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PROJECT MANAGER

July 30, 2019

Mr. Brian Kelly
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U.S. Environmental Protection Agency
Region 5, Emergency Response Branch #1
9311 Groh Road
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Subject: Removal Report, Revision 0
Quincy Mining Company Mason Site
EPA Contract No.: EP-S5-13-01
Technical Direction Document No.: S05-0001-1808-205
Document Tracking No.: 2867

Dear Mr. Kelly:

Tetra Tech, Inc. (Tetra Tech) is submitting this removal report (Revision 0), for your review and comment, that summarizes the time-critical removal activities conducted at the Quincy Mining Company Mason site between October 9, 2018 and June 25, 2019. This report summarizes the field activities conducted at the site located in Mason, Houghton County, Michigan.

If you have any questions regarding this report, please contact me at (586) 524-0613 or via e-mail at lori.kozel@tetrattech.com.

Respectfully,

A handwritten signature in black ink that reads 'Lori A. Kozel'.

Lori Kozel
Project Manager

Enclosure

**REMOVAL REPORT
QUINCY MINING COMPANY MASON SITE
MASON, HOUGHTON COUNTY, MICHIGAN**

Revision 0

THIS DOCUMENT CONTAINS PERSONALLY IDENTIFIABLE INFORMATION

U.S. Environmental Protection Agency
Region 5
Emergency Response Branch #1
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Submitted by

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EPA Contract No.: EP-S5-13-01
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July 30, 2019

Prepared by



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Approved by



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START QC Reviewer

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1.0 INTRODUCTION

The U.S. Environmental Protection Agency (EPA) tasked Tetra Tech, Inc. (Tetra Tech) to provide support during a time-critical removal action at the Quincy Mining Company Mason site (the site) located in Mason, Houghton County, Michigan. This work was assigned under Superfund Technical Assessment and Response Team (START) contract No. EP-S5-13-01, Technical Direction Document (TDD) No. S05-0001-1808-205.

As part of the removal activities, START reviewed the site-specific health and safety plan, performed air monitoring, documented the site activities, and conducted oversight. START also prepared a site-specific air monitoring and sampling plan (Tetra Tech 2018b).

This removal report is organized into the following sections:

- Introduction – describes the objectives and scope of the removal action and describes the site and site history.
- Removal Action Activities – documents the removal activities, including the methods and results of air monitoring, and provides a timeline for the removal action.
- Additional Assessment Sampling – describes the suspect waste samples collected as part of an additional site assessment that was conducted concurrently with the removal action.
- Summary of the Removal Action – summarizes the time-critical removal action and documents the effectiveness of the completed activities.

In addition, this removal report contains six appendices and one attachment. Appendix A provides figures for this report. Appendix B provides tables summarizing analytical results. Appendix C provides preliminary metrics of waste that was removed from the site. Appendix D provides field notes recorded by START personnel. Appendix E provides representative photographs of the site conditions and the removal activities conducted at the site. Information on the environmentally-preferred practices used during this project are included in Appendix F. Attachment 1 provides the laboratory analytical reports for the samples collected during the removal action.

1.1 SITE LOCATION

The site is in Mason, Houghton County, Michigan, and includes more than five parcels. The site lies within the southwest quarter of Section 23, and the northeast quarter of Section 26, Township 55 North, Range 33 West. The site includes the Quincy Reclamation Plant Area and the Quincy Stamp Mills Area (Appendix A, Figures 1 and 2). The site is located at an elevation of 636 feet above mean sea level within

the Laurium topographic quadrangle. The approximate geographic coordinates of the center of the site are 47.1409280° north latitude and -88.4655580° west longitude.

The site, which is situated on approximately 300 acres of land, consists of the remains of a municipal dump and former industrial structures; specifically, a reclamation plant, boiler house, coal dock, stamp mills, and various other structures that supported mining operations. Access to the property, west of M-26, is unrestricted, and the property is frequented by trespassers, tourists, and other members of the public, including student groups.

The site is bordered to the north by an unnamed trail, beyond which is a wooded area; to the east and south by Torch Lake; and to the west by the unincorporated town of Mason, which includes residential properties and wooded areas (Appendix A, Figure 2).

1.2 SITE DESCRIPTION

The Michigan Department of Environment, Great Lakes, and Energy (EGLE), previously known as the Michigan Department of Environmental Quality, has collected samples at the site since 2006. The most recent EGLE sampling event took place in 2017, and involved the collection of 27 samples of potential asbestos-containing building material (ACBM). Of the samples collected, 20 were found to contain friable asbestos. Intact and empty abandoned containers are scattered throughout the site, as well as residual processing material (RPM). EGLE determined that one of the RPM samples collected detected hazardous waste because the waste exhibited a toxicity characteristic leaching procedure (TCLP) lead level that exceeded the Resource Conservation and Recovery Act of 1976 (RCRA) standard of 5.0 milligrams per liter (mg/L).

On November 9, 2017, EGLE requested EPA assistance to address the ACBM, RPM, and abandoned containers at the site.

As a result of EGLE's request, EPA and START mobilized to the site on two occasions (in May and June, 2018) to conduct assessments. EPA and START determined that 20 of 24 bulk asbestos samples contained asbestos in amounts that exceeded the National Emission Standards for Hazardous Air Pollutants (NESHAP) and the EGLE Particulate Soil Inhalation Criterion of 1 percent. The maximum amount detected was 85 percent chrysotile asbestos in sample QMRA-ACBM-07-053018.

Similarly, four of 12 lead soil samples exceeded EPA's industrial removal management level (RML) for lead of 800 milligrams per kilogram (mg/kg); four samples exceeded the EGLE non-residential Direct

Contact Criteria (DCC) for lead of 900 mg/kg; and three samples exceeded the TCLP criterion for lead as a hazardous waste of 5.0 mg/L.

Based on the removal assessment activities, EPA concluded that a removal action was justified at the site, which began in October 2018 and continued through June 2019. Details of the removal assessment activities performed by START in May and June 2018 are provided in the “Removal Assessment Report” (Tetra Tech 2018a). Removal action activities are described in the following sections.

2.0 REMOVAL ACTION ACTIVITIES

This section discusses the removal action activities conducted at the site from October 9, 2018 to June 25, 2019. Environmental Quality Management, Inc. (EQM) served as EPA’s Emergency and Rapid Response Services (ERRS) contractor. START performed air monitoring during the removal activities, collected perimeter air samples, conducted x-ray fluorescence (XRF) soil screening, assisted the ERRS contractor with collecting samples for waste profiling, and documented site activities. ERRS profiled and bulked contaminated materials and wastes, removed ACBM throughout the site, and arranged for off-site transportation and disposal of wastes. These activities are described in the sections below.

2.1 AIR MONITORING

During site activities, START conducted air monitoring using the following instruments: one RAE Systems MultiRAE Pro five-gas monitor (MultiRAE) to monitor for toxic or dangerous atmospheres, and four TSI DustTrak DRX particulate monitors (DustTraks) to monitor dust levels at the perimeter. The DustTraks were connected to EPA’s VIPER Survey Controller software to provide real-time telemetry and to e-mail alerts to on-site START personnel.

START also collected perimeter asbestos and lead samples during asbestos and lead removal operations on site. Air monitoring and sampling was performed in accordance with the site-specific air monitoring and sampling plan (Tetra Tech 2018b). Details of the air monitoring activities are described below.

2.1.1 MultiRAE

One MultiRAE equipped with sensors for measuring volatile organic compounds (VOC), carbon monoxide (CO), oxygen (O₂), lower explosive limit (LEL), and hydrogen sulfide (H₂S) was used throughout the removal. START used the MultiRAE to periodically screen areas where ERRS personnel were working. START screened the area more frequently or continuously, depending on the removal activities, during work in the removal areas, and prior to and during the abandoned container collection and sampling activities. Screening results were recorded in the logbook.

The site-specific action level for VOCs (2.5 parts per million [ppm] during a sustained time greater than 5 minutes) was not exceeded over the course of the RPM removal action and all personnel donned Level C personal protective equipment (PPE). The air monitoring results from the breathing zone, obtained during the removal activities, did not exceed the site-specific action level required to upgrade to Level B PPE (50 ppm for VOCs). VOC levels as high as 23 ppm were observed when the MultiRAE was used to screen near the tops (only when opened) of the recovered plastic containers.

2.1.2 DustTrak DRX Particulate Monitors

Based on the forecasted weather conditions, START stationed one DustTrak upwind of the site activities along the site perimeter and one DustTrak downwind of the site activities also along the site perimeter. Two additional DustTrak units were stationed at crosswind perimeter locations when applicable (Appendix A, Figure 3). The DustTraks were connected to EPA's VIPER Survey Controller software to provide real-time telemetry to the command post. E-mail alerts were set up to notify the on-site START personnel when the site-specific particulate action level was exceeded; however, site-specific action levels were not exceeded over the course of monitoring. Per the EPA OSC, background samples were collected and only two air monitoring stations (upwind and downwind) were deployed while work was occurring on the first floor of Stamp Mill #1.

2.1.3 Perimeter Asbestos Samples

During removal activities conducted in October 2018, START collected background asbestos air samples for a total of 4 days while the ERRS contractor worked on the first floor of Stamp Mill #1 (Appendix A, Figure 3). Weather permitting, perimeter asbestos air samples were collected each day that the asbestos removal operations occurred on site. If conditions seemed to prohibit sample collection, START discussed the situation with the OSC and made a decision about whether to proceed with the asbestos sample collection activities. High-volume asbestos air samples were collected using Gilian AirCon-2 sample pumps calibrated to a flow rate of approximately 10 liters per minute (L/min). Low-volume asbestos air samples were collected using Gilian GilAir5 Personal Air Sampling pumps calibrated to a flow rate of approximately 2.5 L/min. The pump flow rates were calibrated each morning prior to transportation to the site, and then were re-checked at the end of each day following the conclusion of on-site work. The perimeter asbestos air sampling locations are presented in Appendix A, Figure 3. The perimeter asbestos air samples collected between October 12 and 19, 2018 were submitted to ALS Laboratory Group (ALS), in Cincinnati, Ohio, for laboratory analysis via National Institute for Occupational Safety and Health (NIOSH) Method 7400, phase contrast microscopy. If the high-volume samples were overloaded, the corresponding low-volume samples were analyzed via NIOSH Method 7400. Sample results that exceeded

the site-specific perimeter action level of 0.001 fibers per cubic centimeter (f/cc) were resubmitted to ALS for analysis via NIOSH 7402, transmission electron microscopy. Over the duration of the removal, samples did not meet or exceed the action level. The perimeter asbestos air sampling results, which are presented in Appendix B, Table 1, were discussed with the OSC as results were received from the laboratory.

2.1.4 Perimeter Lead Samples

During removal activities conducted in October 2018, START collected background lead air samples for a total of 4 days while the ERRS contractor worked on the first floor of Stamp Mill #1. Weather permitting, the perimeter lead air samples were collected each day that lead removal operations occurred on site. If conditions seemed to prohibit sample collection, START discussed the situation with the OSC and made a decision about whether to proceed with the lead sample collection activities. The lead air samples were collected using Gilian GilAir5 Personal Air Sampling pumps calibrated to a flow rate of approximately 3 L/min. The pump flow rates were calibrated each morning prior to transportation to the site, and were re-checked at the end of each day following the conclusion of on-site work. The perimeter lead air sampling locations are presented in Appendix A, Figure 3.

The perimeter lead air samples were submitted to ALS in Cincinnati, Ohio, for laboratory analysis via NIOSH Method 7300. Over the duration of the removal, samples did not meet or exceed the action level. The lead air sampling results, (presented in Appendix B, Table 2) were discussed with the OSC as results were received from the laboratory.

2.2 ASBESTOS REMOVAL LOCATIONS

During the asbestos removal activities, START identified and marked known and suspect asbestos-containing material (ACM) for removal by the ERRS contractor. START identified and marked bulk ACM at Stamp Mill #1, Stamp Mill #2, the Reclamation Plant, Shore Plant, Power House, and in areas located throughout the site. Items identified and sampled as part of the removal assessment were removed for disposal, including thermal systems insulation, gasket material, roofing, and other debris. Where asbestos-containing mastic could not be removed, the material was encapsulated by using an asbestos binding compound to encapsulate the remaining material. ACBM removal locations are presented in Appendix A, Figure 4.

2.3 LEAD REMOVAL LOCATIONS

Before and during the lead removal activities, START conducted in situ soil screening for lead using a Brunker S1 TITAN hand-held XRF analyzer. During the lead removal activities at Stamp Mill #1, no

additional excavation was required because in situ XRF screening results indicated a lead concentration below the EPA residential RML of 400 mg/kg.

As directed by the EPA OSC, no additional excavation was required during the lead removal activities at Stamp Mill #2 and the Reclamation Plant if the in situ XRF screening results indicated a lead concentration below the EPA non-residential RML of 900 mg/kg. In addition, START marked lead-containing solid material on the lower level of Stamp Mill #2 to be removed by the ERRS contractor. Lead-contaminated soil removal locations are presented in Appendix A, Figure 5.

2.4 AREA-WIDE DRUM REMOVAL

During removal activities, START located and marked various abandoned containers and drums throughout the site. The ERRS contractor gathered and consolidated the containers at the Reclamation Plant. Once consolidated, ERRS completed on-site testing to categorize the abandoned containers into various waste disposal streams. The locations of the abandoned containers and drums are shown in Appendix A, Figure 6. A detailed inventory of the containers and drums is provided in Appendix B, Table 3.

2.5 REMOVAL OVERSIGHT

START performed oversight activities including written and photographic documentation of the site activities and record-keeping of waste leaving the site. Specific details regarding oversight activities are described in this section. Waste metrics, START field notes, and a photographic documentation log of site activities are included as Appendix C, D, and E, respectively.

2.5.1 Documentation

START completed written and photographic documentation of the removal activities throughout the duration of the removal action. In the field logbook, START personnel recorded daily weather conditions, ERRS contractor activities, air monitoring results, and waste disposal events. Scans of the field logbook are provided in Appendix D. START also photographed the site conditions and removal activities and compiled photos in the photographic documentation log included as Appendix E.

As part of the documentation responsibilities, START maintained site files with scanned copies of the waste manifests and digital copies of compiled air monitoring data.

2.5.2 Removal Timeline

The following timeline outlines removal activities that occurred each week during the removal action period from October 9, 2018 and June 25, 2019. Appendix C provides a summary of the wastes removed from the site and lists the facilities that accepted each waste stream.

TABLE 1
REMOVAL ACTIVITY SUMMARY BY DATE

Dates	Removal Activities
10/09/18 – 10/13/18	<ul style="list-style-type: none"> START, ERRS, and EPA mobilized to the site and established the work zones at Quincy Stamp Mill #1. ERRS set up the staging area and lined the initial roll-off box. START connected the air monitoring instruments to the VIPER telemetry system and began perimeter and hot-zone air monitoring. ERRS began asbestos-contaminated debris removal in Quincy Stamp Mill #1. START collected surface soil samples from around QMRA-RPM-08-053018, QMRA-RPM-09-053018, and QMRA-RPM-10-053018 and scanned with an XRF instrument to delineate extent of contamination.
10/15/18 – 10/20/18	<ul style="list-style-type: none"> START collected background air samples. Waste Management hauled seven loads of friable asbestos mixed with debris from Quincy Stamp Mill #1 off site for disposal. START continued to screen area around QMRA-RPM-08-053018 with an XRF instrument for lead removal. START located and marked drums and ACBM for removal on the second floor of Quincy Stamp Mill #1. START began delineating the extent of the lead contamination with an XRF instrument at Quincy Stamp Mill #2 and the Power House. START marked drums for removal in the area surrounding Quincy Stamp Mill #1. EPA met with a local reporter. START re-screened the Power House for lead, marking areas for removal and re-marking ACM. ERRS collected personal air samples from field personnel for asbestos and metals analysis; START assisted with pump calibration and setup. START conducted ongoing hot-zone and perimeter air monitoring.
10/22/18 – 10/27/18	<ul style="list-style-type: none"> ERRS completed asbestos-contaminated debris removal from the first floor of Quincy Stamp Mill #1, and began removal from the second floor. Waste Management hauled four loads of friable asbestos mixed with debris from Quincy Stamp Mill #1 off site for disposal. START delineated lead removal areas at the Reclamation Plant. START marked drums for removal in the area west and southwest of the Reclamation Plant, and east of M-26.

Dates	Removal Activities
	<ul style="list-style-type: none"> • ERRS consolidated lead-contaminated material on the second floor of Stamp Mill #2 for removal. • EPA met with EGLE and a local reporter to discuss the removal progress. • START continued conducting hot-zone and perimeter air monitoring.
10/29/18 – 11/03/18	<ul style="list-style-type: none"> • START marked lead-contaminated material to be removed on the first floor (lower level) of Quincy Stamp Mill #2. • ERRS filled the trench inside Quincy Stamp Mill #1 with sand. • ERRS continued the removal and consolidation of the lead-contaminated material and debris from the second floor of Quincy Stamp Mill #1. • EPA met with EGLE. • ERRS installed fencing along pillars of the first floor of Quincy Stamp Mill #1. • ERRS lined the staging area and built berms for the lead-contaminated material to be staged in the parking area of Quincy Stamp Mill #1. • ERRS and START collected drums from the area around the Power House, north of Quincy Stamp Mill #2, and east of M-26 and staged them on a liner in the Reclamation Plant. • ERRS completed removal in Quincy Stamp Mill #1 and moved support station to the Reclamation Plant. • Waste Management hauled two loads of wood debris off site for disposal. • START continued conducting hot-zone and perimeter air monitoring.
11/05/18 – 11/10/18	<ul style="list-style-type: none"> • ERRS completed the setup of a support station at the Reclamation Plant and began the removal of ACBM and debris from the Reclamation Plant and Shore Plant. • Waste Management hauled two loads of friable asbestos mixed with debris from the Reclamation Plant and Quincy Stamp Mill #1 off site for disposal. • ERRS completed removal of the ACBM from the Shore Plant. • START collected QMCM-STAMPMILL01-110618 for waste characterization. • ERRS installed fencing on the second floor of Quincy Stamp Mill #1 and posted signage. • ERRS consolidated the lead-contaminated material from the Reclamation Plant and transported material to the staging area at Quincy Stamp Mill #1. • START continued the in situ XRF screening of surface soil for lead in the Reclamation Plant. • ERRS removed debris, mastic, and the ACBM roofing material from the concrete tanks in the Reclamation Plant. • EPA met with EGLE, Mannik Smith Group (MSG), National Park Service (NPS), and Keweenaw National Historic Park Advisory Commission (KNHPC) to discuss removal progress. • ERRS containerized and sampled the material from QMRA-RPM-04-053018 and QMRA-RPM-05-053018. • START conducted ongoing hot-zone and perimeter air monitoring. Note: air monitoring ceased on November 7, 2018.

Dates	Removal Activities
11/12/18– 11/13/18	<ul style="list-style-type: none"> • ERRS continued the removal of ACBM from the tanks at the Reclamation Plant and at the Coal Silo, but ran into difficulties due to cold weather. • Waste Management hauled two loads of friable asbestos mixed with debris from the Reclamation Plant and the Shore Plant off site for disposal. • ERRS secured the lead-contaminated material staged at Quincy Stamp Mill #1 and the remaining consolidated drums at the Reclamation Plant for winter storage. • ERRS installed a double fence around the drum staging area at the Reclamation Plant. • ERRS, START, and EPA demobilized for the winter.
12/11/18	<ul style="list-style-type: none"> • MSG repaired the snow fence surrounding the staging area.
05/14/19 – 05/18/19	<ul style="list-style-type: none"> • ERRS, START, and EPA re-mobilized to the site to resume work. • START marked ACBM to be removed from Power House and hillside of Quincy Stamp Mill #2. • ERRS cleared access roads to the Power House and Quincy Stamp Mill #2. • ERRS loaded out material from the Quincy Stamp Mill #1 staging area for disposal. • START continued the in situ XRF screening of the surface soil for lead at Quincy Stamp Mill #2. • ERRS began removing the lead-contaminated material from Quincy Stamp Mill #2. • START field-tested material observed in a trench uncovered at Quincy Stamp Mill #2 for PCBs, indicating possible presence. • ERRS began the removal of lead-contaminated material from the Power House. • Waste Management hauled eleven loads of non-hazardous lead-contaminated soil from Quincy Stamp Mill #1 off site for disposal.
05/20/19 – 05/25/19	<ul style="list-style-type: none"> • ERRS continued removing lead-contaminated material from Quincy Stamp Mill #2. • START continued in situ XRF screening of surface soil for lead. • ERRS containerized material from around QMCM-RPM05, while START screened for VOCs using the MultiRAE. • ERRS and START collected sample QMCM-STAMPMILL02-05212019 for waste characterization analysis, and QMCM-STAMPMILL02-TRENCH-052319 for suspect PCB. • ERRS removed additional ACBM from the Power House, and encapsulated the mastic on the Coal Silo. • ERRS transported consolidated material from Quincy Stamp Mill #2 and the Power House to the staging area at Quincy Stamp Mill #1. • ERRS and START collected sample QMCM-STAMPMILL02HIGH-052319 for TCLP metals analysis and waste characterization analysis. • ERRS completed ACBM removal from Quincy Stamp Mill #2. • START identified additional ACBM located near the north corner of Quincy Stamp Mill #1 in a creek washout area.

Dates	Removal Activities
	<ul style="list-style-type: none"> ERRS loaded out consolidated ACBM. ERRS completed the lead removal from Reclamation Plant. ERRS and START collected samples of contents in collected drums in the staging area and scanned the contents with the MultiRAE. ERRS completed on site testing for waste disposal streams characterization.
05/28/19 – 05/31/19	<ul style="list-style-type: none"> ERRS scraped mastic from the concrete tanks at the Reclamation Plant and encapsulated any remaining ACBM. Waste Management hauled one load of friable asbestos off site for disposal. ERRS loaded miscellaneous wastes for disposal with lead-contaminated material. ERRS mixed Free-Flow stabilizer with the lead-contaminated material staged at Quincy Stamp Mill #1, and START collected sample QMCM-STAMPMILL02-053119 for waste characterization analysis. ERRS began to demobilize equipment.
06/18/19 – 06/19/19	<ul style="list-style-type: none"> ERRS loaded out the remaining stockpile of removal material, debris, and deconstructed the snow fence. Waste Management hauled five loads of non-hazardous lead-contaminated soil with non-friable asbestos off site for disposal. ERRS completed final grading of site.
06/25/2019	<ul style="list-style-type: none"> START collected remaining tarp and tie downs for disposal.

Notes:

ACBM = Asbestos-containing building material

EGLE = Michigan Department of Environment, Great Lakes, and Energy

EPA = U.S. Environmental Protection Agency

ERRS = Emergency and Rapid and Response Services

PCB = Polychlorinated biphenyls

START = Superfund Technical Assessment and Response Team

VOC = Volatile Organic Compound

XRF = X-ray fluorescence

3.0 ADDITIONAL ASSESSMENT SAMPLING

During the removal action, START conducted additional assessment activities. Details about the samples that were collected and their results are presented below.

3.1 SUSPECTED PCB SAMPLING

During the soil screening and removal activities, ERRS and START identified a multi-colored, greasy material in a trench located near the south corner at Quincy Stamp Mill #2. Material similar in appearance located at nearby project sites where mining processes occurred had been observed, sampled, and identified as containing polychlorinated biphenyls (PCBs). The material observed in the trench at Quincy Stamp Mill #2 was sampled as QMCM-STAMPMILL02-TRENCH-052319; however, the results indicated the sample was non-detect for PCBs.

4.0 SUMMARY OF REMOVAL ACTIONS

The following summarizes the removal activities completed from October 9, 2018 to June 25, 2019:

- In total, approximately 415 cubic yards of friable asbestos, 154 cubic yards of non-hazardous lead-contaminated soil with non-friable asbestos, and 220 cubic yards of non-hazardous lead-contaminated soil was removed from the site and was transported to disposal facilities. Additionally, 60 cubic yards of wood and miscellaneous debris were removed and disposed of off site.
- Abandoned containers, drums, and other small containers were consolidated, emptied, and disposed of as non-hazardous waste.
- Thermal systems insulation, gasket material, roofing, and other debris that was identified as ACM during the removal assessment were removed and disposed of off site.
- Perimeter air monitoring did not identify particulates at, or above, the site-specific action level.
- Remaining residual process material within the site was screened with an XRF instrument and was left in place.

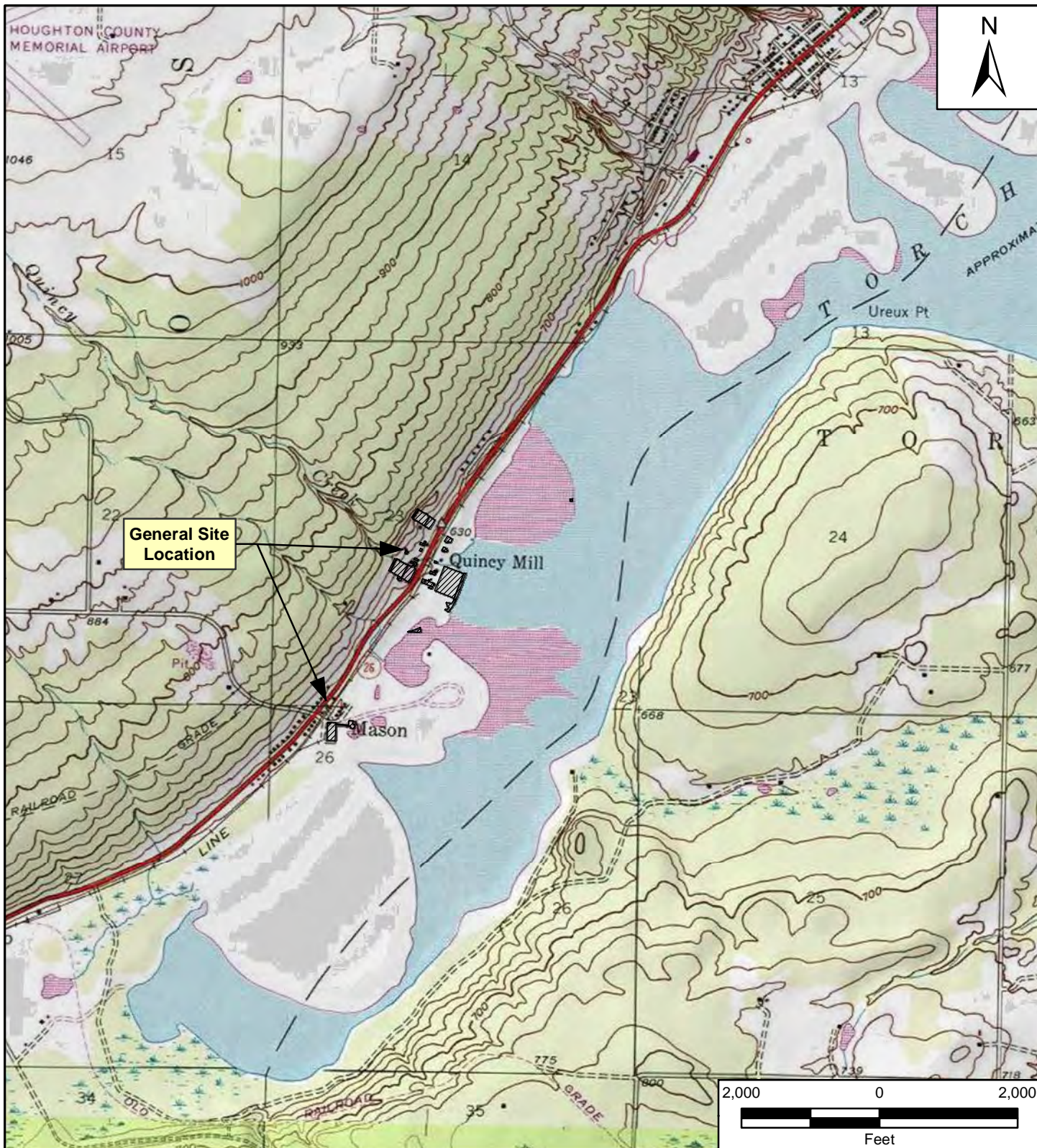
5.0 REFERENCES

- Michigan Department of Environmental Quality. (MDEQ). 2015. "Site Inspection Report for Quincy Mason Operations." U.S. EPA ID NO.: MIN000510939. April 2.
- Tetra Tech, Inc. (Tetra Tech). 2018a. "Removal Assessment Report for the Quincy Mining Company Mason – RS Site." Prepared for EPA under Contract No. EP-S5-13-01. Revision 1. July 6.
- Tetra Tech. 2018b. "Air Monitoring and Sampling Plan." Prepared for EPA under Contract No. EP-S5-13-01. Revision 0. September 17.

APPENDIX A

FIGURES

- 1 – SITE LOCATION MAP
- 2 – SITE LAYOUT MAP
- 3 – PERIMETER AIR MONITORING AND SAMPLING LOCATIONS
- 4 – BULK ACM REMOVAL LOCATIONS
- 5 – LEAD-CONTAMINATED SOIL REMOVAL LOCATIONS
- 6 – AREA-WIDE DRUM REMOVAL LOCATIONS



Base Map Source: ESRI USA Topo Maps map service

EPA Contract No.: EP-S5-13-01
TDD No.: S05-0001-1808-205

Quincy Mining Company Mason Site
Mason, Houghton County, Michigan

Figure 1
Site Location Map



Prepared For: USEPA

Prepared By: KRB



- MTU Identified Mining Era Buildings and Structures
1. Quincy Stamp Mill #1
 2. Quincy Stamp Mill #1 - Washing/Classifying Floor
 3. Quincy Stamp Mill #1 - Rock Bin
 4. Quincy Stamp Mill #1 - Mineral House
 5. Quincy Stamp Mill #2
 6. Quincy Stamp Mill #2 - Washing/Classifying Floor
 7. Quincy Stamp Mill #2 - Rock Bin
 8. Quincy Pump House #1
 9. Quincy Boiler House #1
 10. Chimney
 11. Store House
 12. Concrete coal bin
 13. Concrete chimney
 14. Stone base
 15. Quincy Pump House #2
 16. Quincy Boiler House #2
 17. Coal Shed
 18. Quincy Coal Shed Dock
 19. Quincy Dock
 20. Quincy Carpenter
 21. Blacksmith
 22. Quincy Turbine (Power) House
 23. Oil House - Underground
 24. Quincy Boarding
 25. Store House
 26. Lumber
 27. Assayers Laboratory
 28. Quincy Dredge #1
 29. Quincy Dredge #2
 30. Quincy Regrinding Plant
 31. Substation
 32. Transport
 33. Quincy Shore Plant
- △ Site Features from MDEQ 2015 Site Inspection Report
- A. Former Foundation (Quincy Booster Pump Station)
 - B. Drum Removal Area
 - C. Brick Building Remains
 - D. Drum Removal Area
 - E. Arsenic Removal Area
 - F. Brick Foundation
 - G. Smokestack
 - H. Former Water Intake
 - I. Old Transformer Pad
 - J. Hydrant

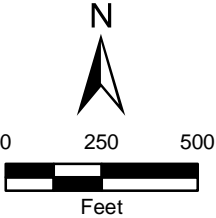


- Legend**
- River / Creek
 - Dump Area
 - Mining Era Buildings and Structures

Notes:
MDEQ = Michigan Department of Environmental Quality
MTU = Michigan Technological University

Source of Aerial Photograph: Michigan Imagery Service (Houghton - 2013)

EPA Contract No.: EP-S5-13-01
TDD No.: S05-0001-1808-205



Quincy Mining Company Mason Site
Mason, Houghton County, Michigan

Figure 2
Site Layout Map

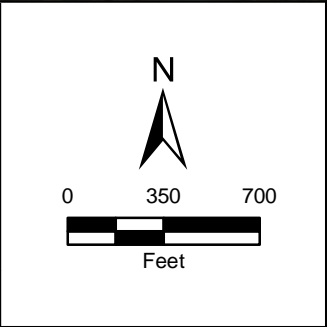


Prepared For: USEPA
Prepared By: KRB

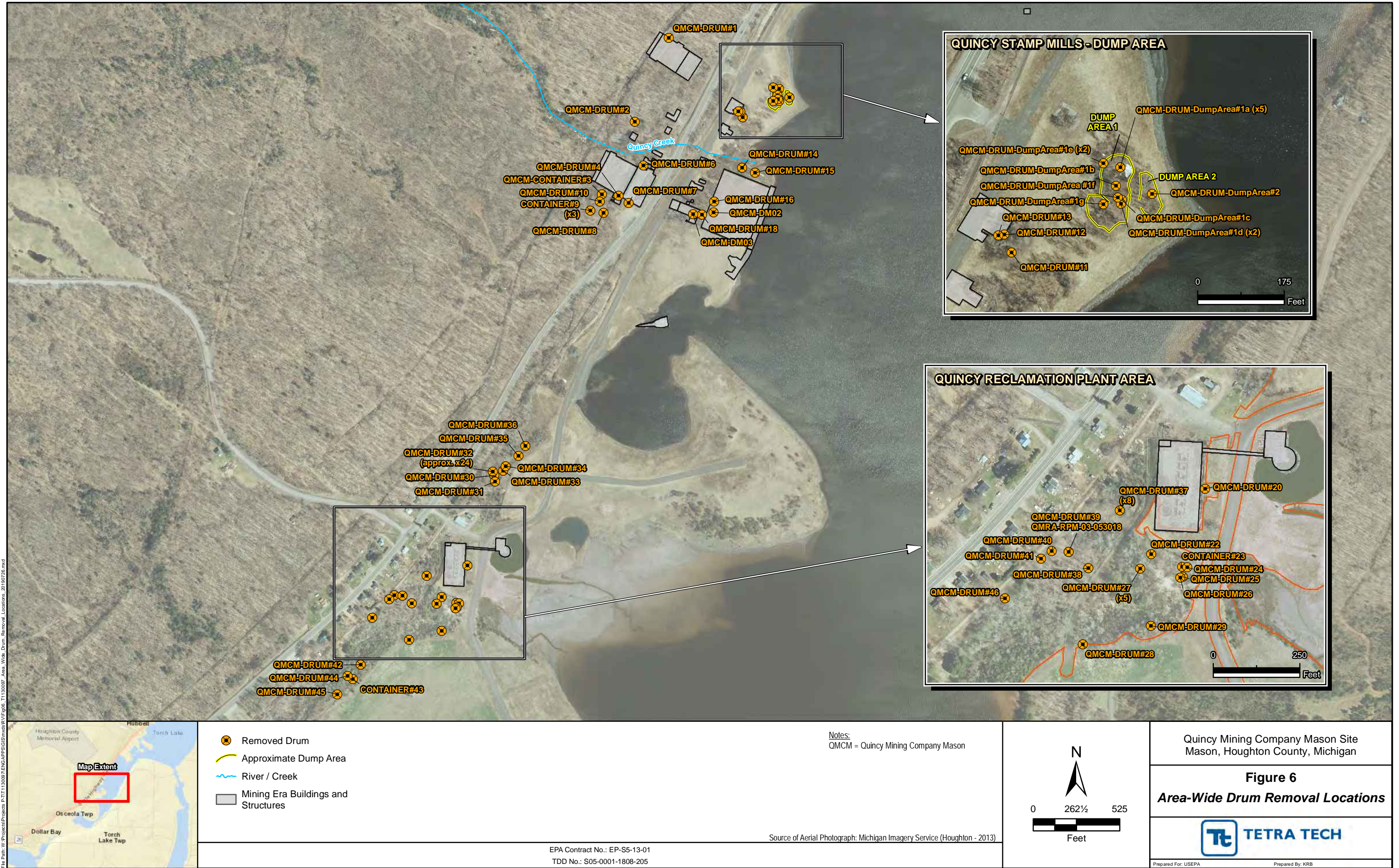
Coordinate System: NAD_1983_StatePlane_Michigan_North_FIPS_2111_Feet_Int



