

INTERIM RESPONSE CONSTRUCTION SUMMARY REPORT FOR DRAINAGE DITCH CLEAN OUT

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



MARCH 2017

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



TABLE OF CONTENTS
Interim Response Construction Summary Report for Drainage Ditch Clean Out
Site ID: 31000098
Houghton County, Michigan

<u>SECTION:</u>	<u>PAGE NO.:</u>
1.0 INTRODUCTION	1
1.1 Project Location.....	1
1.2 Project Background	1
2.0 OBJECTIVE AND SCOPE OF WORK	2
3.0 INTERIM RESPONSE ACTIVITIES.....	2
4.0 SUMMARY AND CONCLUSIONS	2
5.0 RECOMMENDATIONS	3

FIGURES

- Figure 1 Project Location Map
Figure 2 Hubbell Processing Area Features Map

APPENDICES

- Appendix A Emergency Procurement Action Form
Appendix B Purchase Order
Appendix C Hubbell Processing Area Ditch Clean Out Revised Scope of Work
Appendix D Soil Erosion and Sedimentation Control Permit
Appendix E Joint Permit Application Permit
Appendix F Photographic Log

1.0 INTRODUCTION

The Mannik & Smith Group, Inc. (MSG) has prepared this *Interim Response Construction Summary Report for Drainage Ditch Clean Out* (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 (Site ID: 31000098). This CSR summarizes the drainage ditch clean out interim response (IR) completed at the Calumet & Hecla Lake Linden Operations Area (CHLL) Hubbell Processing Area Coal Dock. The IR entailed the repair of breaches and clean out of blocked ditches. 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 drainage ditch clean out was limited to only one property within the Hubbell Processing Area, the Hubbell Coal Dock. *Figure 2, Hubbell Processing Area Features Map*, depicts the area encompassing the Hubbell Processing Area in addition to features, the ditch sections cleaned out, and breach repaired.

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 Coal Dock property, 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; physical hazards; and, erosion and deposition of contaminated soils into Torch Lake. Blocked and breached historic drainage pathways allowed for uncontrolled run off and erosion of PCB-contaminated soils into Torch Lake. Just off shore of the Coal Dock property is an area of sediments that has been identified as an ongoing in-lake source of PCBs, contributing to the Michigan Department of Human Health Services (MDHHS) fish consumption guideline for total PCBs in Torch Lake fish.

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 cleaned out and repaired a breach in blocked ditches to return surface water flow to its historic flow path to reduce erosion and deposition of PCB-contaminated soils into Torch Lake.

2.0 OBJECTIVE AND SCOPE OF WORK

The objective of the IR was to clean out and repair blocked ditches to return surface water flow to its historic flow path to reduce erosion and deposition of PCB-contaminated soils into Torch Lake. 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. The TC selected and retained by the State of Michigan was B&B Contracting, Calumet, Inc. (B&B) of Calumet, Michigan. Refer to *Appendix B, Purchase Order*. B&B completed the work in accordance with the TC procurement package included in *Appendix C, Hubbell Processing Area Ditch Clean Out Project Revised Scope of Work* during August 2016. Due to the work within the drainage channel and the proximity of the work to Torch Lake a Part 91, Soil Erosion and Sedimentation Control (SESC) Permit included in *Appendix D, Soil Erosion and Sedimentation Control Permit*, was required. Due to the work within a section of ditch considered regulated under Part 301, a Joint Permit Application was submitted and a permit obtained, which is included in *Appendix E, Joint Permit*. Photographs of the IR operations are included in *Appendix F, Photographic Log*.

4.0 SUMMARY AND CONCLUSIONS

The following drainage ditch clean out IR operations were completed at the Coal Dock portion of the Hubbell Processing Area:

- Excavation of accumulated sand and debris to an approximate profile of 3 feet (ft) wide by 2 ft deep with tapered side slopes from approximately 30 linear ft of non-regulated drainage ditch and placement in the southern spoils placement area.

- Removed trees and piled as neatly as possible off to the side of the work area, as needed for access and excavation of accumulated sand and debris from approximately 320 linear ft of non-regulated drainage ditch and placement in the northern spoils placement area. Excavated to an approximate profile of 3 ft wide by 2 ft deep with tapered side slopes. Encountered historic wooden bank reinforcement was left in-place.
- Excavated accumulated sand and debris from approximately 112 linear ft of regulated drainage ditch and placed in the southern spoils placement area. Excavated to an approximate profile of 3 ft wide by 2 ft deep with tapered side slopes. Complied with the issued joint permit.
- Removed woody debris and associated accumulated leaf piles from approximately 780 linear ft of regulated drainage ditch. This included cutting off 78 trees that were located in the middle of the ditch at the water line (59 were 0-2 inches diameter and 19 were 3-8 inches diameter). Placed removed woody debris off to the side of the ditch.
- Removed accumulated rocks, sediment, and trees that were partially blocking an approximately five ft long section of the southern non-regulated drainage ditch at the bank breach. Placed spoils and debris on top of the north ditch bank.
- Placed 10 cubic yards of clean loamy soil to block the existing breach in the ditch bank and raise the bank height approximately 1.5 ft along approximately 30 ft of the north side of the ditch. Placed 20 linear ft of coir logs/fiber rolls at the base of the new bank material along the water line in the ditch. Seeded and mulched the new bank area with 100% biodegradable straw blankets.
- Graded spoils areas to be no more than 6-inches in thickness and tapered the edges to match surrounding grades. To inhibit erosion, seeded with perennial grass species and mulched with 100% biodegradable straw blankets all spoils placed in the northern and southern spoils placement areas. Placed 10 linear feet of coir log/fiber roll along the outside of the bend in the ditch.
- Excavated approximately 10 cubic yards of accumulated sediment from the northern non-regulated drainage ditch at the junction with the regulated drainage ditch. Spread the excavated sediments along the ditch bank in a layer approximately one-foot thick, raked reasonably smooth, seeded with perennial grass species, and mulched with 100% biodegradable straw blankets.
- Removed woody debris and associated accumulated leaf piles from the northern non-regulated drainage ditch from the junction with the regulated drainage ditch down to Torch Lake.

