):</b>          Name: UPPER PENINSULA ABATEMENT COMPANY INCORPORATED          Location Address: 349 U. S. HIGHWAY 41 E.          City/State/Zip: NEGAUNEE, MI 49866</p> <p>Name:          Location Address:          City/State/Zip:</p>
				RACM/ACM to be removed	RACM to be Encapsulated		Non-friable ACM <u>not</u> removed prior to demo.		Units of Measure																		
	Category I	Category II																									
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Roofing material scattered on ground			5,000		<input checked="" type="checkbox"/> Sq. Ft. <input type="checkbox"/> Sq. M.																						
					<input type="checkbox"/> Cu. Ft.* <input type="checkbox"/> Cu. M.*																						
<p><b>9. ORDERED DEMOLITIONS:</b> (See NESHAP regulations for definition of "Ordered Demolition.") A copy of the official Order must accompany this notification.</p> <p>Gov't Agency Ordering Demo:          Name/Title of Person Signing Order:          Date of Order:                                   Date Ordered to Begin:</p>																											

**NOTIFICATION OF INTENT TO RENOVATE/DEMOLISH (continued)**

**11. PROJECT DESCRIPTION:** Complete A) for Renovation (asbestos removal/encapsulation) or B) for Demolition:

**A) RENOVATION:** Mark all surfaces/types of RACM to be removed:      **Encapsulation (for LARA):** Mark surfaces/types to be encapsulated:

<input type="checkbox"/> Piping	<input type="checkbox"/> Fittings	<input type="checkbox"/> Boiler(s)	<input type="checkbox"/> Tanks(s)	<input type="checkbox"/> Piping	<input type="checkbox"/> Fittings	<input type="checkbox"/> Boiler(s)	<input type="checkbox"/> Tanks(s)
<input type="checkbox"/> Beam(s)	<input type="checkbox"/> Duct(s)	<input type="checkbox"/> Tunnel(s)	<input type="checkbox"/> Ceiling Tile(s)	<input type="checkbox"/> Beam(s)	<input type="checkbox"/> Duct(s)	<input type="checkbox"/> Tunnel(s)	<input type="checkbox"/> Ceiling Tile(s)
<input type="checkbox"/> Mag Block <input checked="" type="checkbox"/> Other (describe): OFF THE GROUND				<input type="checkbox"/> Other (describe):			

**Method of removal:** Describe how the asbestos will be removed.

<input type="checkbox"/> Glove Bag	<input type="checkbox"/> Neg. Pressure Cont.	<input type="checkbox"/> Cut into sections and remove	<input type="checkbox"/> Hand Scraping
<input type="checkbox"/> Dry Removal (please provide attachment with a description and explanation)			<input checked="" type="checkbox"/> Other (describe):

HAND PICKING

**B) DEMOLITION:** Indicate if complete or partial demolition:

Complete or  Partial (describe part of facility to be demolished):

**Method of Demolition:** Describe the method of demolition of facility, bridge, etc.:

<input type="checkbox"/> Excavator or other heavy equipment	<input type="checkbox"/> Disassembly by hand	<input type="checkbox"/> Explosives	<input type="checkbox"/> Other (describe):
---	--	-------------------------------------	--

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**12. ENGINEERING CONTROLS:** Describe work practices and engineering controls used to prevent visible emissions before, during, and after removal, and until proper disposal:

<input checked="" type="checkbox"/> Water spray to control dust	<input checked="" type="checkbox"/> Place in leak tight containers	<input type="checkbox"/> Adequately wet material	<input checked="" type="checkbox"/> Other (describe):
---	--	--	---

HEPA VAC

---

**13. UNEXPECTED ASBESTOS:** Describe the steps you intend to follow in the event that unexpected RACM is found or previously non-friable asbestos becomes friable (crumbled, pulverized, reduced to powder, etc.) and therefore regulated:

<input type="checkbox"/> Stop Work	<input type="checkbox"/> Wet material	<input type="checkbox"/> Contact DEQ and abatement contractor	<input type="checkbox"/> Revise notification	<input checked="" type="checkbox"/> Other (describe):
------------------------------------	---------------------------------------	---	--	---