Legend	Source of Aerial Photograph: Michigan Imagery Service (Houghton - 2013)
Perimeter Air Monitoring Station Location (samples analyzed)	EPA Contract No.: EP-S5-13-01
Background Air Monitoring Station Location	TDD No.: S05-0001-1808-205
Perimeter Air Monitoring Station Location (samples not analyzed)	
River / Creek	
Mining Era Buildings and Structures	



Quincy Mining Company Mason Site Mason, Houghton County, Michigan
Figure 3 Perimeter Air Monitoring and Sampling Locations
TETRA TECH
Prepared For: USEPA Prepared By: KRB Coordinate System: NAD_1983_StatePlane_Michigan_North_FIPS_2111_Feet_Int



APPENDIX B
ANALYTICAL SUMMARY TABLES

TABLE 1
PERIMETER AIR SAMPLING RESULTS – ASBESTOS SUMMARY TABLE
QUINCY MINING COMPANY MASON SITE

Sample Location	Sample I.D.	Analysis	Collection Date	Date Received	Work Order Number	Air Volume (L)	Results (fiber/cc)
Quincy Mill #1 - Downwind	QMCM-AAS-L-DW-101218	NIOSH 7400 - PCM (Asbestos)	10/12/2018	10/23/2018	18101063	--	--
	QMCM-AAS-H-DW-101218	NIOSH 7400 - PCM (Asbestos)	10/12/2018	10/23/2018	18101063	2828.970	<0.00095
Quincy Mill #1 - Upwind	QMCM-AAS-L-UW-101218	NIOSH 7400 - PCM (Asbestos)	10/12/2018	10/23/2018	18101063	--	--
	QMCM-AAS-H-UW-101218	NIOSH 7400 - PCM (Asbestos)	10/12/2018	10/23/2018	18101063	2815.710	<0.00096
Field Blank	QMCM-FB-101218	NIOSH 7400 - PCM (Asbestos)	10/12/2018	10/23/2018	18101063	0.000	NA
Equipment Blank	QMCM-EB1-101218	NIOSH 7400 - PCM (Asbestos)	10/12/2018	10/23/2018	18101063	0.000	NA
Equipment Blank	QMCM-EB2-101218	NIOSH 7400 - PCM (Asbestos)	10/12/2018	10/23/2018	18101063	0.000	NA
Quincy Mill #1 - Downwind	QMCM-AAS-L-DW-101318	NIOSH 7400 - PCM (Asbestos)	10/13/2018	10/23/2018	18101062	--	--
	QMCM-AAS-H-DW-101318	NIOSH 7400 - PCM (Asbestos)	10/13/2018	10/23/2018	18101062	1537.030	<0.0018
Quincy Mill #1 - Upwind	QMCM-AAS-L-UW-101318	NIOSH 7400 - PCM (Asbestos)	10/13/2018	10/23/2018	18101062	--	--
	QMCM-AAS-H-UW-101318	NIOSH 7400 - PCM (Asbestos)	10/13/2018	10/23/2018	18101062	1548.330	<0.0017
Field Blank	QMCM-FB-101318-PCM	NIOSH 7400 - PCM (Asbestos)	10/13/2018	10/23/2018	18101062	0.000	NA
Quincy Mill #1 - Downwind	QMCM-AAS-L-DW-101518	NIOSH 7400 - PCM (Asbestos)	10/15/2018	10/23/2018	18101061	--	--
	QMCM-AAS-H-DW-101518	NIOSH 7400 - PCM (Asbestos)	10/15/2018	10/23/2018	18101061	5008.060	<0.00054
Quincy Mill #1 - Upwind	QMCM-AAS-L-UW-101518	NIOSH 7400 - PCM (Asbestos)	10/15/2018	10/23/2018	18101061	--	--
	QMCM-AAS-H-UW-101518	NIOSH 7400 - PCM (Asbestos)	10/15/2018	10/23/2018	18101061	4962.400	<0.00054
Field Blank	QMCM-FB-101518-PCM	NIOSH 7400 - PCM (Asbestos)	10/15/2018	10/23/2018	18101061	0.000	NA
Quincy Mill #1 - Downwind	QMCM-AAS-L-DW-101618	NIOSH 7400 - PCM (Asbestos)	10/16/2018	10/19/2018	1810906	--	--
	QMCM-AAS-H-DW-101618	NIOSH 7400 - PCM (Asbestos)	10/16/2018	10/19/2018	1810906	6109.990	<0.00044
Quincy Mill #1 - Upwind	QMCM-AAS-L-UW-101618	NIOSH 7400 - PCM (Asbestos)	10/16/2018	10/19/2018	1810906	--	--
	QMCM-AAS-H-UW-101618	NIOSH 7400 - PCM (Asbestos)	10/16/2018	10/19/2018	1810906	6560.210	<0.00041
Background 1	QMCM-AAS-L-BG1-101618	NIOSH 7400 - PCM (Asbestos)	10/16/2018	10/19/2018	1810906	--	--
	QMCM-AAS-H-BG1-101618	NIOSH 7400 - PCM (Asbestos)	10/16/2018	10/19/2018	1810906	4803.980	<0.00056
Background 2	QMCM-AAS-L-BG2-101618	NIOSH 7400 - PCM (Asbestos)	10/16/2018	10/19/2018	1810906	--	--
	QMCM-AAS-H-BG2-101618	NIOSH 7400 - PCM (Asbestos)	10/16/2018	10/19/2018	1810906	5766.060	<0.00047
Field Blank	QMCM-FB-101618	NIOSH 7400 - PCM (Asbestos)	10/16/2018	10/19/2018	1810906	0.000	NA
Quincy Mill #1 - Downwind	QMCM-AAS-L-DW-101718	NIOSH 7400 - PCM (Asbestos)	10/17/2018	10/19/2018	1810907	--	--
	QMCM-AAS-H-DW-101718	NIOSH 7400 - PCM (Asbestos)	10/17/2018	10/19/2018	1810907	4255.840	<0.00063
Quincy Mill #1 - Upwind	QMCM-AAS-L-UW-101718	NIOSH 7400 - PCM (Asbestos)	10/17/2018	10/19/2018	1810907	--	--
	QMCM-AAS-H-UW-101718	NIOSH 7400 - PCM (Asbestos)	10/17/2018	10/19/2018	1810907	4013.000	<0.00067

TABLE 1
PERIMETER AIR SAMPLING RESULTS – ASBESTOS SUMMARY TABLE
QUINCY MINING COMPANY MASON SITE

Sample Location	Sample I.D.	Analysis	Collection Date	Date Received	Work Order Number	Air Volume (L)	Results (fiber/cc)
Background 1	QMCM-AAS-L-BG1-101718	NIOSH 7400 - PCM (Asbestos)	10/17/2018	10/19/2018	1810907	--	--
	QMCM-AAS-H-BG1-101718	NIOSH 7400 - PCM (Asbestos)	10/17/2018	10/19/2018	1810907	3604.150	<0.00075
Background 2	QMCM-AAS-L-BG2-101718	NIOSH 7400 - PCM (Asbestos)	10/17/2018	10/19/2018	1810907	--	--
	QMCM-AAS-H-BG2-101718	NIOSH 7400 - PCM (Asbestos)	10/17/2018	10/19/2018	1810907	3809.820	<0.00071
Field Blank	QMCM-FB-101718	NIOSH 7400 - PCM (Asbestos)	10/17/2018	10/19/2018	1810907	0.000	NA
Background 3	QMCM-AAS-L-BG3-101818	NIOSH 7400 - PCM (Asbestos)	10/18/2018	10/23/2018	18101064	1337.13	<0.002
	QMCM-AAS-H-BG3-101818	NIOSH 7400 - PCM (Asbestos)	10/18/2018	10/23/2018	18101064	3954.98	<0.00068
Background 4	QMCM-AAS-L-BG4-101818	NIOSH 7400 - PCM (Asbestos)	10/18/2018	10/23/2018	18101064	1317.6	<0.002
	QMCM-AAS-H-BG4-101818	NIOSH 7400 - PCM (Asbestos)	10/18/2018	10/23/2018	18101064	3768.13	<0.00072
Background 3	QMCM-AAS-L-BG3-101918	NIOSH 7400 - PCM (Asbestos)	10/19/2018	10/23/2018	18101064	1249.22	<0.0022
	QMCM-AAS-H-BG3-101918	NIOSH 7400 - PCM (Asbestos)	10/19/2018	10/23/2018	18101064	5042.89	0.00068
Background 4	QMCM-AAS-L-BG4-101918	NIOSH 7400 - PCM (Asbestos)	10/19/2018	10/23/2018	18101064	1311.54	<0.0021
	QMCM-AAS-H-BG4-101918	NIOSH 7400 - PCM (Asbestos)	10/19/2018	10/23/2018	18101064	5039.87	0.00083

Notes:

-- = Represents low volume asbestos cassette that was not analyzed due to analysis that was run on corresponding high volume cassette

f/cc = fibers per cubic centimeter

L = Liter

NA = Not applicable

ND = Non Detectable

NIOSH = National Institute for Occupational Safety and Health

PCM = Phase Contrast Microscopy

QMCM = Quincy Mining Company Mason

Air Sampling Technician: Ashley Miller

Date Sampled: 10/12/2018 - 10/19/2018

Primary Calibration: Bios Defender 520

TABLE 2
PERIMETER AIR SAMPLING RESULTS – LEAD SUMMARY TABLE
QUINCY MINING COMPANY MASON SITE

Location	Sample I.D.	Analysis	Collection Date	Date Received	Work Order Number	Results (µg/sample)	Reporting Limit (µg/sample)	Air Volume (L)	Results (mg/m ³)
Quincy Mill #1 - Downwind	QMCM-LAS-DW-101218	NIOSH 7300 (Lead)	10/12/2018	10/23/2018	18101063	ND	0.20	882.800	<0.00023
Quincy Mill #1 - Upwind	QMCM-LAS-UW-101218	NIOSH 7300 (Lead)	10/12/2018	10/23/2018	18101063	ND	0.20	838.560	<0.00024
Field Blank	QMCM-FB-101218	NIOSH 7300 (Lead)	10/12/2018	10/23/2018	18101063	ND	0.20	0.000	NA
Equipment Blank	QMCM-EB1-101218	NIOSH 7300 (Lead)	10/12/2018	10/23/2018	18101063	ND	0.20	0.000	NA
Equipment Blank	QMCM-EB2-101218	NIOSH 7300 (Lead)	10/12/2018	10/23/2018	18101063	ND	0.20	0.000	NA
Quincy Mill #1 - Downwind	QMCM-LAS-DW-101318	NIOSH 7300 (Lead)	10/13/2018	10/23/2018	18101062	ND	0.20	490.550	<0.00041
Quincy Mill #1 - Upwind	QMCM-LAS-UW-101318	NIOSH 7300 (Lead)	10/13/2018	10/23/2018	18101062	ND	0.20	489.780	<0.00041
Field Blank	QMCM-FB-101318-LEAD	NIOSH 7300 (Lead)	10/13/2018	10/23/2018	18101062	ND	0.20	0.000	NA
Quincy Mill #1 - Downwind	QMCM-LAS-DW-101518	NIOSH 7300 (Lead)	10/15/2018	10/23/2018	18101061	ND	0.20	1609.420	<0.00012
Quincy Mill #1 - Upwind	QMCM-LAS-UW-101518	NIOSH 7300 (Lead)	10/15/2018	10/23/2018	18101061	ND	0.20	1580.260	<0.00013
Field Blank	QMCM-FB-101518-LEAD	NIOSH 7300 (Lead)	10/15/2018	10/23/2018	18101061	ND	0.20	0.000	NA
Quincy Mill #1 - Downwind	QMCM-LAS-DW-101618	NIOSH 7300 (Lead)	10/16/2018	10/19/2018	1810906	ND	0.20	1754.840	<0.00011
Quincy Mill #1 - Upwind	QMCM-LAS-UW-101618	NIOSH 7300 (Lead)	10/16/2018	10/19/2018	1810906	ND	0.20	1775.870	<0.00011
Background 1	QMCM-LAS-BG1-101618	NIOSH 7300 (Lead)	10/16/2018	10/19/2018	1810906	ND	0.20	1700.240	<0.00012
Background 2	QMCM-LAS-BG2-101618	NIOSH 7300 (Lead)	10/16/2018	10/19/2018	1810906	ND	0.20	1726.090	<0.00012
Field Blank	QMCM-FB-101618	NIOSH 7300 (Lead)	10/16/2018	10/19/2018	1810906	ND	0.20	0.000	NA
Quincy Mill #1 - Downwind	QMCM-LAS-DW-101718	NIOSH 7300 (Lead)	10/17/2018	10/19/2018	1810907	ND	0.20	1257.420	<0.00016
Quincy Mill #1 - Upwind	QMCM-LAS-UW-101718	NIOSH 7300 (Lead)	10/17/2018	10/19/2018	1810907	ND	0.20	1249.960	<0.00016
Background 1	QMCM-LAS-BG1-101718	NIOSH 7300 (Lead)	10/17/2018	10/19/2018	1810907	ND	0.20	1124.230	<0.00018
Background 2	QMCM-LAS-BG2-101718	NIOSH 7300 (Lead)	10/17/2018	10/19/2018	1810907	ND	0.20	1168.910	<0.00017
Field Blank	QMCM-FB-101718	NIOSH 7300 (Lead)	10/17/2018	10/19/2018	1810907	ND	0.20	0.000	NA
Background 3	QMCM-LAS-BG3-101818	NIOSH 7300 (Lead)	10/18/2018	10/23/2018	18101064	ND	0.20	1603.290	<0.00012
Background 4	QMCM-LAS-BG4-101818	NIOSH 7300 (Lead)	10/18/2018	10/23/2018	18101064	ND	0.20	1602.010	<0.00012
Background 3	QMCM-LAS-BG3-101918	NIOSH 7300 (Lead)	10/19/2018	10/23/2018	18101064	ND	0.20	1508.830	<0.00013
Background 4	QMCM-LAS-BG4-101918	NIOSH 7300 (Lead)	10/19/2018	10/23/2018	18101064	ND	0.20	1560.930	<0.00013

Notes:

µg/sample = Micrograms per sample

mg/m³ = Milligrams per cubic meter

L=Liter

NA = Not applicable

ND = Non Detectable

NIOSH = National Institute for Occupational Safety and Health

QMCM = Quincy Mining Company Mason

Air Sampling Technician: Ashley Miller

Date Sampled: 10/12/2018 - 10/19/2018

Primary Calibration: Bios Defender 520

TABLE 3
ABANDONED CONTAINER REMOVAL SUMMARY
QUINCY MINING COMPANY MASON SITE

Container Identification	Inspection (Sample) Date	Property Identification Number	Laboratory Work Order Number	Longitude	Latitude	Description	Notes	Container Intact?	Container Empty?	Waste Characterization					Available Laboratory Analyses																
										Hazardous Waste	Non-Hazardous Waste	TSCA Waste	RCRA Empty Drum	Unknown - Requires Characterization if Not Empty	TCLP Herbicides	TCLP Pesticides	TCLP VOCs	TCLP SVOCs	TCLP Mercury	TCLP Metals	Reactive Sulfide	Reactive Cyanide	pH	Paint Filter	Flash Point	VOCs	PNAs	Mercury	Metals	PCBs	Herbicides
Abandoned Containers - Quincy Mining Company Area, West of M-26																															
QMCM-DRUM#1	4/21/2017	009-023-001-00	NA	-88.4594331700	47.1492415343	Crushed, rusted, highly weathered and damaged drum	Unknown contents near creasing, includes slag near top of drum	No	Unk					X																	
QMCM-DRUM#2	4/21/2017	009-023-001-00	NA	-88.4602280851	47.1478355976	Rusted, crushed drum carcass, no visible top or bottom	Partially buried	No	Yes				X																		
QMCM-CONTAINER#3	4/24/2017	009-023-001-00	NA	-88.4609957027	47.1466162504	Quart-sized rusted container labeled "Quality Plus" Motor Oil	Empty	Yes	Yes				X																		
QMCM-DRUM#4	4/24/2017	009-023-001-00	NA	-88.4605851406	47.1466005012	Rusted drum, top and bottom appear missing, crushed to approximately 6 inches	Appears to be filled with possibly soil, leaf debris	No	Unk					X																	
QMCM-DRUM#6	4/24/2017	009-023-001-00	NA	-88.4599987625	47.1471122719	Partially buried drum carcass	Filled with visible leaf debris, other contents not visible, missing lid	No	Unk					X																	
QMCM-DRUM#7	4/24/2017	009-023-001-00	NA	-88.4603345909	47.1464830429	Rusted and crumpled drum carcass	Observed along south edge of Stamp Mill No.1 building, partially buried	No	Yes				X																		
QMCM-DRUM#8	4/24/2017	009-023-001-00	NA	-88.4609449897	47.1463118682	Crushed drum with rusted hole	Partially buried, appears empty, contents unknown	No	Unk					X																	
CONTAINER#9	4/24/2017	009-023-001-00	NA	-88.4612696930	47.1463490633	Three 5-gallon plastic containers: two white/clear with blue tops, one full, second partially full; third white/clear with a red top, container cracked and empty.	Content unknown, appears to be a dark liquid, labels are weathered and illegible	Yes	No					X																	
QMCM-DRUM#10	4/24/2017	009-023-001-00	NA	-88.4610407332	47.1464989873	Rusted drum, bulging at both ends, container is split along one end	Content unknown	Yes	No					X																	
Abandoned Containers - Quincy Stamp Mills - Dump Area																															
QMCM-DRUM-DumpArea#1a	4/24/2017	099-023-001-00	NA	-88.4567271816	47.1484288019	5 visible drum carcasses, rusted, includes various drum pieces within the area	Partially buried within Dump Area #1	No	Yes				X																		
QMCM-DRUM-DumpArea#1b	4/24/2017	099-023-001-00	NA	-88.4567603811	47.1483250539	Drum pieces of various sizes	Partially buried within Dump Area #1	No	Yes				X																		
QMCM-DRUM-DumpArea#1c	4/24/2017	099-023-001-00	NA	-88.4567105511	47.1482473118	Drum carcass, rusted	Partially buried within Dump Area #1	No	Yes				X																		
QMCM-DRUM-DumpArea#1d	4/24/2017	099-023-001-00	NA	-88.4567185614	47.1482251958	2 drum carcasses, rusted	Partially buried within Dump Area #1	No	Yes				X																		
QMCM-DRUM-DumpArea#1e	4/24/2017	099-023-001-00	NA	-88.4568682495	47.1484478296	2 drum carcasses, rusted	Partially buried within Dump Area #1	No	Yes																						
QMCM-DRUM-DumpArea #1f	4/24/2017	099-023-001-00	NA	-88.4567457513	47.1482589034	Crushed drum	Empty, within Dump Area #1	Yes	Yes				X																		
QMCM-DRUM-DumpArea#1g	4/24/2017	099-023-001-00	NA	-88.4568617004	47.1482216302	5-gallon empty can	Within Dump Area #1	Yes	Yes				X																		
QMCM-DRUM-DumpArea#2	4/24/2017	099-023-001-00	NA	-88.4564673273	47.1482841810	Drum carcass, rusted	Within Dump Area #2	No	Unk					X																	
QMCM-DRUM#11	4/24/2017	099-023-001-00	NA	-88.4575990582	47.1479436512	Crushed, rusted drum, partially flattened	Appears empty, unknown if contents are present	No	Unk					X																	
QMCM-DRUM#12	4/24/2017	099-023-001-00	NA	-88.4576601711	47.1480427452	Crushed, rusted drum, flattened	Appears empty, unknown if contents are present, located on top of overgrown debris pile	No	Unk					X																	
QMCM-DRUM#13	4/24/2017	099-023-001-00	NA	-88.4577095222	47.1480390992	Crushed, rusted drum carcass	Located on top of overgrown debris pile	No	Unk					X																	
QMCM-DRUM#14	4/24/2017	099-023-001-00	NA	-88.4575898377	47.1471040953	Crushed drum	Partially buried, located on west side of Quincy Creek Bank	Yes	Unk					X																	
QMCM-DRUM#15	4/24/2017	099-023-001-00	NA	-88.4572678663	47.1470208203	Rusted, crushed, drum carcass	Partially buried	No	Yes				X																		
QMCM-DRUM#16	4/24/2017	099-023-001-00	NA	-88.4582588289	47.1465334899	Buried rusted, drum, unknown if visible piece is carcass or complete drum	Appears empty, unknown if contents are present	Unk	Unk					X																	
QMCM-DM02-0"-6"	4/24/2017 (5/17/2017)	099-023-001-00	17051193	-88.4582677269	47.1463522030	Flattened drum carcass, rusted, surrounded by granular tan colored substance	Sampled as QMCM-DM02-0"-6" on 05/17/2017, initially observed as DRUM17 on 4/24/2017, estimated 0.5 tons of material assuming full 55 gallon drum	No	No		X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Abandoned Containers - Quincy Mining Company Area, East of M-26																															
QMCM-DRUM#30	5/4/2017	099-023-001-00	NA	-88.4634906777	47.1419134436	Rusted drum, partially crushed and buried	Appears empty, unknown if contents are present	No	Unk					X																	
QMCM-DRUM#31	5/4/2017	099-023-001-00	NA	-88.4634697012	47.1418070628	Rusted, partially sunk drum with stick-up (petcock) bung, top and bottom intact	No oil sheen in water surrounding it	No	Yes				X																		
QMCM-DRUM#32	5/4/2017	099-023-001-00	NA	-88.4635273252	47.1419761299	Approximately 24 rusted drum top and bottoms, some folded/crushed	Partially buried in railroad grade, at least one contains a label that reads: Dow Chemical Company	No	Yes				X																		
QMCM-DRUM#33	5/4/2017	099-023-001-00	NA	-88.4632764262	47.1419956226	Rusted drum, both ends intact, with bullet hole at one end	Strong petroleum-like odor when near	Yes	Unk					X																	
QMCM-DRUM#34	5/4/2017	099-023-001-00	NA	-88.4632146944	47.1420725469	Rusted black painted drum, appears to have a lid inside	Partially buried, unknown if contents are present	No	Unk					X																	
QMCM-DRUM#35	5/4/2017	099-023-001-00	NA	-88.4629063852	47.1422412683	Black, rusted drum, no visible top, approximately 10 inches of the drum is visible	Partially buried, contents unknown with only visible leaf litter	No	Unk					X																	
QMCM-DRUM#36	5/4/2017	099-023-001-00	NA	-88.4627442044	47.1424147012	Flattened drum carcass	Partially buried, unknown if contents are present	No	Unk					X																	
QMCM-DRUM#42	5/4/2017	009-026-003-00	NA	-88.4666645296	47.1387262981	Crushed, empty drum		No	Yes				X																		
CONTAINER#43	5/4/2017	009-026-003-00	NA	-88.4668413584	47.1384866208	Automobile fuel tank, rusted	Partially buried	Yes	Unk					X																	
QMCM-DRUM#44	5/4/2017	009-026-003-00	NA	-88.4669753296	47.1385380034	Crushed drum	Unknown if contents are present	No	Unk					X																	
QMCM-DRUM#45	5/4/2017	009-026-003-00	NA	-88.4672200085	47.1382262668	Crushed, empty drum, flattened		No	Yes				X																		
Abandoned Containers - Quincy Reclamation Plant Area																															
QMCM-DRUM#18	4/24/2017	009-023-001-70	NA	-88.4585493132	47.1463169691	Drum buried with only top portion of rim visible	Buried near SE side of coal bin, contents unknown, but contains visible leaf litter	No	Unk					X																	
QMCM-DM03-0"-6"	4/24/2017 (5/17/2017)	009-023-001-70	17051193	-88.4587615772	47.1463336414	Drum carcass without top or bottom, rusted, partially flattened	Crystallized material spilling out, contents unknown, appears to be white and solid; sampled as QMCM-DM03-0"-6" on 5/17/2017, initially observed as DRUM19 on 4/24/2017, estimated 0.5 tons of material assuming full 55 gallon drum	No	No		X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
QMCM-DRUM#20	5/3/2017	009-026-003-00	NA	-88.4641026234	47.1404060552	Buried crushed drum, appears to have rolled top and is hollow underneath	Potential carcass	No	Unk					X																	
QMCM-DRUM#22	5/3/2017	009-026-003-00	NA	-88.4647149651	47.1398770331	Rusted drum, buried in hillside, unknown if contents are present		No	Unk					X																	
CONTAINER#23	5/3/2017	009-026-003-00	NA	-88.4643529238	47.1397842994	Rusted container approximately 10 inches in height, contains a valve on top, approximately 3L	Potentially pressurized	Yes	Unk					X																	
QMCM-DRUM#24	5/3/2017	009-026-003-00	NA	-88.4642938806	47.1397794392	Rusted drum, has black tar mastic on sides	Appears to be empty	Yes	Yes				X																		
QMCM-DRUM#25	5/3/2017	009-026-003-00	NA	-88.4643460426	47.1397068601	Rusted Drum, circular hole on one end, intact bottom	Unknown if contents are present	Yes	Unk				</																		

APPENDIX C
WASTE METRICS

**WASTE METRICS
QUINCY MINING COMPANY MASON SITE
MASON, HOUGHTON COUNTY, MICHIGAN
10/09/19 - 6/25/19**

Waste Stream	Medium	Quantity	Manifest #	Treatment	Disposal
Friable Asbestos	Solid	415 Cubic Yards	N/A	None	K&W Landfill Ontonagon, MI
Non-Hazardous Lead Contaminated Soil with Non-Friable Asbestos	Solid	154 Cubic Yards (158.01 Tons)	#001 - #005	Free Flow Stabilizer	K&W Landfill Ontonagon, MI
Non-Hazardous Lead Contaminated Soil	Solid	220 Cubic Yards	#001 - #011	None	K&W Landfill Ontonagon, MI
Wood and Misc. Debris	Solid	60 Cubic Yards	N/A	None	K&W Landfill Ontonagon, MI

WASTE SHIPMENT RECORD/ASBESTOS MANIFEST

(See Reverse for Instructions)

For Disposal Site Use Only

Elevation _____

North _____ East _____

1-A. Special Waste Profile Number 123142MI		NESHAP Notified YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>		WSR Number	
1-B. Generator Name, Contact Name, and Complete Mailing Address (including Zip Code) USEPA 9311 Greenfield Rd Greenfield MI 48138					1-C. Generator's Phone Number 734-740-9019
1-D. Work Site Address Intersection Foreman Road and M-26 Mason, MI					1-E. 24 Hour Emergency Response Telephone Number 513-265-8875
2. Operator's Name and Complete Mailing Address					Operator's Phone Number
3. Waste Disposal Site (WDS) Name and Complete Mailing Address K&W Landfill 11877 State Highway M38, Ontonagon, MI 49953					WDS Phone Number 906-883-3504
4. Name and Address of Responsible Agency Michigan Dept. of Environmental Quality PO Box 30260, Lansing, MI 48909-7760					
5. Description of Materials Friable Asbestos				6. Containers No. Type	7. Total Quantity yds
friable asbestos				RO, NA2212, Asbestos, 9, PGIII	1 amp 30YRD
non-friable asbestos				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 Brian Kelly EPA OSC			Signature Brian Kelly		Date 10-15-18
Transporter	10. Transporter 1 Company Name WM Houghton			Driver Signature Jim Papponey	
	Complete Mailing Address 1108 ENTERPRIZE DR Houghton MI 49931			Printed Name and Title Jim PAPPONEY DRIVER	
	Telephone Number (including area code) 906-488-4575			Date 10/15/18	
	11. Transporter 2 Company Name			Driver Signature	
Disposal Site	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			Signature		Date

WHITE - Disposal Site

CANARY - Generator
(To be mailed by Disposal Site)

PINK - Transporter

GOLD - Generator
(To be taken prior to disposal)

WASTE SHIPMENT RECORD/ASBESTOS MANIFEST

(See Reverse for Instructions)

For Disposal Site Use Only

Generator	1-A Special Waste Profile Number 123142MI		NESHAP Notified YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>		WSR Number <div></div>		Elevation North _____ East _____	
	1-B Generator Name, Contact Name, and Complete Mailing Address (including Zip Code) USEPA 9311 Groh Road Grosse Ile MI 48138						1-C Generator's Phone Number 734-692-7684	
	1-D Work Site Address Forsman Road & M-26 Mason MI 49330						1-E 24 Hour Emergency Response Telephone Number 513-265-8875	
	2 Operator's Name and Complete Mailing Address US EPA 9311 Groh Road Grosse Ile, MI 48138						Operator's Phone Number 734-692-7684	
	3 Waste Disposal Site (WDS) Name and Complete Mailing Address K&W Landfill 11877 State Highway M38, Ontonagon, MI 49953						WDS Phone Number 906-883-3504	
	4 Name and Address of Responsible Agency Michigan Dept. of Environmental Quality PO Box 30260, Lansing, MI 489090-7760							
	5 Description of Materials Friable Asbestos						6 Containers No. Type	
	Inable asbestos				RQ, NA2212, Asbestos, 9, PGIII		7. Total Quantity yd3	
	non-inable asbestos				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 Brian Kelly OSC				Signature [Signature]		Date 10-16-18		
Transporter	10. Transporter 1 Company Name WM				Driver Signature [Signature]			
	Complete Mailing Address 1108 ENTERPRISE RD HOUGHTON, MI 49931				Printed Name and Title JASON HEREFORD			
	Telephone Number (including area code) 906 482-4620				Date 10-16-18			
	11. Transporter 2 Company Name				Driver Signature			
Disposal Site	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				Signature		Date		

WHITE - Disposal Site

CANARY - Generator
(To be mailed by Disposal Site)

PINK - Transporter

GOLD - Generator
(To be taken prior to disposal)

Shipment 04

WASTE SHIPMENT RECORD/ASBESTOS MANIFEST

(See Reverse for Instructions)

For Disposal Site Use Only

1-A. Special Waste Profile Number 123142MI		NESHAP Notified <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		WSR Number		Elevation North _____ East _____			
1-B. Generator Name, Contact Name, and Complete Mailing Address (including Zip Code) USEPA 9311 Groh Road Gross Ile MI 48138					1-C. Generator's Phone Number 734-692-7684				
1-D. Work Site Address Forman Road & M-26 Mason, MI 49330					1-E. 24 Hour Emergency Response Telephone Number 513-265-8875				
2. Operator's Name and Complete Mailing Address USEPA 9311 Groh Road Gross Ile, MI 48138					Operator's Phone Number 734-692-7684				
3. Waste Disposal Site (WDS) Name and Complete Mailing Address K&W Landfill 11877 State Highway M38, Ontonagon, MI 49953					WDS Phone Number 906-883-3504				
4. Name and Address of Responsible Agency Michigan Dept. of Environmental Quality PO Box 30260, Lansing, MI 489090-7760									
5. Description of Materials Friable Asbestos						6. Containers		7. Total Quantity	
						No. Type		yds	
friable asbestos						1		30 YRS	
non-friable asbestos						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 Brian Kelly, OSC				Signature Brian Kelly		Date 10-18-18			
10. Transporter 1 Company Name Wm Houghton Complete Mailing Address 1108 ENTERPRISE DR. HOUGHTON MI 49931 Telephone Number (including area code) 906-482-4575					Driver Signature Jim Piampney				
					Printed Name and Title Jim Piampney Date 10/18/18				
11. Transporter 2 Company Name Complete Mailing Address Telephone Number (including area code)					Driver Signature				
					Printed Name and Title 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				Signature		Date			

WHITE - Disposal Site

CANARY - Generator
(To be mailed by Disposal Site)

PINK - Transporter

GOLD - Generator
(To be taken prior to disposal)

DCE-230-87

Shipment 5

WASTE SHIPMENT RECORD/ASBESTOS MANIFEST

(See Reverse for Instructions)

For Disposal Site Use Only

1-A. Special Waste Profile Number 123142ME		NESHAP Notified YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>		WSR Number		Elevation North _____ East _____	
1-B. Generator Name, Contact Name, and Complete Mailing Address (including Zip Code) USEPA 9311 Groh Road Grosse Ile MI 48138						1-C. Generator's Phone Number 734-692-7684	
1-D. Work Site Address Forsman Road & M-26 Mason, MI 49130						1-E. 24 Hour Emergency Response Telephone Number 513-265-8875	
2. Operator's Name and Complete Mailing Address USEPA 9311 Groh Road Grosse Ile, MI 48138						Operator's Phone Number 734-692-7684	
3. Waste Disposal Site (WDS) Name and Complete Mailing Address K&W Landfill 11877 State Highway M38, Ontonagon, MI 49953						WDS Phone Number 906-883-3504	
4. Name and Address of Responsible Agency Michigan Dept. of Environmental Quality PO Box 30260, Lansing, MI 48909-7760							
5. Description of Materials Friable Asbestos							
friable asbestos				HQ, NA2212, Asbestos, 9, PGIII		6. Containers No. 1 Type <i>dump</i>	
non-friable asbestos				Cell I _____ Cell II _____		7. Total Quantity yd3 30 cy	
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 Brian Kelly, OSC				Signature <i>Brian Kelly</i>		Date 10-19-18	
10. Transporter 1 Company Name LWM Houghton				Driver Signature <i>Jim Houghton</i>			
Complete Mailing Address 1108 ENTERPRISE DR, HOUGHTON MI 49931				Printed Name and Title JIM HOUGHTON RO DRIVER			
Telephone Number (including area code) 906-480-4525				Date 10/19/18			
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 signatory 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				Signature		Date	

DCS-23047

WHITE - Disposal Site

CANARY - Generator
(To be mailed by Disposal Site)

PINK - Transporter

GOLD - Generator
(To be kept prior to disposal)

Load 006

WASTE SHIPMENT RECORD/ASBESTOS MANIFEST

(See Reverse for Instructions)

For Disposal Site Use Only

Elevation _____

North _____ East _____

1-A. Special Waste Profile Number
123142MT

NEP-AP Notified

YES ☒ NO ☐

WSEL Number _____

1-B. Generator Name, Contact Name, and Complete Mailing Address (including Zip Code)

USEPA

9311 Groh Road

Grosse Ile MI 48138

1-C. Generator's Phone Number

734-692-7684

1-D. Work Site Address

Forsman Road & M-26

Mason, MI 49330

1-E. 24 Hour Emergency Response

Telephone Number

513-265-8875

2. Operator's Name and Complete Mailing Address

USEPA

9311 Groh Road

Grosse Ile, MI 48138

Operator's Phone Number

734-692-7684

3. Waste Disposal Site (WDS) Name and Complete Mailing Address

K&W Landfill

11877 State Highway M38, Ontonagon, MI 49953

WDS Phone Number

906-883-3504

4. Name and Address of Responsible Agency

Michigan Dept. of Environmental Quality

PO Box 30260, Lansing, MI 48909-7760

5. Description of Materials

Friable Asbestos

6. Containers

No.