The completed IR operations met the objective of returning surface water flow to its historic flow path to reduce erosion and deposition of PCB-contaminated soils into Torch Lake.

5.0 RECOMMENDATIONS

MSG has the following recommendation:

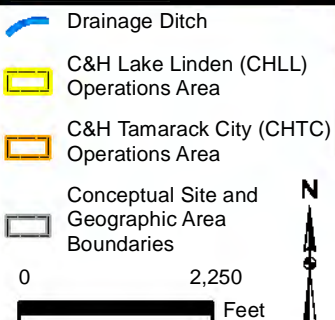
- Periodic monitoring and maintenance of the drainage ditch as required to maintain the IR's effectiveness.

FIGURES





Torch Lake



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



APPENDIX A

Emergency Procurement Action Form



EMERGENCY PROCUREMENT ACTION FORM

Site Name: Abandoned Mining Wastes County: Houghton

Index: 44251 PCA: 30872 Project #: 456990

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

District Supervisor's Signature: _____

Clifton Clark

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. In early May 2016 during spring run-off, observation of drainage patterns revealed that storm water originating from culverts along the adjacent roadway was flowing uncontrolled across the area into the most contaminated areas of the properties and ultimately Torch Lake. This uncontrolled flow is infiltrating into contaminated soils along Torch Lake and causing visible evidence of erosion of PCB-contaminated soils into Torch Lake. Historical document review and additional reconnaissance identified historic drainage ditches which were intended to route these flows around the former material handling areas, which are now the most impacted areas. These ditches have become plugged with sediment in several areas and/or have been breached, resulting in the uncontrolled water flow. Clean-out and repair of the ditches prior to the return of seasonal wet weather will aid in routing the storm water around the most contaminated areas and help stop the erosion of PCB-contaminated soils into Torch Lake. The largest area of PCB-impacted sediment identified to-date in Torch Lake is adjacent to this upland area of PCB contamination. Failure to undertake emergency response actions will allow for the on-going release of contaminants into Torch Lake.

Cause of Emergency: Plugged and breached drainage ditches are causing the uncontrolled flow of storm water into the most contaminated areas and the erosion of PCB-contaminated soils into Torch Lake.

Specific Threats: Infiltration of significant amounts of storm water into contaminated areas along Torch Lake and erosion of PCB contaminated soils directly into Torch Lake. The largest area of PCB-impacted sediment identified to-date in Torch Lake is adjacent to this upland area of PCB contamination.

Action Taken: Because of the imminent threat the emergency procurement process is being utilized to contract ditch clean-out and repair within a few months. If more extensive response actions are necessary, they will be undertaken using the normal contracting process. Specifications have been developed and a Pre-Bid Meeting was conducted June 28, 2016 to obtain firm bids for the work.

Additional Information:

3 bids were obtained on July 14, 2016 and evaluated. Based on the evaluation, it is recommended that the bid be awarded to B&B Contracting, Calumet, Inc. for

\$29,200.00.

Their address is: B&B Contracting, Calumet, Inc, 55670 Highway M-26, Calumet, MI 49913. Phone/fax is (906)337-0017

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

761P6600562

REQUESTING 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: | 07/26/16 | 76120100 | 761R6600643 | 07/26/16B & B CONTRACTING, CALUMET, INC.
BRIAN BONEN
55670 HWY M26
CALUMET MI 49913CASH DISCOUNT : NET 30 DAYS
DELIVERY REQUIRED :
FREIGHT CARRIER :
F.O.B. : DELIVERED

VENDOR PHONE : (906)281-2587

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
------	--------------	----------	------	------------	-------------

COMMODITY NAME/SPECIFICATIONS

1	912-68	1.00	EA	29,200.0000	29,200.00
---	--------	------	----	-------------	-----------

MANAGEMENT, CONSTRUCTION #

FURNISH ALL LABOR, MATERIALS, EQUIPMENT AND RELATED WORK REQUIRED TO
PERFORM PCB EROSION CONTROL AT THE ABANDONED MINING WASTES SITE
#31000098

PM: A. KERANEN

START: 7/25/16

END: 6/30/17

GRAND TOTAL

29,200.00

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

PAGE : 2

FORM DMB-287
(REV 11/94)

PURCHASE ORDER

PURCHASE ORDER
NUMBER 761P6600562

ACCOUNTING INFORMATION :

SX	AGY	Y	INDEX	PCA	COBJ	AOBJ	GRANT	PH	PROJ	PH	AG1	AG2	AG3	TOTAL
01	761	4	44251	30872		6127			45699000					29200.00

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

--- END OF DOCUMENT ---

APPENDIX C

Hubbell Processing Area Ditch Clean Out Project Revised Scope of Work



Hubbell Coal Dock Interim Response

Revised Ditch Clean Out Scope of Work

The Michigan Department of Environmental Quality (MDEQ) has identified that certain sections of drainage ditches at the Hubbell Coal Dock property (Property) in Hubbell, Michigan have become blocked and are causing runoff to flow into contaminated portions of the Property. **Figure 1** depicts the Property location. To reduce potential contaminant loading to Torch Lake as a result of the uncontrolled runoff into the most contaminated portions of the Property, MDEQ will clean out the affected ditch sections to return flow to its historic routing away from the most contaminated areas.

MDEQ-Water Resources Division has designated a portion of the ditch network as regulated under Part 301, Inland Lakes and Streams, of the Natural Resources and Environmental Protection Act (NREPA), 1994 Public Act 451, as amended. MDEQ has received a Joint Permit for clean-out activities in the regulated section of ditch.