SAME AS ABOVE

---

**14. PROCEDURE(S) USED TO DETECT THE PRESENCE OF ASBESTOS:**

A) Indicate how you determined whether or not asbestos is in the facility. If analytical sampling was used, describe method of analysis. (The determination of the presence or absence of asbestos must be made prior to submitting a renovation/demolition notification):

<input checked="" type="checkbox"/> All suspect materials sampled and analyzed using Polarized Light Microscopy (PLM)	<input type="checkbox"/> Other (describe):
---	--

B) Name, address, and phone number of company performing asbestos survey: WESTON SOLUTIONS, INC., 224-864-7200, 300 PLAZA CIRCLE, SUITE 202, MUNDELEIN, IL, 60060

C) Name, accreditation number of inspector, and date of inspection: MICHAEL CASTILLO, A46183, 10/15/2014

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**15. EMERGENCY RENOVATIONS:**      Date/time of emergency: \_\_\_\_\_  
Describe the sudden, unexpected event: \_\_\_\_\_

Explain how the event caused unsafe conditions, and/or would cause equipment damage and/or an unreasonable financial burden: \_\_\_\_\_

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16. I certify that an individual trained in the provisions of 40 CFR Part 61, Subpart M, will be on-site during the renovation and during demolition involving RACM above the threshold and/or during an ordered demolition. Evidence that this person has completed the required training will be available for inspection at the renovation or demolition site.

\_\_\_\_\_  
Signature of Owner or Abatement/Demolition Contractor      Date

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**17. Signature Requirements for Projects with Negative Pressure Enclosures: (required by LARA)**  
Per Section 221(1)(2) of P.A. 135 of 1986, as amended, clearance air monitoring is required for any asbestos abatement project involving 10 linear feet/15 square feet or more of friable material which is performed within a negative pressure enclosure. I (the building owner or lessee) have been advised by the contractor of my responsibility under Act 135 to have clearance air monitoring performed on this project.

_____ Signature of Building Owner or Lessee	_____ Date	_____ Signature of Asbestos Abatement Contractor Representative	_____ Date
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**NOTE: It is not mandatory that a signed copy be sent to LARA unless requested.**  
For affected projects, this section of the notification form must be completed, signed, and made part of **your** records before the project begins.

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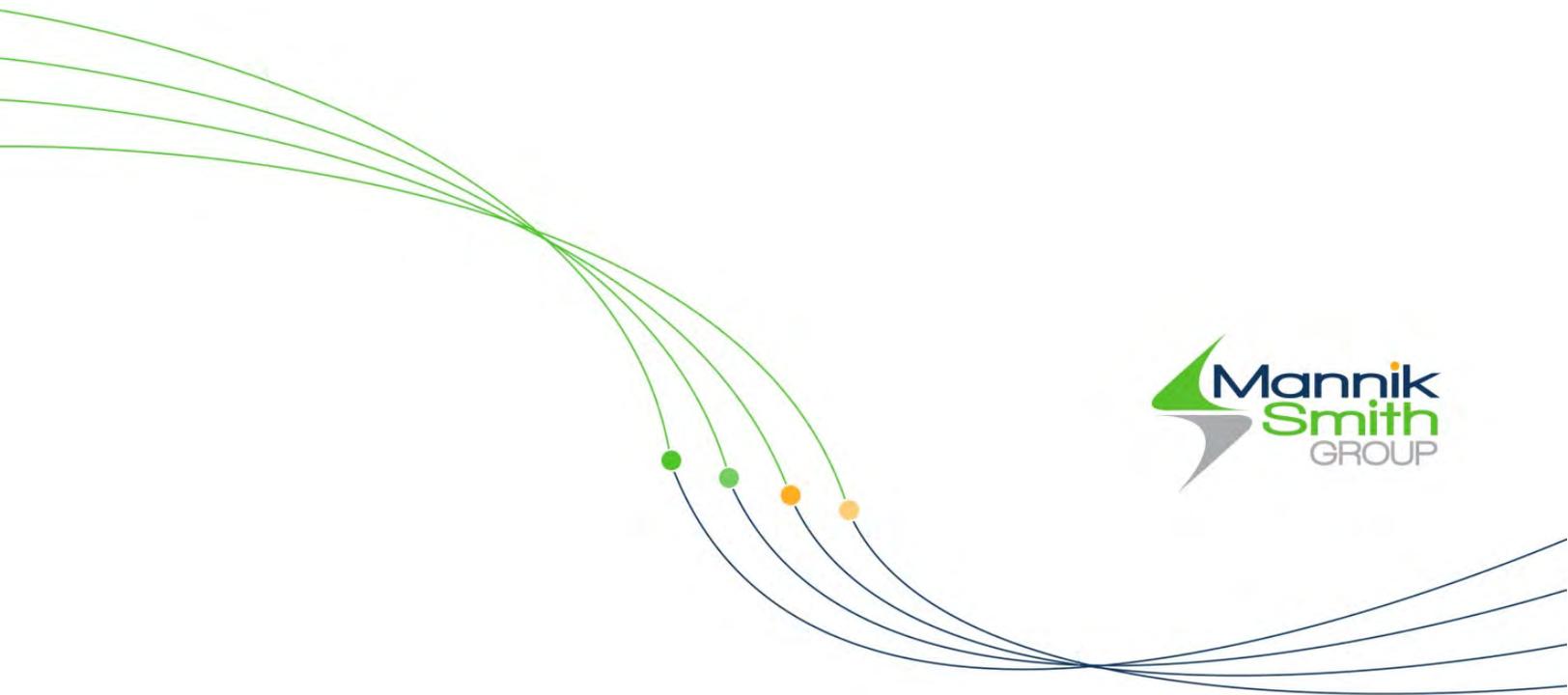
18. I certify that the above information is correct:

_____ Printed Name of Owner/Operator	_____ Date	_____ Signature of Owner/Operator	_____ Date
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APPENDIX E  
Air Sampling Results









KEM Landfill  
 11877 Hwy 38  
 Ontonagon, MI, 49953  
 Ph: 906-883-3504

Originals **11258364**  
 Ticket# 275619

Customer Name UPPERPENINSULAABATENEM UPPER Carrier UPPERPENINSULAABATENEM Upper Peninsula  
 Ticket Date 06/29/2016 Vehicle# 1 Volume  
 Payment Type Credit Account Container  
 Manual Ticket# Driver  
 Hauling Ticket# Check#  
 Route Billing # 0000385  
 State Waste Code Gen EPA ID  
 Manifest 20395 Grid  
 Destination  
 PG  
 Profile ASB118579MI (NON FRIABLE ASBESTOS)  
 Generator 136-MICHIGANDEPTOFENVIRO MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

Time	Scale	Operator	Inbound	Gross	20960 lb
In 06/29/2016 09:22:23	Scale	LThoreson		Tare	17600 lb
Out 06/29/2016 10:10:11	Scale	LThoreson		Net	3360 lb
				Tons	1.68

Comments: MICHIGAN DEPT  
 HURBLE MINERAL BUILDING

**WASTE MANAGEMENT**

Product	LDX	Qty	UOM	Rate	Tax	Amount	Origin
1	Asb Non Fri-Tons-A 100	1.68	Tons				HOUGMI
2	FUEL-Fuel Surcharg 100		%				HOUGMI
3	EVF-L-Standard Env 100	1	Load				HOUGMI

Total Tax  
 Total Ticket

*Dale Peterson*  
 Driver's Signature

①

# WASTE SHIPMENT RECORD/ASBESTOS MANIFEST

(See Reverse for Instructions)