Type

7. Total Quantity

yds

friable asbestos

RO, NA2212, Asbestos, 9, PGII

1

asbestos

30 yd

non-friable asbestos

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

Brian Kelly, OSC

Signature

Brian Kelly

Date

10-19-18

10. Transporter 1 Company Name

WM Houghton

Complete Mailing Address

1108 ENTERPRISE DR.

Houghton MI 49931

Telephone Number (including area code)

906 980-4575

Driver Signature

Jim Pipponey

Printed Name and Title

JIM PIPPONEY DRIVER

Date

10/19/18

11. Transporter 2 Company Name

Complete Mailing Address

Telephone Number (including area code)

Driver Signature

Printed Name and Title

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

Signature

Date

DCS-330-87

WHITE - Disposal Site

GRAY - Generator
(To be noted by Disposal Site)

PINK - Transporter

GOLD - Generator
(To be taken prior to disposal)

Load 7 102218

WASTE SHIPMENT RECORD/ASBESTOS MANIFEST

(See Reverse for Instructions)

For Disposal Site Use Only

1-A. Special Waste Profile Number 123143MI		MSRIAP Notified <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		WSR Number		Elevation North East	
1-B. Generator Name, Contact Name, and Complete Mailing Address (including Zip Code) USEPA 9311 Groh Road Grosse Ile MI 48139				1-C. Generator's Phone Number 734-692-7684			
1-D. Work Site Address Forsythe Road & M-26 Marion, MI 49130				1-E. 24 Hour Emergency Response Telephone Number 513-265-8825			
2. Operator's Name and Complete Mailing Address USEPA 9311 Groh Road Grosse Ile, MI 48139				Operator's Phone Number 734-692-7684			
3. Waste Disposal Site (WDS) Name and Complete Mailing Address K&W Landfill 11877 State Highway M38, Ontonagon, MI 49953				WDS Phone Number 906-883-3504			
4. Name and Address of Responsible Agency Michigan Dept. of Environmental Quality PO Box 30260, Lansing, MI 48909-7760							
5. Description of Materials Friable Asbestos						6. Containers No. Type	
7. Total Quantity yds							
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 Brian Kelly, OSC				Signature B. Kelly		Date 10/22/18	
10. Transporter 1 Company Name Wm Houghton				Driver Signature Jim P. Poney			
Complete Mailing Address 1108 ENTERPRISE DR HOUGHTON MI 49931				Printed Name and Title JIM P. PONEY RD DRIVER			
Telephone Number (including area code) 906 482-4525				Date 10/22/18			
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				Signature		Date	

DCE-630-97

WHITE - Disposal Site

CANARY - Generator
(To be mailed by Disposal Site)

PINK - Transporter

GOLD - Generator
(To be taken prior to disposal)

Load 8

(See Reverse for Instructions)

100

Generator

TransportDisposal Site

DCE-200-97

WHITE - Depoent Str

CANARY - Generator
(To be mailed by Disposal Site)

PKC-Transporter

GOLD - Generator
(To be taken prior to disposal)

WASTE SHIPMENT RECORD/ASBESTOS MANIFEST				For Disposal Site Use Only	
(See Reverse for Instructions)				Elevation _____	
1-A. Special Waste Profile Number 123142M1		NEB-WP-Notified YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>		WSFI Number _____	
1-B. Generator Name, Contact Name, and Complete Mailing Address (including Zip Code) USEPA 9311 Groh Road Grosse Ile MI 48138				1-C. Generator's Phone Number 734-692-7684	
1-D. Work Site Address Forsman Road & M-26 Marion, MI 49330				1-E. 24 Hour Emergency Response Telephone Number 513-265-8875	
2. Operator's Name and Complete Mailing Address USEPA 9311 Groh Road Grosse Ile MI 48138				Operator's Phone Number 734-692-7684	
3. Waste Disposal Site (WDS) Name and Complete Mailing Address K&W Landfill 11877 State Highway M38, Ontonagon, MI 49953				WDS Phone Number 906-883-3504	
4. Name and Address of Responsible Agency Michigan Dept. of Environmental Quality PO Box 30260, Lansing, MI 48906D-7760					
5. Description of Material					
Friable Asbestos		6. Containers No. Type		7. Total Quantity yds	
friable asbestos		RQ, NA2212, Asbestos, B, PGM		1 RO Drum 30 yd ³	
non-friable asbestos		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 shipper 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 Brian Kelly OSC		Signature <i>Brian Kelly</i>		Date 10-23-18	
10. Transporter 1 Company Name W M Houghton		Driver Signature <i>Jason Hereford</i>			
Complete Mailing Address 1108 ENTERPRISE DR. Houghton MI 49931		Printed Name and Title JASON HEREFORD / DRIVER			
Telephone Number (including area code) 906 482-4575		Date 10-23-18			
11. Transporter 2 Company Name		Driver Signature			
Complete Mailing Address		Printed Name and Title			
Telephone Number (including area code)		Date			
12. Emergency Incident Space					
13. Waste Disposal Site Director or Operator Special Waste Approval is issued by signature in the case of a Genotoxic Asbestos Approval. Certification of receipt of asbestos materials covered by this manifest must be noted in Item 12.					
Printed/Typed Name and Title		Signature		Date	
<div style="display: flex; justify-content: space-between;"> WASTE - Disposal Site Generator - Generator (To be signed by Generator Site) Print - Transporter Disposal - Disposal (To be signed prior to disposal) </div>					

Load 10

WASTE SHIPMENT RECORD/ASBESTOS MANIFEST

(See Reverse for Instructions)

For Disposal Site Use Only

1-A. Special Waste Profile Number 123142MI		NEBRAP Notified YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>		YSER Number		Elevation North _____ East _____	
1-B. Generator Name, Contact Name, and Complete Mailing Address (including Zip Code) USEPA 9311 Groh Road Gross Ile MI 48138						1-C. Generator's Phone Number 734-692-7684	
1-D. Work Site Address Forrest Road & M-26 Mason, MI 49330						1-E. 24 Hour Emergency Response Telephone Number 513-265-8875	
2. Operator's Name and Complete Mailing Address USEPA 9311 Groh Road Gross Ile MI 48138						Operator's Phone Number 734-692-7684	
3. Waste Disposal Site (WDS) Name and Complete Mailing Address K&W Landfill 11877 State Highway M38, Ontonagon, MI 49953						WDS Phone Number 906-883-3504	
4. Name and Address of Responsible Agency Michigan Dept. of Environmental Quality PO Box 30260, Lansing, MI 48909-7760							
5. Description of Materials Friable Asbestos							
friable asbestos				RQ, NA2212, Asbestos, 9, PGIH		6. Containers No. 1 Type TCO Dump	
non-friable asbestos				Cell 1 _____ Cell 2 _____		7. Total Quantity yds 30 yd ³	
8. Special Handling Instructions and Additional Information 24 HOUR NOTICE GIVEN PRIOR TO DISPOSAL, MUST BE BURIED							
9. GENERATOR/OPERATOR 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 Brian Kelly, OSC				Signature Brian Kelly		Date 10-24-18	
10. Transporter 1 Company Name WM Houghton				Driver Signature Jim Ruppberg			
Complete Mailing Address 1108 ENTERPRISE DR Houghton MI 49931				Printed Name and Title Jim Ruppberg, R/O DRIVER			
Telephone Number (including area code) 806-488-4575				Date 10/24/18			
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				Signature		Date	


DCE-200-87

WHITE - Disposal Site

CANARY - Generator
(To be mailed by Disposal Site)

PINK - Transporter

GOLD - Generator
(To be taken prior to disposal)

Load  (ACM/SACM Material)

WASTE SHIPMENT RECORD/ASBESTOS MANIFEST

(See Reverse for Instructions)

For Disposal Site Use Only

1-A. Special Waste Profile Number 123142MI		NEBAP Notified <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		WSR Number <div></div>		Elevation North _____ East _____	
1-B. Generator Name, Contact Name, and Complete Mailing Address (including Zip Code) USEPA 9311 Groh Road Gross Ile MI 48138						1-C. Generator's Phone Number 734-692-7684	
1-D. Work Site Address Forsman Road & M-26 Mason, MI 49330						1-E. 24 Hour Emergency Response Telephone Number 513-265-8875	
2. Operator's Name and Complete Mailing Address USEPA 9311 Groh Road Gross Ile MI 48138						Operator's Phone Number 734-692-7684	
3. Waste Disposal Site (WDS) Name and Complete Mailing Address K&W Landfill 11877 State Highway M38, Ontonagon, MI 49953						WDS Phone Number 906-883-3504	
4. Name and Address of Responsible Agency Michigan Dept. of Environmental Quality PO Box 30260, Lansing, MI 48909-7760							
5. Description of Materials							
friable asbestos				FQ, NA2212, Asbestos, 9, PQIII		8. Containers No. Type	
non-friable asbestos				Cell I _____ Cell II _____		7. Total Quantity yds 30 yd	
6. 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 Brian Kelly, OSC				Signature Brian Kelly		Date 11-05-18	
10. Transporter 1 Company Name WMI				Driver Signature Jeff Baker			
Complete Mailing Address 1118 Enterprise Drive Troy MI 48068				Printed Name and Title Jeff Baker Driver			
Telephone Number (including area code) 482-4575				Date 11-5-18			
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 disposal of asbestos materials covered by this manifest except as noted in Item 12.							
Printed/Typed Name and Title				Signature		Date	

DOT-229-01

WRI-ITC Disposal Site

CAUTION - Generator
(To be filled by Disposal Site)

PAK - Transporter

GOOD - Generator
(To be taken to Disposal)

Load 12

WASTE SHIPMENT RECORD/ASBESTOS MANIFEST

(See Reverse for Instructions)

For Disposal Site Use Only

1-A. Special Waste Profile Number 123142MI		NESHAP Notified <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		WSR Number		Elevation North _____ East _____	
1-B. Generator Name, Contact Name, and Complete Mailing Address (including Zip Code) USEPA 9311 Groh Road Gross Ile MI 48138				1-C. Generator's Phone Number 734-692-7684			
1-D. Work Site Address Fortman Road & M-26 Mason, MI 49330				1-E. 24 Hour Emergency Response Telephone Number 513-265-8875			
2. Operator's Name and Complete Mailing Address USEPA 9311 Groh Road Gross Ile MI 48138				Operator's Phone Number 734-692-7684			
3. Waste Disposal Site (WDS) Name and Complete Mailing Address K&W Landfill 11877 State Highway M38, Ontonagon, MI 49953				WDS Phone Number 906-883-3504			
4. Name and Address of Responsible Agency Michigan Dept. of Environmental Quality PO Box 30260, Lansing, MI 48909-7760							
5. Description of Materials							
Friable Asbestos				6. Containers		7. Total Quantity	
friable asbestos				No. Type		yds	
non-friable asbestos				Cell I _____ Cell II _____		30 CY	
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 Brian Kelly, OSC				Signature Brian Kelly		Date 11-08-18	
10. Transporter 1 Company Name WM				Driver Signature Jeff Baker			
Complete Mailing Address 1106 Enterprise Dr. Houghton, MI				Printed Name and Title Jeff Baker Driver			
Telephone Number (including area code) 906 482 4575				Date 11-8-18			
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				Signature		Date	

WHITE - Disposal Site

CANARY - Generator
(To be mailed by Disposal Site)

PINK - Transporter

GOLD - Generator
(To be taken prior to disposal)

DCE-230-97

WASTE SHIPMENT RECORD/ASBESTOS MANIFEST

(See Reverse for Instructions)

For Disposal Site Use Only

1-A. Special Waste Profile Number 123142MI		NEHAP Notified <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		WSR Number		Elevation _____ North _____ East _____	
1-B. Generator Name, Contact Name, and Complete Mailing Address (including Zip Code) USEPA 9311 Groh Road Gross Ile MI 48138						1-C. Generator's Phone Number 734-692-7684	
1-D. Work Site Address Forsman Road & M-26 Mason, MI 49330						1-E. 24 Hour Emergency Response Telephone Number 513-265-8875	
2. Operator's Name and Complete Mailing Address USEPA 9311 Groh Road Gross Ile MI 48138						Operator's Phone Number 734-692-7684	
3. Waste Disposal Site (WDS) Name and Complete Mailing Address K&W Landfill 11877 State Highway M38, Ontonagon, MI 49953						WDS Phone Number 906-883-3504	
4. Name and Address of Responsible Agency Michigan Dept. of Environmental Quality PO Box 30260, Lansing, MI 48909-7760							
5. Description of Materials Friable Asbestos				6. Containers No. Type		7. Total Quantity yd3	
friable asbestos				RQ, NA2212, Asbestos, 9, PGIII		1 AC DUMP 30 CY	
non-friable asbestos				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 Brian Kelly, OSC				Signature Brian Kelly		Date 11-12-18	
10. Transporter 1 Company Name Wm Houghton Complete Mailing Address 1108 ENTERPRISE DR. Houghton MI 49931 Telephone Number (including area code) 906-482-4575				Driver Signature Jim Pippenger Printed Name and Title JIM PIPPENGER RO-DRIVER Date 11/12/18			
11. Transporter 2 Company Name Complete Mailing Address Telephone Number (including area code)				Driver Signature Printed Name and Title 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				Signature		Date	

DCE-230-97

WHITE - Disposal Site

CANARY - Generator
(To be mailed by Disposal Site)

PINK - Transporter

GOLD - Generator
(To be taken prior to disposal)

#17

WASTE SHIPMENT RECORD/ASBESTOS MANIFEST

(See Reverse for Instructions)

For Disposal Site Use Only

Generator _____

North _____ East _____

Generator	1-A Special Waste Profile Number E-14281		NESMA Notified YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>		WSE Number [Blank]		Generator's Phone Number [Blank]	
	1-B Generator Name, Contact Name, and Complete Mailing Address (including Zip Code) [Blank]						1-C Generator's Phone Number [Blank]	
	1-D Work Site Address Bulldozing Road & M... Muskegon, MI 49441						1-E 24 Hour Emergency Response Telephone Number [Blank]	
	2 Operator's Name and Complete Mailing Address [Blank]						Operator's Phone Number [Blank]	
	3 Waste Disposal Site (WDS) Name and Complete Mailing Address K&W Landfill 11877 State Highway 338, Onondagon, MI 49953						WDS Phone Number 575-882-3504	
	4 Name and Address of Responsible Agency Michigan Dept. of Environmental Quality PO Box 30280 Lansing MI 48909-0280							
	5 Description of Materials friable asbestos non-friable asbestos				6 Containers No. Type 20 9		7 Total Quantity yds 30.4	
	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 Brown Kelly, CEO				Signature [Signature]		Date 11-12-18	
Transporter	10. Transporter 1 Company Name WCS Enterprises DR Houghton				Driver Signature [Signature]			
	Complete Mailing Address [Blank]				Printed Name and Title Jim P... R/O DRIVER			
	Telephone Number (including area code) 906-482-4575				Date 11/12/18			
	11. Transporter 2 Company Name [Blank]				Driver Signature [Blank]			
Disposal Site	Complete Mailing Address [Blank]				Printed Name and Title [Blank]			
	Telephone Number (including area code) [Blank]				Date [Blank]			
	12. Discrepancy Indication Space [Blank]							
	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 [Blank]				Signature [Blank]		Date [Blank]		

WHITE - Disposal Site

CANARY - Generator
(To be mailed by Disposal Site)

PINK - Transporter

GOULD - Generator
(To be taken prior to disposal)

Wood Debris Load 1

Generator: USEPA
9311 Groh Road
Grosse Ile Michigan 48138

Phone: 313-882-7684

Shipping Address: Forsman Road & M-26, Mason Michigan

Phone: 513-265-8875

Operator: USEPA
9311 Groh Road
Grosse Ile Michigan 48138

Name of Responsible Party:

USEPA
9311 Groh Road
Grosse Ile Michigan 48138

Waste Disposal Site

K&W Landfill
11877 State Highway M-38, Oronagon MI 49953

Phone

906-883-3504

Description Of Materials:

Wood and Misc. Debris

Container

Dump

Total Quantity in CY

30

Transporter
Company

Wm Houghton

Driver Signature:

Jim P. Pouch

Mailing Address:

1106 ENTERPRISE DR Houghton

Print Name

Jim P. Pouch

Phone Number:

906-482-4575

Date:

11/2/18

Await at \$63/ton disposal, Box Delivery at \$150, Haul at \$395, Tax \$0.36/ton and 16% Environmental fee

Wood Debris Box No. 2

(See notes on Box 1)

Bill of Lading

Generator: USEPA
9311 Groh Road
Grosse Ile Michigan 48138
Phone 313-692-7684

Shipping Address: Forsman Road & M-26, Mason Michigan
Phone 513-265-8875

Operator: USEPA
9311 Groh Road
Grosse Ile Michigan 48138

Name of Responsible Party:

USEPA
9311 Groh Road
Grosse Ile Michigan 48138

Waste Disposal Site
K&W Landfill
118777 State Highway M-38, Otonagan MI 49953
Phone 906-883-3504

Description Of Materials:	Container	Total Quantity In CY
Wood and Misc. Debris	Dump	30

Transporter
Company W.M. Houghton

Driver Signature:

Mailing Address: 1108 ENTERPRISE DR Houghton 49931

Print Name

Phone Number:

906-482-4575

Date:

11/2/18



NON-HAZARDOUS MANIFEST

NON-HAZARDOUS MANIFEST

1. Generator's US EPA ID No.

Manifest Doc No.

2. Page 1 of

001

3. Generator's Mailing Address:

USEPA/QUINCY MINING SITE
INTERSECTION FORSMAN AND M26
HANCOCK, MI 49930Generator's Site Address (if different than mailing):
USEPA/QUINCY MINING SITE
INTERSECTION FORSMAN AND M26
HANCOCK, MI 49930

A. Manifest Number

WMNA

B. State Generator's ID

4. Generator's Phone

734-692-7684

5. Transporter 1 Company Name

B+B Contracting Calumet MI
55670 M26
44943

6. US EPA ID Number

C. State Transporter's ID

D. Transporter's Phone

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

10. US EPA ID Number

G. State Facility ID

H. State Facility Phone

9. Designated Facility Name and Site Address
K&W Landfill
11877 State Highway M38
Ontonagon, MI 49953

11. Description of Waste Materials

a. Non Haz Lead Contaminated Soil

WM Profile # 124101MI

b.

WM Profile #

c.

WM Profile #

d.

WM Profile #

J. Additional Descriptions for Materials Listed Above

K. Disposal Location

BILL TO:

Cell

Level

Grid

15. Special Handling Instructions and Additional Information
This applies to Non-Hazardous Materials Only

Purchase Order #

EMERGENCY CONTACT / PHONE NO.:

Brian Kelly 734-692-7684

16. GENERATOR'S CERTIFICATE:

I hereby certify that the above-described materials are not hazardous wastes as defined by CFR Part 261 or any applicable state law, have been fully and accurately described, classified and packaged and are in proper condition for transportation according to applicable regulations.

Printed Name

Terry Stilman

Signature "On behalf of"

for USEPA

Month

Day

Year

05

15

19

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed Name

Greg Tchirka

Signature

Greg Tchirka

Month

Day

Year

5

15

19

Transporter 2 Acknowledgement of Receipt of Materials

Printed Name

Signature

Month

Day

Certificate of Final Treatment/Disposal

I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste was managed in compliance with all applicable laws, regulations, permits and licenses on the dates listed above.

Facility Owner or Operator: Certification of receipt of non-hazardous materials covered by this manifest.

Printed Name

Signature

Month

Day



NON-HAZARDOUS MANIFEST

NON-HAZARDOUS MANIFEST

1. Generator's US EPA ID No.

Manifest Doc No.

2. Page 1 of

002

3. Generator's Mailing Address:

USEPA/QUINCY MINING SITE
INTERSECTION FORSMAN AND M26
HANCOCK, MI 49930

Generator's Site Address (if different than mailing):

USEPA/QUINCY MINING SITE
INTERSECTION FORSMAN AND M26
HANCOCK, MI 49930

A. Manifest Number

WMNA

B. State Generator's ID

4. Generator's Phone

734-692-7684

5. Transporter 1 Company Name

Superior Sand & Gravel 49930
1028 Ethel Ave Hancock MI

6. US EPA ID Number

C. State Transporter's ID

D. Transporter's Phone

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address

K&W Landfill
11877 State Highway M38
Ontonagon, MI 49953

10. US EPA ID Number

G. State Facility ID

H. State Facility Phone

11. Description of Waste Materials

12. Containers

No.

Type

13. Total

Quantity

14. Unit

Wt./Vol.

I. Misc. Comments

a. Non Haz Lead Contaminated Soil

20 CYD³ 20 CYD³

WM Profile # 124101MI

b.

WM Profile #

c.

WM Profile #

d.

WM Profile #

J. Additional Descriptions for Materials Listed Above

K. Disposal Location

BILL TO:

Cell

Level

Grid

15. Special Handling Instructions and Additional Information

This applies to Non-Hazardous Materials Only

Purchase Order #

EMERGENCY CONTACT / PHONE NO.:

Brian Kelly 734-692-7684

16. GENERATOR'S CERTIFICATE:

I hereby certify that the above-described materials are not hazardous wastes as defined by CFR Part 261 or any applicable state law, have been fully and accurately described, classified and packaged and are in proper condition for transportation according to applicable regulations.

Printed Name

Terry Stilman

Signature "On behalf of"

for USEPA

Month

Day

Year

05

15

19

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed Name

MARK WAISANEN

Signature

Mark Waisanen

Month

Day

Year

05

15

19

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed Name

Signature

Month

Day

Year

19. Certificate of Final Treatment/Disposal

I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste was managed in compliance with all applicable laws, regulations, permits and licenses on the dates listed above.

20. Facility Owner or Operator: Certification of receipt of non-hazardous materials covered by this manifest.

Printed Name

Signature

Month

Day

Year



NON-HAZARDOUS MANIFEST

NON-HAZARDOUS MANIFEST		1. Generator's US EPA ID No.		Manifest Doc No.		2. Page 1 of 003		
3. Generator's Mailing Address: USEPA/QUINCY MINING SITE INTERSECTION FORSMAN AND M26 HANCOCK, MI 49930				Generator's Site Address (if different than mailing): USEPA/QUINCY MINING SITE INTERSECTION FORSMAN AND M26 HANCOCK, MI 49930				
4. Generator's Phone 734-692-7684				A. Manifest Number WMNA				
5. Transporter 1 Company Name Portage Lake Construction Chassell, MI				B. State Generator's ID				
6. US EPA ID Number				C. State Transporter's ID				
7. Transporter 2 Company Name				D. Transporter's Phone				
8. US EPA ID Number				E. State Transporter's ID				
9. Designated Facility Name and Site Address K&W Landfill 11877 State Highway M38 Ontonagon, MI 49953				F. Transporter's Phone				
10. US EPA ID Number				G. State Facility ID				
				H. State Facility Phone				
11. Description of Waste Materials				12. Containers		13. Total Quantity	14. Unit Wt./Vol.	I. Misc. Comments
				No.	Type			
a. Non Haz Lead Contaminated Soil						20	cyd ³	
WM Profile # 124101MI								
b.								
WM Profile #								
c.								
WM Profile #								
d.								
WM Profile #								
J. Additional Descriptions for Materials Listed Above				K. Disposal Location				
BILL TO:				Cell		Level		
				Grid				
15. Special Handling Instructions and Additional Information This applies to Non-Hazardous Materials Only								
Purchase Order #			EMERGENCY CONTACT / PHONE NO.:			Brian Kelly 734-692-7684		
16. GENERATOR'S CERTIFICATE: I hereby certify that the above-described materials are not hazardous wastes as defined by CFR Part 261 or any applicable state law, have been fully and accurately described, classified and packaged and are in proper condition for transportation according to applicable regulations.								
Printed Name Terry Stilman			Signature "On behalf of" [Signature] for USEPA			Month 05	Day 15	Year 19
17. Transporter 1 Acknowledgement of Receipt of Materials								
Printed Name Karey Fravair			Signature [Signature]			Month 05	Day 15	Year 19
18. Transporter 2 Acknowledgement of Receipt of Materials								
Printed Name			Signature			Month	Day	Year
9. Certificate of Final Treatment/Disposal I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste was managed in compliance with all applicable laws, regulations, permits and licenses on the dates listed above.								
1. Facility Owner or Operator: Certification of receipt of non-hazardous materials covered by this manifest.								
Printed Name			Signature			Month	Day	Year



NON-HAZARDOUS MANIFEST

NON-HAZARDOUS MANIFEST		1. Generator's US EPA ID No	Manifest Doc No	2. Page 1 of 004
3. Generator's Mailing Address: USEPA/QUINCY MINING SITE INTERSECTION FORSMAN AND M26 HANCOCK, MI 49930		Generator's Site Address (if different than mailing): USEPA/QUINCY MINING SITE INTERSECTION FORSMAN AND M26 HANCOCK, MI 49930		A. Manifest Number WMNA
4. Generator's Phone 734-692-7684				B. State Generator's ID
5. Transporter 1 Company Name B+B Contracting Calumet MI 55670 M26 49913		6. US EPA ID Number		C. State Transporter's ID
7. Transporter 2 Company Name		8. US EPA ID Number		D. Transporter's Phone 906-337-0001
9. Designated Facility Name and Site Address K&W Landfill 11877 State Highway M38 Ontonagon, MI 49953		10. US EPA ID Number		E. State Transporter's ID
				F. Transporter's Phone
				G. State Facility ID
				H. State Facility Phone 906-883-3626
11. Description of Waste Materials		12. Containers No. Type	13. Total Quantity	14. Unit Wt./Vol.
a. Non Haz Lead Contaminated Soil		1 Dump	70	cyd ³
WM Profile # 124101MI				
b.				
WM Profile #				
c.				
WM Profile #				
d.				
WM Profile #				
J. Additional Descriptions for Materials Listed Above		K. Disposal Location		
BILL TO:		Cell	Level	
		Grid		
15. Special Handling Instructions and Additional Information This applies to Non-Hazardous Materials Only				
Purchase Order #		EMERGENCY CONTACT / PHONE NO.		Brian Kelly 734-692-7684
16. GENERATOR'S CERTIFICATE I hereby certify that the above-described materials are not hazardous wastes as defined by CFR Part 261 or any applicable state law, have been fully and accurately described, classified and packaged and are in proper condition for transportation according to applicable regulations.				
Printed Name Terry Stilum		Signature "On behalf of" [Signature] for USEPA		Month 05 Day 15
17. Transporter 1 Acknowledgement of Receipt of Materials		Printed Name Greg Tchida		Signature [Signature] Month 5 Day 15
18. Transporter 2 Acknowledgement of Receipt of Materials		Printed Name		Signature
19. Certificate of Final Treatment/Disposal I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste was managed in compliance with all applicable laws, regulations, permits and licenses on the dates listed above.		20. Facility Owner or Operator: Certification of receipt of non-hazardous materials covered by this manifest.		
Printed Name		Signature		Month Day



NON-HAZARDOUS MANIFEST

1. Generator's US EPA ID No.		Manifest Doc No.		2. Page 1 of 1	
NON-HAZARDOUS MANIFEST				DOE	
3. Generator's Mailing Address: USEPA/QUINCY MINING SITE INTERSECTION FORSMAN AND M26 HANCOCK, MI 49930		Generator's Site Address (if different than mailing) USEPA/QUINCY MINING SITE INTERSECTION FORSMAN AND M26 HANCOCK, MI 49930		A. Manifest Number WMNA	
4. Generator's Phone 734-892-7684				B. State Generator's ID	
5. Transporter 1 Company Name Superior Sand & Gravel 1033 E. Main Ave. HANCOCK, MI 49930		6. US EPA ID Number 49920		C. State Transporter's ID	
7. Transporter 2 Company Name		8. US EPA ID Number		D. Transporter's Phone 734-452-3130	
9. Designated Facility Name and Site Address K&W Landfill 11877 State Highway M38 Ontonagon, MI 49953		10. US EPA ID Number		E. State Transporter's ID	
				F. Transporter's Phone	
				G. State Facility ID	
				H. State Facility Phone 906-883-3504	
11. Description of Waste Materials		12. Container		13. Total Quantities	
		No. Type		14. URP Wt./Vol	
a. Non Haz Lead Contaminated Soil		1 Dump 20 cu yd			
WM Profile # 1241021M					
b.					
WM Profile #					
c.					
WM Profile #					
d.					
WM Profile #					
1. Additional Descriptions for Materials Listed Above		E. Disposal Location			
BRL FO		Cell		Level	
		Grid			
15. Special Handling Instructions and Additional Information This applies to non-hazardous materials only.					
PURCHASE ORDER #		EMERGENCY CONTACT / PHONE NO.		Brian Kelly 734-682-7684	
16. GENERATOR'S CERTIFICATE					
I hereby certify that the above-described materials are not hazardous wastes as defined by CFR Part 261 or any applicable state law, have been fully and accurately described, classified and packaged and are in proper condition for transportation according to applicable regulations.					
Printed Name Terry Stilman		Signature "On behalf of" for USEPA		Month Day Year 05 15 19	
17. Transporter 1 Acknowledgment of Receipt of Materials		Printed Name MARK WAISALEN		Signature Malwai	
				Month Day Year 05 15 19	
18. Transporter 2 Acknowledgment of Receipt of Materials		Printed Name		Signature	
				Month Day Year	
19. Certificate of Final Treatment/Disposal					
I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste was managed in compliance with all applicable laws, regulations, permits and licenses on the dates listed above.					
20. Facility Owner or Operator: Certification of receipt of non-hazardous materials covered by this manifest.					
Printed Name		Signature		Month Day Year	



NON-HAZARDOUS MANIFEST

NON-HAZARDOUS MANIFEST		1. Generator's US EPA ID No.		Manifest Doc No.		2. Page 1 of 006		
3. Generator's Mailing Address: USEPA/QUINCY MINING SITE INTERSECTION FORSMAN AND M26 HANCOCK, MI 49930				Generator's Site Address (if different than mailing): USEPA/QUINCY MINING SITE INTERSECTION FORSMAN AND M26 HANCOCK, MI 49930		A. Manifest Number WMNA		
4. Generator's Phone 734-692-7684						B. State Generator's ID		
5. Transporter 1 Company Name Portage Lake Construction Chassell, MI				6. US EPA ID Number		C. State Transporter's ID		
7. Transporter 2 Company Name				8. US EPA ID Number		D. Transporter's Phone 906-231-3920		
9. Designated Facility Name and Site Address K&W Landfill 11877 State Highway M38 Ontonagon, MI 49953				10. US EPA ID Number		E. State Transporter's ID		
						F. Transporter's Phone		
						G. State Facility ID		
						H. State Facility Phone 906-883-3504		
GENERATOR	11. Description of Waste Materials			12. Containers		13. Total Quantity	14. Unit Wt./Vol.	I. Misc. Comments
	a. Non Haz Lead Contaminated Soil			No.	Type			
	WM Profile # 124101MI			1	Dump	20	Cuyd	
	b.							
	WM Profile #							
	c.							
TRANSPORTER	WM Profile #							
	d.							
	WM Profile #							
	J. Additional Descriptions for Materials Listed Above			K. Disposal Location				
	BILL TO:			Cell		Level		
				Grid				
15. Special Handling Instructions and Additional Information This applies to Non-Hazardous Materials Only								
EMERGENCY CONTACT / PHONE NO.: Brian Kelly 734-692-7684								
Purchase Order #								
16. GENERATOR'S CERTIFICATE: I hereby certify that the above-described materials are not hazardous wastes as defined by CFR Part 261 or any applicable state law, have been fully and accurately described, classified and packaged and are in proper condition for transportation according to applicable regulations.								
Printed Name: L. A. Terry				Signature: "On behalf of" [Signature]			Month: 05 Day: 15 Year: 19	
17. Transporter 1 Acknowledgement of Receipt of Materials				Signature: [Signature]			Month: 05 Day: 15 Year: 19	
Printed Name: [Signature]								
18. Transporter 2 Acknowledgement of Receipt of Materials				Signature:			Month: Day: Year:	
Printed Name:								
19. Certificate of Final Treatment/Disposal I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste was managed in compliance with all applicable laws, regulations, permits and licenses on the dates listed above.								
20. Facility Owner or Operator: Certification of receipt of non-hazardous materials covered by this manifest.				Signature:			Month: Day: Year:	
Printed Name:								



NON-HAZARDOUS MANIFEST

NON-HAZARDOUS MANIFEST		1. Generator's US EPA ID No.	Manifest Doc No.	2. Page 1 of	007
3. Generator's Mailing Address: USEPA/QUINCY MINING SITE INTERSECTION FORSMAN AND M26 HANCOCK, MI 49930		Generator's Site Address (if different than mailing): USEPA/QUINCY MINING SITE INTERSECTION FORSMAN AND M26 HANCOCK, MI 49930		A. Manifest Number WMNA	B. State Generator's ID
4. Generator's Phone 734-692-7684		5. Transporter 1 Company Name Superior Sand & Gravel 49930 1028 Ethel Ave Hancock, MI		C. State Transporter's ID D. Transporter's Phone 906-482-3130	
7. Transporter 2 Company Name		6. US EPA ID Number		E. State Transporter's ID F. Transporter's Phone	
9. Designated Facility Name and Site Address K&W Landfill 11877 State Highway M38 Ontonagon, MI 49953		8. US EPA ID Number		G. State Facility ID H. State Facility Phone 906-883-3504	
10. US EPA ID Number		11. Description of Waste Materials		12. Containers	
				13. Total Quantity	
				14. Unit Wt./Vol.	
				15. Misc. Comments	
a. Non Haz Lead Contaminated Soil		1. 1 dump 20		Cuyd	
WM Profile # 124101MI					
b.					
WM Profile #					
c.					
WM Profile #					
d.					
WM Profile #					
J. Additional Descriptions for Materials Listed Above		K. Disposal Location			
Bill TO:		Cell		Level	
		Grid			
15. Special Handling Instructions and Additional Information This applies to Non-Hazardous Materials Only					
Purchase Order #					
EMERGENCY CONTACT / PHONE NO. Brian Kelly 734-692-7684					
16. GENERATOR'S CERTIFICATE I hereby certify that the above described materials are not hazardous wastes as defined by CFR Part 261 or any applicable state law, have been fully and accurately described, classified and packaged and are in proper condition for transportation according to applicable regulations.					
Printed Name Terry Stilman		Signature [Signature] for USEPA		Month 05	Day 15
				Year 19	
17. Transporter 1 Acknowledgement of Receipt of Materials		Signature [Signature]		Month 05	Day 15
Printed Name MARK WAISANEN				Year 19	
18. Transporter 2 Acknowledgement of Receipt of Materials		Signature		Month	Day
Printed Name				Year	
19. Certificate of Final Treatment/Disposal I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste was managed in compliance with all applicable laws, regulations, permits and licenses on the dates listed above. This is a true and correct receipt of non-hazardous materials covered by this manifest.					