Ditch clean out shall consist of the following Work Items in areas identified on **Figure 2**:

1. Work Item 1: Excavation of accumulated sand and debris from approximately 30 linear feet (ft) of non-regulated drainage ditch and placement in the proposed northern spoils placement area. Excavate to an approximate profile of 3 ft wide by 2 ft deep with tapered side slopes.
2. Work Item 2: Removal of trees as needed for access and excavation of accumulated sand and debris from approximately 320 linear ft of non-regulated drainage ditch and placement in the proposed southern spoils placement area. Excavate to an approximate profile of 3 ft wide by 2 ft deep with tapered side slopes. If buried culverts are encountered remove the culverts and place off to the side of the work area. If historic wooden bank reinforcement is encountered, leave the wooden pieces in-place. Trees removed from the ditch area shall be piled as neatly as possible off to the side of the work area in as few piles as possible.
3. Work Item 3: Excavation of accumulated sand and debris from approximately 112 linear ft of regulated drainage ditch and placement in the proposed northern spoils placement area. Excavate to an approximate profile of 3 ft wide by 2 ft deep with tapered side slopes. Comply with the issued permit under Part 301. If tree removal is needed outside of the ditch to access the ditch for excavation, the trees shall be cut and the stumps left in-place. Tree cutting shall be limited to the extent reasonably possible. Removed trees shall be piled off to the side of the ditch.

4. Work Item 4: Remove woody debris and associated accumulated leaf piles from approximately 780 linear ft of regulated drainage ditch. This includes cutting off 78 trees that are located in the middle of the ditch at the water line (59 are 0-2 inches diameter and 19 are 3-8 inches diameter). Refer to **Attachment A** for photographs of example trees. Place removed woody debris off to the side of the ditch. Do not excavate any sediments or change the original ditch profile.
5. Work Item 5: Remove accumulated rocks, sediment, and trees that are partially blocking an approximately five ft long section of the southern non-regulated drainage ditch at the bank breach. Place spoils and debris on top of the north ditch bank. All equipment must access the location from the south.
6. Work Item 6: Place 10 cubic yards of clean loamy soil to block the existing breach in the ditch bank and raise the bank height approximately 1.5 ft along approximately 30 ft of the north side of the ditch. All equipment must access the location from the south. Place 30 linear ft of wattles or coir logs/fiber rolls at the base of the new bank material along the water line in the ditch. Stake and secure wattles or coir logs following supplier recommendations using wood stakes. Seed and mulch the new bank area with 100% biodegradable straw blankets.
7. Work Item 7: Grade spoils areas to be no more than 6-inches in thickness and taper the edges to match surrounding grades. To inhibit erosion, seed with perennial grass species and mulch with 100% biodegradable straw blankets all spoils placed in the proposed northern and southern spoils placement areas.
8. Work Item 8: Excavate up to 10 cubic yards of accumulated sediment from the northern non-regulated drainage ditch at the junction with the regulated drainage ditch. Spread the excavated sediments along the north ditch bank in a layer approximately one-foot thick, rake reasonably smooth, seed with perennial grass species, and mulch with 100% biodegradable straw blankets.
9. Work Item 9: Remove woody debris and associated accumulated leaf piles from the northern non-regulated drainage ditch from the junction with the regulated drainage ditch down to Torch Lake.

Due to the proximity of Torch Lake, soil erosion and sedimentation control (SESC) best management practices must be applied and a SESC permit (acquired by the Contractor) is required. Refer to:

- http://www.houghtoncounty.net/directory_drain_commissioner.php; and,
- http://www.houghtoncounty.net/docs/SESC_Email_Attach.pdf

It is intended that the work shall be completed during dry weather conditions to help minimize the potential for sedimentation resulting from the excavation activities. The work shall occur from upstream areas to downstream such that existing blockages in downstream areas serve as sediment traps for upstream work. It is anticipated that up to 400 linear feet of silt fence will be required along the downhill sides of the spoils placement areas. The Contractor is responsible for removing silt fence once vegetation has sufficiently grown to stabilize the spoils.

All Contractor tools and equipment that may have encountered contaminated media during execution of the work shall be decontaminated. Decontamination water that is free of detergents or other cleaning additives may be applied to the ground surface on the Property. All access routes, staging and decontamination areas, and other areas outside of the ditch clean-out limits that are disturbed by the work shall be restored to pre-work conditions. This includes raking as needed and placement of grass seed (perennial grass species) in areas that were originally vegetated but that are disturbed during execution of the work. Trees shall be saved to the extent reasonably possible.

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 B**. Copies of training certificates will be required. 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 C** 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.