For Disposal Site Use Only

Generator	1-A. Special Waste Profile Number <i>AD112579-211</i>		NESHAP Notified <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		WSR Number <b>80395</b>		Elevation _____	
	1-B. Generator Name, Contact Name, and Complete Mailing Address (including Zip Code) <i>Michigan Dept of Environmental Quality Grand Rapids, MI 49503</i>						1-C. Generator's Phone Number <i>261-281-4726</i>	
	1-D. Work Site Address <i>11677 State Hwy, M35, Ontonagon, MI 49853</i>						1-E. 24 Hour Emergency Response Telephone Number <i>906-281-4726</i>	
	2. Operator's Name and Complete Mailing Address <i>U.P. Aluminum Co 349 US 41 E Nagawac, MI 49866</i>						Operator's Phone Number <i>734-250-2177</i>	
	3. Waste Disposal Site (WDS) Name and Complete Mailing Address <i>K &amp; W Landfill 11677 State Hwy, M35, Ontonagon MI 49853</i>						WDS Phone Number <i>906-683-3504</i>	
	4. Name and Address of Responsible Agency <i>State of Michigan, Region 1 Headquarters 1090 US Highway 41 South, South Marquette, MI 49855</i>							
	5. Description of Materials <i>Asbestos bag paper</i>				6. Containers No. Type		7. Total Quantity yd3	
	friable asbestos				RQ, NA2212, Asbestos, 9, PGIII		<i>1.68 Tons</i>	
	non-friable asbestos				Cat I _____ Cat II <i>2</i>		<i>2 yards</i>	
	8. Special Handling Instructions and Additional Information 24 HOUR NOTICE GIVEN PRIOR TO DISPOSAL, MUST BE BURIED							
9. GENERATOR/OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations. I hereby certify that the asbestos is not contaminated with hazardous, PCB, and/or any special waste.								
Printed/Typed Name and Title <i>DALE CRACKER</i>				Signature <i>[Signature]</i>		Date <i>6/29/16</i>		
Transporter	10. Transporter 1 Company Name <i>U.P. Aluminum Co</i>				Driver Signature <i>[Signature]</i>			
	Complete Mailing Address <i>349 US 41 E Nagawac 49866</i>				Date <i>6/29/16</i>			
	Telephone Number (including area code) <i>106 250-6710</i>				Printed Name and Title			
					Date			
Disposal Site	11. Transporter 2 Company Name				Driver Signature			
	Complete Mailing Address				Printed Name and Title			
	Telephone Number (including area code)				Date			
12. Discrepancy Indication Space								
13. Waste Disposal Site Owner or Operator Special Waste Approval is issued by signature in the case of a Generic Asbestos Approval. Certification of receipt of asbestos materials covered by this manifest except as noted in Item 12.								
Printed/Typed Name and Title <i>Operations Linda Thoreson Specialist</i>				Signature <i>[Signature]</i>		Date <i>6-29-16</i>		



K&W Landfill  
 11877 HWY 38  
 Ontonagon, MI, 49953  
 Ph: 906-883-3504

11258416

Original  
 Ticket# 275673

Customer Name UPPERPENINSULARAB UPPER PENINS Carrier UPPERPENINSULARABTEM Upper Peninsula  
 Ticket Date 07/01/2016 Vehicle# 1 Volume  
 Payment Type Credit Account Container  
 Manual Ticket# Driver  
 Hauling Ticket# Check#  
 Route Billing # 0000369  
 State Waste Code San EPA ID  
 Manifest 80396 Grid  
 Destination  
 PO  
 Profile ()  
 Generator

	Time	Scale	Operator	Inbound	Gross	
In	07/01/2016 10:18:05	Scale	LThoreson		23260 lb	
Out	07/01/2016 10:37:50	Scale	LThoreson		12120 lb	
					Net	11140 lb
					Tons	5.57

Comments MICHIGAN DEC  
 HUBBELL MINERAL BUILDING  
 HUBBELL, MI



Product	LD%	Qty	UCM	Rate	Tax	Amount	Origin
1 100BT-MSW TON	100	5.57	Tons				HOU6MI
2 EVF-L-Standard Env	100	1	Load				HOU6MI
3 FUEL-Fuel Surchar	100		X				HOU6MI

Total Tax  
 Total Ticket

403WM-N  
 Driver Signature



# WASTE SHIPMENT RECORD/ASBESTOS MANIFEST

(See Reverse for Instructions)