NON-HAZARDOUS MANIFEST

NON-HAZARDOUS MANIFEST

1. Generator's US EPA ID No.

Manifest Doc No.

2. Page 1 of

008

3. Generator's Mailing Address:
USEPA/QUINCY MINING SITE
INTERSECTION FORSMAN AND M26
HANCOCK, MI 49930

Generator's Site Address (if different than mailing):
USEPA/QUINCY MINING SITE
INTERSECTION FORSMAN AND M26
HANCOCK, MI 49930

4. Generator's Phone 734-692-7684

5. Transporter 1 Company Name
Gib Contracting Co. Calumet, MI
55110 M26 49913

6. US EPA ID Number

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address
K&W Landfill
11877 State Highway M38
Ontonagon, MI 49953

10. US EPA ID Number

A. Manifest Number

WMNA

B. State Generator's ID

C. State Transporter's ID

D. Transporter's Phone 906-337-00

E. State Transporter's ID

F. Transporter's Phone

G. State Facility ID

H. State Facility Phone 906-883-35

11. Description of Waste Materials

a. Non Haz Lead Contaminated Soil

WM Profile # 124101MI

b.

WM Profile #

c.

WM Profile #

d.

WM Profile #

J. Additional Descriptions for Materials Listed Above

K. Disposal Location

Cell

Grid

Level

BILL TO:

15. Special Handling Instructions and Additional Information

This applies to Non-Hazardous Materials Only

Purchase Order #

EMERGENCY CONTACT / PHONE NO.:

Brian Kelly 734-692-7684

16. GENERATOR'S CERTIFICATE:

I hereby certify that the above-described materials are not hazardous wastes as defined by CFR Part 261 or any applicable state law, have been fully and accurately described, classified and packaged and are in proper condition for transportation according to applicable regulations.

Printed Name

Terry Stiles

Signature "On behalf of"

USEPA

Month

Day

Year

05

15

19

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed Name

Greg Tchida

Signature

Greg Tchida

Month

Day

Year

5

15

19

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed Name

Signature

Month

Day

Year

19. Certificate of Final Treatment/Disposal

I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste was managed in compliance with all applicable laws, regulations, permits and licenses on the dates listed above.

20. Facility Owner or Operator: Certification of receipt of non-hazardous materials covered by this manifest.

Printed Name

Signature

Month

Day

Year



NON-HAZARDOUS MANIFEST

NON-HAZARDOUS MANIFEST		L. Generator's US EPA ID No.	Manifest Doc No.		2. Page 1 of 009				
3. Generator's Mailing Address: USEPA/QUINCY MINING SITE INTERSECTION FORSMAN AND M26 HANCOCK, MI 49930			Generator's Site Address (if different than mailing): USEPA/QUINCY MINING SITE INTERSECTION FORSMAN AND M26 HANCOCK, MI 49930			A. Manifest Number WMNA			
4. Generator's Phone 734-692-7684			B. State Generator's ID						
5. Transporter 1 Company Name Portage Lake Construction Chassell, MI			6. US EPA ID Number						
7. Transporter 2 Company Name			8. US EPA ID Number						
9. Designated Facility Name and Site Address K&W Landfill 11877 State Highway M38 Ontonagon, MI 49953			10. US EPA ID Number						
			C. State Transporter's ID						
			D. Transporter's Phone 906-231-39						
			E. State Transporter's ID						
			F. Transporter's Phone						
			G. State Facility ID						
			H. State Facility Phone 906-883-350						
GENERATOR	11. Description of Waste Materials		12. Containers		13. Total Quantity	14. Unit Wt./Vol.	I. Misc. Comments		
	a. Non Haz Lead Contaminated Soil		No.	Type					
	WM Profile # 124101MI		1	dump	20	cuyd			
	b.								
	WM Profile #								
	c.								
TREATMENT	WM Profile #								
	d.								
	WM Profile #								
	J. Additional Descriptions for Materials Listed Above		K. Disposal Location						
	BILL TO:		Cell		Level				
			Grid						
15. Special Handling Instructions and Additional Information This applies to Non-Hazardous Materials Only									
Purchase Order # EMERGENCY CONTACT / PHONE NO.: Brian Kelly 734-692-7684									
16. GENERATOR'S CERTIFICATE: I hereby certify that the above-described materials are not hazardous wastes as defined by CFR Part 261 or any applicable state law, have been fully and accurately described, classified and packaged and are in proper condition for transportation according to applicable regulations.									
Printed Name Terry Stelman			Signature On behalf of			Month 05	Day 15	Year 19	
TRANSPORTER	17. Transporter 1 Acknowledgement of Receipt of Materials			Signature for USEPA			Month 05	Day 15	Year 19
	Printed Name Fred Frauen			Signature			Month 05	Day 15	Year 19
	18. Transporter 2 Acknowledgement of Receipt of Materials			Signature			Month	Day	Year
FACILITY	19. Certificate of Final Treatment/Disposal			Signature			Month	Day	Year
	I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste was managed in compliance with all applicable laws, regulations, permits and licenses on the dates listed above.						Month	Day	Year
	20. Facility Owner or Operator: Certification of receipt of non-hazardous materials covered by this manifest.						Month	Day	Year
Printed Name			Signature			Month	Day	Year	



NON-HAZARDOUS MANIFEST

NON-HAZARDOUS MANIFEST		1. Generator's US EPA ID No.		Manifest Doc No.		2. Page 1 of 1		010	
3. Generator's Mailing Address: USEPA/QUINCY MINING SITE INTERSECTION FORSMAN AND M26 HANCOCK, MI 49930				Generator's Site Address (if different than mailing): USEPA/QUINCY MINING SITE INTERSECTION FORSMAN AND M26 HANCOCK, MI 49930				A. Manifest Number WMNA	
4. Generator's Phone 734-692-7684								B. State Generator's ID	
5. Transporter 1 Company Name B+B Contracting 556 TO M26 Calumet, MI 49913				6. US EPA ID Number 49913				C. State Transporter's ID	
7. Transporter 2 Company Name				8. US EPA ID Number				D. Transporter's Phone 906-337-4017	
9. Designated Facility Name and Site Address K&W Landfill 11877 State Highway M38 Ontonagon, MI 49953				10. US EPA ID Number				E. State Transporter's ID	
								F. Transporter's Phone	
								G. State Facility ID	
								H. State Facility Phone 906-383-3504	
G E N E R A T O R	11. Description of Waste Materials			12. Containers		13. Total Quantity	14. Unit Wt./Vol.	I. Misc. Comments	
	a. Non Haz Lead Contaminated Soil			No.	Type				
	WM Profile # 124101MI			1	dump	20	Cuyd		
	b.								
	WM Profile #								
	c.								
T R A N S P O R T E R	d.								
	WM Profile #								
	J. Additional Descriptions for Materials Listed Above			K. Disposal Location					
	BILL TO:			Cell		Level			
				Grid					
	15. Special Handling Instructions and Additional Information This applies to Non-Hazardous Materials Only								
Purchase Order #			EMERGENCY CONTACT / PHONE NO.:			Brian Kelly 734-692-7684			
16. GENERATOR'S CERTIFICATE: I hereby certify that the above-described materials are not hazardous wastes as defined by CFR Part 261 or any applicable state law, have been fully and accurately described, classified and packaged and are in proper condition for transportation according to applicable regulations.									
Printed Name Terry Stiltner			Signature "On behalf of" [Signature] for USEPA			Month 5	Day 16	Year 19	
17. Transporter 1 Acknowledgement of Receipt of Materials			Printed Name Greg Tachida			Signature [Signature]			
			Signature			Month 5	Day 16	Year 19	
18. Transporter 2 Acknowledgement of Receipt of Materials			Printed Name			Signature			
			Signature			Month	Day	Year	
F A C I L I T Y	19. Certificate of Final Treatment/Disposal I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste was managed in compliance with all applicable laws, regulations, permits and licenses on the dates listed above.								
	20. Facility Owner or Operator: Certification of receipt of non-hazardous materials covered by this manifest.								
	Printed Name			Signature			Month	Day	Year



NON-HAZARDOUS MANIFEST

NON-HAZARDOUS MANIFEST		1. Generator's US EPA ID No.		Manifest Doc No.		2. Page 1 of 1		011				
3. Generator's Mailing Address: USEPA/QUINCY MINING SITE INTERSECTION FORSMAN AND M26 HANCOCK, MI 49930				Generator's Site Address (if different than mailing): USEPA/QUINCY MINING SITE INTERSECTION FORSMAN AND M26 HANCOCK, MI 49930				A. Manifest Number WMNA				
4. Generator's Phone 734-692-7684								B. State Generator's ID				
5. Transporter 1 Company Name Bob Contracting 55670 M26 Calumet MI 49913				6. US EPA ID Number				C. State Transporter's ID				
7. Transporter 2 Company Name				8. US EPA ID Number				D. Transporter's Phone 906-337-0017				
9. Designated Facility Name and Site Address K&W Landfill 11877 State Highway M38 Ontonagon, MI 49953				10. US EPA ID Number				E. State Transporter's ID				
								F. Transporter's Phone				
								G. State Facility ID				
								H. State Facility Phone 906-383-3504				
GENERATOR	11. Description of Waste Materials			12. Containers		13. Total Quantity	14. Unit Wt./Vol.	I. Misc. Comments				
				No.	Type							
	a. Non Haz Lead Contaminated Soil			1	dump	20	Cuyd					
	WM Profile # 124101MI											
	b.											
	WM Profile #											
	c.											
WM Profile #												
d.												
WM Profile #												
J. Additional Descriptions for Materials Listed Above			K. Disposal Location									
BILL TO:			Cell				Level					
			Grid									
15. Special Handling Instructions and Additional Information This applies to Non-Hazardous Materials Only												
Purchase Order #			EMERGENCY CONTACT / PHONE NO.:				Brian Kelly 734-692-7684					
16. GENERATOR'S CERTIFICATE: I hereby certify that the above-described materials are not hazardous wastes as defined by CFR Part 261 or any applicable state law, have been fully and accurately described, classified and packaged and are in proper condition for transportation according to applicable regulations.												
Printed Name Terry Stilman			Signature "On behalf of" [Signature] for USEPA				Month 5	Day 16	Year 19			
TRANSPORTER	17. Transporter 1 Acknowledgement of Receipt of Materials			Printed Name Greg Tchick				Signature [Signature]		Month 5	Day 16	Year 19
	18. Transporter 2 Acknowledgement of Receipt of Materials			Printed Name				Signature		Month	Day	Year
FACILITY	19. Certificate of Final Treatment/Disposal I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste was managed in compliance with all applicable laws, regulations, permits and licenses on the dates listed above.											
	20. Facility Owner or Operator: Certification of receipt of non-hazardous materials covered by this manifest.											
Printed Name			Signature				Month	Day	Year			

WASTE SHIPMENT RECORD/ASBESTOS MANIFEST

(See Reverse for Instructions)

001

For Disposal Site Use Only

Generator	1-A. Special Waste Profile Number ASB124516MI		NESHAP Notified <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		WSR Number []		Elevation []	
	1-B. Generator Name, Contact Name, and Complete Mailing Address (including Zip Code) U.S. EPA, Region II 9311 Groh Road Grosse Ile MI 48138-1197						1-C. Generator's Phone Number 734-740-9019	
	1-D. Work Site Address M26 + Forsman Rd Hancock, MI						1-E. 24 Hour Emergency Response Telephone Number 734-740-9019	
	2. Operator's Name and Complete Mailing Address Jeff Engel 1800 Carillon Blvd, Cincinnati, OH 45240						Operator's Phone Number 513-307-1590	
	3. Waste Disposal Site (WDS) Name and Complete Mailing Address K&W Landfill 11877 State Highway M38, Ontonagon, MI 49953						WDS Phone Number 906-883-3504	
	4. Name and Address of Responsible Agency Michigan Dept. of Environmental Quality PO Box 30260, Lansing, MI 489090-7760							
	5. Description of Materials Non Haz Lead Contaminated Soil with Non-Friable Asbestos				6. Containers No. Type		7. Total Quantity yd3	
	friable asbestos				RQ, NA2212, Asbestos, 9, PGIII			
	non-friable asbestos				Cat I _____ Cat II _____		2 DT 43	
	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 Brian Kelly, EPA OSC				Signature Brian Kelly			Date 6-18-19	
Transporter	10. Transporter 1 Company Name Beryl Turino Complete Mailing Address 55670 M26 Calumet MI 49913 Telephone Number (including area code) 906-337-0017				Driver Signature [Signature]			
					Printed Name and Title Beryl Turino			
					Date 6-18-19			
	11. Transporter 2 Company Name Complete Mailing Address Telephone Number (including area code)				Driver Signature [Signature] Printed Name and Title [] 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 Linda Thorson Specialist				Signature Linda Thorson			Date 6-18-19



16753188

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

Original
Ticket# 294503

Customer Name EQM EQM
Ticket Date 06/18/2019
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 001
Destination
PO
Profile ASB124516MI (NON HAZ LEAD CONTAMINATED SOIL WITH ASBESTOS WM011A)
Generator 136-USEPAQUINCY USEPA QUINCY MINING SITE

Carrier BBCONTRACTING B&B CONTRACTING
Vehicle# 22 Volume
Container
Driver
Check#
Billing # 0000487
Gen EPA ID
Grid

	Time	Scale	Operator	Inbound	Gross	122380 lb
In	06/18/2019 09:52:36	Scale	LThoreson		Tare	49140 lb
Out	06/18/2019 10:45:14	Scale	LThoreson		Net	73240 lb
					Tons	36.62

Comments US EPA / QUINCY MINING SITE
M26 & FORSMAN RD
MASON, MI

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 Asb Non Fri-Tons-A 100		36.62	Tons				HOUGMI
2 ENVT-ENVIRONMENTAL 100		36.62	Tons				HOUGMI
3 FUEL-FUEL SURCHAR 100		36.62	Tons				HOUGMI
4 WWT-WASTE WATER M 100		36.62	Tons				HOUGMI
5 TTE-TRANSPORTATION 100		36.62	Tons				HOUGMI

Total Tax
Total Ticket

403WM-N
Driver's Signature

VOID - CUSTOMER DO NOT ACCEPT



WASTE SHIPMENT RECORD/ASBESTOS MANIFEST

(See Reverse for Instructions)

002

For Disposal Site Use Only

Generator	1-A. Special Waste Profile Number ASB124516MI		NESHAP Notified <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		WSR Number []		Elevation _____ North _____ East _____	
	1-B. Generator Name, Contact Name, and Complete Mailing Address (including Zip Code) U.S. EPA, Region V 9311 Groh Road Grosse Ile, MI 48138-1697						1-C. Generator's Phone Number 734-740-9019	
	1-D. Work Site Address 1246 + Forsman Rd Hancock, MI						1-E. 24 Hour Emergency Response Telephone Number 734-740-9019	
	2. Operator's Name and Complete Mailing Address Jeff Engel 1800 Carillon Blvd, Cincinnati, OH 45240						Operator's Phone Number 513-307-1590	
	3. Waste Disposal Site (WDS) Name and Complete Mailing Address K&W Landfill 11877 State Highway M38, Ontonagon, MI 49953						WDS Phone Number 906-883-3504	
	4. Name and Address of Responsible Agency Michigan Dept. of Environmental Quality PO Box 30260, Lansing, MI 48909-7760							
	5. Description of Materials Non-Haz Lead Contaminated Soil with Non-Friable Asbestos							
	Friable asbestos				RQ, NA2212, Asbestos, 9, PGIII		6. Containers No. Type	
	non-friable asbestos				Cat I _____ Cat II _____		7. Total Quantity yd3 26.67 tons	
	Transporter	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 Brian Kelly, EPA OSC				Signature Brian Kelly		Date 6-18-19		
10. Transporter 1 Company Name Greg Tchida Complete Mailing Address B+B Excavating 55670 mab Calumet MI 49913 Telephone Number (including area code) 906-337-0017				Driver Signature Greg Tchida Printed Name and Title Greg Tchida Date 6-18-19				
11. Transporter 2 Company Name Complete Mailing Address Telephone Number (including area code)				Driver Signature Printed Name and Title 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 Linda Thoresen Specialist				Signature Linda Thoresen		Date 6-18-19	

WHITE - Disposal Site

CANARY - Generator
(To be mailed by Disposal Site)

PINK - Transporter

GOLD - Generator
(To be taken prior to disposal)



16753190

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

Original
Ticket# 294504

Customer Name EQM EQM
Ticket Date 06/18/2019
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 002
Destination
PO

Carrier BBContracting B&B Contracting
Vehicle# 2016 Volume
Container
Driver
Check#
Billing # 0000487
Gen EPA ID

Grid

Profile ASB124516MI (NON HAZ LEAD CONTAMINATED SOIL WITH ASBESTOS WM011A)
Generator 136-USEPAQUINCY USEPA QUINCY MINING SITE

	Time	Scale	Operator	Inbound	Gross	
In	06/18/2019 09:55:01	Scale	LThoreson		Tare	101200 lb
Out	06/18/2019 11:00:25	Scale	LThoreson		Net	47860 lb
					Tons	53340 lb
						26.67

Comments USEPA QUINCY MINING SITE
M26 & FORSMAN RD
HANCOCK, MI

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 Asb Non Fri-Tons-A	100	26.67	Tons				HOUGMI
2 ENVT-ENVIRONMENTAL	100	26.67	Tons				HOUGMI
3 FUEL-FUEL SURCHAR	100	26.67	Tons				HOUGMI
4 WWT-WASTE WATER M	100	26.67	Tons				HOUGMI
5 TTE-TRANSPORTATION	100	26.67	Tons				HOUGMI

Total Tax
Total Ticket



WASTE SHIPMENT RECORD/ASBESTOS MANIFEST

003

(See Reverse for Instructions)

For Disposal Site Use Only

Generator	1-A. Special Waste Profile Number ASB124516MI		NESHAP Notified <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		WSR Number		Elevation _____ North _____ East _____	
	1-B. Generator Name, Contact Name, and Complete Mailing Address (including Zip Code) U.S. EPA, Region II 9311 Groh Road Grosse Ile, MI 48138-1697						1-C. Generator's Phone Number 734-740-9019	
	1-D. Work Site Address M26 + Forsman Rd Hancock, MI						1-E. 24 Hour Emergency Response Telephone Number 734-740-9019	
	2. Operator's Name and Complete Mailing Address Jeff Engel 1800 Carillon Blvd, Cincinnati, OH 45240						Operator's Phone Number 513-307-1590	
	3. Waste Disposal Site (WDS) Name and Complete Mailing Address K&W Landfill 11877 State Highway M38, Ontonagon, MI 49953						WDS Phone Number 906-883-3504	
	4. Name and Address of Responsible Agency Michigan Dept. of Environmental Quality PO Box 30260, Lansing, MI 489090-7760							
	5. Description of Materials Non Haz Lead Contaminated Soil with Non-Friable Asbestos				6. Containers No. Type		7. Total Quantity yd3	
	Friable asbestos				RQ, NA2212, Asbestos, 9, PGIII			
	non-friable asbestos				Cat I _____ Cat II _____		1 DT 20	
	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 Brian Kelly, EPA OSC				Signature Brian Kelly		Date 6-18-19		
Transporter	10. Transporter 1 Company Name Greg Tchida Complete Mailing Address B+B Excavating 55670 m26 Calumet MI 49913 Telephone Number (including area code) 906-337-0017				Driver Signature Greg Tchida Printed Name and Title Greg Tchida Date 6-18-19			
	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 Linda Thoresen operations specialist				Signature Linda Thoresen		Date 6-18-19	



16753191

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

Original
Ticket# 294505

Customer Name EGM EGM
Ticket Date 06/18/2019
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 003
Destination
PO

Carrier BBContracting B&B Contracting
Vehicle# 380 TRAILER Volume
Container
Driver
Check#
Billing # 0000487
Gen EPA ID

Profile ASB124516MI (NON HAZ LEAD CONTAMINATED SOIL WITH ASBESTOS WM011A)
Generator 136-USEPAQUINCY USEPA QUINCY MINING SITE

	Time	Scale	Operator	Inbound	Gross	58220 lb
In	06/18/2019 09:56:19	Scale	LThoreson		Tare	16840 lb
Out	06/18/2019 11:00:52	Scale	LThoreson		Net	41380 lb
					Tons	20.69

Comments USEPA QUINCY MINING SITE
M26 & FORSMAN
MASON, MI

Product	LDX	Qty	UOM	Rate	Tax	Amount	Origin
1 Asb Non Fri-Tons-A 100		20.69	Tons				HOUGMI
2 ENVT-ENVIRONMENTAL 100		20.69	Tons				HOUGMI
3 FUEL-FUEL SURCHAR 100		20.69	Tons				HOUGMI
4 WWT-WASTE WATER M 100		20.69	Tons				HOUGMI
5 TTE-TRANSPORTATION 100		20.69	Tons				HOUGMI

Total Tax
Total Ticket

403WM-N
Driver's Signature

VOID - CUSTOMER DO NOT ACCEPT

WASTE SHIPMENT RECORD/ASBESTOS MANIFEST

(See Reverse for Instructions)

004

For Disposal Site Use Only

Generator	1-A. Special Waste Profile Number ASB124516MI		NESHAP Notified <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		WSR Number []		Elevation _____ North _____ East _____			
	1-B. Generator Name, Contact Name, and Complete Mailing Address (including Zip Code) U.S. EPA Region IV 9311 Groh Rd Grosse Ile, MI 48138-1697						1-C. Generator's Phone Number 734-740-9019			
	1-D. Work Site Address male + Forsman Rd Hancock, MI						1-E. 24 Hour Emergency Response Telephone Number 734-740-9019			
	2. Operator's Name and Complete Mailing Address Jeff Engel 1800 Carillon Blvd Cincinnati OH 45240						Operator's Phone Number 513-307-1590			
	3. Waste Disposal Site (WDS) Name and Complete Mailing Address K&W Landfill 11877 State Highway M38, Ontonagon, MI 49953						WDS Phone Number 906-883-3504			
Transporter	4. Name and Address of Responsible Agency Michigan Dept. of Environmental Quality PO Box 30260, Lansing, MI 489090-7760									
	5. Description of Materials Non Haz Lead Contaminated Soil with Non-Friable Asbestos						6. Containers No. Type		7. Total Quantity yd3	
	friable asbestos		RQ, NA2212, Asbestos, 9, PGIII						50.83 + 2	
	non-friable asbestos		Cat I _____ Cat II _____				2 DT		43	
	8. Special Handling Instructions and Additional Information 24 HOUR NOTICE GIVEN PRIOR TO DISPOSAL, MUST BE BURIED									
Disposal Site	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 Brian Kelly, EPA OSC				Signature Brian Kelly			Date 6-18-19		
	10. Transporter 1 Company Name Beryl Turino Complete Mailing Address B+B Excavating 55670 male Calumet MI 49913 Telephone Number (including area code) 906-337-0017				Driver Signature [Signature]					
					Printed Name and Title Beryl Turino					
					Date 6-18-19					
Disposal Site	11. Transporter 2 Company Name Complete Mailing Address Telephone Number (including area code)				Driver Signature [Signature]					
					Printed Name and Title					
					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 Linda Thoreson operations Specialist				Signature Linda Thoreson			Date 6-18-19			



16753204

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

Original
Ticket# 294520

Customer Name EQM EQM
Ticket Date 06/18/2019
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 004
Destination
PO

Carrier BBContracting B&B Contracting
Vehicle# 22 Volume
Container
Driver
Check#
Billing # 0000487
Gen EPA ID

Grid

Profile ASB124516MI (NON HAZ LEAD CONTAMINATED SOIL WITH ASBESTOS WM011A)
Generator 136-USEPAQUINCY USEPA QUINCY MINING SITE

	Time	Scale	Operator	Inbound	Gross	
In	06/18/2019 13:48:03	Scale	LThoreson		Tare	150620 lb
Out	06/18/2019 14:15:00	Scale	LThoreson		Net	48960 lb
					Tons	101660 lb
						50.83

Comments USEPA / QUINCY MINE SITE
M26 & FORSMAN RD
HANCOCK

Product	LDX	Qty	UOM	Rate	Tax	Amount	Origin
1 Asb Non Fri-Tons-A	100	50.83	Tons				HOUGMI
2 ENVT-ENVIRONMENTAL	100	50.83	Tons				HOUGMI
3 FUEL-FUEL SURCHAR	100	50.83	Tons				HOUGMI
4 WWT-WASTE WATER M	100	50.83	Tons				HOUGMI
5 TTE-TRANSPORTATION	100	50.83	Tons				HOUGMI

Total Tax
Total Ticket

403WM-N
Driver's Signature

VOID - CUSTOMER DO NOT ACCEPT



WASTE SHIPMENT RECORD/ASBESTOS MANIFEST

(See Reverse for Instructions)

005

For Disposal Site Use Only

Generator	1-A. Special Waste Profile Number ASB124516MI		NESHAP Notified <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		WSR Number <div></div>		Elevation _____ North _____ East _____	
	1-B. Generator Name, Contact Name, and Complete Mailing Address (including Zip Code) U.S. EPA Region V Brian Kelly 9311 Bron Rd Grosse Ile MI 48138-1697						1-C. Generator's Phone Number 734-740-9019	
	1-D. Work Site Address Male-Forsman Rd Hancock, MI						1-E. 24 Hour Emergency Response Telephone Number 734-740-9079	
	2. Operator's Name and Complete Mailing Address Jeff Engel 1800 Carillon Blvd Cincinnati OH 45240						Operator's Phone Number 513-307-1590	
	3. Waste Disposal Site (WDS) Name and Complete Mailing Address K&W Landfill 11877 State Highway M38, Ontonagon, MI 49953						WDS Phone Number 906-883-3504	
	4. Name and Address of Responsible Agency Michigan Dept. of Environmental Quality PO Box 30260, Lansing, MI 489090-7760							
	5. Description of Materials Non Haz Lead Contaminated Soil with Non-Friable Asbestos				6. Containers No. Type		7. Total Quantity yd3	
	friable asbestos RQ, NA2212, Asbestos, 9, PGIII						(23.20 tons)	
	non-friable asbestos Cat I _____ Cat II _____				1 DT		24	
	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 Brian Kelly, EPA OSC				Signature Brian Kelly		Date 6-19-19		
Transporter	10. Transporter 1 Company Name Beryl Turino Complete Mailing Address 55670 male Calumet MI 49913 Telephone Number (including area code) 906-337-0017				Driver Signature 			
					Printed Name and Title Beryl Turino			
					Date 6-19-19			
	11. Transporter 2 Company Name Complete Mailing Address Telephone Number (including area code)				Driver Signature Printed Name and Title 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 Linda Thoreson Specialist				Signature Linda Thoreson		Date 6-19-19	



16753222

K&W Landfill
11577 HWY 30
Ontonagon, MI, 49853
Ph: 906-923-7568

Original
Ticket# 1294537

Customer Name LOM LOM
Ticket Date 06/19/2019
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 003
Destination
PO

Carrier RECONTRACTING DBB CONTRACTING
Vehicle# 23 Volume
Container
Driver
Check#
Billing # 0000407
Gen EPA ID
Drill

Profile 45012451691 0001 HAZ LEAD CONTAMINATED SOIL WITH ASBESTOS MMS (S)
Generator 130-USEPAQUINCY-USEPA QUINCY MINING SITE

File	Date	Operator	Inbound	Gross	61910 15
In 06/19/2019 09:11:33	06/19	LThoresen		Yrs	35440 11
Out 06/19/2019 15:17:55	06/19	LThoresen		Net	45100 10
				Tare	23.20

Comments: 130001 QUINCY MINING SITE
USEPA QUINCY MINING SITE
USEPA QUINCY MINING SITE
USEPA QUINCY MINING SITE

Product	Lot	Qty	Unit	Tax	Amount	Origin
---------	-----	-----	------	-----	--------	--------



16752637

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

Original
Ticket# 293960

Customer Name WMHOUHLG WM HOUGHTON RD 411-0 Carrier WMHOUHLG WM Houghton Hauling
Ticket Date 05/31/2019 Vehicle# 406721 Volume
Payment Type Credit Account Container
Manual Ticket# Driver
Hauling Ticket# Check#
Route Billing # 0000151
State Waste Code Gen EPA ID
Manifest 0531191
Destination Grid
PO
Profile 123142MI (FRIABLE ASBESTOS WM011A)
Generator 136-USEPAMASON USEPA QUINCY MINING CO-MASON

	Time	Scale	Operator	Inbound	Gross	
In	05/31/2019 08:50:25	Scale	LThoreson		Tare	67780 lb
Out	05/31/2019 09:14:20	Scale	LThoreson		Net	37900 lb
					Tons	29880 lb
						14.94

Comments USEPA - QUINCY MINING SITE
FORSMAN RD & M26
MASON, MI

Product	LDX	Qty	UDM	Rate	Tax	Amount	Origin
1 Asb Friable-Tons-A 100		14.94	Tons				HOUGMI

Total Tax
Total Ticket

403WM-N
Driver's Signature

Jeff Baker
CUSTOMER COPY



APPENDIX D
START FIELD NOTES

TUESDAY

Location MASON - HOUGHTON COUNTY, MI Date 10-9-18

Project / Client QUINCY MINING COMPANY - MASON SITE

1200 START (MILLER & SCHULTZ) ONSITE
AT STAMMILL #1 - SCOPE OF WORK -
COMPLETE SITE WALK TO RECON
DUSTTRAX STATION SAMPLING/
MOVILAB/INVT LOCATIONS, BACKGROUND
LOCATIONS, PICK UP XRC FROM
EPA KELY. ————— AM
1230 START OFFSITE, EDU ONSITE -
MOBILIZING EQUIPMENT/TRAILERS

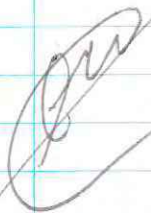
Rite in the Rain

Location MASON, HOUSTON COUNTYDate 10-10-18

WEDNESDAY

Project / Client AMOM

0800 START (MILLER & SCHULTZ) UNPACK, SETUP, DUSTEX, HIGH VOLUME/LOW VOLUME AIR SAMPLING PUMPS, CHARGES EQUIPMENT AT HANCOCK OFFICE. NO SITE WORK IS ANTICIPATED - EQM CONTINUES TO MOBILIZE LABORERS/EQUIPMENT/TRAILERS FOR 10/10/18. PER EQM & EPA KELLY.


Location MASON, HOUSTON COUNTYDate 10-11-18


THURSDAY

Project / Client AMOM

0800 START (MILLER & SCHULTZ) WORK TO SETUP VIPER SYSTEM, TROUBLESHOOT LINE CONNECTIONS, COMPLETE TEST RUNS AT HANCOCK OFFICE — AM

1300 START (MILLER & SCHULTZ) AVSIDE AT WORK TRAILERS ON EAST SIDE OF M-26 TO DROP AIR MONITORING/SAMPLING SUPPLIES. SITE WORK AT STAMMULLEY WILL START TOMORROW 10/12/18 WITH DEBRIS REMOVAL ON FIRST FLOOR OF SMITH, PER EPA KELLY. — AM

1430 START OFFSITE, EQM, EPA REMAIN — AM



0630 - START (MILLER & SCHULTZ) CALIBRATE &
 LOAD AIR MONITORING & SAMPLING EQUIPMENT.
 ZERO CAL TSI DRX PARTICULATE MONITORS.
 CAL GILS AIR PUMPS TO 3.0 L/MIN FOR METALS
 CAL GILS AIR PUMPS TO 2.5 L/MIN FOR ASBESTOS
 CAL AIRCON 2 AIR PUMPS TO 10.0 L/MIN FOR ASBESTOS
WEATHER 35°F, WIND NW @ 12 MPH, SNOW/RAIN
 MIX CURRENTLY - PROJECTED UNTIL NOON, OVERCAST.

0730 - START (MILLER & SCHULTZ) ARRIVE ON SITE.

EPA (KELLY) & ^{ERRS} EQM (3 PERSONNEL) ON SITE.