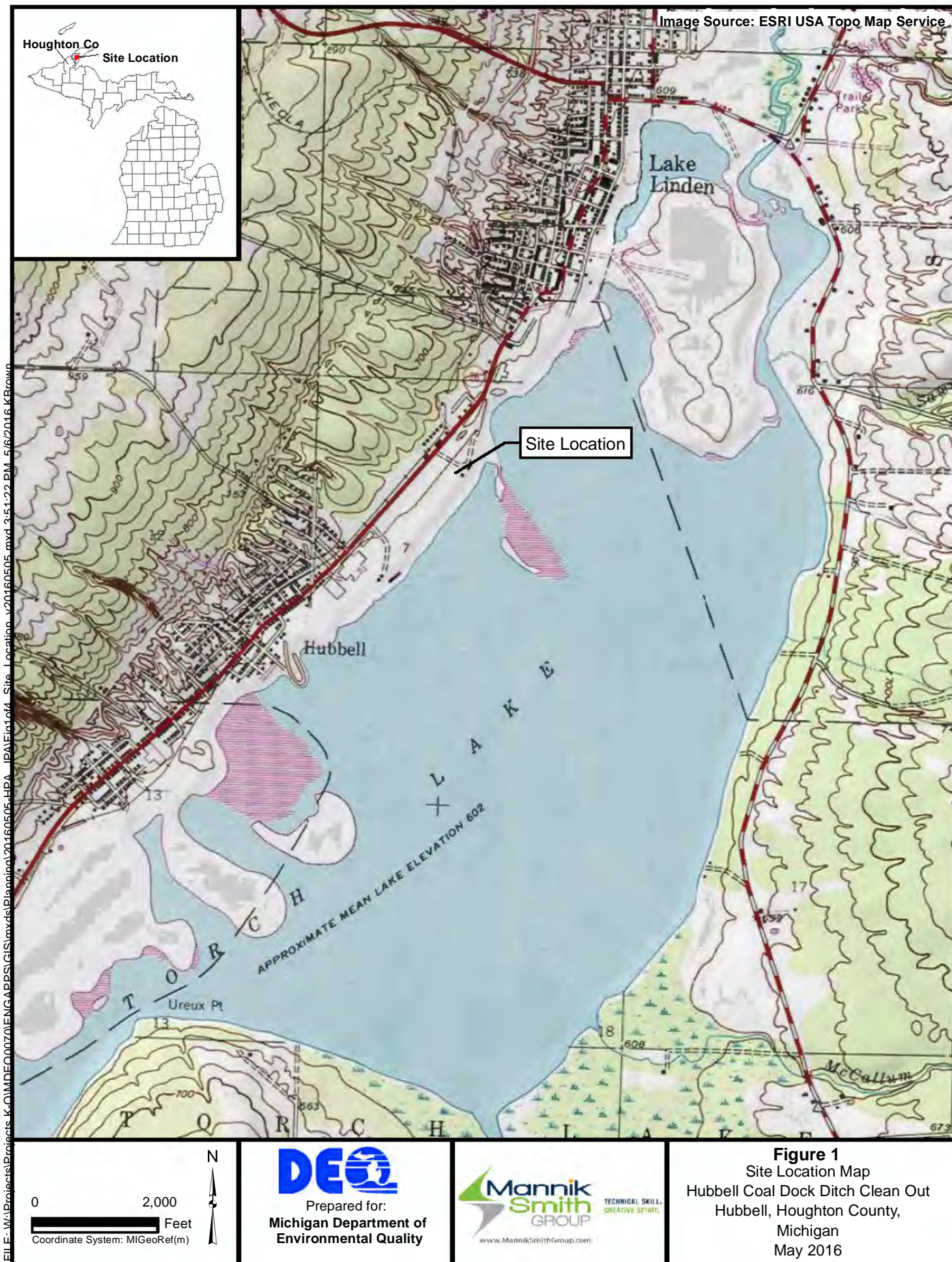
Schedule:

- 28 June 2016 – Pre-Bid Meeting at 11:00 am local time at the Site
- 14 July 2016 – Bids Due at 5:00 pm local time
- 18 July 2016 – Award Project (tentative)
- 25 July 2016 – Issue Purchase Order (tentative)
- 2 September 2016 – Ditch clean out work shall be completed
- 30 June 2017 – Vegetation growth, removal of silt fence, and release of the SESC permit shall be completed

The following tasks will be required of the Contractor to complete the work:

<u>Pay Item</u>	<u>Contractor Quote</u>
1. Obtain a SESC Permit. Install, maintain, and ultimately remove silt fence and/or other measures when the disturbed areas have been stabilized and the permit is released.	\$ _____
2. Mobilization and demobilization of all materials, tools, labor, and equipment jointly required for Pay Items 3 through 5 below. If mobilization and demobilization of a specific piece of equipment or labor force is required for less than all three of these Pay Items, include that cost in the respective Pay Item below. All, some, or none of the Pay Items may be awarded or the work may be split into more than one mobilization.	\$ _____
3. Clean-out non-regulated ditch sections, spread spoils in designated areas, seed and mulch, decontamination, and restoration as detailed in Work Items 1, 2, and 7 above and depicted on Figure 2 .	\$ _____
4. Clean-out regulated ditch sections, comply with permit conditions, spread spoils in designated area, seed and mulch, decontamination, and restoration as detailed in Work Items 3, 4, and 7 above and depicted on Figure 2 .	\$ _____
5. Clean-out non-regulated ditch section, spread spoils in designated area, fix bank breach, seed and mulch, wattles or coir logs, decontamination, and restoration as detailed in Work Items 5 and 6 above and depicted on Figure 2 .	\$ _____
6. Clean-out up to 10 cubic yards of sediment from non-regulated ditch section, spread spoils along north ditch bank, seed and mulch, decontamination, and restoration as detailed in Work Items 8 and 9 above and depicted on Figure 2 .	\$ _____
TOTAL	\$ _____

FIGURES





- 0 250 Ft
Coordinate System: MGeoRef(m)