For Disposal Site Use Only

1-A. Special Waste Profile Number <i>ASB 118579MI</i>		NESHAP Notified <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		WSR Number <b>80396</b>		Elevation _____					
1-B. Generator Name, Contact Name, and Complete Mailing Address (including Zip Code) <i>Michigan Department of Environmental Quality 350 Ottawa Ave E, Lansing MI 48903</i>						1-C. Generator's Phone Number <i>517-375-2211 906-281-4726</i>					
1-D. Work Site Address <i>Hubbard MI 49934 Hubbard School Building</i>						1-E. 24 Hour Emergency Response Telephone Number <i>906-281-4726</i>					
2. Operator's Name and Complete Mailing Address <i>UPPER MERIDIAN ASBESTOS CO 349 US 41 E NORWAY MI 49861</i>						Operator's Phone Number <i>906-250-2710</i>					
3. Waste Disposal Site (WDS) Name and Complete Mailing Address <i>R &amp; W Landfill 11877 State Hwy. M38, Ortonagon MI 49853</i>						WDS Phone Number <i>606-283-3504</i>					
4. Name and Address of Responsible Agency <i>State of Michigan, Region 1 Headquarters 1290 US Highway 41 South, South Marquette, MI 49855</i>											
5. Description of Materials <i>Roofing Paper</i>						6. Containers		7. Total Quantity			
						No.		Type		yd3	
friable asbestos				RQ, NA2212, Asbestos, 9, PGIII				<i>5.57 tons</i>			
non-friable asbestos <input checked="" type="checkbox"/>				Cat I _____ Cat II _____							
8. Special Handling Instructions and Additional Information 24 HOUR NOTICE GIVEN PRIOR TO DISPOSAL, MUST BE BURIED											
9. GENERATOR/OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations. I hereby certify that the asbestos is not contaminated with hazardous, PCB, and/or any special waste.											
Printed/Typed Name and Title <i>Dale L. ...</i>				Signature <i>[Signature]</i>			Date <i>6-30-15</i>				
10. Transporter 1 Company Name <i>U.P. Asbestos Co</i> Complete Mailing Address <i>349 US 41 E Norway MI 49861</i> Telephone Number (including area code) <i>906-250-6710</i>						Driver Signature <i>[Signature]</i>					
						Printed Name and Title <i>Dale L. ...</i>					
						Date <i>6-30-15</i>					
						11. Transporter 2 Company Name					
Complete Mailing Address						Printed Name and Title					
Telephone Number (including area code)						Date					
12. Discrepancy Indication Space											
13. Waste Disposal Site Owner or Operator Special Waste Approval is issued by signature in the case of a Generic Asbestos Approval. Certification of receipt of asbestos materials covered by this manifest except as noted in Item 12.											
Printed/Typed Name and Title <i>operations</i>				Signature <i>[Signature]</i>			Date <i>6-30-15</i>				

DCE-230-97

WHITE - Disposal Site

CANARY - Generator  
(To be mailed by Disposal Site)

PINK - Transporter

GOLD - Generator  
(To be taken prior to disposal)



#0 Landfill  
 11877 HWY 38  
 Ontonagon, MI, 49953  
 Ph: 906-883-3504

Original  
 Ticket# 275688  
 11258433

Customer Name UPPERPENINSULAABATEMENT UPPER Carrier UPPERPENINSULAABATEMENT Upper Peninsula  
 Ticket Date 07/01/2016 Vehicle# 1 Volume  
 Payment Type Credit Account Container  
 Manual Ticket# Driver  
 Hauling Ticket# Check#  
 Route Billing # 0000285  
 State Waste Code Gen EPA ID  
 Manifest 80397 Grid  
 Destination  
 PO  
 Profile ASB118579MI (NON FRIABLE ASBESTOS)  
 Generator 136-MICHIGANDEPTOFENVIRO MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

	Time	Scale	Operator	Inbound	Gross	28460 lb
In	07/01/2016 14:45:32	Scale	LThoreson		Tare	11340 lb
Out	07/01/2016 15:00:14	Scale	LThoreson		Net	9120 lb
					Tons	4.56