0800 - ERRS HOLDS DAILY H&S MEETING. DISCUSS
 COLD WEATHER, SLIPS, TRIPS, & FALLS, & GO OVER
 HOSPITAL ROUTE. KS

SCOPE OF WORK TODAY KS

- EPA & ERRS WILL GO THROUGH QUINCY STAMP
 MILL #1 - SOME LARGE HISTORICAL ITEMS TO BE
 LEFT IN PLACE. KS

- ERRS TO SET UP STAGING AREA, LINE ROLL OFF
 BOX FOR ACM, MAY BEGIN REMOVING DEBRIS
 FROM QUINCY STAMP MILL #1 - FIRST FLOOR KS

- START WILL DEPLOY PERIMETER PARTICULATE - KS
 MONITORING & AIR SAMPLING EQUIPMENT. - KS

- START WILL XRF SOIL AROUND KNOWN HOT SPOTS
 TO FURTHER DEFINE THE EXTENT OF LEAD IMPACTED

MATERIAL ON SITE. KS

0830 - END DAILY H&S MEETING. KS

0835 - START WILL DELAY DEPLOYING PARTICULATE
 MONITORING & AIR SAMPLING EQUIPMENT DUE
 TO PRECIPITATION. KS

0900 - ERRS SETTING UP STAGING AREA &
 LINED ROLL OFF BOX @ QUINCY STAMP MILL #1.

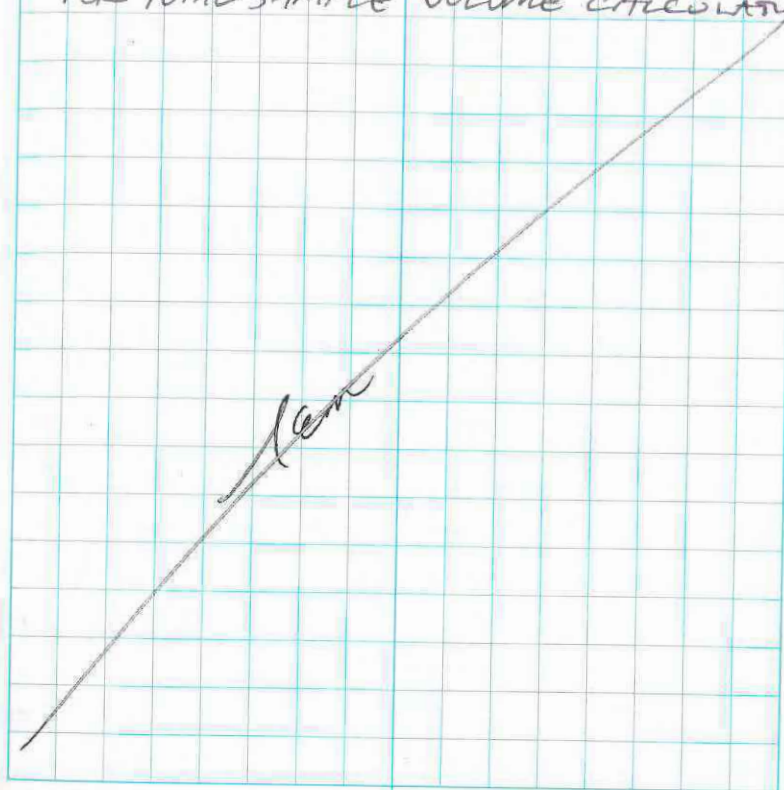
1000 - DISCUSS PERIMETER PARTICULATE MONITORING/AIR
 SAMPLING LOCATIONS W/ EPA (KELLY). WHILE ERRS
 IS COMPLETING DEBRIS REMOVAL ON FIRST FLOOR
 IN QUINCY STAMP MILL #1, ONLY 2 STATIONS WILL
 BE DEPLOYED. QM-001 WILL BE SET UP AT THE
 SOUTH ENTRANCE OF STAMP MILL #1 & QM-002
 WILL BE SET UP AT NORTH/NORTHEAST CORNER
 OF STAMP MILL #1. KS

1045 - SET UP 2 PERSONAL AIR PUMPS W/ 25mm
 ASBESTOS CARTRIDGES FOR ERRS PERSONNEL THAT
 WILL BE WORKING IN STAMP MILL #1 ON THE
 FIRST FLOOR. PUMPS ARE SET TO 2.0 L/MIN,
 PER ERRS HASP & PERSONAL AIR MONITORING
 PLAN. KS

1110 - ^(BTI) DEPLOY TSI DRX, AIRCON2, & 2 GILS AIR
 PUMPS AT QM-001. LOW-VOLUME METALS, LOW-VOLUME
 ASBESTOS, & HIGH-VOLUME ASBESTOS AIR SAMPLES
 TO BE COLLECTED.

- 1120 - DEPLOY TSI DRX (DT2), AIRCON2, & 2 GUS
AIR PUMPS AT QM-002. LOW-VOLUME METALS, LOW
VOLUME ASBESTOS, & HIGH-VOLUME ASBESTOS AIR SAMPLES
TO BE COLLECTED. — KS
- 1145 - START VIPER RUN "QMCM-VM34-101218", — KS
- 1200 - ERRS BREAKS FOR LUNCH — KS
- 1230 - END LUNCH. — KS
- 1300 - COLLECT SURFACE MATERIAL AT STEP OUT
LOCATIONS AROUND QMRA-RPM-08-053018. WILL
SCREEN W/ XRF TO DELINEATE EXTENT OF
IMPACTED MATERIAL. — KS
- 1400 - COLLECT SURFACE MATERIAL AT STEP OUT
LOCATIONS AROUND QMRA-RPM-10-053018. WILL
SCREEN W/ XRF TO DELINEATE EXTENT OF
IMPACTED MATERIAL. — KS
- 1500 - COLLECT SURFACE MATERIAL AT STEP OUT
LOCATIONS AROUND QMRA-RPM-09-053018. WILL
SCREEN W/ XRF TO DELINEATE EXTENT OF
IMPACTED MATERIAL. — KS
- 1540 - ERRS WRAPS UP WORK FOR THE DAY,
SECURE EQUIPMENT & SITE. — KS
- 1550 - END PERSONAL AIR SAMPLING ON - KS
ERRS PERSONNEL. — KS
- 1553 - END RUN AT QM-001 — KS

- 1602 - END RUN AT QM-002. — KS
- 1615 - MEET W/ ERRS & EPA TO DISCUSS
PROJECTED WORK FOR TOMORROW. — KS
- 1630 - EPA & ERRS OFF SITE. — KS
- 1645 - START OFF SITE. — KS
- 1700 - START (MILNER) RUNS DRYCAL ON
ALL PUMPS TO COLLECT END FLOW RATES
FOR TOTAL SAMPLE VOLUME CALCULATION!



0615 - START (MILLER) CALIBRATE & LOAD AIR MONITORING & SAMPLING EQUIPMENT — AEM
 ZERO CAL TSI DRX PARTICULATE MONITORS
 CAL GILS AIR PUMPS TO 3.0 L/MIN FOR METALS
 CAL GILS AIR PUMPS TO 2.5 L/MIN FOR ASBESTOS
 CAL AIRCONZ PUMPS TO 10 L/MIN FOR ASBESTOS
WEATHER 30° F, WIND W @ 3 MPH, CALM — AEM

PARTLY SUNNY THEN SLIGHT CHANCE OF RAIN PROJECTED

0730 START (MILLER) ARRIVE ON SITE — AEM
 ERS ERM (3 PERSONNEL) ON SITE, ERM (KELLY) ARRIVES

0750 ERS HOLDS DAILY HHS MEETING, DISCUSSES
 SLIPS, TRIPS, & FALLS, COLD STRESS — AEM

SCOPE OF WORK FOR 10/13/18

ERS WILL WORK UNTIL 1330 TO ASSIST WITH
 DRIVE TIME, RESUME WORK IN STAMP MILL
 NO 1 REMOVING DEBRIS AND SEPARATING
 LARGER ITEMS ATT 1030 THEY WILL ASSIST
 START IN XRFING LOCATIONS AROUND
 CONCRETE IN STAMP MILL #1 CONCRETE FLOOR
 SECOND FLOOR TO IDENTIFY IF AN ACCESS
 ROAD WILL NEED TO BE BUILT TO FACILITATE
 MATERIAL REMOVAL — AEM

ERS WILL HANG ADDITIONAL SIGNS AROUND
 FENCED AREA

0800 - END OF HHS MEETING — AEM

0820 - ERS HANGING ADDITIONAL SIGNAGE — AEM

0820 - START DEPLOYS TSI DRX DT1, AIRCONZ
 & 2 GILS AIR PUMPS AT QM-001. LOW-VOLUME
 METALS, LOW-VOLUME-ASBESTOS, HIGH-VOLUME
 ASBESTOS AIR SAMPLES TO BE COLLECTED.

0830 - START DEPLOYS TSI DRX DT2, AIRCONZ
 & 2 GILS AIR PUMPS AT QM-001. LOW-VOLUME
 METALS, LOW-VOLUME-ASBESTOS, HIGH-VOLUME
 ASBESTOS AIR SAMPLES TO BE COLLECTED.

0840 SET UP 2 PERSONAL AIR PUMPS W/
 25MM ASBESTOS CASSETTES FOR ERS

PERSONNEL THAT WILL BE WORKING IN
 STAMP MILL #1 DO FIRST FLOOR. PUMPS
 ARE SET TO 2.0 L/MIN PER ERS HASP
 AND PERSONAL AIR MONITORING PLAN.

0854 START VIPER RUN "QMCM-M-101318"

0900 START BEGINS DRIVING SOIL/MATERIAL
 COLLECTED AROUND QMRA-RM08-053018
 FOR XRF SCREENINGS — AEM

1030 ERS COMPLETES WORK INSIDE STAMP
 MILL #1 FOR THE DAY — AEM

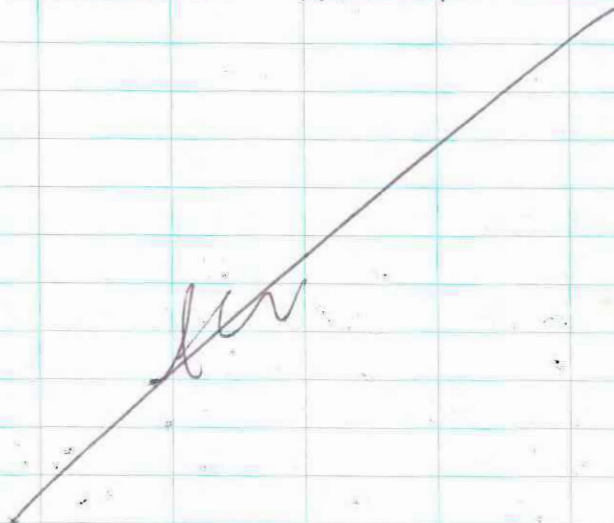
1102 END RUN AT QM-001 — AEM

1108 END RUN AT QM-002 — AEM

Location MASON, HOUGHTON COUNTY, MI Date 10/13/18

Project / Client QMCM

1130 START (MILLER) AND ERBS (2 PERSONNEL)
SCREEN SOIL AROUND QMUA-RM02-05308
TO DELINEATE AREA FOR REMOVAL, ACM
PILES ARE MARKED ——— AEM
WHILE ON 2ND FLOOR. XRF SCREENING 8 PERSONS
(2 GROUPS OF 4) PEOPLE) WERE TOLD THAT THE
SITE WAS PART OF A REMOVAL PROJECT
AND IT WASNT SAFE FOR VISITING ——— AEM
100 ERBS COVERS ROLL-OFF BOXS WITH
TAPES AND BUNGIES FOR OVERNIGHT / WEEKEND
SECURITY ——— AEM
1140 ERBS & START OFFSITE, EPA OFFSITE ——— AEM



Location MASON, HOUGHTON COUNTY, MI Date 10/15/18

Project / Client QMCM

0745 START (MILLER & STODDARD) ONSITE
EPA (KELLY) & ERBS (5 PERSONNEL) ALREADY
AT GATE ——— AEM
0750 MORNING H & S MEETING, DISCUSS
SLIPS, TRIPS, FALLS, TRAFFIC CONTROL, &
LEAD / ASBESTOS HAZARDS, COLD ——— AEM
SCOPE OF WORK - 10/15/18
ERBS WILL CONTINUE CLEANING OUT ——— AEM
1ST FLOOR OF STAMP MILL #1, START ——— AEM
WILL COMPLETE IDENTIFICATION OF ——— AEM
ASBESTOS MATERIAL AND LEAD DELINEATION
ON 2ND FLOOR FOR REMOVAL, AND
TO DETERMINE IF ACCESS ROAD NEEDS
TO BE BUILT AND WHETHER EQUIPMENT
WILL BE BROUGHT IN ——— AEM
0838 - START DEPLOYS DT1 AT QM-001
FOR ASBESTOS / LEAD SAMPLE COLLECTION
0847 START DEPLOYS DT2 AT QM-002
FOR ASBESTOS / LEAD SAMPLE COLLECTION
0900 START (MILLER) STAYS W/ MR
STEVIE KARPIAK OF USCEOLA TWP ——— AEM
HE HAS STOPPED BY ONSITE, HE IS
REFERRED TO EPA (KELLY) FOR QUESTIONS
0945 ERBS BEGINNING REMOVAL DEBRIS FROM

Rite in the Rain

Location MASON, HOUGHTON COUNTY MI

Date

MONDAY
10/15/18

Project / Client DMC

STAMP MILL 100.1 FOR DAY. START (MILLER & STODDARD) CONTINUE TO DELINEATE AREA AROUND RPM-08 FOR LEAD REMOVAL? - AEM
ASBESTOS CONTAINING MATERIAL IS ALSO FLAGGED IN FIELD

1030 EPA (KELLY), START (MILLER), ERM (2 PERSONNEL INCLUDING BOWMAN) DISCUSS PLAN FOR 10/10/18 TO INCLUDE CONTINUING WORK INSIDE STAMP MILL #1. START TO MAKE LEAD DELINEATION IN STAMP MILL #1 2ND FLOOR, LOCATE/MARK DRUMS, DELINEATE MATERIAL ON STAMP MILL #2 FLOOR, MAKE AEM IN TURBINE HOUSE - AEM

1200 AFTERNOON MEETING AVER

1715 START REMOVES QM-001, QM-002 FROM FIELD, ERM (EKRS) COMPLETE WILL WORK FOR THE DAY - AEM

1730 EKRS, EPA, START OFFSITE

[Signature]

Location MASON, HOUGHTON COUNTY MI

Date

TUESDAY
10/16/18

Project / Client DMC

THIS START (MILLER & STODDARD) ONSITE ERM (BOWMAN) ONSITE, EPA (KELLY) AND 4 ERM PERSONNEL ONSITE FOLLOWING 0800 MORNING HES MEETING, ONSITE - AEM PERSONNEL DISCUSS PHYSICAL HAZARDS ONSITE SLIPS, TRIPS, FALLS, HEAVY EQUIPMENT, COLD STRESS EKRS WILL CONTINUE TO CLEAN OUT - AEM STAMP MILL #1, START WILL CONTINUE MARKING AREAS/CONTAINERS/DRUMS/AEM FOR REMOVAL. - AEM

0840 START DEPLOYS DT1 AT QM-001

0845 START DEPLOYS DT2 AT QM-002

0902 START DEPLOYS DT4 AT B62 (BACKGROUND)

0910 START DEPLOYS DT3 AT B61 (BACKGROUND)

0930 VIPER SYSTEMS/SERVERS ARE DOWN CURRENTLY AND A REMOTE CONNECTION CANNOT BE MADE, VIPER SUPPORT ERT HAS BEEN CONTACTED, DUST TRACK STATIONS WILL BE CHECKED PERIODICALLY THROUGH THE DAY FOR STATS - AEM

1000 MDEK (KERANEV) ONSITE AT EPA TRAILER, COMPLETES SITE WALK W/ EPA (KELLY) - AEM

START (MILLER & STODDARD) MARK

Not in the Rain

Location MASON, HOUGHTON COUNTY MI Date TUESDAY 10/16/18
Project / Client RMCM

AREAS FOR REMOVAL ON 2ND FLOOR OF STAMP MILL #2, DRUMS IN WOODS WEST OF #1 AND 1 LOCATED ON EAST SIDE, INCLUDING ACM ——— AEM
1100 GRAHAM JAEHNIG OF DAIRY MINING GAZETTE ONSITE AT WORK ZONE, IS REFERRED TO EPA (KELLY) FOR COMMENT ON PROJECT, WOMAN STOPS START ALONG ROAD CONCERNING SON'S EXPOSURE FROM BENS IN ~~STAMP MILL~~ STAMP MILL #1, SHE IS REFERRED TO (KELLY) EPA. ——— AEM
1200 START (MILLER & STODDARD) MARK — AEM AREAS W/ ACM IN AND AROUND ^{NEW} POWER HOUSE, XRF SCREENING IS COMPLETED IN POWERHOUSE, READINGS BETWEEN 900-1600PPM, IN PLACE ——— AEM
100 START WALKS GRID AT STAMP MILL #2 SCREENING W/ XRF, READINGS BELOW 200PPM ARE MARKED W/ WHITE DOT IN PLACE, ABOVE ARE MARKED IN FIELD, LEAD READINGS — AEM
> 400 PPM, UP TO 14000 PPM ARE OBSERVED
1130 WORK PLAN MEETING ONSITE BEGINS PROGRESS IN POWERHOUSE AND STAMP MILL #2 ARE REPORTED, LOGISTICS FOR

Location MASON, HOUGHTON COUNTY MI Date TUESDAY 10/16/18
Project / Client RMCM

HEAVY EQUIPMENT MOB, SCHEDULE ARE DISCUSSED ——— AEM
1800 ERM DISCONTINUES WORK FOR THE DAY, PERSONNEL MONITORING STOP — AEM
START (STODDARD) REMOVES RM-001 AND RM-002 MONITORING STATIONS
START (MILLER) REMOVES BG1 & BG2 STATIONS ——— AEM
1830 EPA (KELLY), ERM (5 PERSONS) AND START (MILLER & STODDARD) OFFSITE FOR EVENING, GATE SECURED ——— AEM

[Handwritten signature]

Location MASON, HAUGHTON CO. MI Date 10/17/18
Project / Client QMCM

0745 START (MILLER & STODDARD), EDM (5 PERSONS), EPA (KELL) ON SITE — ABM
0800 MORNING H&S MEETING, COVERS PREVIOUSLY DISCUSSED PHYSICAL HAZARDS CHEMICAL HAZARDS, AND CHAIN SAW SAFETY DUE TO PLANNED NATURE OF WORK IN STAMP MILL #1 — ABM
0815 H&S MEETING COMPLETED — ABM
0830 START (MILLER) ON SITE AT STAMP MILL #1 W/ EDM, AIR MONITORING STATIONS WILL BE DELAYED IN DEPLOYMENT DUE TO SNOW — ABM
0900 EDM BEGINS WORK IN STAMP MILL #1 FOR DAY, PERSONNEL MONITORING STARTED — ABM
0930 START (MILLER & STODDARD) SCREEN POWERHOUSE FLOOR MATERIAL FOR LEAD, FLAG LOCATIONS, ROYMARK ACM LOCATIONS, MEASURE BUILDING STRUCTURES FOR VOLUME CALCULATIONS
1145 PRECIPITATION HAS CLEARED
1150 START DEPLOYS QM-002 — ABM
1150 START DEPLOYS QM-001 — ABM
1150 START DEPLOYS BG12 — ABM

Location MASON, HAUGHTON COUNTY, MI Date 10/17/18
Project / Client QMCM

1159 START DEPLOYS BG1 — ABM
1215 QMCM VM34-101718 VIPER RUN BEGINS — ABM
122 START (MILLER & STODDARD) TO STAMP MILL #2 TO FURTHER DELINEATE LEAD W/ IN FIELD XRF SCREENING, MARKED DROM FOR REMOVAL, FLAGGED ASBESTOS CONTAM MATERIAL FOR REMOVAL, CREATED FIELD SKETCH W/ DIMENSIONS FOR LEAD MATERIAL REMOVAL VOLUME ESTIMATES
1200 START CHECKS AIR MONITORING STATION BG1 VIPER CONNECTION NOT CONNECTED
1230 WORK PLAN MEETING W/ EPA (KELL) EDM (2 PERSONS), STAMP MILL #1 HAS APPROX. 65-70% COMPLETE, DIVUL
112 ROWOFF BOXES WILL BE COLLECTED ON 10/18/18, SO PREV WORK FOR ACES TO 2ND FLOOR WILL START — ABM
1245 EDM STOPS WORK IN STAMP MILL #1 FOR THE DAY, START REMOVES MR SAMPLING / MONITORING STATION PERSONAL PUMPS STOPPED — ABM
1330 ALL SITE PERSONNEL OFFSITE

0750 START (MILLER & STODDARD) ON SITE
EQM PERSONNEL ALREADY ON SITE - MEM
0800 MORNING HAS MEETING COVERS FIRE
SCHEM AND MEETING LOCATION IN CASE
OF EMERGENCY ———— AEM

0820 HAS MEETING ENDS ———— AEM

0848 START DEPLOYS QM-001 NEAR WORK
SITE ———— AEM

0910 START DEPLOYS QM-002 ———— AEM

0910 START DEPLOYS BG3 & BG4 ON
STAMP SANDS, ONE (BG3) LOCATED NE
OF AREA 2ND IN LOG SOUTH OF SITE

0955 START DEPLOYS VIDEO RVN QM-VMB4
101819 REVISITS EACH STATION DUE TO
CONNECTIVITY ISSUES ———— AEM

1200 START COMPLETES CUGS FOR FIRST
5 DAYS OF SAMPLES TO BE SHIPPED
TODAY. ———— AEM

BACKNOTE - EQM BEGINS WORK INSIDE
STAMP MILL #1 FOR DAY - WORK INCLUDES
CUTTING LARGE TIMBERS (WOOD DEBRIS
AND STAGING UNTIL A ROLL-OFF IS
SHIPPED, PLANNED LATER IN THE
DAY - WORK BEGINS AT 0915.

1400 START (MILLER) OFF SITE TO SHIP
THE SAMPLES TO ALS LAB — AEM
START (STODDARD) TO MARK ADDITIONAL
ASBG SDS AT STAMP MILL #2 — AEM
1515 START (MILLER) ON SITE — AEM
WORK CONTINUES INSIDE STAMP MILL
#1 ———— AEM

1530 START (MILLER & STODDARD)
CONTINUE TAKING MEASUREMENTS
AT STAMP MILL #2 FOR VOLUME
CALCS, MARKING AEM DETERMINED
DEPTHS OF CONCRETE CHANNELS.

1730 AFTERNOON WORK PLAN MEETING
W/ EPA (KELLY), EQM (2 PERSONS) AND
START (MILLER). ROLLOFFS WILL BE SWITCHED
OUT ON FRIDAY. WORK INSIDE SM #1
IS ABOUT 75% DONE, WITH AN ESTIMATE
OF 60 TONS OF MATERIAL TAKEN OUT
OF THE BUILDING. EQM RECEIVED AN
EXCAVATOR TODAY. IT WAS REPORTED THAT
THE WALKER PERSONAL PUMPS WERE TURNED
ON AT 1045 DUE TO WOOD CUTTING — AEM
START IS CALCULATING VOLUME AT SM #2
OF MATERIAL. ———— AEM

1750 EDM STOPS WORK FOR THE DAY-ADM
1755 START BEGINS PULLING AIR MONITORING
STATIONS ——— ADM

1830 EPA (KELLY), EDM (15 PERSONS) START
(MILLER & STODDARD) OFFSITE ——— ADM

[Handwritten signature]

0745 START (STODDARD & MILLER) ONSITE,
EDM AROUND ONSITE, EPA (KELLY) FOLLOWS
0800 MORNING HEALTH AND SAFETY
MEETING, TWA FOR PARTICULATE MONITORING
IS REPORTED, TRAFFIC SAFETY, SAFETY.
DATA FOR MATERIALS ONSITE HAVE BEEN
PRINTED AND PLACED IN BINDER W/ HASP.
0815 HAS MEETING OVER ——— ADM
0823 START DEPLOYS BG1 ON STAMPBANDS
0840 START DEPLOYS QM-001 IN SOUTH
SIDE OF SM#1 ——— ADM
0845 START DEPLOYS QM-002 ON WEST
SIDE OF SM#1 ——— ADM
0855 START DEPLOYS BG3 NE^W OF SITE
0915 VIBR RUN QM VM31-10/18-ADM
STARTED, BG3 & BG4 TEMPORARILY
STOPPED AND RESTARTED TO TROUBLESHOOT
LINC/DUSTTRAX CONNECTIVITY ISSUE-ADM
0920 EDM CONTINUES REMOVING DEBRIS
FROM 1ST FLOOR SM#1, PERSONAL PUMPS
ARE STARTED. ——— ADM
1130 WASTE MANAGEMENT ONSITE TO
PICKUP/DROP OFF ROLLOFF BOXES
START REMARKS SOIL FOR REMOVAL

Location MASON, Houghton County, MI Date 12/19/18

Project / Client DMLM

ON FLOOR OF SM#1, 2ND FLOOR, ADDITIONAL
 ASBESTOS IS MARKED ———— AEM
 1200 ERM BREAKS FOR LUNCH ———— AEM
 1300 WORK IN SM#1 RESUMES ———— AEM
 1315 START CALLS MULTIMETER, ALL TESTS PASSED
 TOTAL VOC READING NEAR DRUM ON INSIDE
 NW OF SM#1 = 150 ppb, ALL OTHER DRUMS
 THAT WERE MARKED, SCREENED FOR VOCs
 = READINGS OF 100 ppb ———— AEM
 1400 START MARKS ADDITIONAL AEM ON 2ND
 FLOOR SM#1 ———— AEM
 1430 START CONTINUES XRF SCREENING AT
 SM#2, SOIL AND LEAF LITTER DIRECTLY
 BELOW WALL ON LOWER-MOST LEVEL - XRF
 SCREENINGS OF 100-200 ppm. BLACK MATERIAL
 SAMPLED FOR ASBESTOS (NO RESULTS) DESCRIBED
 AS BLACK TIE PAPER ROOFING W/ PEBBLES -
 XRF SCREENING FOR LEAD 800-1000 ppm.
 START MARKS VISIBLE LOCATIONS THROUGHOUT
 AREA ———— AEM
 1630 AFTERNOON WORK PLAN MEETING
 SM#1 ~85% COMPLETE W/ WORK ON 1ST
 FLOOR. WILL COMPLETE SATURDAY
 6 ROLL-UPS HAVE BEEN SHIPPED TODAY

Location MASON, Houghton County, MI Date 12/19/18

Project / Client DMLM

ERM DESCRIBES PLAN FOR SM#2
 LOGISTICS / ACCESS ———— AEM
 1650 - ERM STOPS WORK IN SM#1
 FOR DAY ———— AEM
 1655 START PULLS AIR MONITORING/
 SAMPLING LOCATIONS ———— AEM
 1730 EPA (KELLY) ERM (5 PERSONS),
 START MILLER & STUPPARD'S DEFENSE

fun

0800 - START (MILLER & STODDARD) ONSITE,
FOLLOWED BY EPA (KEVIN), EDM (SPERD)
ONSITE ALREADY. AEM

0805 MORNING HAS MEETING, COVERS
PHYSICAL HAZARDS ONSITE INCLUDING
LADDER SAFETY. AEM

0815 HAS OVER. AEM

0820 START WILL NOT DEPLOY AIR
SAMPLING/MONITORING LOCATIONS DUE
TO HEAVY SNOW PRECIP. WILL WATCH WEATHER
TO DETERMINE IF SETUP WILL OCCUR

0830 EDM BEGINS REMOVING DEBRIS
FROM INSIDE SM#1. AEM

1100 PRECIPITATION STOPS, START TO DEPLOY
AIR MONITORING/SAMPLING LOCATIONS

1106 START DEPLOYS QM-001. AEM

1118 START DEPLOYS QM-002. AEM

1123 VIOLE RUM QMCUM-VM34-101912
STARTED. AEM

1200 EDM BREAKS FOR LUNCH. AEM

1300 EDM CONTINUES TO REMOVE/CONSOLIDATE
DEBRIS FROM EAST END OF SM#1 TO NEAR
DOCK FOR STAGING. LOADING TO COLODFF
TO TAKE PLACE ON MONDAY. AEM

1430 EDM BEGINS MOVING EQUIPMENT
TO TRAILER FOR WEEKEND STORAGE
1500 EDM HAS COMPLETED DEBRIS
MOVING FOR DAY, BEGINS REMOVING
PIPE WRAP HANGING FROM RPES
IN SM#1. AEM

1525 EDM HAS COMPLETED BAGGING PIPE
WRAP, ONE PILE AT NE CORNER OF
BUILDING REMAINS OF DEBRIS TO BE REMOVED
EDM SECURES WEBSITE FOR WEEKEND

1530 START COLLECTS AIR MONITORING
SAMPLING STATIONS FOR DAY - AEM
1600 EDM & START OFFSITE, GATE
SECURED. AEM

fern

Location MASON, HOUGHTON COUNTY, MI Date 10/22/18

Project / Client QMCM

0845 START (MILLER & STODDAR), EPA (KELLY)
 DIV SITE. EBM PERSONNEL RETURN AT TRAILER
 0800 MORNING H&S MEETING BEGINS, INCLUDES
 REMINDER OF CHAINSAW SAFETY ——— AEM
 0815 H&S MEETING COMPLETED ——— AEM
 0850 ONE ROLLOFF TAKEN TO LANDFILL, EBM
 BEGINS LOADING ROLLOFF REPLACEMENT
 0857 START DEPLOYS QM-001 ——— AEM
 0859 START DEPLOYS QM-002 ——— AEM
 0908 VIPER RUN QM-VM34-102218 STARTED
 START COMPLETES CHAINS FOR REMAINING
 BACKGROUND SAMPLES FOR SHIPPING — AEM
 1115 SECOND ROLLOFF SWITCHED OUT BY
 WASTE MANAGEMENT, EBM CONTINUES LOADING
 1120 START COMPLETES SIDEWALK OF
 PREVIOUSLY DELINEATED MATERIAL, DRUMS
 FOR REMOVAL W/ EBM (BOUMAN) & EPA
 (KELLY) THROUGH POWERHOUSE AND SM#2
 1230 BACKGROUND SAMPLES SHIPPED TO
 MLS, EBM OFFSITE FOR LUNCH — AEM
 *BACKNOTE - 1030 - VIPER RUN QM-VM34-102218
 RESTARTED TO REFLECT CORRECT COORDINATES
 OF QM-001 & QM-002 ——— AEM
 1300 START DELINEATES PROCESSING MATERIAL

Location MASON, HOUGHTON COUNTY, MI Date 10/22/18

Project / Client QMCM

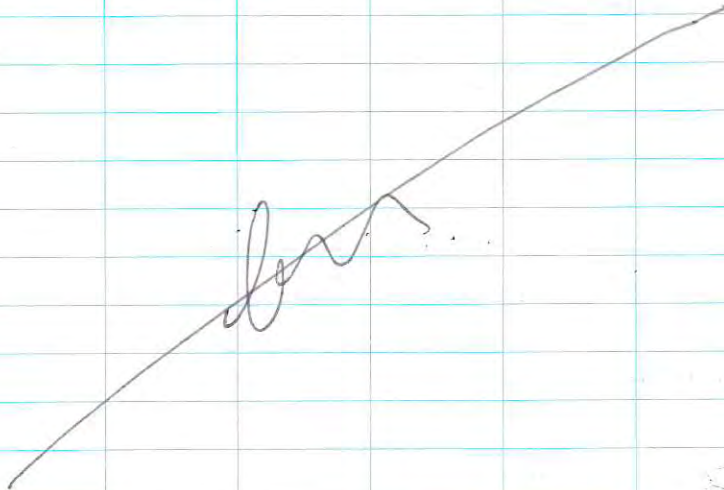
AT RECLAMATION PLANT, WALKING IN A
 GRID, SCREENING SOIL FOR LEAD — AEM
 AREAS HIGHER THAN 300PPM FOR LEAD
 ARE LABELED AND FLAGGED ——— AEM
 1400 AEM KERNAN - WDED ONSITE W/
 EPA (KELLY) AT TRAILER. ——— AEM
 1430 EBM HAS COMPLETED DEBRIS
 LOADING FROM SM#1 1ST FLOOR — AEM
 1530 EBM REMOVES MARKED DRUMS
 AND PLASTIC PAILS FOR DISPOSAL — AEM
 THE DRUM W/ 150 PPB VOC READING ON
 WEST SIDE OF SM#1 IS PACKED IN
 OVERPACK CONTAINER. ALL CONTAINERS
 ARE BEING STORED IN SM#1 BUILDING
 1730 AFTERNOON WORK PLANNING MEETING
 EBM REPORTS 2 BOXES OF ACM DEBRIS
 WERE REMOVED FROM SITE, DRUM CARCASSES
 HAVE BEEN PICKED UP, SAND WILL BE
 BROUGHT IN TO FILL SM#1 TRENCH — AEM
 1745 START RUNS AIR MONITORING
 STATIONS ——— AEM
 1830 EBM, EPA, START OFFSITE, GATE
 SECURED ——— AEM

0800 ERM, EPA START ONSITE FOR MORNING
H&S MEETING, PLAN FOR 2ND FLOOR OF SM#1
IS DISCUSSED: STAGING/COMPILING ACUM
DEBRIS NEAR LOADING ZONE — AEM
0815 H&S MEETING OVER — AEM
0830 WASTE MANAGEMENT ONSITE FOR
ROLLOFF SWITCH OUT — AEM
0840 ERM MOVES EQUIPMENT TO 2ND FLOOR
OF SM#1 VIA ACCESS ROAD FOR ACUM CONSOLIDATION
0916 QM-001 DEPLOYED ON SOUTH SIDE OF SM#1
0922 QM-002 DEPLOYED ON ^{WEST} SIDE OF SM#1
0935 QM-004 DEPLOYED ON ^{WEST} SIDE OF SM#1
0945 QM-003 DEPLOYED ON NORTH SIDE OF SM#1
1015 VIPER RUN QMCM-VM34-102318 STARTED
LINE 241/GATEWAY 241 IS NOT MAKING A
CONNECTION FOR REAL-TIME MONITORING
1100 ERM CONTINUES CONSOLIDATION ACUM
MATERIAL FOR REMOVAL INSIDE 2ND FLOOR
OF SM#1. START (MILLER) SPOT CHECKS
FOR ADDITIONAL MATERIAL DURING
BREAK — AEM
1200 ERM ONSITE FOR LUNCH — AEM
1300 WORK AT SM#1 2ND FLOOR RESUMES — AEM
1315 START (MILLER AND STODOLSKY) MARK

METASICE LEAD AGENTS FOR REMOVAL AND
REM IN REC PLANT — AEM
1400 START MARKS DRUMS AND CARCASSES
WEST OF REC PLANT, RETURN TO SM#1
TO SPOT CHECK ACUM PERCOLATOR — AEM
1545 ERM COMPLETES ACUM CONSOLIDATION
AT SM#1 2ND FLOOR — AEM
1600 START COLLECTS MARKINGS FOR
DRUMS THAT HAVE ALREADY BEEN
REMOVED & STAGED, MARKS ADDITIONAL
DRUMS ON LAKE-SIDE OF ROAD — AEM
ERM BEGINS PILING MATERIAL BACK
FROM THE 2ND FLOOR OF SM#1 WHERE
FENCE WILL BE PLACED AND FILLING IN
TRENCH INSIDE SM#1 W/ FILL — AEM
1642 END QM-003 RUN — AEM
1649 END QM-004 RUN — AEM
WHILE COLLECTING AIR STATION QM-004
3 PEOPLE ARE ASKED TO LEAVE THE
2ND FLOOR OF SM#1 AS THEY HAVE
COME UP THE CREEK AND ONTO THE
2ND FLOOR WHERE THE EXCAVATOR IS
RUNNING CLEARING MATERIAL FROM
THE FENCE LOCATION. — AEM

Location MASON, HOUGHTON COUNTY, MI Date TUESDAY 10/23/18Project / Client DMCM

1056 END RUN QM-002 ——— AEM
 1700 END RUN QM-001 ——— AEM
 1730 AFTERNOON PLANNING MEETING
 M EPA, ERM, START; ONE ROLLOFF WAS
 SHIPPED. ALL HCM CONSOLIDATED FROM
 SM #1 2ND FLOOR. SECURING STAIRCASE
 TO 2ND FLOOR WAS DISCUSSED. START
 IDENTIFIED 24 DRUM LOCATIONS AND
 COMPLETED ASSESSMENT OF REC PLANT
 1750 ERM SECURES CONSOLIDATED HCM
 PILE W/ VIKING. ROLLOFF BOXES
 W/ TARPING ——— AEM
 1830 EPA, ERM, START OFFSITE ——— AEM



WEDNESDAY

Location MASON, HOUGHTON COUNTY, MI Date 10/24/18Project / Client DMCM

1800 EPA, ERM, START ONSITE FOR
 MORNING HES MEETING. ERM WILL
 CONSOLIDATE LEAD MATERIAL IN SM #1
 2ND FLOOR FOR LOADING. SECURING
 SITE FOR WEEKEND BREAK IS DISCUSSED
 085 END HES MEETING. ERM MOVES
 TO SITE TO BEGIN WORK ——— AEM
 0900 AMM KERRANEN MPED ONSITE W/
 EPA (KELLY). TV MEDIA ALSO ONSITE
 W/ KELLY ——— AEM
 0915 ERM BEGINS MOVING LEAD
 MATERIAL AND CONSOLIDATING IN
 PILE ON CONCRETE NEAR COVERED
 HCM PILE. EPA (KELLY), MPED & MEDIA
 FROM TV6 ONSITE AT SM #1 ——— AEM
 0912 QM-003 DEPLOYED ON NORTH
 PERIMETER OF SM #1 ——— AEM
 0922 QM-004 DEPLOYED ON WEST SIDE
 0930 QM-001 DEPLOYED ON SOUTH SIDE.
 0935 QM-002 DEPLOYED ON EAST SIDE.
 1000 VIPER RUN QM-UM34-102418
 STARTED ——— AEM
 1030 EPA (KELLY), OFFSITE
 BACKNOTE: MPED OFFSITE ~ 1000.