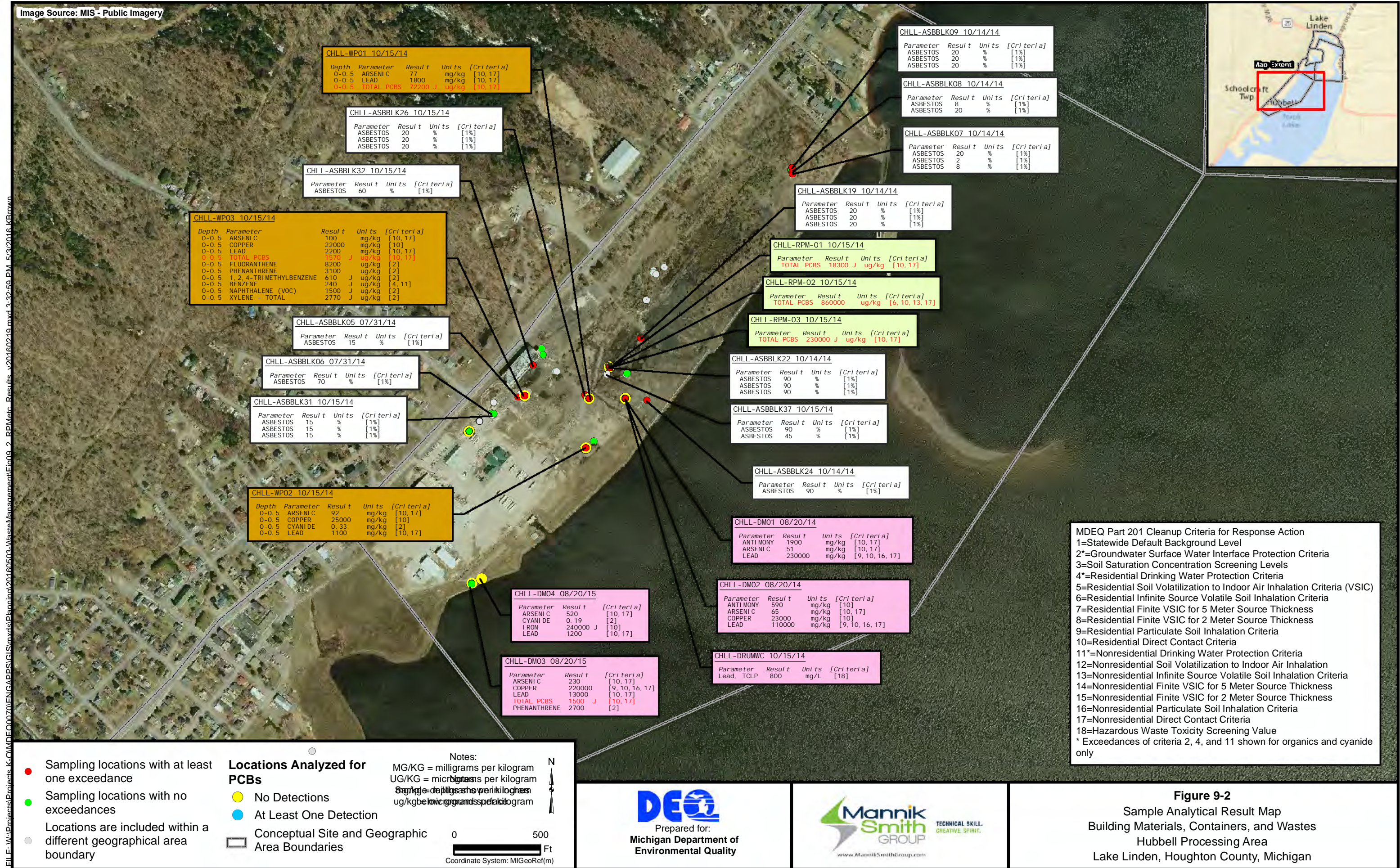
Figure 2
Site Plan
Hubbell Coal Dock Ditch Clean Out
Hubbell, Houghton County, Michigan
June 2016