Consents MICHIGAN DEO  
 OLD HUBBELL MINERAL BUILDING SITE  
 HUBBELL, MI

WASTE MANAGEMENT

Product	LD%	Qty	UDM	Rate	Tax	Amount	Origin
1	Asb Non Fri-Tons-A 100	4.56	Tons				HOUGMI
2	FUEL-Fuel Surcharg 100		%				HOUGMI
3	EVF-L-Standard Env 100	1	Load				HOUGMI

Total Tax  
 Total Ticket

*Robert Miller*

Driver's Signature  
 403WM-N



# WASTE SHIPMENT RECORD/ASBESTOS MANIFEST

(See Reverse for Instructions)

For Disposal Site Use Only

Generator	1-A Special Waste Profile Number <i>ASB 112579MI</i>	NESHAP Notified <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	WSR Number <b>80397</b>	Elevation _____	
	1-B. Generator Name, Contact Name, and Complete Mailing Address (including Zip Code) <i>MT DEB 222 STANLEY AVE NW #12 Grand Rapids MI 49503</i>			1-C. Generator's Phone Number <i>906-281-4706</i>	
	1-D. Work Site Address <i>Hubbell MI M-26 Old Hubbell Mineral Bully Site</i>			1-E. 24 Hour Emergency Response Telephone Number <i>706-281-4706</i>	
	2. Operator's Name and Complete Mailing Address <i>UP Abatement Co 349 US 41 E Grand Rapids MI 49866</i>			Operator's Phone Number <i>906-250-6710</i>	
	3. Waste Disposal Site (WDS) Name and Complete Mailing Address <i>K &amp; W Landfill 11877 State Hwy M38, Ontonagon MI 49853</i>			WDS Phone Number <i>800-883-3504</i>	
	4. Name and Address of Responsible Agency <i>State of Michigan, Region I Headquarters 1900 US Highway 41 South, South Marquette, MI 49855</i>				
	5. Description of Materials <i>Roofing Materials</i>		6. Containers No. Type	7. Total Quantity yd3 <b>4.56 TONS</b>	
	friable asbestos		RQ, NA2212, Asbestos, 9, PGIII		
	non-friable asbestos		Cat I <input type="checkbox"/> Cat II <input checked="" type="checkbox"/>		<i>6 bags bagged</i>
	8. Special Handling Instructions and Additional Information 24 HOUR NOTICE GIVEN PRIOR TO DISPOSAL, MUST BE BURIED				
9. GENERATOR/OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations. I hereby certify that the asbestos is not contaminated with hazardous, PCB, and/or any special waste.					
Printed/Typed Name and Title <i>Dale Carruth/owner</i>		Signature <i>[Signature]</i>		Date <i>6/2/16</i>	
Transporter	10. Transporter 1 Company Name <i>UP Abatement Co</i>		Driver Signature <i>[Signature]</i>		
	Complete Mailing Address <i>349 US 41 E Grand Rapids MI 49866</i>		Printed Name and Title <i>Bob Hecker/Operator</i>		
	Telephone Number (including area code)		Date <i>7-1-16</i>		
	11. Transporter 2 Company Name		Driver Signature		
Complete Mailing Address		Printed Name and Title			
Telephone Number (including area code)		Date			
Disposal Site	12. Discrepancy Indication Space				
	13. Waste Disposal Site Owner or Operator Special Waste Approval is issued by signature in the case of a Generic Asbestos Approval. Certification of receipt of asbestos materials covered by this manifest except as noted in Item 12.				
	Printed/Typed Name and Title <i>Linda Thoreson Special Waste Operations</i>		Signature <i>[Signature]</i>		Date <i>6-1-16</i>

APPENDIX G  
Photographic Log





Photo 1: Area A prior to roofing debris removal. Photo taken on 5/6/16.



Photo 2: Area C prior to roofing debris removal. Photo taken on 6/28/16.



Photo 3: Areas A and B during roofing debris removal. Photo taken on 6/28/16.



Photo 4: Area B following roofing debris removal. Photo taken on 7/1/16.



Photo 5: Area C during roofing debris removal. Photo taken on 6/30/16.



Photo 6: Area C after roofing debris removal. Photo taken on 9/19/16.