Rite in the Rain

Location MASON, MOUNTAIN COUNTY, TN Date 10/24/18
 Project / Client QMCN

1100 START MARKS DRUMS FOR REMOVAL
 ON SOUTHWEST SIDE OF REC PLANT - AEM
 1230 EDM OFF SITE FOR LUNCH - AEM
 1330 EDM RESUMES WORK AT SM #1
 CONSOLIDATING LEAD MATERIAL IN
 LARGE PILE. EDM IS USING A SKID
 STEER, MINI EXCAVATOR AND HAND
 SHOVELS TO MOVE MATERIAL - AEM
 1400 START MARKS DRUMS/DRUM PIECES
 FOR PICK-UP / REMOVAL FROM DUMP
 AREAS ON EAST SIDE OF M-26 - AEM
 1530 START SPOT CHECKS REMOVAL
 MEET W/ XRF DURING EDM BREAK.
 1540 EDM CONTINUES MOVING LEAD MATERIAL.
 1715 EDM COMPLETS WORK FOR DAY, BEGINS
 SECURING SITE, COVERING LEAD MATERIAL
 W/ PLASTIC, MOVING EQUIPMENT BACK TO
 TRAILER
 1720 START SENDS AIR MONITORING (SAMPLES
 RUNS AT QM-001 - QM-004 - AEM
 1800 SITE / GATE SECURED, EDM START
 OFF SITE - AEM

[Signature]

Location MASON, MOUNTAIN COUNTY, TN Date 10/29/18
 Project / Client QMCN

1145 START (MILLER W/ CHRISTENSEN)
 ON SITE TO MARK ACM FOR REMOVAL
 AND TO MEET EPA (TERRY STILLMAN)
 LOCATIONS MARKED INCLUDE ACM IN
 WOODS SW OF REC PLANT, ACM ROOFING
 ALONG SHORELINE OF DREDGE POND,
 ACM WOOD MATERIAL AND TRANSIT
 NEAR DUMP AREA, WASTE AND ROPE
 GASKET NEAR COAL SILO - AEM
 1330 START MARKS LEAD MATERIAL
 TO BE REMOVED ON FIRST FLOOR
 AREA OF STAMP MILL #2 - AEM
 1400 EPA (STILLMAN) ON SITE AT
 GATE NEAR HANDMAN ROAD, WALKS
 REMOVAL AREAS NEAR SM #1,
 POWERHOUSE AND SM #2 FOR
 WORK OVERVIEW - AEM
 1515 START - EPA OFF SITE - AEM

[Signature]

TUESDAY

0800 START (MILLER) ONSITE AT TRAILER, EPA - ABM (STILLMAN), EDM (5 PERSONS) ALREADY ONSITE MORNING H&S MEETING, COVERS PHYSICAL HAZARDS OF SITE WORK AND GENERAL SITE FOR 2 NEW EDM WORKERS AND EPA (STILLMAN) AS FILL IN FOR EPA (KELLY).
 0820 H&S MEETING OVER, EDM BEGINS MOVING EQUIPMENT TO SITE FOR DAY.
 0840 GREAT LAKES MATERIAL ONSITE W/ SAND FOR TRENCH IN SM#1, EDM BEGINS FILLING TRENCH INSIDE — AEM
 0859 START DEPLOYS QM-002 — ^{EAST} SIDE SIDE SM#1
 0903 START DEPLOYS QM-001 — SOUTH SIDE SM#1
 0916 START DEPLOYS QM-004 — WEST SIDE SM#1
 0927 START DEPLOYS QM-003 — NORTH SIDE SM#1
 1000 VIPER RUN QMCM VMS4-103018 STARTED.
 QM-003, QM-004 CONTINUE TO HAVE CONNECTIONS, TUSTAX, LINE, GATEWAYS ALL RESTRICTED.
 1030 EDM MOVES TO SM#1 2ND FLOOR, CONTINUES MOVING LEAD IMPACTED SOIL TO STAGING LOCATION USING THE MINI EXCAVATOR, SLID STEER AND 2 LABORS W/ HAND SHOVELS, START (MILLER) SCREENS SIDEWALLS AND FLOOR OF REMOVAL

TUESDAY

LOCATION AS EDM WORKS — AEM PUTS EDM OFFSITE FOR LUNCH — AEM 1315 EDM RESUMES WORK AT SM#1. START CONTINUES SCREENING SOIL AS EDM WORKS TO CONSOLIDATE AND STOCKPILE, HAND DIGGING THE TRENCH THAT RUNS FROM THE TUNNEL EAST - APPROX. 18" DEEP — AEM 1730 EDM, EPA, START HOLD AFTERNOON WORK PLAN MEETING, WORK CONSOLIDATING LEAD MATERIAL WILL CONTINUE ON WED. AT SM#1, RUBBER BOARDER WILL BE — AEM DELIVERED, DEBRIS BOXES WILL BE — AEM DROPPED FOR FILLING. — AEM 1745 START PLUS AIR MONITORING STATIONS, EDM BEGINS SITE CLEANUP FOR EVENING — AEM 1830 EDM, EPA, START OFFSITE, GATE SECURED — AEM

0745 STREET ONSITE, EPA (STILMAN) EQM PERSONNEL
ALREADY ONSITE AT TRAILER ——— AEM
0800 MORNING HCS MEETING, COVERS
WORKING AROUND MACHINERY, COLD STRESS
0820 END HCS MEETING ——— AEM
0904 START DEPLOYS QM-004 AT WEST CORNER
0906 START DEPLOYS QM-003 AT NORTH CORNER
0915 EQM BEGINS CONSOLIDATING LEAD-ARM
MATERIAL AT SM#1, START SCREENS W/ XRF
AS MATERIAL IS REMOVED AND TRANSFERRED
TO STAGING PILE ——— AEM
0953 START DEPLOYS QM-002 AT EAST CORNER
0957 START DEPLOYS QM-DU1 AT SOUTH CORNER
1010 VIPER RUN QMCM VM34103118 STARTED
1030 START SCREENS SOIL FOR REMOVAL AT
SM#1 AS EQM CONSOLIDATES MATERIAL IN
PILES. EQM CONTINUES TO USE SHOVELS;
THE MINI EXCAVATOR AND SKID STEER TO
MOVE MATERIAL FROM THE NORTHEAST
PORTION OF SM#1 ——— AEM
1215 CONSOLIDATION OF LOOSE MATERIAL
HAS BEEN COMPLETED, W/ XRF SCREENING
USED TO VERIFY MATERIAL LEFT — AEM
1230 EQM OFFSITE FOR LUNCH ——— AEM

130 EQM RESUMES WORK AT SM#1, LEAD
CONTAMINATED SOIL HAS BEEN CONSOLIDATED,
AREAS AROUND REMOVAL HAVE BEEN
SCREENED W/ XRF, ALL BELOW 100PPM.
EQM REMOVES BRUSH, TREES, PILES
OF DEBRIS FROM PILLARS WHERE FENCE
WILL BE INSTALLED, EQM ALSO BEGINS
CHUNKING WOOD DEBRIS CONSOLIDATED/
SEPARATED INSIDE 1ST FLOOR OF SM#1.
TWO ROLL OFF BOXES FOR WOOD/CONSTRUCTION
DEBRIS HAVE BEEN DELIVERED. — AEM
1400 AMU KERANEN MOVED ONSITE AT TRAILER
1430 MOVED (KERANEN) OFFSITE ——— AEM
1445 EQM CONTINUES WORK REMOVING DEBRIS
2ND FLOOR SM#1, CUTTING WOOD 1ST FLOOR
OF SM#1 ——— AEM
1615 EQM COMPLETES WORK OF MOVING DEBRIS
AWAY FROM PILLARS ON 2ND FLOOR — AEM
1625 END RUN FOR QM-003 ——— AEM
1633 END RUN FOR QM-004 ——— AEM
1640 EQM MOVING WOOD/CONSTRUCTION
DEBRIS FROM INSIDE SM#1 TO ROLLOFF
BOXES IN PARKING AREA
1745 AFTERNOON WORK PLAN MEETING

Date: 12/5/18

1830 BOM. EPA. STMT DEPOSITS, GATE

Project / Client BMCW

Update

8/1/11
Thursday

0259 QM-002 DEPLOYED - UD LOCATION AT EAST SIDE OF SMTH 1 - ARM

0848 QM-001 DEPLOYED - DU LOCATION AT SOUTH SIDE OF SMTH, ONLY QM-001 & QM-002 WILL BE DEPLOYED PER GRADE DUE TO LIMITED OF WORK - THAT INCLUDES MOVING MATERIAL FROM AND BACK TO STORAGE LOCATION IN PROXIMITY AREA. - ARM

0900 - QM-001, QM-002, QM-003, QM-004, QM-005, QM-006, QM-007, QM-008, QM-009, QM-010, QM-011, QM-012, QM-013, QM-014, QM-015, QM-016, QM-017, QM-018, QM-019, QM-020, QM-021, QM-022, QM-023, QM-024, QM-025, QM-026, QM-027, QM-028, QM-029, QM-030, QM-031, QM-032, QM-033, QM-034, QM-035, QM-036, QM-037, QM-038, QM-039, QM-040, QM-041, QM-042, QM-043, QM-044, QM-045, QM-046, QM-047, QM-048, QM-049, QM-050, QM-051, QM-052, QM-053, QM-054, QM-055, QM-056, QM-057, QM-058, QM-059, QM-060, QM-061, QM-062, QM-063, QM-064, QM-065, QM-066, QM-067, QM-068, QM-069, QM-070, QM-071, QM-072, QM-073, QM-074, QM-075, QM-076, QM-077, QM-078, QM-079, QM-080, QM-081, QM-082, QM-083, QM-084, QM-085, QM-086, QM-087, QM-088, QM-089, QM-090, QM-091, QM-092, QM-093, QM-094, QM-095, QM-096, QM-097, QM-098, QM-099, QM-100, QM-101, QM-102, QM-103, QM-104, QM-105, QM-106, QM-107, QM-108, QM-109, QM-110, QM-111, QM-112, QM-113, QM-114, QM-115, QM-116, QM-117, QM-118, QM-119, QM-120, QM-121, QM-122, QM-123, QM-124, QM-125, QM-126, QM-127, QM-128, QM-129, QM-130, QM-131, QM-132, QM-133, QM-134, QM-135, QM-136, QM-137, QM-138, QM-139, QM-140, QM-141, QM-142, QM-143, QM-144, QM-145, QM-146, QM-147, QM-148, QM-149, QM-150, QM-151, QM-152, QM-153, QM-154, QM-155, QM-156, QM-157, QM-158, QM-159, QM-160, QM-161, QM-162, QM-163, QM-164, QM-165, QM-166, QM-167, QM-168, QM-169, QM-170, QM-171, QM-172, QM-173, QM-174, QM-175, QM-176, QM-177, QM-178, QM-179, QM-180, QM-181, QM-182, QM-183, QM-184, QM-185, QM-186, QM-187, QM-188, QM-189, QM-190, QM-191, QM-192, QM-193, QM-194, QM-195, QM-196, QM-197, QM-198, QM-199, QM-200, QM-201, QM-202, QM-203, QM-204, QM-205, QM-206, QM-207, QM-208, QM-209, QM-210, QM-211, QM-212, QM-213, QM-214, QM-215, QM-216, QM-217, QM-218, QM-219, QM-220, QM-221, QM-222, QM-223, QM-224, QM-225, QM-226, QM-227, QM-228, QM-229, QM-230, QM-231, QM-232, QM-233, QM-234, QM-235, QM-236, QM-237, QM-238, QM-239, QM-240, QM-241, QM-242, QM-243, QM-244, QM-245, QM-246, QM-247, QM-248, QM-249, QM-250, QM-251, QM-252, QM-253, QM-254, QM-255, QM-256, QM-257, QM-258, QM-259, QM-260, QM-261, QM-262, QM-263, QM-264, QM-265, QM-266, QM-267, QM-268, QM-269, QM-270, QM-271, QM-272, QM-273, QM-274, QM-275, QM-276, QM-277, QM-278, QM-279, QM-280, QM-281, QM-282, QM-283, QM-284, QM-285, QM-286, QM-287, QM-288, QM-289, QM-290, QM-291, QM-292, QM-293, QM-294, QM-295, QM-296, QM-297, QM-298, QM-299, QM-300, QM-301, QM-302, QM-303, QM-304, QM-305, QM-306, QM-307, QM-308, QM-309, QM-310, QM-311, QM-312, QM-313, QM-314, QM-315, QM-316, QM-317, QM-318, QM-319, QM-320, QM-321, QM-322, QM-323, QM-324, QM-325, QM-326, QM-327, QM-328, QM-329, QM-330, QM-331, QM-332, QM-333, QM-334, QM-335, QM-336, QM-337, QM-338, QM-339, QM-340, QM-341, QM-342, QM-343, QM-344, QM-345, QM-346, QM-347, QM-348, QM-349, QM-350, QM-351, QM-352, QM-353, QM-354, QM-355, QM-356, QM-357, QM-358, QM-359, QM-360, QM-361, QM-362, QM-363, QM-364, QM-365, QM-366, QM-367, QM-368, QM-369, QM-370, QM-371, QM-372, QM-373, QM-374, QM-375, QM-376, QM-377, QM-378, QM-379, QM-380, QM-381, QM-382, QM-383, QM-384, QM-385, QM-386, QM-387, QM-388, QM-389, QM-390, QM-391, QM-392, QM-393, QM-394, QM-395, QM-396, QM-397, QM-398, QM-399, QM-400, QM-401, QM-402, QM-403, QM-404, QM-405, QM-406, QM-407, QM-408, QM-409, QM-410, QM-411, QM-412, QM-413, QM-414, QM-415, QM-416, QM-417, QM-418, QM-419, QM-420, QM-421, QM-422, QM-423, QM-424, QM-425, QM-426, QM-427, QM-428, QM-429, QM-430, QM-431, QM-432, QM-433, QM-434, QM-435, QM-436, QM-437, QM-438, QM-439, QM-440, QM-441, QM-442, QM-443, QM-444, QM-445, QM-446, QM-447, QM-448, QM-449, QM-450, QM-451, QM-452, QM-453, QM-454, QM-455, QM-456, QM-457, QM-458, QM-459, QM-460, QM-461, QM-462, QM-463, QM-464, QM-465, QM-466, QM-467, QM-468, QM-469, QM-470, QM-471, QM-472, QM-473, QM-474, QM-475, QM-476, QM-477, QM-478, QM-479, QM-480, QM-481, QM-482, QM-483, QM-484, QM-485, QM-486, QM-487, QM-488, QM-489, QM-490, QM-491, QM-492, QM-493, QM-494, QM-495, QM-496, QM-497, QM-498, QM-499, QM-500, QM-501, QM-502, QM-503, QM-504, QM-505, QM-506, QM-507, QM-508, QM-509, QM-510, QM-511, QM-512, QM-513, QM-514, QM-515, QM-516, QM-517, QM-518, QM-519, QM-520, QM-521, QM-522, QM-523, QM-524, QM-525, QM-526, QM-527, QM-528, QM-529, QM-530, QM-531, QM-532, QM-533, QM-534, QM-535, QM-536, QM-537, QM-538, QM-539, QM-540, QM-541, QM-542, QM-543, QM-544, QM-545, QM-546, QM-547, QM-548, QM-549, QM-550, QM-551, QM-552, QM-553, QM-554, QM-555, QM-556, QM-557, QM-558, QM-559, QM-560, QM-561, QM-562, QM-563, QM-564, QM-565, QM-566, QM-567, QM-568, QM

07/5 Start Dredge, Grain, (Prestium) - New
 08/02 Mould H & Sweetly looks
 08/06 OF work Forth's PM - Mouldy
 08/15 Grain Begins to move to site Estuaria
 08/15 Mouldy

DEBRIS STAGED ON SECOND FLOOR OF SMH1
 TO ROLL OFF BOXES IN PARKING AREA
 1130 ACM MATERIAL HAS BEEN LOADED FOR
 DISPOSAL, EDM SECURES LINING FOR TRANSPORT
 1215 EDM BREAKS FOR LUNCH ——— AEM
 1315 EDM CONTINUES WORK ONSITE, INSTALLING
 FENCING AROUND PILLARS OF SMH1 ON 2ND
 FLOOR. FENCE IS WIRE WRAPPED AND BOLTED
 WITH CABLE TIES AROUND EACH PILLAR
 ATTIRE TOP AND BOTTOM OF THE FENCE
 1615 START PUMP AIR STATIONS, EDM
 CONTINUES TO INSTALL FENCE, ADDITIONAL
 IMPACTED MATERIAL WILL NOT BE DISTURBED
 BACK NOTE: EPA (STILMAN) OFFSITE AT 1400
 1630 EDM BUILDS BERM IN PARKING AREA
 OF SMH1 WHERE LEAD MATERIAL WILL
 BE STAGED WHEN IT IS MOVED FROM
 THE SECOND FLOOR ——— AEM
 1830 EDM, START OFFSITE, GATE, SITE
 SECURED ——— AEM

[Signature]

0745 START (MILLER) ONSITE, EDM PERSONEL
 ARE ADVISING THAT TRAILERS ——— AEM
 0800 MORNING HAS MEETING, COVERS
 SPOTTING SAFETY AS MATERIAL IS BROUGHT
 TO STAGING LOCATION FROM 2ND FLOOR OF
 SMH1, COLD STRESS. ——— AEM
 0815 END HAS MEETING, EDM MOVS
 TO SITE, WASTE MANAGEMENT ONSITE
 TO COLLECT WOOD DEBRIS BOXES, EMPTY
 ROLL OFF BOXES ARE MOVED TO
 REC PLANT AREA ——— AEM
 0841 QM-002 ON EAST CORNER OF
 SMH1 IS DEPLOYED ——— AEM
 0859 QM-001 ON SOUTH CORNER OF
 SMH1 IS DEPLOYED ——— AEM
 0915 QMCM-VM34-110218 VIPER RUN
 IS STARTED, QM-003 & QM-001
 ARE NOT DEPLOYED DUE TO SCORE
 OF WORK ——— AEM
 0930 EDM BEGINS LINING STAGING
 AREA FOR LEAD MATERIAL STAGING — AEM
 1000 EDM MOVES LEAD MATERIAL FROM
 2ND FLOOR OF SMH1 TO STAGING AREA
 BY TRANSFERRING MATERIAL FROM

A SKID STEER TO THE FRONT END LOADER THAT IS STATIONED ON THE RAMP TO THE 2ND FLOOR, MATERIAL IS BEING PILED ON THE LINER, ONE LABORER IS SPOTTING THE SKID STEER ON THE 2ND FLOOR — AEM 1030 EBM (EVANS) AND START (MILLER) START COLLECTING DRUMS THAT ARE ACCESSIBLE TO THE SOUTH OF THE REC PLANT, NEAR THE POWERHOUSE AND NORTH OF THE SM#2, DRUMS ARE STAGED ON PLASTIC LINER IN THE REC PLANT — AEM 1215 EBM BREAKS FOR LUNCH — AEM 1315 EBM RESUMES WORK, MOVING LEAD MATERIAL FROM THE SECOND FLOOR TO THE STAGING LOCATION IN THE PARKING AREA EBM (EVANS) & START (MILLER) COLLECT DRUMS IN THE PUMP AREA FOR STAGING AT THE REC PLANT — AEM

1745 EBM HAS COMPLETED MATERIAL MOVING, PILE IN STAGING AREA IS COVERED WITH TARP EBM BEGINS SECURING SITE/EQUIPMENT — AEM

1753 END QM-001 RUN — AEM

1757 END QM-002 RUN — AEM

1830 EBM, START OFFSITE, GATE SECURED — AEM

AEM

0745 START ONSITE, EBM PERSONNEL ALREADY AT TRAILERS — AEM

0800 MORNING HHS MEETING INCLUDES SCOPE OF WORK FOR 11/03 — COMPLETING THE TRANSFER OF LEAD MATERIAL FROM THE 2ND FLOOR TO STAGING LOCATION AREA. REVIEW OF FIRST AID KIT, FIRE EXTINGUISHER OTHER SAFETY ITEM LOCATIONS — AEM

0820 END HHS MEETING, EBM MOBILIZES TO SITE — AEM

0853 QM-002 DEPLOYED AT EAST CORNER OF SM#1 — AEM

0905 QM-001 DEPLOYED AT SOUTH CORNER OF SM#1 — AEM

0915 EBM BEGINS MOVING MATERIAL USING THE SKID STEER TO LOAD THE FRONT END WADER ON LOWER PORTION OF SM#1, FRONT END LOADER CONTINUING TO STAGE MATERIAL ON LINER IN PARKING AREA — QMCM UNB4 110318 VIPER RUN STARTED.

1030 EBM (EVANS) & START (MILLER) CONTINUE PICKING UP DRUMS & CASSES ON EAST SIDE OF M-26 WHERE EASILY ACCESSIBLE. DRUMS ARE STAGED W/ OTHERS AT

Rec in the Rain

Location MASON HOUGHTON COUNTY MI Date 11/03/18

Project / Client QMUM

THE REC PLANT ——— AEM
 1215 EDM OFFSITE/BACKS FOR WALK — AEM
 1315 EDM RESUME WORK AT STAMP MILL #1
 MOVING MATERIAL FOR STAGING, START
 (MINOR) SCREENS W/ XRF AS EDM
 USES SKID STEER AND HAND TOOLS TO
 CLEAR AREA WHERE MATERIAL WAS
 STAGED ON 2ND FLOOR ——— AEM
 1515 MOVING MATERIAL TO LOWER STAGING
 AND XRF SCREENING IS COMPLETED — AEM
 1523 QM-001 IS PULLED ——— AEM
 1529 QM-002 IS PULLED, VIBRATOR UNDED
 1600 EDM COMPLETES RECD AT SHORE
 PLANT FOR ACCESS, SECURES SM#1,
 INCLUDING COVERING LEAD MATERIAL
 AND DEMOS OF SUPPORT STATION — AEM
 1700 EDM BEGINS SETUP OF SUPPORT
 STATION ITEM AT REC PLANT AREA — AEM
 1830 EDM COMPLETE PREP FOR MONDAY
 WORK AT REC PLANT, EDM, START
 OFFSITE, GATE SECURED ——— AEM

Location MASON HOUGHTON COUNTY MI Date 11/05/18

Project / Client QMUM

0730 START ONSITE, EDM PERSONNEL ALREADY
 ONSITE FOR H&S MEETING. SCOPE OF WORK
 INCLUDES SHIPPING ACM ROLLOFF FROM SM#1
 LOADING ACM FROM REC PLANT, CONSOLIDATING
 LEAD MATERIAL ON LINERS IN NORTH CORNER
 OF REC PLANT. COLD STRESS SIGNS DISCUSSED
 0845 END H&S MEETING ——— AEM
 0750 EDM BEGINS SETUP AT REC PLANT
 FOR SUPPORT ZONE, LINING ROLLOFF
 BOXES, MOVING EQUIPMENT — AEM
 0930 AIR STATIONS FOR MONITORING (SAMPLING
 ARE DEPLOYED ON NORTH (QM-005), EAST
 (QM-006), SOUTH (QM-007) AND WEST (QM-008)
 SIDES OF REC PLANT WALK AREA. PUS
 ARE NOT STARTED DUE TO RAIN
 STATIONS COVERED IN PLASTIC — AEM
 1015 EDM BEGINS REMOVING ACM FROM
 REC PLANT. MATERIAL IS BEING SHOVELLED
 INTO THE SKID STEER BUCKET. EDM USES
 MINI EXCAVATOR TO CONSOLIDATE
 MATERIAL AT SHORE PLANT, MOVING
 WOOD DEBRIS FROM EAST SIDE TO
 PAD OF CONCRETE ——— AEM
 1145 EDM BREAKS FOR LUNCH ——— AEM

1230 EDM RESUMES WORK ONSITE, TWO LABORERS COLLECT BATH AUM MATERIAL FROM REC PLANT, FRONT WARDEN AND MINI EXCAVATOR ARE BEING USED TO MOVE MATERIAL/DEBRIS FROM SHORE PLANT TO ROLL OFF BOXES,

OPA (KRM) ONSITE ——— AEM

BACKNOTE - EDM HAS STOPPED, QM-005 - QM-008

DOSTRAK/AUM/LEAD SAMPLING EQUIPMENT

STARTED, VIPERWIN QMCM-VM34-110518 STARTED

AT 1145 ——— AEM

1245 EDM BREAKS FOR LUNCH ——— AEM

1345 EDM RESUMES WORK PICKING UP MATERIAL (AUM) FROM REC PLANT, MOVING AUM DEBRIS FROM SHORE PLANT, START SPOT CHECKS

REC PLANT AS MATERIAL IS BAGGED

1715 AFTERNOON WORK PLAN MEETING,

CHECKLIST OF COMPLETED ITEMS DISCUSSED

WORK WILL CONTINUE AT REC AND

SHORE PLANT TOMORROW ——— AEM

1745 START PLUS AIR MONITORING/ SAMPLING STATIONS, EDM SECURES SITE FOR EVENING ——— AEM

1830 EDM, OPA START DEFSITE
SITE SECURED

0730 START (MILNER), EPH (KRM) ONSITE FOR MORNING HES MEETING, EDM PERSONNEL ALREADY ONSITE AT TRAILER, MORNING MEETING HAS TOPIC - WORKING AROUND WATER AT SHORE PLANT. ——— AEM

0745 END HES MEETING ——— AEM

0750 EDM MOBS TO REC SHORE PLANT AREA, PREPS TO MOVE AUM MATERIAL

FROM SHORE PLANT W/ MINI EXCAVATOR

TWO LABORERS ^{AEM} INSTALL LIFELINE

FOR WORK AROUND WATER, BEGIN

COLLECTING AUM MATERIAL FROM

WITHIN CONCRETE WALLS ——— AEM

0820 START DEPLOY QM-009 AT NE

CORNER OF WORK ZONE, FOLLOWED BY

QM-006 AT S PERIMETER AT 0827,

QM-005 AT N PERIMETER AT 0832 AND

QM-008 AT NW PERIMETER AT 0854

0930 START COLLECTS QMCM-STAMP MICH

01-110618 FOR WASTE CHARACTERIZATION

SUBMITTED TO KLS FOR TELP VOLS, SVCS

METALS, PH, REACT. & IENITA. ——— AEM

1015 EDM CONTINUES WORK AT SHORE

PLANT, CHRIS MILNER ONSITE AT

Location WILSON, HOUGHTON COUNTY, MI Date 11/07/18Project / Client QMCUM

TUESDAY

TRAILER w/ EPA (KELLY), DISCUSSES TOWNSHIP
SEWER PROJECT, DEFSITE ~ 1100 ——— AEM
1145 EBM BREAKS FOR LUNCH ——— AEM
1145 EBM RESUMES WORK AT SHORE PLANT
2 ROLL OFF BOXES HAVE BEEN FILLED.
BACKNOTE: ~ 1130 START STOPS DUSTRAY
PARTICULATE MONITORING / SAMPLE COLLECTION
DUE TO RAIN. STATIONS ARE COVERED,
FORECAST IS THAT RAIN WILL CONTINUE.
1400 START CHECKS SHORE PLANT FOR
ACM MATERIAL, WORKS w/ EBM TO COMPLETE
ACM PICKUP / SCRAPPING ——— AEM
1545 SHORE PLANT ACM PICKUP / REMOVAL
IS COMPLETE, MATERIAL HAS BEEN PILED
FOR LOADING IN NEXT AVAILABLE ROLL OFF.
1600 EBM RESUMES ACM PICKUP IN
REC PLANT CIRCULAR BINS, BEGINS
CUTTING REBAR AT BIN 3 FOR ACCESS,
CONSOLIDATING LEAD MATERIAL. START
XRFs AS LEAD MATERIAL IS SCRAPPED.
1715 AFTERNOON WORK PLAN MEETING: EBM
WILL FOCUS ON FENCING IN SM#1 & LEAD
AT REC PLANT ON 11/07/18 ——— AEM
1800 EBM, EPA, START DEFSITE, GATE
SECURED ——— AEM

Location WILSON, HOUGHTON COUNTY, MI Date 11/07/18Project / Client QMCUM

WEDNESDAY

0720 START ONSITE, EBM ALREADY ONSITE
AT TRAILER, EPA (KELLY) & JEFFREY
WILLIAMS (EPA) ONSITE SHORTLY AFTER.
0730 MORNING HAS MEETING, DISCUSSES
TRAFFIC AS EBM WILL INSTALL FENCE
AROUND STAIR CASES INSIDE SM#1,
MEETING OVER 0745, AIR MONITORING
SAMPLING WILL CEASE DUE TO PARTICULATE
RESULTS / AIR SAMPLING RESULTS — AEM
0800 EBM MOBS TO SM#1 — AEM
0830 EBM WORKS TO INSTALL FENCING
TO DETOR ACCESS TO THE 2ND FLOOR VIA
THE OPEN STAIRCASES, THE SKID STEER
AND EXCAVATOR ARE BEING USED TO
MOVE THE DEBRIS PILE ON THE 2ND
FLOOR TO A LOCATION ON THE 2ND
FLOOR FURTHER AWAY FROM THE
FENCING. ——— AEM
1130 EBM COMPLETES MOVING DEBRIS ON
2ND FLOOR ——— AEM
1200 EBM BREAKS FOR LUNCH — AEM
1300 EBM RESUMES FENCE INSTALLATION IN
SM#1, NO TRESPASSING, KEEP OUT SIGNS
ARE POSTED ON FENCE ——— AEM

Rite in the Rain

1500 ERM COMPLETES FENCE INSTALLATION
ON 2ND LEVEL OF SMHI, POSTING SIGNS
FOR NO TRESPASSING ———— AEM

1515 ERM LINES ROLLOFF AT REC PLANT
FOR ACM DEBRIS ———— AEM

1530 ERM LOADS ACM DEBRIS PILE FROM
SHRED PLANT INTO ROLLOFF BOX USING MINI
EXCAVATOR AND FRONT END WHEELER, TWO
LABORERS BEGIN BAGGING MATERIAL.
ACM MATERIAL - FROM TRAILER #2

1600 SCOPE OF WORK HAS CHANGED, TWO
LABORERS COVER ACM ROLLOFF BOXES, AND
BEGIN CONSOLIDATING LEAD MATERIAL
IN ~~SMHI~~ REC PLANT AREA, START SCREENS
SOIL W/ XRF AS MATERIAL ^{IS} IS REMOVED

1715 AFTERNOON WORK PLAN MEETING:

SCOPE OF WORK FOR 11/8/18 INCLUDES
COMPLETING CONSOLIDATION OF LEAD
MATERIAL AT REC PLANT ———— AEM

1730 ERM CLEANS UP SUPPORT STATION

1800 ERM, EPA, START OFFSITE, GATE SECURED.

[Signature]

0730 EPA, ERM, START ONSITE FOR
WORKING H'S MEETING, SCOPE OF
WORK INCLUDES LEAD CONSOLIDATION
AT REC PLANT, ACM REMOVAL. SAFETY
TOPIC INCLUDES SLIPS, TRIPS, FALLS
DUE TO ICE, SNOWY CONDITIONS ———— AEM
0745 H'S MEETING COMPLETE, ERM
MOBILIZES TO REC PLANT

0800 ERM CONSOLIDATES LEAD MATERIAL
AT REC PLANT, TWO LABORERS USE
SHOVELS TO CLEAN OUT IN BETWEEN
CONCRETE PILLARS, MATERIAL IS
LOADED INTO THE SKID STEER
AND THEN FRONT LOADER. THE
FRONT LOADER IS TAKING MATERIAL
TO THE SMHI WHERE IT WILL BE
STAGED W/ THE REST OF THE LEAD
DEBRIS ———— AEM