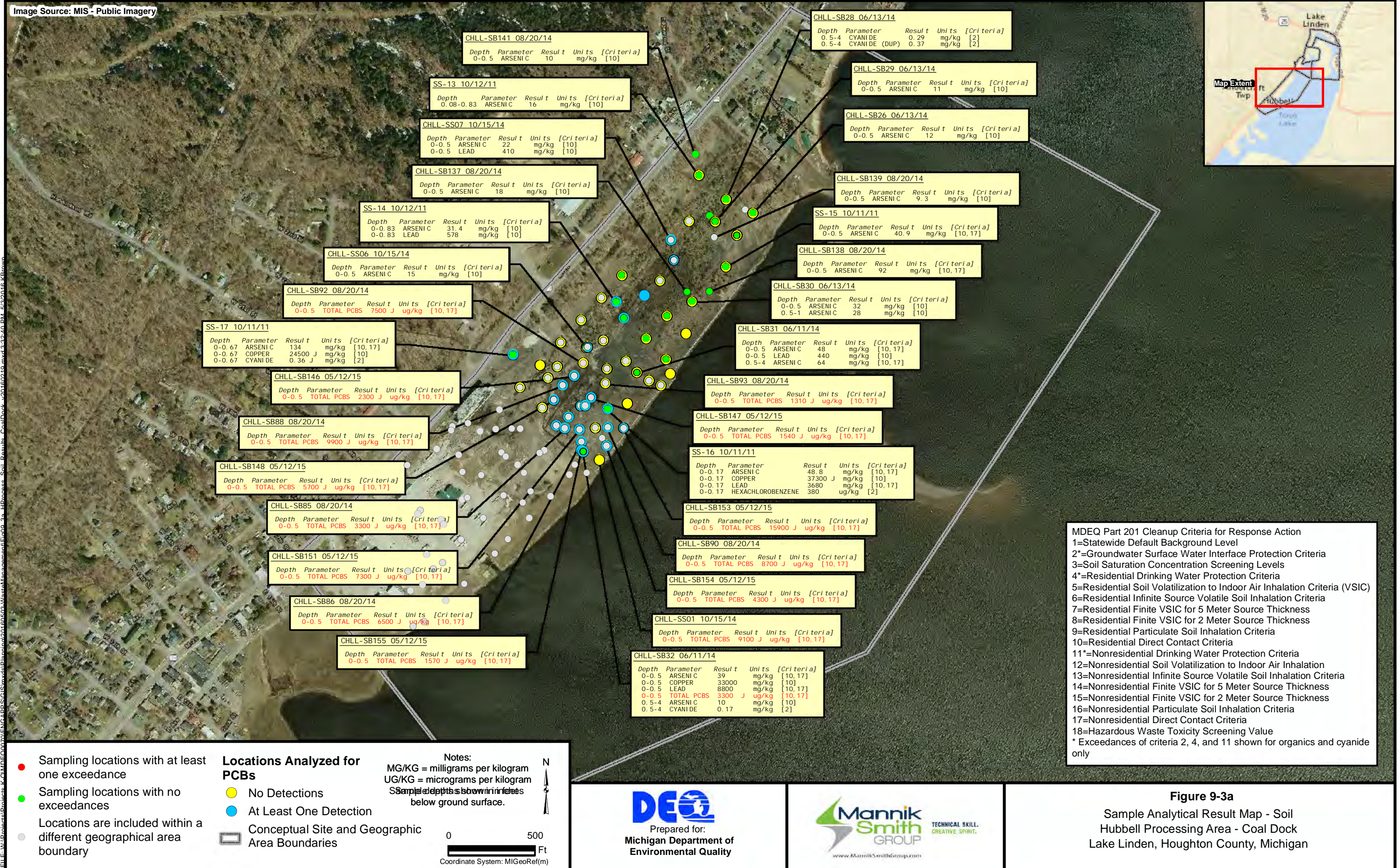
ATTACHMENT A

Representative Photographs of Blockages and Trees Within the Drainage Ditch



ATTACHMENT B





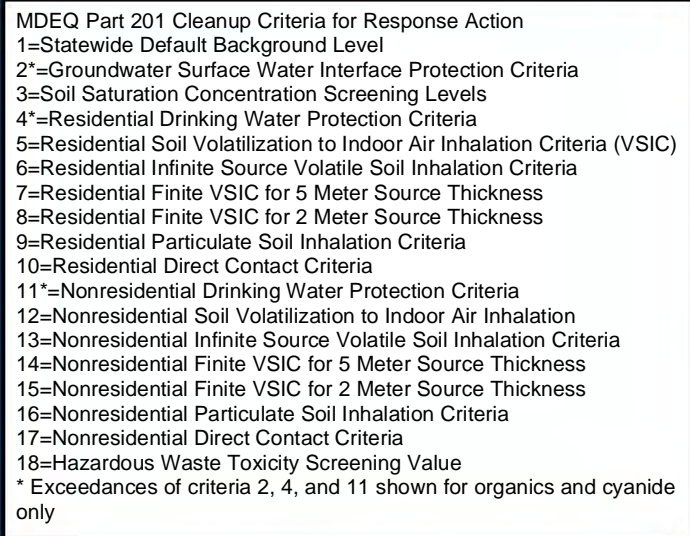


Figure 9-3b
Sample Analytical Result Map - Soil
Hubbell Processing Area - Mineral Building
Lake Linden, Houghton County, Michigan

ATTACHMENT C



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 were appropriate.

APPENDIX D

SOIL EROSION AND SEDIMENTATION CONTROL PERMIT



Keranen, Amy (DEQ)

From: John Pekkala <jpekkala@houghtoncounty.net>
Sent: Thursday, December 01, 2016 8:44 AM
To: hanshaapala
Cc: Keranen, Amy (DEQ); jchrestensen@manniksmithgroup.com
Subject: Hubbell Coal Dock Ditch Clean Out

Good morning Hans,

I inspected the ditch clean out on the Coal Dock property with Amy Keranen and Jed Chrestensen on November 17th. The site has been adequately stabilized and all temporary SESC measures may be removed. I am closing out the SESC permit for the site. The permit number is 16-915-SE.

If you have any questions, please contact me.

Thanks,
John

John Pekkala, Drain Commissioner
County Enforcing Agent for
Soil Erosion and Sedimentation Control
401 E. Houghton Avenue
Houghton, MI 49931
Phone: 906-482-4491
Fax: 906-482-7238

COUNTY OF HOUGHTON
SOIL EROSION AND SEDIMENTATION CONTROL PERMIT

(issued under the authority of part 91, Soil Erosion and Sedimentation Control,
of the Natural Resources and Environmental Protection Act,
1994 PA 451, as amended)

Permittee: Houghton Forest Products

Address: Attn. Mr. Ken Buchanan
1174 Dawson Road
Thunder Bay, Ontario, Canada, P7G1H6

Permit No.:	<u>16-915-SE</u>
Issued:	<u>08-08-16</u>
Expires:	<u>08-08-17</u>
Extended:	<u> </u>

On-Site Responsible Person: Name: Brian Bonen

Company: B&B Contracting, Calumet, Inc. Telephone Number: (906) 337-0017 or 281-2587

Permitted Activity:

Clean out existing ditches

Project Location: Town: 55N ; Range: 32W ; Section: 7

City or Township: Torch Lake Township

Address: 52634 Hwy M26

Permit Conditions:

1. The permitted activity shall be completed in accordance with the approved plans and specifications and the attached general and specific conditions.
2. This permit does not waive the necessity for obtaining all other required federal, state, or local permits.
3. Permittee shall notify the permitting agency within one week after completing the permitted activity or one week prior to the permit expiration date, whichever comes first.


Permitting Agent

(906) 482-4491
Telephone Number

THIS PERMIT MUST BE POSTED AT THE PROJECT SITE.

Permit Number: 16-915-SE

General Conditions:

In accordance with rule 1709 promulgated under the authority of part 91, Soil Erosion and Sedimentation Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, and in addition to the information on the attached plan(s) and special conditions, the following general conditions apply to the earth change authorized by this permit:

- Design, construct, and complete the earth change in a manner that limits the exposed area of disturbed land for the shortest period of time.
- Remove sediment caused by accelerated soil erosion from runoff water before it leaves the site of the earth change.
- Temporary or permanent control measures shall be designed and installed to convey water around, through, or from the earth change at a non-erosive velocity.
- Install temporary soil erosion and sedimentation control measures before or upon commencement of the earth change activity and maintain the measures on a daily basis. Remove temporary soil erosion and sedimentation control measures after permanent soil erosion measures are in place and the area is stabilized. (Stabilized means the establishment of vegetation or the proper placement, grading; or covering of soil to ensure its resistance to soil erosion, sliding, or other earth movement.)
- Complete permanent soil erosion control measures for the earth change within five calendar days after final grading or upon completion of the final earth change. If it is not possible to permanently stabilize the earth changes, then maintain temporary soil erosion and sedimentation control measures until permanent soil erosion control measures are in place and the area is stabilized.