1000 AMY KERANEN (MDEB), JEFF BINKLEY
(MANNIL SMITH) STEVE DEZON (MDEB) &
SCOTT SEE (KNHPC) ONSITE FOR SITE
WALK W/ EPA (KEZLY) ———— AEM

1130 ALL VISITORS OFFSITE ———— AEM
1145 ERM BREAKS FOR LUNCH ———— AEM

Location MASON HUGHITON COUNTY MI Date 11/08/18
Project / Client BMCN

1245 EDM RESUMES WORK/LEAD REMOVAL AT REC PLANT, DRUM CARCASSES ARE CRUSHED AND ADDED TO STAGED MATERIAL AT SMH1, START XRF SCREENS AS MATERIAL IS REMOVED. ———— APM

1530 ^{APM} APM LEAD MATERIAL THAT IS UNDER WATER WILL REMAIN IN PLACE UNTIL ICE FREEZES FOR SURFACING ———— APM
1600 EDM REMOVES TRANSITE TILE AND ROOFING MATERIAL FROM SOUTH OF REC PLANT WIPED AREA. EDM ALSO REMOVES ROOFING DEBRIS FROM TANK #3 ON SE CORNER OF REC PLANT ———— APM

1700 EDM THOPS ROLLOFF FOR REMOVAL
1715 AFTERNOON WORK-PLAN MEETING:
EDM WILL CONTINUE ACM REMOVAL FROM TANKS #1 & 3 (FELT ON CONCRETE) AND TANK #2 (ROOFING MATERIAL ON GROUND), LEAD REMOVAL WHEN FROZEN, IF POSSIBLE.
1745 EDM COMPLETES TANK 3 ACM REMOVAL, CLEANS UP SITE AT REC PLANT FOR NIGHT.
1800 EPA, EQM. START OFFSITE, SITE SECURED

can

Location MASON HUGHITON COUNTY MI Date 11/08/18
Project / Client BMCN

0130 EDM, EPA, START OFFSITE FOR MORNING HRS MEETING. VISIBILITY IN SNOW, SLIPS, TRIPS, FALLS DISCUSSED, SCOPE OF WORK INCLUDES ACM REMOVAL FROM TANKS AT REC PLANT ———— APM

0145 END SAFETY MEETING, EDM ROLLS TO REC PLANT ———— APM

0800 EDM COMPLETES DEBRIS REMOVAL FROM TANK #3, BEGINS WORKING ON MASTIC REMOVAL FROM TANK #1.

TWO LABORERS ARE USING PUTTY KNIVES TO SCRAP FELT MASTIC ———— APM

0815 EDM SCRAPES TANK #2 FOR ACM ROOFING MATERIAL, CLEANS

SLAP OF CONCRETE ON EAST SIDE OF REC PLANT OF ACM DEBRIS ———— APM

1000 EDM REMOVES ROOFING MATERIAL - ACM - FROM WOODED AREA SOUTH OF REC PLANT ———— APM

1130 EDM BREAKS FOR LUNCH ———— APM

1230 EDM RESUMES WORK, 2 LABORERS

60AL ACM IN ROLLOFF BOX FOR TRANSPORT, 3 DRUMS ARE RETRIEVED FROM THE WOODED AREA SOUTHEAST OF REC PLANT

Rite in the Rain

Location MASON HUGHES COUNTY MI Date 11/09/18
 Project / Client QMCN

1400 EDM CONTAINERIZES ONE DRUM AND MATERIAL SAMPLED AS DM03 NEAR COAL SILE, ONE HALF DRUM AND THE RESIDUAL MATERIAL FROM DM02 ARE ALSO COLLECTED. DM02 MATERIAL IS CONTAINERIZED — AEM.
 1515 AFTERNOON WORK WITH MEETING: WORK WILL CONTINUE ON AEM FELT REMOVAL FROM TANKS, DRUM/AEM COLLECTION AREA WIDE. SNOW WILL DICTATE WORK ACTIVITIES — AEM
 1600 EDM, CPA, START OFFSITE. GATE SECURED — AEM

[Handwritten signature/initials]

Location MASON, HUGHES COUNTY MI Date 11/10/18
 Project / Client QMCN

0730 EDM, CPA, START ONSITE FOR MORNING HRS MEETING, SCOPE OF WORK WILL FOCUS ON DRUM RECOVERY. AEM FELT MASTIC REMOVAL FROM TANKS. SLIPS, TRIPS, FALLS ON ICEY GROUND, EXTRA TIME, SPACE WORKS AROUND HEAVY EQUIPMENT DISCUSSED — AEM
 0745 HRS MEETING ENDS, EDM CONTINUED SNOW REMOVAL OF DRIVES, SITE ROADS W/ SKID STEER, FRONT LOADER — AEM
 0830 EDM SECURES LINING AROUND AEM DEBRIS IN ROLLOFF BOX — AEM
 0930 EDM RECOVERS 2 DRUMS ON EAST SIDE OF M-26 W/ ONE DRUM BAND ALSO RECOVERED NEAR OUTLET OF QUINCY CREEK — AEM
 1100 EDM ATTEMPTS TO CROSS STREAM BED BY RECRUIT TO RECOVER DRUMS. EXCAVATOR WILL NOT HAVE SAFE ACCESS, SO DRUMS WILL HAVE TO BE TAKEN OUT BY HAND — AEM
 1145 EDM BREAKS FOR LUNCH — AEM
 1245 EDM RESUMES WORK IN WOODS

Rite in the Rain

Location MASON, HOUGHTON COUNTY MI Date 11/10/18
 Project / Client QMC/M

SOUTH OF REC PLANT, COLLECTS 3 PARTIAL DRUMS. DRUM PREVIOUSLY PULLED FROM INSIDE W/ CONTENTS WILL BE LEFT. UNTIL EQUIPMENT CAN ACCESS AREA FOR OVERPACK REMOVAL ——— AEM
 1400 EDM PICKS UP DRUMS NEAR FENCE LINE SOUTHWEST OF REC PLANT, EAST OF TRAIL, ONLY DRUM SOUTH OF REC PLANT NEEDING OVERPACK REMAINS TO BE REMOVED. ALL DRUMS ARE STAGED IN REC PLANT ON LINER, WILL REMAIN UNTIL SPRING ——— AEM
 1500 AFTERNOON WORK PLAN MEETING, PROGRESS W/ DRUM REMOVAL REPORTED, DEMOB PLANS FOR NEXT WEEK DISCUSSED
 1530 EDM SECURES SITE FOR WEEKEND
 1600 EDM, EPA, START OFFSITE, GATE LOCKED ——— AEM

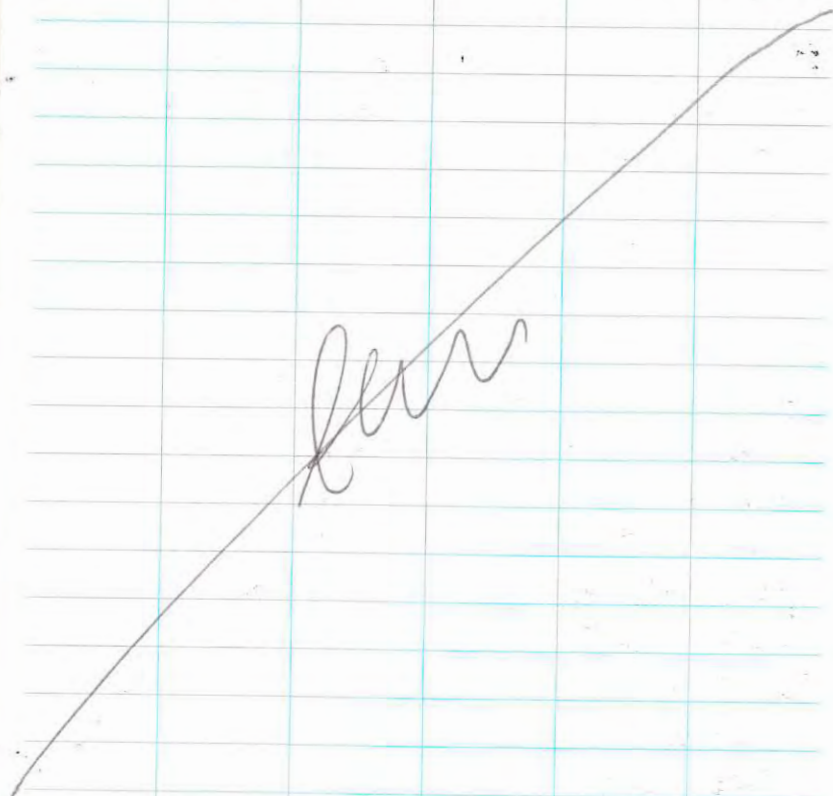
Location MASON, HOUGHTON COUNTY MI Date 11/12/18
 Project / Client QMC/M

0730 EDM START ONSITE AT TRAILERS FOR MORNING HCS MEETING, PLAN FOR REMAINING FELT REMOVAL, DEMOB THROUGHOUT THE WEEK DISCUSSED — AEM
 0745 END HCS MEETING, EDM MOBS TO REC PLANT TO REMOVE SILVER FELT FROM TANKS #1 & #3 ——— AEM
 0815 WASTE MANAGEMENT ONSITE FOR ROLLOFF LOADING ——— AEM
 0900 EDM (BOWMAN) OFFSITE, EDM (~~PLACE~~ ~~ITEM~~) REMAINS AS EDM MANAGEMENT
 0915 EDM WORKS TO REMOVE AEM FELT MATERIAL FROM TANKS #1 & #3
 1200 WASTE MANAGEMENT ONSITE FOR FINAL AEM ROLLOFF TRANSPORT — AEM
 1230 EDM OFFSITE FOR UNIT PROBLEM — AEM
 1300 EDM RESUMES WORK, AEM FELT REMOVAL IN WETTER CONDITIONS ISN'T WORKING OUT - MATERIAL IS CHIPPING, OR WILL NOT COME OFF W/ SCRAPER HAND TOOLS, FELT REMOVAL FROM TANKS WILL CONTINUE IN SPRING.
 1330 EDM MOBS TO STAMP MILL #1 TO REMOVE FENCE ALONG ROAD,

Location MASON HOUTTON COUNTY MD Date 11/12/18
Project / Client DMCM

DOUBLE FENCE ALONG PARKING AREA
EOM SECURES LEAD REMOVAL PILE w/
NETWORK OF TIRES AND ADDITIONAL
BERM.

1515 EOM FINALIZES SMH/ SITE FOR
WINTER, DRIPS EQUIPMENT FOR DEMOB,
1600 EOM, START OFFSITE, GATE SECURED.



Location MASON HOUTTON COUNTY MD Date 11/13/18
Project / Client DMCM

0730 EOM, START ONSITE AT TRAILER
FOR MORNING HHS MEETING, SCORE
OF WORK INCLUDE MASTIC REMOVAL FROM
COAL SILD AND DEMOB ACTIVITIES,
COLD STRESS IS DISCUSSED. TEMPS
ARE IN THE TEENS - 16°F CURRENTLY.
0745 END MORNING HHS MEETING,
EOM MOBS TO COAL SILD -
0815 EOM BEGINS SCRAPING MASTIC FELT
FROM COAL SILD USING HAND SCRAPER,
REACHING AS HIGH AS THEY CAN. SNOW
PACK WILL NOT ALLOW FOR LADDER
WORK SAFELY. SCAFFOLDING OR A
LIFT WILL NEED TO BE USED TO REACH
REMAINING MATERIAL.
1045 EOM COMPLETES ACM REMOVAL,
PICKS UP PASKET MATERIAL MARKED
MATERIAL. ACM HAS BEEN BAGGED AND
WILL BE STORED IN DRUMS FOR WINTER.
1130 EOM SECURES DRUMS w/ REC
PLANT ON LIMER, COVERING w/ TARP
AND ADDING A FENCE AROUND MATERIAL
AND DRUMS TO BE LEFT, LEAD MATERIAL
AT REC PLANT THAT HAS BEEN STOCK-

Location MASON HUGHTON COUNTY MI Date 11/13/18
 Project / Client DMCM

PILEP IS COVERED W/ PLASTIC LINER
 AND SECURED W/ TIRES. ——— ABN
 1230 EDM BREAKS FOR LUNCH ——— ABN
 1330 EDM RESUMES WORK, ADDING ACM
 SIGNAGE TO FENCED AREAS AT SM#1.
 1430 EDM BEGINS DEMOS FOR EPA
 TRAILERS AND HEAVY EQUIPMENT-ABN
 1445 START OFFSITE, EDM REMAINS
 FOR DEMOS ACTIVITIES ——— ABN



Location MASON HUGHTON COUNTY MI Date 12/4/18
 Project / Client DMCM

1015 MSH (BINKLEY & MILLER) OFFSITE AT
 STAMP MILL #1 ON BEHALF OF MDED TO
 REPAIR SNOW FENCE THAT HAS FALLEN.
 AN ADDITIONAL STAKE IS DRIVEN INTO
 GROUND, SNOW FENCE ATTACHED W/
 ZIP TIES TO SECURE. SNOW FENCE IS
 ATTACHED W/ ZIP TIES IN THREE OTHER
 PLACES TO RESOLVE FALLING FENCE.
 1045 MSH OFFSITE



Location MASON, HAMILTON COUNTY Date 5/14/19Project / Client QMCMI

0705 MSA-REM (EPA START) ONSITE AT WORK SITE ON EAST SIDE OF MI-26, ALREADY ONSITE TYRONNE (EQM) —
 WEATHER ~53°F SUNNY, CALM WINDS
 ERIC BOWMAN, AND FOUR EQM PERSONS
 INCLUDING TAMMY, JEFF, PUTT, BEATRICE
 ONSITE ~0718^{AM} EPA TERRY STILLMAN
 ~0710. — AM

0720 MORNING HHS MEETING HELD, TOPICS:
 TRAFFIC SAFETY PULLING IN/OUT OF SM#1&2
 LEAD/ASBESTOS HAZARDS, PLAN FOR WEEK,
 MOB EQUIPMENT, SIGNAGE DELIVERIES FOR
 ROAD CLOSURE. LOAD STOCKPILED MATERIAL
 FROM SM#1 STAGING. START CONSOLIDATING
 ASBESTOS AND LEAD DEBRIS AT SM#2

0735 MORNING HHS MEETING ENDS —
 0800 COMPLETES SITE WALK W/ ERIC (EQM),
 TAMMY, AND JEFF (EQM) TO ASSESS
 WHAT REMAINS, BRING TAMMY/JEFF UP
 TO SPEED ON BUILDINGS, REMOVAL,
 STRATEGY FOR ACCESS. — AM

0930 EQM MOBS TO STAMPMILL#1 TO SET
 UP BEST AREA VIEWWASH WINDSOCK — AM
 0945 START-REM COMPLETES QUALITY CHECK
 ON BRUNNER FITM XRF GUN — AM

Location MASON, HAMILTON COUNTY Date 5/14/19Project / Client QMCMI

1100 EQM MOBS SKID STEER, FRONTLOADER
 MINIEXCAVATOR TO STAMPMILL#1 — AM
 1145 EQM OFFSITE FOR LUNCH — AM
 1200 START-REM OFFSITE — AM
 *BACKNOTE- EPA STILLMAN OFFSITE
 PRIOR TO 1200 — AM
 1300 START-REM ONSITE AT SM#1,
 EQM PERSONS AT STAMPMILL#2
 TO ASSESS CLEARANCE, MATERIAL
 TO BE REMOVED. START REM TO
 SM#2. START REM MARKS ASBESTOS
 MATERIAL TO BE REMOVED AT POWER
 HOUSE, INCLUDES TSI ON FLOOR,
 BLACK/WHITE WOVEN FABRIC OUTSIDE,
 AREAS OF TSI AT POWERHOUSE
 DOORS. POTENTIAL FIRE DOOR (SMILM
 TO FIRE DOOR POSITIVE FOR REM, UNABLE
 TO LOCATE FROM FLOORING) ON
 NORTH SIDE OF POWERHOUSE AND
 TSI FROM PIPE OVERHEAD ON WEST
 SIDE. — AM

1400 EQM REGINS WIDEN TRAIL UP
 TO POWERHOUSE BY TAKING DOWN TREES
 MOVING THEM TO THE SIDE USING

Site in the Rain

Location MASON, HUGGINTON COUNTY Date 5/19/19

Project / Client OMCM

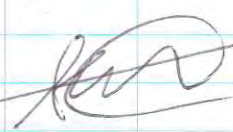
MINE EXCAVATOR, SKIP STEER AND CHAIN SAW. EDW CONTINUES ALONG RAILROAD GRADE TO SM#2. ——— AM

1500 START REMARKS ASBESTOS ON HILLSIDE OF SM#2. EDW CONTINUES WIDEN PATH FOR REMOVAL, SECURES SINK HOLE ON SOUTH SIDE W FENCE POSTS^{on} AND SNOW FENCE. EDW USES SKIP STEER TO LEVEL PATH FROM ROAD TO POWERHOUSE THEN TO SM#2.

1645 EOM MOBS EQUIPMENT BACK TO SM#1 FOR NIGHT. SITE CLEANING AFTERNOON WORK PLAN MEETING IS HELD. TRUCKS WILL BE ON SITE NOTIS FOR STOCKPILE LOADING, DISCUSSED CONSOLIDATING SM#2 AND PLAN FOR PREDICTED RAINY DAYS TH/SA ON THIS WEEK. ——— AM

1740 EOM OFFSITE. ——— AM

1745 EPA STILLMAN OFFSITE. START AM BELWICK GATE. OFFSITE



Location MASON, HUGGINTON COUNTY Date 5/15/19

Project / Client OMCM

0645 START MILLER ON SITE. EOM USES A FURBATH ON SITE. WEATHER ~44°F, TOXAM, WINDS CALM. ——— AM
EDW MOVING HAS MEETING, SCOPE OF WORK FOR S/S: LOAD OUT STOCKPILE MATERIAL FROM SM#1, CONTINUE CLEARING ACCESS TO POWERHOUSE & SM#2, BEGIN CONSOLIDATING LEAD DEBRIS/MATERIAL AT SM#2. 015 EOM MOBS TO SM#1 FOR TRUCK TRANSPORT/Hauling. ——— AM

0730 START MILLER RC CHECKS/CALS XRF - SOIL MODE. ON SITE AT SM#2 TO DELINEATE/REMARK LEAD REMOVAL AREAS. ——— AM

0930 THREE TRUCKS HAVE BEEN LOADED AND LEFT FOR DISPOSAL OF STOCKPILE MATERIAL FROM SM#1. TRUCKS WILL TURN FOR ANOTHER TRIP FOLLOWING DISPOSAL IN ONTARIO REGION. ——— AM

0945 EOM CONTINUES WIDENING/ "BRAVBING" PATH TO POWERHOUSE & SM#2. START MILLER CONTINUES SCREENING/

Rate in the Rain

REMARKS AT SM#2. ——— AM
 1100 THREE MORE TRUCKS HAVE BEEN LOADED
 W/ MATERIAL FROM STOCKPILE AT SM#1 FOR
 DISPOSAL ——— AM
 1130 START MILLER SPEAKS W/ DEPER
 BRADWAY OF BRADWAY ENTERPRISES ~~AM~~
 AT GATE. HE STATES HE HAS ENTERED AND
 A PURCHASE AGREEMENT TO BUY PROPERTY
 QUESTIONS WORK BEING DONE, EXISTING MUDS
 ON SITE. START MILLER STATES HIS INFO
 WILL BE PASSED TO OSC KAM. HE IS
 INVITED TO AWW OPEN HOUSE NEXT WEEK.
 1145 START MILLER OFFSITE, EDM OFFSITE —
~~1150~~ START MILLER ONSITE, EDM OFFSITE
 EPA OFFSITE ——— AM
 1245 EDM ONSITE, ——— AM
 1300 TRUCKS ARRIVING, EDM LOADS 2 MORE
 TRUCKS W/ MATERIAL FROM STOCKPILE — AM
 1330 START MILLER CONTINUES REMARKING
 LOAD REMOVAL AREA AT SM#2
 1500 EDM MOBS WATER TANK, EQUIPMENT TO
 SM#2 TO BEGIN ASBESTOS CONSOLIDATION
 FILLS WATER POLY FROM DITCH, PLACES AT
 POWERHOUSE ——— AM

1615 DAN RODAN - WASTE MANAGEMENT
 INSIDE NEAR STAMP MILL #1, SIGNS IN
 AT TRAILER, RETURNS TO WORK AREA.
 SPOKE WITH CRIC BOWMAN - EDM
 ABOUT WASTE TRANSPORT, QUANTITY
 YET TO BE CONSOLIDATED ——— AM
 1645 DAN - WM OFFSITE ——— AM
 1720 AFTERNOON WORK MEETING. WARC
 CONTINUES ON PATH CLEARING, NINE
 TRUCK LOADS OF MATERIAL (WITZTONS)
 WERE HAULED OFFSITE. ONE TRUCK
 AND APPROX. THREE LOADS ARE
 ANTICIPATED ON 5/16. CRAWLER
 CARRIERS / TWO ADDITIONAL LABORERS
 WILL BE MOBBING 5/16. IF POOR
 WEATHER, POWERHOUSE WORK WILL
 BEGIN. IF BETTER WEATHER: CONSOLIDATION
 OF AWM AT SM#2 WILL BEGIN. —
 1730 ALL PERSONS OFFSITE, GATE
 SECURED ——— AM

7 AM SOUTH
5/16/19

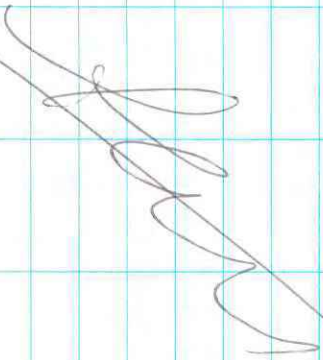
0650 START MILLER ONSITE, EDM (SIX PERSONS)
USEPA (STILLMAN) ACHIEVING ONSITE — AM
0700 MORNING HIS MEETING TOPIC HYPOTHEMIA. SCOPE OF WORK FOR 5/16 INCLUDES
LOADING OF STOCKPILED MATERIAL, LAY SWAMP
MATS ACROSS DITCH, BEGIN SCRAPING POWER
HOUSE LEAD. ASBESTOS WORK ON HOLD FOR
PERSONAL AIR MONITOR ACHIEVING. — AM
WEATHER - 38° RAINY, CLOUDY, WIND
E@ 4 MPH. RAIN TO PASS BY MID MORNING.
0715 END MORNING MEETING, EDM MOBS
TO SMH1 FOR TRUCK LOADING — AM
0730 FIRST TRUCK LOAD OF DM OFFSITE — AM
0800 EDM MOBS TO SMH2, BEGINS
SCRAPPING LEAD MATERIAL FROM FLOOR,
INCLUDES DEBRIS & NON-FRAGILE ~~ASBESTOS~~ ^{ACM}
ACM. START MILLER XREFS AREAS AFTER
SCRAPPING TO VERIFY. EDM USES ~~HAND~~ ^{MINI} ~~ACM~~
MINI EXCAVATOR TO SCRAP, SKID STEER TO
MOVE MATERIAL TO SOUTH CORNER, ONE
LABORER USES SHOVEL TO CLEAN OUT AROUND
CONCRETE PILLARS/STUMPS. — AM
1045 - EDM TO SMH1 TO LOAD 2ND TRUCK
LOAD OF STOCKPILE MATERIAL — AM

7 AM SOUTH
5/16/19

1100 START MILLER OFFSITE —
1200 START MILLER ONSITE, EDM &
SHORTLY AFTER, MOB EQUIPMENT AT
BE EDM BEGINS CONSOLIDATING LEAD
MATERIAL AT STAMP MILL #2 FOR
DISPOSAL. EDM USES THE MINI EXCAVATOR
HAND SHOVEL TO SCRAP, MOVE MATERIAL
STARTING IN THE NORTH CORNER. THE
SKID STEER IS PILING MATERIAL AT
SOUTH CORNER FOR TRANSPORT BACK TO
START MILLER SCREENS SOIL FOLLOW
SCRAPPING. —
1400 START MILLER SPEAKS W/ NEIL
MARLETTA - ADJACENT PROPERTY OWNER
THE NORTHEAST - IS TOLD AREA IS
ACTIVE WORK ZONE —
1500 JEFF BINKLEY ^{WISG} ^{NSH} ONSITE AT STAMP MILL
#2 TO OBSERVE WORK. EDM TALKS
KINGEL, ERIC BOWMAN ONSITE —
1545 JEFF BINKLEY - WISG OFFSITE —
1600 EDM CONTINUES CONSOLIDATION
AT STAMP MILL #2 —
1645 AFTERNOON WORK PLAN MEETING
WORK ON. 5/17 WILL INCLUDE CONTINUED

Location MASON, Houghton County Date 5/16/19Project / Client ARCAD

SAMPLES OF SMTH, DELIVERY OF CERUCC
 CRIBES, WEATHER CONTINUED, PUN
 INUUDS SCARPING OF POWERHOUSE
 1730 ML PARTIES OFF SITE, FATE
 SECURED.



THURSDAY

Location MASON, Houghton County Date 5/17/19Project / Client ARCAD

DISC STRUCTURE AVISIT, ERM
 PERSONAL VISIT ALREADY. — AN
 WEATHER: 35°F SUNDAY CLOUDS
 DDD MODERATE HAS WEATHER, TDDIS
 INUUD SLIPS, TRIPS, FALLS, PROPER
 CERTIFICATION DOCUMENTATION. — NOW
 GOVE DRILLER ERM 5/17/19 — CONTINUE
 CONSOLIDATION LEAD MATERIAL AT
 STORMMILL #2, ERM WITH CONSIST
 A "REINDE" AT DITCH CROSSING AT
 GROUNDLINE WITH PATH TO POWERHOUSE
 SMTH ACCESS TO CUT DIVISION AND.
 CROTHUR CRIBES, POTENTIALLY
 DELIVERED TODAY. ERM HAS NO
 ADDITIONAL LABELES AVISIT — AN
 DDD ERM MOVS TO SMTH, WEATHER
 ERM —
 ERM CAN CONTINUE CONSOLIDATION
 LEAD MATERIAL AT SMTH USING MARY
 EXAMINATION, INUUD STRENGTH, STREPLE
 TEMPERATURE REMAINS AT SMTH
 CORNER OF SMTH. STREPLE-WEATHER
 SECTIONS REMAIN MEANS OF XRF
 AS MORE CONTINUES. SCHEDULE

ARCAD

Location MASON, Houghton County Date 5/17/19Project / Client QRCM

CRITERIA IS 900PPM PER EPA-OSL
XRF. ———— AM

1045 EDM CONTINUES SCRAPING / CLEANSING
OVT TRENCHES AT SM#2. START-MILLER
CONTINUES SCREENING W/ XRF ———— AM

1200 START-MILLER OFFSITE ———— AM

1300 START-MILLER ONSITE, EDM ONSITE — AM

1315 EDM MOBS TO SM#2, CONTINUES
SCRAPING LEAD IMPACTED MATERIAL, EDM
USES MINI EXCAVATOR, HAND SHOVELING TO
SCRAP, CLEAN TRENCHES, MATERIAL IS
STOCKPILED FOR T4D. START MILLER CONTINUES
TO MARK / REMARK REMOVAL AREAS THAT
ARE SCREENED W/ XRF AND ABOVE 900PPM.
AREAS SCRAPPED ARE CHECKED BY START-
MILLER W/ XRF FOR CLEARANCE BELOW
900 ppm. ———— AM

1600 EDM SCRAPES TRENCH NEAR STOCKPILE,
CLEARED FOR LEAD, A GREEN MISTARD,
PURPLE, BLUE VARIOUS MATERIAL IS OBSERVED
AT BOTTOM OF TRENCH. MATERIAL PULLED FROM
TRENCH IS SEPARATED, EDM - BOWMAN NOTIFIED.

1730 CRAWLER CARRIERS ARE DELIVERED,
EDM REMAINS ONSITE TO UNLOAD ———— AM
1730 START-MILLER OFFSITE ———— AM

Location MASON, Houghton County Date 5/18/19Project / Client QRCM

0650 START-MILLER ONSITE AT WORK
TRAILERS, EDM ALREADY ONSITE — AM
WEATHER: ~42°F, CLOUDY, WIND SE
1 mph, OVERCAST. RAIN EXPECTED
THROUGHOUT THE DAY ———— AM

0700 MORNING MEETING STOPK:
EQUIPMENT SAFETY, PROPER PLACEMENT
OF TOOLS. SCOPE OF WORK FOR 5/18/19:
CONTINUE AT SM#2 CONSOLIDATING,
AND SCRAPING LEAD MATERIAL,
SWAMP MAT / BRIDGE WILL BE LAD
ACROSS DITCH, IF RAIN PERSISTS
AND IS HEAVY, WORK IN POWERHOUSE
WILL BEGIN. ———— AM

0715 MORNING MEETING ENDS — AM
0800 EDM MOBS TO SITE TO MOVE
SWAMP MAT / BRIDGE FOR INSTALLATION
0900 EDM WORKS TO INSTALL
TIMBER BRIDGE ACROSS DITCH FROM
M-26 SHOULDER AREA TO NEAR ENTRANCE
OF PATH TO POWERHOUSE TO FACILITATE
TRANSFER OF CONTAMINATED MATERIAL
TO STOCK PILE LOCATION AT SM#1 — AM
0930 START-MILLER COMPLETES

Rite in the Rain

Location MASON, HOUGHTON COUNTY Date 5/17/19Project / Client QMCAL

COLLECTION OF MATERIAL OBSERVED IN
TRENCH ON 5/17/19. CLORIN-SOIL SCREENING
TEST FOR PCBs SHOWS PURPLE, INDICATING
PCBs ARE POTENTIALLY PRESENT <50PPM.
EDM-BOWMAN IS NOTIFIED, WILL REPORT
TO OSC WHEN INSIDE FORM. — AM
1100 EDM CONTINUES WORKING TO REMOVE
TIMBER BRIDGE ACROSS DITCH. — AM
1200 EDM OFFSITE — AM
1300 EDM ONSITE AND MOBILIZING TO
POWERHOUSE TO BEGIN SCRAPING LEAD
MATERIAL. THE SKID STEER IS USED TO
SCRAP WHERE ACCESSIBLE. EDM USES
HAND SHOVELS TO SCRAP MATERIAL,
ADDING AWM MARKED ON FLOOR.
EDM TRANSPORTS MATERIAL TO SMH2
FOR CONSOLIDATION w/ OTHER MATERIAL.
1515 EDM COMPLETES WORK AT POWERHOUSE
DUE TO COLD (RAIN, ENOUGH) TRACKS ARE
MUDDY. BEGINS CLEAN UP. SMH1 SCRAP
1530 EDM + STRET-MILLER OFFSITE

Location MASON, HOUGHTON COUNTY Date 5/20/19Project / Client QMCAL

0600 STRET MILLER ONSITE AT TRAILERS.
EDM ALREADY INSIDE. WEATHER - 41°F
OVERCAST, NO PRECIP, WINDS NW 3 mph
0700 MORNING HCS MEETING, EDM
REMINDS WORKERS TO WATCH SLICK
SURFACES, ESPECIALLY WHILE WEARING
PPE BOOTS. SCOPE OF WORK FOR SKID-
STEER WORK WILL CONTINUE AT SMH2.
THE POWERHOUSE WILL BE REVISITED ^{then} ~~while~~
WHEN RAIN IS PREDICTED WATER ON
IN THE WEEK. — AM
0715 END MORNING MEETING — AM
0730 EDM MOBS TO SMH1 TO COMPLETE
TIMBER BRIDGE INSTALL ACROSS DITCH
AT ENTRANCE TO PATH TO POWERHOUSE.
0900 EDM COMPLETES TIMBER BRIDGE
MOBS TO SMH2 TO CONTINUE SCRAPING
CONSOLIDATING LEAD MATERIAL.
EDM USES MINI EXCAVATOR, SKID STEER
AND THREE LABORERS TO MOVE LEAD
MATERIAL TO SOUTH CORNER STOCKPILE.
STRET MILLER XRFs MATERIAL LEFT
IN PLACE TO VERIFY <900PPM. — AM
1100 EDM OFFSITE FOR WINTER. — AM

Rite in the Rain

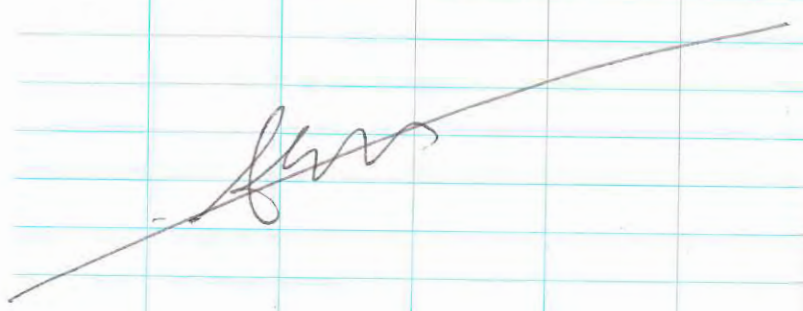
1300 EDM ALREADY ONSITE, MOVING TO SM#2 ——— AM

135 EDM USES HAND SHOVELS TO REMOVE LEAD MATERIAL FROM WOODED HILLSIDE (MDEB SAMPLE QMCM-RPM04). MATERIAL IS STOCKPILED W/ OTHER LEAD DEBRIS FROM SM#2.