SPECIFIC CONDITIONS

48 hours notice prior to earth change

APPENDIX E

Joint Permit Application Permit





**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER RESOURCES DIVISION
PERMIT**

ISSUED TO:

DEQ RRD
Attn: Amy Keranen
55195 US Hwy 41 North
Calumet, MI 49913

Permit No.	WRP 003072
Submission No.	2FN-DP9E-R7ST
Issued	June 25, 2016
Expires	June 25, 2021

This permit is being issued by the Michigan Department of Environmental Quality (MDEQ) under the provisions of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA), and specifically:

- | | |
|---|---|
| <input checked="" type="checkbox"/> Part 301, Inland Lakes and Streams | <input type="checkbox"/> Part 315, Dam Safety |
| <input type="checkbox"/> Part 325, Great Lakes Submerged Lands | <input type="checkbox"/> Part 323, Shorelands Protection and Management |
| <input type="checkbox"/> Part 303, Wetlands Protection | <input type="checkbox"/> Part 353, Sand Dunes Protection and Management |
| <input type="checkbox"/> Part 31, Floodplain/Water Resources Protection | |

Permission is hereby granted, based on permittee assurance of adherence to State of Michigan requirements and permit conditions, to:

Permitted Activity:

Dredge a total of 25 cubic yards of sediment from the filled-in channel of an unnamed tributary to Torch Lake. Dredging to be completed over an area 112 ft. long by 3 ft. wide, and at a depth of 2 ft. on average. Dispose of sediment in areas adjacent to normal channel area to cover contaminated sediments adjacent to stream.

Note:

- 1. All work to be completed in accordance with the attached plans and permit conditions.**

Water Course Affected: Unnamed tributary to Torch Lake

Property Location: 52634 Highway M-26, Houghton County, Village of Hubbell, Section 7, Town/Range T55N/32W

Authority granted by this permit is subject to the following limitations:

- A. Initiation of any work on the permitted project confirms the permittee's acceptance and agreement to comply with all terms and conditions of this permit.
- B. The permittee, in exercising the authority granted by this permit, shall not cause unlawful pollution as defined by Part 31, Water Resources Protection, of the NREPA.
- C. This permit shall be kept at the site of the work and available for inspection at all times during the duration of the project or until its date of expiration.
- D. All work shall be completed in accordance with the approved plans and specifications submitted with the application and/or plans and specifications attached to this permit.
- E. No attempt shall be made by the permittee to forbid the full and free use by the public of public waters at or adjacent to the structure or work approved.
- F. It is made a requirement of this permit that the permittee give notice to public utilities in accordance with Act 53 of the Public Act of 1974 and comply with each of the requirements of that Act.
- G. This permit does not convey property rights in either real estate or material, nor does it authorize any injury to private property or invasion of public or private rights, nor does it waive the necessity of seeking federal assent, all local permits, or complying with other state statutes.
- H. This permit does not prejudice or limit the right of a riparian owner or other person to institute proceedings in any circuit court of this state when necessary to protect his rights.
- I. Permittee shall notify the MDEQ within one week after the completion of the activity authorized by this permit, by completing and forwarding the attached preaddressed postcard to the office addressed thereon.
- J. This permit shall not be assigned or transferred without the written approval of the MDEQ.

- K. Failure to comply with conditions of this permit may subject the permittee to revocation of permit and criminal and/or civil action as cited by the specific state act, federal act, and/or rule under which this permit is granted.
- L. All dredged or excavated materials shall be disposed of in an upland site (outside of floodplains, unless exempt under Part 31, and wetland).
- M. In issuing this permit, the MDEQ has relied on the information and data that the permittee has provided in connection with the submitted application for permit. If, subsequent to the issuance of a permit, such information and data prove to be false, incomplete, or inaccurate, the MDEQ may modify, revoke, or suspend the permit, in whole or in part, in accordance with the new information.
- N. The permittee shall indemnify and hold harmless the State of Michigan and its departments, agencies, officials, employees, agents, and representatives for any and all claims or causes of action arising from acts or omissions of the permittee, or employees, agents, or representative of the permittee, undertaken in connection with this permit. The permittee's obligation to indemnify the State of Michigan applies only if the State (1) provides the permittee or its designated representative written notice of the claim or cause of action within 30 days after it is received by the State and (2) consents to the permittee's participation in the proceeding on the claim or cause of action. It does not apply to contested case proceedings under the Administrative Procedures Act challenging the permit. This permit shall not be construed as an indemnity by the State of Michigan for the benefit of the permittee or any other person.
- O. Noncompliance with these terms and conditions and/or the initiation of other regulated activities not specifically authorized shall be cause for the modification, suspension, or revocation of this permit, in whole or in part. Further, the MDEQ may initiate criminal and/or civil proceedings as may be deemed necessary to correct project deficiencies, protect natural resource values, and secure compliance with statutes.
- P. If any change or deviation from the permitted activity becomes necessary, the permittee shall request, in writing, a revision of the permitted activity from the MDEQ. Such revision request shall include complete documentation supporting the modification and revised plans detailing the proposed modification. Proposed modifications must be approved, in writing, by the MDEQ prior to being implemented.
- Q. This permit may be transferred to another person upon written approval of the MDEQ. The permittee must submit a written request to the MDEQ to transfer the permit to the new owner. The new owner must also submit a written request to the MDEQ to accept transfer. The new owner must agree, in writing, to accept all conditions of the permit. A single letter signed by both parties which includes all the above information may be provided to the MDEQ. The MDEQ will review the request and if approved, will provide written notification to the new owner.
- R. Prior to initiating permitted construction, the permittee is required to provide a copy of the permit to the contractor(s) for review. The property owner, contractor(s), and any agent involved in exercising the permit are held responsible to ensure that the project is constructed in accordance with all drawings and specifications. The contractor is required to provide a copy of the permit to all subcontractors doing work authorized by the permit.
- S. Construction must be undertaken and completed during the dry period of the wetland. If the area does not dry out, construction shall be done on equipment mats to prevent compaction of the soil.
- T. Authority granted by this permit does not waive permit requirements under Part 91, Soil Erosion and Sedimentation Control, of the NREPA, or the need to acquire applicable permits from the County Enforcing Agent.
- U. Authority granted by this permit does not waive permit requirements under the authority of Part 305, Natural Rivers, of the NREPA. A Natural Rivers Zoning Permit may be required for construction, land alteration, streambank stabilization, or vegetation removal along or near a natural river.
- V. The permittee is cautioned that grade changes resulting in increased runoff onto adjacent property is subject to civil damage litigation.
- W. Unless specifically stated in this permit, construction pads, haul roads, temporary structures, or other structural appurtenances to be placed in a wetland or on bottomland of the waterbody are not authorized and shall not be constructed unless authorized by a separate permit or permit revision granted in accordance with the applicable law.
- X. For projects with potential impacts to fish spawning or migration, no work shall occur within fish spawning or migration timelines (i.e., windows) unless otherwise approved in writing by the MDNR, Fisheries Division.
- A. Work to be done under authority of this permit is further subject to the following special instructions and specifications:

All raw areas in uplands resulting from the permitted construction activity shall be effectively stabilized with sod and/or seed and mulch (or other technology specified by this permit or project plans) in a sufficient quantity and manner to prevent erosion and any potential siltation to surface waters or wetlands. Temporary stabilization measures shall be installed before or upon commencement of the permitted activity, and shall be maintained until permanent measures are in place. Permanent measures shall be in place within five (5) days of achieving final grade.

Authority granted by this permit does not waive permit or program requirements under Part 91, Soil Erosion and Sedimentation Control, of the NREPA, or the need to acquire applicable permits from the County Enforcing Agent (CEA). To locate the Soil Erosion Program Administrator for your county visit www.mi.gov/deqstormwater and look for Soil Erosion and Sedimentation Control Program under "Related Links".

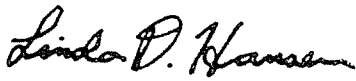
The authority to conduct the activity as authorized by this permit is granted solely under the provisions of the governing act as identified above. This permit does not convey, provide, or otherwise imply approval of any other governing act, ordinance, or regulation, nor does it waive the permittee's obligation to acquire any local, county, state or federal approval or authorization, necessary to conduct the activity.

No fill, excess soil, or other material shall be placed in any wetland or surface water area not specifically authorized by this permit, its plans, and specifications.

This permit does not authorize or sanction work that has been completed in violation of applicable federal, state, or local statutes.

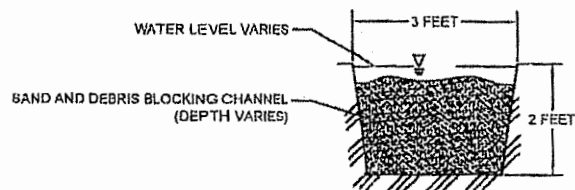
The permit placard shall be kept posted at the work site, in a prominent location at all times for the duration of the project, or until permit expiration.

This permit is being issued for the maximum time allowed and no extensions of this permit will be granted. Initiation of the construction work authorized by this permit indicates the permittee's acceptance of this condition. The permit, when signed by the MDEQ, will be for a five-year period beginning at the date of issuance. If the project is not completed by the expiration date, a new permit must be sought.

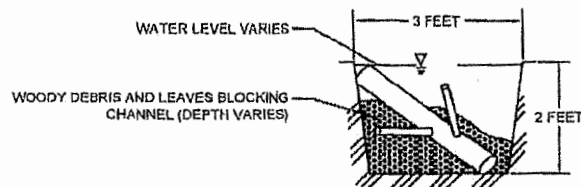
By: 

Linda D. Hansen PE PWS
Water Resources Division
(906) 353-7522

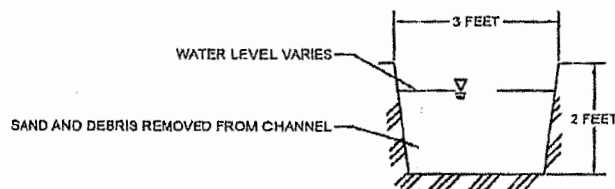
cc: Village of Hubbell
Houghton County CEA
Mannik & Smith Group, Inc.



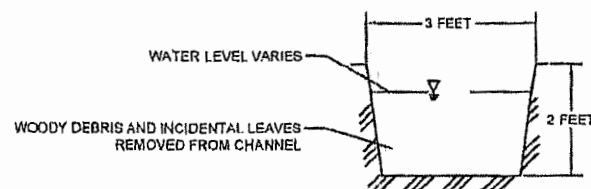
CROSS SECTION A - A'
 TYPICAL EXISTING CONDITIONS



CROSS SECTION B - B'
 TYPICAL EXISTING CONDITIONS



CROSS SECTION A - A'
 TYPICAL PROPOSED CONDITIONS



CROSS SECTION B - B'
 TYPICAL PROPOSED CONDITIONS

NOTES:

- ALL DIMENSIONS ARE APPROXIMATE TYPICAL CONDITIONS. THE DITCH WIDTH AND DEPTH VARY SOMEWHAT.
- WOODY DEBRIS AND LEAF ACCUMULATIONS ARE SPORADIC WHERE LOGS AND BRANCHES HAVE FALLEN INTO THE DITCH. A TYPICAL BLOCKAGE IS REPRESENTED.



FIGURE 4 OF 4

CROSS SECTIONS

HUBBELL COAL DOCK DITCH CLEAN OUT
 HUBBELL, HOUGHTON COUNTY, MICHIGAN
 MAY 2016

DATE	DRAWN BY	DESIGNED BY	PROJECT NO.
5/4/2016	JBC	JBC	MDEQ0070

APPENDIX F

Photographic Log





Photo 1: Drainage ditch exiting MDOT culvert prior to clean out. Photo taken on 4/20/16.



Photo 2: Drainage ditch exiting MDOT culvert after clean out. Photo taken on 8/25/16.



Photo 3: Drainage ditch before berm repair. Photo taken on 5/18/16.



Photo 4: Drainage ditch after berm repair. Photo taken on 8/25/16.



Photo 5: Confluence with north ditch prior to clean out. Photo taken on 5/6/16.



Photo 6: Confluence with north ditch after clean out. Photo taken on 8/25/16.