1400 EDM CONTINUES SCRAPING TRENCHES) CONCRETE AT SM#2. NEAR CENTER OF CONCRETE PAD. MATERIAL STOCKPILED AT SM#2. START MILLER XREFS AS WORK PROGRESSES TO DETERMINE LIMITS. ——— AM

1700 EDM BEGINS CLEAN UP FOR PAD. MATERIAL FROM MDEB QMCM-RPM05 REMAINS FOR SEPARATE CONTAINERIZING

1730 EDM, START OFFSITE FROM WORK TRAILERS SITE SECURED ——— AM



0650 START MILLER ONSITE AT WORK TRAILERS. EDM ALREADY ONSITE — AM
0700 MORNING HAS MEETING TOPIC INCLUDES WORKING W/ ASBESTOS — PROPER WETTING METHODS. SCOPE OF WORKER SIZING — CONSOLIDATE ACM MATERIAL FROM SM#2 ALL FEASIBLE FROM ON HILLSIDE, AND SCATTERED THROUGH SM#2. COMPLETE UPPER PORTION OF LEAD DEBRIS CONSOLIDATION AT SM#2. CONTINUE ON LOWER PORTION OF LEAD MATERIAL PICK UP. START WILL COLLECT SAMPLE OF LEAD MATERIAL FOR ANALYSIS AT LAB. WEATHER — 48°F SUNNY, CLEAR. WINDS ARE CALM — AM
0725 START MILLER CALIBRATES PERSONAL PUMPS FOR EDM, EDM MOVES TO SM#2.
0800 EDM ONSITE AT SM#2, CONTINUES TO REMOVE / STOCKPILE LEAD MATERIAL AT SOUTH END OF HILL. ——— AM
0900 OSCERA IZELL ONSITE W/ EDM BOWMAN AND ENGEL FOR SIDEWALK.
0915 EDM CONTINUES SCRAPING LEAD MATERIAL. START MILLER SET^{AM} XREFS

AS WORK PROGRESSES. EDM BEGINS TO CONTAINERIZE AREA AROUND DEQ QMCM-RPMOS. (YELLOW/MUSTARD FLAKY CRACK MATERIAL) EDM START MILLER CALIBRATES MULTIRAE TO SCREEN FOR VOCs. EDM SETS UP FOR RPM WETTING AND STOCKPILING ON HILLSIDE OF SM#2. ADDITIONAL 55-GALLON DRUMS ONSITE FOR QMCM-RPMOS MATERIAL - AM 1030 EDM WETS ACM MATERIAL ON HILLSIDE AT SM#2. DRUMS MATERIAL SAMPLED AS QMCM-RPMOS. START MILLER SURVEYS FOR VOCs w/ MULTIRAE AS MATERIAL IS CONTAINERIZED. EDM SPOT CHECKS CONCRETE FOUNDATION AREA OF SM#2 FOR LEAD MATERIAL. ——— AM 1045 EDM-TENGEL AND START-MILLER COLLECT SAMPLE QMCM-SPRAMP MILLER-05212019 FOR ANALYSIS OF WASTE FOR T & D ——— AM 1100 EDM BREAKS FOR LUNCH ——— AM 1200 EDM ONSITE MOVING TO SM#2. EDM CONTINUES SCRAPING w/ SHOVELS TO CLEAN CONCRETE FOUNDATION OF LEAD MATERIAL. MINOR EXCAVATION IS USED TO REMOVE ACM MATERIAL FROM NW

CORNER OF SM#2. PERSON-EDM IS WETTING AS EXCAVATOR IS USED TO SCRAP. ACM IS BEING STOCKPILED ON CONCRETE FOUNDATION OF SM#2. 1445 EDM COMPLETES ACM CONSOLIDATION AND LEAD SCRAPING OF CONCRETE FOUNDATION. EDM BEGINS DIGGING BLACK SOLID PEBBLE MATERIAL FROM EAST SIDE OF SM#2 FOUNDATION. START MILLER XRFs COMPLETED LOCATIONS. CLEARS LOCATIONS VISIBLY FOR MATERIAL. XRF SCREENING OF BLACK SOLID MATERIAL IS BETWEEN 1100-1300ppm. 1530 AFTERNOON WORK MEETING: EDM REVIEWS PROGRESS. START-MILLER ESTIMATES SM#2 IS ~70% COMPLETE. START GIVES EDM ITEMIZED LIST OF MATERIAL/ITEMS TO BE COMPLETED PER SITE ASSESSMENT REPORTS. EDM/START VISUALLY INSPECTS WOOD LINED PITS FOR BLACK CAULKING. 1615 START-MILLER REPORTS BACK TO SM#2. VISUALLY INSPECTS TOP PORTION OF SM#2 FOR BLACK

LOAD MATERIAL CARS TOP PORTION.
 1630 EDM BARR/START MILLER COMPLETE
 SITE WALK OF BOTTOM PORTION OF SH#2.
 1645 EDM COVERS LEAD STOCKPILE AND ACM
 STOCKPILE AT SMH#2. LEAVES SITE - AM
~~1915~~ SMH#1 SITE DECON AREA SECURED - AM
 1730 EDM, START OFFSITE GATE SECURED
 & BACKNOTE: EPA KENNY DEFSITE AT 1600.

[Handwritten signature/initials]

0650 START MILLER ONSITE, EPA. EDM
 ON SITE AT WORK NEARLY PRIOR.
 WEATHER ~45°F RAIN, OVERCAST
 WINDS CALM. — AM
 0700 MORNING HAS MEETING: THUNDER-
 STORMS ARE PREDICTED FOR THE NEXT
 FEW DAYS, IF LIGHTNING/THUNDER OCCURS
 CREW SHOULD HEAD TO TRUCK "SCOPE"
 OF WORK FOR 5/22 - CONTINUE WORK
 ON SCRAPING POWERHOUSE FLOODIC
 FOR ACM & LEAD, FOLLOWED BY
 BOTTOM PORTION OF SMH#2. — AM
 0730 EDM MOVS. TO SMH#1, THEN
 TO SMH#2. BEGINS FILLING TANK
 FOR ACM WETTING. — AM
 0800 EDM CONTINUES SCRAPING ACM
 MATERIAL AT POWERHOUSE. ACM DEBRIS
 IS TAKEN TO STOCKPILE AT SMH#2
 FOR CONSOLIDATION WITH ADDITIONAL
 MATERIAL FROM SMH#2. EDM USES
 HANDSHOVELS TO SCOW MATERIAL INTO
 SKIPSTOCK. MINIECAVATOR IS USED TO
 SCOOP/SCRAP ACM OBSERVED OUTSIDE
 OF POWERHOUSE ON EAST SIDE OF

BUILDING. START MILLER CHECKS AREA FOR ACM FOLLOWING REMOVAL. — AM
ADDITIONAL LEAD MATERIAL IS REMOVED FROM POWERHOUSE. START MILLER XRF'S LOCATIONS IN CONCRETE W/ DIVETS FOR ADDITIONAL REMOVAL. EDM CONTINUES REMOVING WETTED ACM FROM 3 INCH TRENCH AND UNDER/AROUND CONCRETE SLAB. — AM

1230 EDM BREAKS FOR LUNCH. — AM

1330 EDM BACK ON SITE, MOVING TO POWERHOUSE TO COMPLETE SCRAPING FLOOR OF CONCRETE.

1400 CONCRETE SLAB IS MOVED. TRENCH NEAR NORTH DOOR IS CLEANED OUT. ADDITIONAL ACM OUTSIDE POWERHOUSE IS REMOVED STOCKPILED AT ~~SMH1~~ SMH2. START VISUALLY CLEARS POWERHOUSE OF ACM MATERIAL.

1500 EDM CONTINUES PICKING UP BLACK SOLID MATERIAL AT SMH2. START MILLER VISUALLY SURVEYS AREA FOR ADDITIONAL MATERIAL. XRF'S CLEARED AREAS AS EDM DIGS OUT/PICKS UP LEAD MATERIAL. EDM OPERATORS USE FILL MATERIAL FROM SMH2 TO FILL IN HOLE NEAR POWERHOUSE

WHERE ACM MATERIAL WAS DUG UP. 1630 AFTERNOON WORK ORDER MEETING: SUSPECT PCB MATERIAL WILL BE SAMPLED. SCOPE OF WORK FOR 5/23/19 INCLUDES TRAFFIC CONTROLS AND MOVING MATERIAL TO SMH1 FOR STOCKPILING. START MILLER PROVIDES EDM W/ LIST OF ITEMS TO BE DONE BASED ON INVENTORIES/REMOVAL ASSESSMENT. — AM

1700 EPA KEM OFF SITE. EDM SECURING STOCKPILES AT SMH2 BY IMC PILING PILES. SMH1 SECURED. — AM

1730 EDM START OFF SITE GATE SECURED. — AM

0650 START MILLER ONSITE, EXIT EDWARDS SITE PRIOR. WEATHER 53°F SUNNY, WINDS NORTH AT 3 MPH. — AM

0700 MORNING HTS MEETING TOPIC:

WORKING NEAR ROADWAY. SCOPE OF WORK FOR 5/23/19 - BEGIN MOVING STOCKPILED MATERIAL FROM SM#2 TO SM#1, CLOSE SHOULDER OF M-26 TO FACILITATE CRAWLER CARRIERS MOVING TO SM#1. START WILL SAMPLE SUSPECT PCB MATERIAL, XRF AS MATERIAL IS SCRAPED FROM STOCK AREA AT SM#2. — AM

0720 END MEETING, EDM MOBS TO SM#1, BEGINS MOVING SIGNS FOR ROAD SHOULDER CLOSURE. — AM

0845 START MILLER COLLECTS QMCM-STAMP MILLOZ TRENCH-052319 SAMPLE OF SUSPECT PCB MATERIAL IN TRENCH. — AM

0900 START MILLER, EPARKLEY, EDM BOWMAN COMPLETE SIDE WALK OF REMAINING ITEMS ON EAST SIDE OF M-26, TO CORAL SILCO. EDM WILL SCRAP GRAY MASTIC, W/ POTENTIAL TO ENCAPSULATE.

0910 START MILLER COLLECTS GPS OF QMCM-STAMP MILLOZ TRENCH-052319

0915 EDM BEGINS LOADING CRAWLER CARRIERS WITH MATERIAL FROM SM#2 USING MINI EXCAVATOR. CRAWLER CARRIES TRANSPORT MATERIAL TO SM#1. SKID STEER IS BEING USED TO SMOOTH PATH OF TRACKS AS WORK PROGRESSES. — AM

1000 START MILLER REMARKS ITEMS TO BE REMOVED FROM DUMP AREA - ACM WOVEN TUBING AND RESIDUAL DRUM MATERIAL LEFT FROM IDER QMCM-DMOZ THAT WAS PULLED IN FAIL. START MILLER REMOVES FLAGGING/TAPING FROM LOCATIONS THAT HAVE BEEN COMPLETED. — AM

1115 START MILLER COLLECTS SAMPLE QMCM-STAMP MILLOZ TRENCH-052319 FROM CONTAINERIZED MATERIAL FROM SM#2 WILL SUBMIT TUBES FOR TOXIC METALS. EDM TENDER ASSISTS W/ SAMPLING. — AM

1130 EDM OFFSITE FOR LUNCH — AM
1230 EDM ONSITE MOVING TO SM#1 TO CONTINUE^{AM} MOVING LEAD MATERIAL

Location MASON HONOLULU COUNTY Date 5/23/19
Project / Client DMCM

TO SM#1 FROM SM#2. ———— AM
1500 START MILLER XRF EASTSIDE OF
RECIPIENT TAIL ADDITIONAL SCRAPPING
WHERE LEAD MATERIAL WAS UNDER WATER
DURING FALL MOD. START MILLER
REMOVES PILES FROM COLLECTED
DRUM LOCATIONS SOUTH OF REC PLANT,
REMARKS OLUMS (2) FOR REMOVAL
1545 EDM CONTINUES TO MOVE LEAD
MATERIAL FROM SM#2 TO SM#1. ———— PM
1630 AFTERNOON WORK PLAN MEETING INCLUDES
ITEMS TO DEMOB (EQUIPMENT), HAZCAT
DRUMS, SCRAPPING REC PLANT. SCOPE OF
WORK FOR 5/24/19 INCLUDES COMPLETION
OF MATERIAL REMOVAL FROM SM#2,
DEMOLISHING TRAFFIC CONTROLS, DISASSEMBLY
OF BRIDGE.

1700 START MILLER TO SM#2, SCRAPPING & XRF
TO CLEAR STOCKPILE LOCATION WILL OCCUR 5/24/19.
EDM COVERING STOCKPILE REMAINING, SWEEPING
MUD/DIRT TRACKED ONTO SHOULDER BACK OFF
ROAD. ———— PM

1730 EDM, START MILLER OFFSITE, GATE SECURED
BACKSITE: UPA KLM OFFSITE AT 1700. ———— PM

per

Location MASON, HONOLULU COUNTY Date 5/24/19
Project / Client DMCM

0650 START MILLER ONSTE. EPA KELLY
AND EDM ONSITE AT WICK TRAILERS.
WEATHER: 47° OVERCAST LIGHT RAIN
WINDS CALM. ———— AM
0700 MORNING HES MEETING, SCOPE
OF WORK FOR 5/24/19: COMPLETE REMOVAL
OF ARM DEBRIS PILE FROM SM#2, TRICE
ONT BRIDGE, REMOVE TRAFFIC CONTROL
SIGNAGE. ———— PM
0715 END MORNING MEETING, EDM
MOBS TO SM#1 THEN TO SM#2.
0730 START MILLER XRF SCREENS
SOIL LEFT WHERE STOCKPILE WAS
LOCATED AT SOUTH END OF SM#2.
SOIL LEFT WAS SCREENED AND <900 ppm.
0845 EDM REMOVES ADDITIONAL SOIL
FROM TRENCH WHERE SUSPECT PCB
MATERIAL WAS OBSERVED. SIMILAR
MATERIAL IS OBSERVED WHERE
LEAD IS REMOVED SOUTH IN TRENCH.
EDM-BOWMAN NOTIFIED OF OBSERVATION.
SAMPLE RESULTS FROM LABS EXPECTED
WEDNESDAY.
0900 EDM DOUBLE PLASTIC BAGS

Rite in the Rain

MATERIAL SEGMENTED THAT WOULD BE SUSPECT PCB MATERIAL.

0930 EAM LOADS CRAWLER CARRIERS W/ ACM MATERIAL, STOPPED AT SM#2 UNTIL IT CAN BE LOADED FOR TRANSPORT. — AM

1000 ACM MATERIAL HAS BEEN FULLY REMOVED FROM SM#2. EAM REMOVES TAPE AROUND AREA. — AM

1100 EAM BREAKS FOR LUNCH — AM

1145 EAM UNSITE, MOBS TO SM#1

1230 EAM REMOVES BRIDGE/SWAMP MAT ACROSS BRIDGE. BRIDGE IS CUT UP FOR DISPOSAL/WASTE MATERIAL.

1330 EAM RAKES, SMOOTHS DITCH AREA WHERE BRIDGE WAS SET. ROAD SIDE IS SWEEP OF MUD/DIRT DEBRIS. — AM

1430 START-MILLER TAKES DOWN/COLLECTS LEFT OVER FLASHING ON WEST SIDE OF M-26. IDENTIFIES LOCATION NEAR NORTH CORNER OF SM#1 (PREVIOUSLY UNKNOWN)

W/ SIMILAR ACM OBSERVED AT SM#1 SM#2 AND POWERHOUSE. SECOND LOCATION IS OBSERVED IN STREAM WASHOUT (OBVIOUSLY FIREHOUSE DEBRIS THAT

WAS UNABLE TO BE LOCATED PREVIOUSLY. EAM IS NOTIFIED OF ADDITIONAL MATERIAL FOR PICK UP. — AM

1445 EAM REMOVES TRAFFIC CONTROL SIGNAGE ALONG M-26. — AM

1530 EAM DECKS CRAWLER CARRIERS FOR RENTAL RETURN. — AM

1630 AFTER NOON WORK PLAN MEETING: WORK FOR 5/25 INCLUDES LOADING ACM TO ROLL OFF BOX, COLLECTION OF DRUMS, HAZCHDRUMS AND SCRAP REMAINING MATERIAL AT RECDPLANT.

1700 EPA KELLUM OFFSITE. — AM

1710 EAM WORKS TO SECURE SM#1 AREA. — AM

1730 START, EAM OFFSITE, GATE SECURED

0600 START-MILLER ON SITE AT WORK
TERRIERS. EDM ON SITE PRIOR. WEATHER
MOSTLY CLOUDY, 25°F, WINDS ARE CALM.
0700 MORNING HAS MEETING TOPIC: SAFETY
WHILE HAZARDING DRUMS. SCOPE OF WORK
FOR 5/25/19 - LOAD ACM INTO ROLLOFF
SCRAP REC PLANT FOR ADDITIONAL
LAND. COLLECT DRUMS SOUTHWEST OF
REC PLANT. COLLECT ACM FROM DUMP
AREA AND WASHOUT FROM CREEK ON
WEST SIDE OF M-26. ——— AM

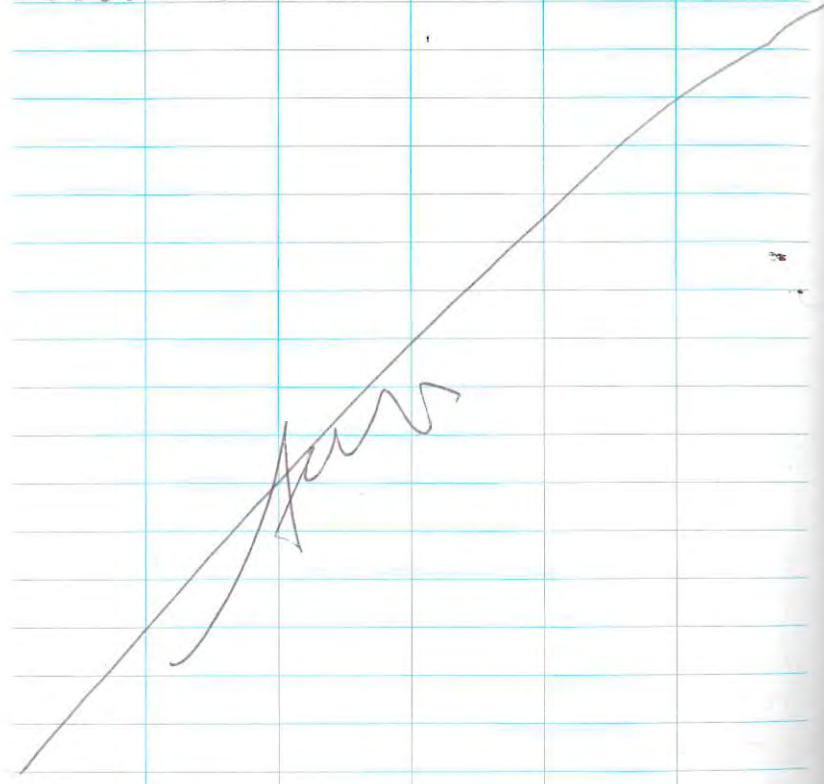
0750 END MORNING MEETING ——— AM
0730 EDM MOBS TO SMITH. BEGINS LOADING
ACM MATERIAL TO LINED ROLLOFF BOXES.
0800 EDM SCRAPS REC PLANT AREA TO EAST
WHERE START HAS OBTAINED LEAD SCREENING
> 900 ppm. START-MILLER CLEARS AREA
BY XRF SCREENING AS EDM REMOVES
MATERIAL. ——— AM

0915 EDM COMPLETES REC PLANT LOAD
SCRAPING. EPA KEM OFF SITE ——— AM
0930 EDM MOBS TO WOODS SOUTHWEST
OF REC PLANT FOR DRUM REMOVAL. EDM
BATHS WHITE, POTENTIALLY HAZARDOUS MATERIAL
ON GROUND AND FROM WITHIN DRUM.

EDM PULLS EMPTY FROM CARCASS
FROM LOCATION NEARBY - TWO TOTAL.
HAVE BEEN PULLED FOR DISPOSAL.
1030 EDM RETRIEVES ACM MATERIAL
WASHER USING FROM DUMP AREA.
1045 EDM DIGS OUT RESIDUAL MATERIAL
FROM DM-02 (DQ) NEAR CORN SILO
1130 START-MILLER OFF SITE TO RETRIEVE
ADDITIONAL PLASTIC SAMPLING SLIPS.
EDM REMAINS ON SITE ——— AM
1215 START-MILLER ON SITE ——— AM
1300 EDM COLLECTS SAMPLES OF
MATERIAL COLLECTED FROM 4 DRUMS
AND 3 PLASTIC BUCKETS. START-MILLER
SCREENS W/ MULTIRATE AS SAMPLES
ARE COLLECTED AT STAGING AREA
NEAR REC PLANT. TWO BUCKETS
HAVE READINGS OF 17 & 23 ppm FOR
VOCs. NO OTHER READINGS ——— AM
1400 EDM HAZCATS SAMPLES FROM
FOUR DRUMS AND THREE BUCKETS.
LIQUID IN BUCKETS APPEAR TO BE
FLAMMABLE. PH, CHLORINATION AND
COLOR, LIQUID/SOLID OBSERVED.

Location MASON INDUSTRY COUNTY Date 5/25/19Project / Client QULCM

COPIED RESULTS WILL BE PROVIDED.
 DISPOSAL TO BE DETERMINED - ALL SOLIDS
 ARE DETERMINED TO BE METAL SOLIDS,
 LIQUIDS APPEAR TO BE EITHER COMBUSTIBLE
 OR FLAMMABLE LIQUIDS ———— AM
 1500 EDM PLANS WORK ORDER FOR TUESDAY.
 CLEANS UP AROUND TRAILER. START-
 MILLER OFFSITE ———— AM


Location MASON INDUSTRY COUNTY Date 5/28/19Project / Client QULCM

0650 START-MILLER ONSITE. EPA, EDM
 PREVIOUSLY ONSITE. WEATHER 42°F,
 FOG, MISTING RAIN, WINDS 1 MPH NW.
 0700 MORNING MEETING; LADDER
 SAFETY SCOPE OF WORK FOR 5/28/19 -
 PICK UP SCATTERED ACM NEAR DREDGE.
 TWO PILES OF SUSPECT ACM IN WASH
 OUT NEAR SMH1, CUT DOWN PIPE
 W/ ACM AT POWERHOUSE, CLEAR
 GEAR PATH FOR MAN LIFT AT COAL
 SILD. EPA PLANS TO COMPLETE SITE
 WALK W/ EDM. START ———— AM
 0710 MORNING MEETING ENDS ———— AM
 0720 EDM MOBS TO FIELD NEAR
 DREDGE TO PICK UP SCATTERED
 ROOFING MATERIAL IN FIELD THAT
 START HAS MARKED ———— AM
 0800 EDM COMPLETES ACM PICKUP, MOBS
 TO SMH1, COLLECTS SUSPECT ACM
 PILES IN WASH AT AREA OF CREEK
 AND NORTH CORNER OF SMH1, POTENTIAL
 RESIDUAL ACM FROM FIREDOWN THAT
 WAS WASHED AWAY. ———— AM
 0830 EDM MOBS TO POWERHOUSE TO

Rite in the Rain

TUESDAY

REMOVE ACM FROM OVERHEAD PIPE
EDM USES LADDER TO ACCESS PIPE,
CLIPS WIRING HOLDING ACM MATERIAL
INTO DISPOSAL BAG. ——— AM

0900 EDM MOBS TO SM#2 TO CUT
TREES/BRUSH LEFT AT FOUNDATION.
TREES ARE CUT INTO LENGTHS THAT
ARE DUMPED WITHIN HOLE AT SOUTH
END OF SM#2. EDM FILLS HOLE
WITH TREE BRANCHES AND COVERS W/
CLEAN FILL. ——— AM

0930 BPA KELLY AND EDM BOWMAN,
EDM TIENHIE ON SITE FOR SITE WALK.

1000 START MILLER SCREENS SOIL USED
AS BERM AROUND STOCKPILE AREA
AT SM#1. ALL SCREENING LEVELS
BELOW 2900PPM, MOST 2 LEVEL OF
DETECTION. ——— AM

1030 EDM CUTS CHAIN IN RATE AT
NORTH END OF LAKE SHORE ESTATES FOR
ACCESS TO EAST SIDE OF M-26. BEGINS
SMOOTHING/GRADING SO MAN-LIFT
CAN BE BROUGHT IN. ——— AM

115 EDM CREATES FUEL UNCLIFF OFFSITE. ——— AM

TUESDAY

1200 EDM ON SITE, GRAVEL DELIVERED,
EDM GRADES ENTRANCE AT NORTH
GATE. ——— AM

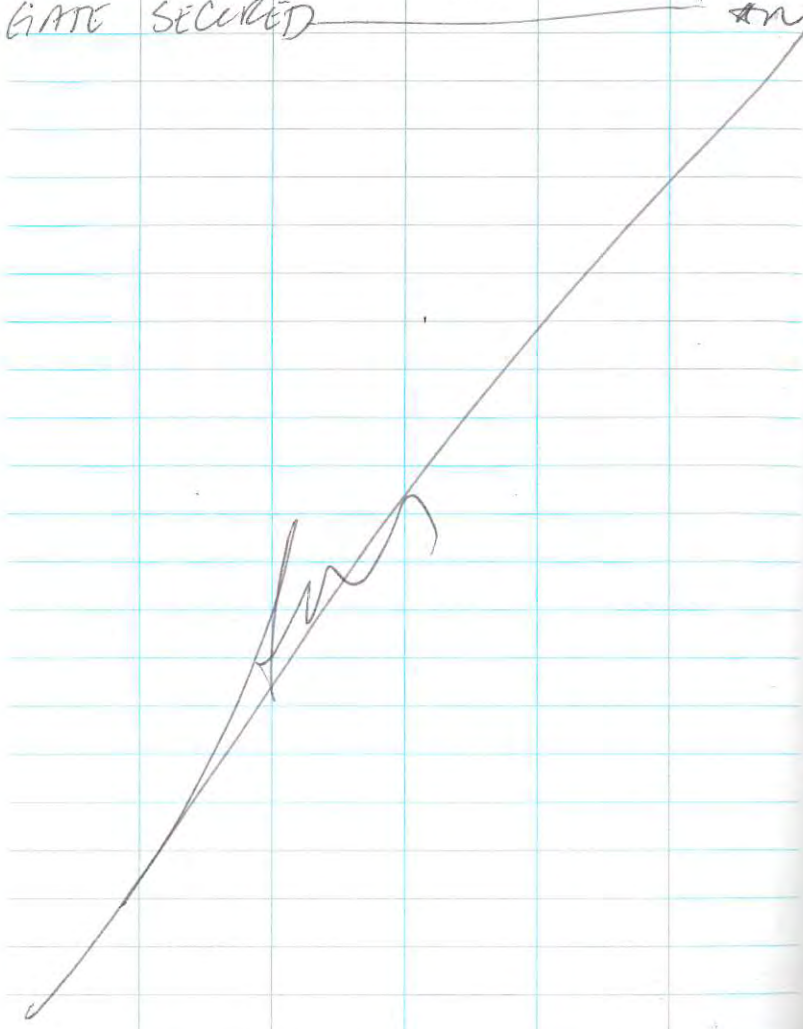
1315 EDM MEANS OUT DRUM STOCKPILE
MULCH AT WPC PLANT, DRUMS W/
SOLID MATERIAL THAT WERE HAZARDOUS
ARE CONSOLIDATED W/ LEAD STUBS
AT SM#1. LIQUIDS ARE CONSOLIDATED
AS WELL. ——— AM

1400 START MILLER COLLECTS FLAGS
FROM EAST SIDE OF M-26 WHERE
DRUMS HAVE BEEN REMOVED. — AM
1515 EDM CONSOLIDATES PILE AT
SM#1 INCLUDING DRUMS W/ SOLID
& LIQUIDS - PILE AT SM#1 WILL NEED
TREATMENT PRIOR TO TRANSPORT
AND DISPOSAL DUE TO TELL RESULTS
FOR LEAD. ——— AM

1545 AFTERNOON WORK MEETING.
DISCUSSES DEMOBING/REMOBING
DEPENDENT ON DELIVERY OF
FREEFLOW TO TREAT PILE AT SM#1
STOCKPILE AND SAMPLE RESULTS.
EDM WILL WORK 8HR DAYS NOW

Rite in the Rain

1600 EPA KELLY OFFSITE ——— AM
 1630 EDM START-MILLER OFFSITE,
 GATE SECURED ——— AM



0650 START MILLER AND EPA KELLY ONSITE
 AT WORK NEARLERS. EDM ONSITE ALREADY
 WEATHER: 55°F SUNNY, CLEAR, WINDS
 NW @ 1 MPH. ——— AM

0700 MORNING H&S MEETING TIME -
 MANLIFT SAFETY. SCOPE OF WORK FOR
 5/29/19 - SEED AREAS DISTURBED BY
 HEAVY EQUIPMENT, USE STRAW ROLLS
 NEAR ROAD. SCRAP ACWL FROM
 TANKS AT REC PLANT, CIRCUIT PATH
 FOR MANLIFT AT COAL SILO, ACCEPT
 MANLIFT DELIVERY IN AFTERNOON.

0720 END MORNING MEETING. EDM
 MOVS TO BRIDGE/TIMBER CROSSING AT
 PATH TO POWERHOUSE TO GRADE,
 SMOOTH, SEED, COVER BANK AREA.

0845 EDM SEEDS ENTRANCE TO REC
 PLANT AFTER ROLLING SOIL ——— AM

0930 EDM MOVS TO BEGIN SCRAPING
 BRAY FULT MASTIC FROM TANK #3
 AT REC PLANT. MATERIAL IS SCRAPED
 AS MUCH AS POSSIBLE TO SMOOTH,
 THEN ABL EMBERLOCK IS APPLIED
 TO AREA. ——— AM

1115 EQM COMPLETES TANK #3 AT REC PLANT, BREAKS FOR LUNCH — AM

1200 EQM ONSITE, MOBS TO REC PLANT — AM

1230 EQM IS REMOVING GRAY FELT AND BLACK MASTIC FROM TANK #1 USING SAME METHOD AS TANK #3, SCRAPING THEN APPLYING WHITE ENCAPSULANT.

1400 EQM COMPLETES WORK AT TANK #1.

1415 EQM CLEARS PATH FOR MANLIFT AT COAL SILO, REMOVES TREES FOR ACCESS.

1500 AFTERNOON WORK PLAN MEETING:

EQM WILL DEMOB NEXT WEEK, WILL REMOB/SEND PERSONS UP FOLLOWING ANALYTICAL RESULTS FROM POST-TREATMENT OF STOCKPILE AT SMH1 (FROM SMH2) — AM

1530 MANLIFT DELIVERED ONSITE.

1545 START-MILLER OFFSITE, EQM, EPA OFFSITE, GATE SECURED — AM

0650 START-MILLER ONSITE, EPA, EQM MEETING ONSITE AT TRAILERS WEATHER - 51°F CLOUDY, WINDS 1 MPH - NW. — AM

0700 MORNING MEETING: MANLIFT SAFETY - COAL SILO WORK. SCOPE OF WORK FOR 5/30/19 - SCRAP AND ENCAPSULATE COAL SILO MASTIC, DECON EQUIPMENT FOR DEMOBING.

0715 EQM MOBS TO COAL SILO

0720 START-MILLER BEGINS EQM'S PERSONNEL MONITORING CASSETTES CHAIN FOR DELIVERY TO ALS. FOR-PRICK ACM WORK. — AM

0800 EQM CONTINUES SCRAPING GRAY/BLACK MASTIC FROM COAL SILO, USES 'ABC' TO PAINT/ENCAPSULATE RESIDUAL BLACK MASTIC THAT WILL NOT SCRAP OFF. — AM

1130 EQM COMPLETES COAL SILO ACM SCRAPING AND ENCAPSULATION — AM

1200 EQM BREAKS FOR LUNCH — AM

1230 EQM ONSITE, DECON'S EQUIPMENT FOR RENTAL RETURN AT SMH1

1300 EOM ANTICIPATES FREEFLOW
DELIVERY TODAY 5/30. TO MIX W/
LEAD MATERIAL AT SM#1 STOCKPILE.
1400 EOM REPORTS FREEFLOW EN ROUTE,
WILL NOT MIX UNTIL 5/31 DUE TO
8 HOUR DAM ————— AM
1445 SHORT MILLER OFFSITE, EOM
REMAINS ONSITE. ————— AM

0650 START MILLER ONSITE AT WORK
TRAILERS, EOM ONSITE PRIOR
0700 MORNING HES MEETING:
EQUIPMENT SAFETY, LOWERING BUCKETS.
FREEFLOW STABILIZER IS EN ROUTE,
EOM ANTICIPATES MIXING FOR
SMCT TO START TODAY 5/31/19.
EOM WILL CONTINUE DEMOB ACTIVITIES
WHILE WAITING FOR DELIVERY
WEATHER - 45°F SUNNY, PARTLY
CLOUDY, WINDS IMPIT NNW ——— AM
0720 EOM MOBS TO SM#1,
WASTE MANAGEMENT ONSITE -
0730 EMATH 20 YD. BOX DROPPED
OFF BY WM FOR GENERAL
DEBRIS, WM LOADS JACM ROLLOFF
FOR DISPOSAL. ————— AM
0800 EOM LOADS GENERAL DEBRIS
BOX W/ EMATH CRUSHED DRUMS,
MISC. WASTE USED FENCING
FROM SITE ————— AM
1030 EOM BEGINS DEMOB PREP,
TRAILER CLEANOUT, RECON TENT
TEAR DOWN. ————— AM

1200 WEEBROW STABILIZER FOR LEAD MATERIAL AT STOCKPILE BM#1 DELIVERED, UNLOADED AT SM#1. 1300 EDM BEGINS MIXING LEAD STABILIZER W/ LEAD MATERIAL. MATERIAL IS WETTED WHILE MINI EXCAVATOR IS USED TO MIX IN STABILIZER. ——— AM

1630 EDM CONTINUES TO MIX STABILIZER W/ LEAD MATERIAL FROM STAMP MILL #2. 1700 EDM COMPLETES STABILIZER MIX. 1715 STARTMILLER COLLECTS SAMPLE FROM MIXED STOCKPILE - QMCM - STAMP MILL 02-053119. SAMPLE IS COLLECTED FROM MULTIPLE LOCATIONS, MATERIAL IS MIXED/HOMOGENIZED IN STAINLESS STEEL BOWL PRIOR TO PLACEMENT IN SAMPLE JAR. ——— AM

1730 SAMPLE IS SIGNED OVER TO EDM-1 ENGEL FOR SHIPMENT TO AIG LAB. ANALYSIS OF TCLP LEAD. EDM COVERS STOCKPILE W/ TARP - WILL SECURE. COMPLETE DEMOB ACTIVITIES ON 6/1/19.

1745 START, EDM OFFSITE, GATE SECURED

EDM

1345 MSG-START MILLER ONSITE AT STAMP MILL #1, EDM-2 CROW ONSITE. WEATHER 62°F SUNNY WINDS E 5 MPH. EDM REPORTS THREE TRUCKS (SIX TOTAL LOADS) HAVE GONE OFFSITE FOR T&D. EDM ESTIMATES ONE LOAD ON 6/19/19. WILL GRADE AREA FOLLOWING LAST LOAD FROM STOCKPILE AREA. EDM/START PULL HAND RAIL TO WALK UP TO STAMP MILL #1 - 2ND FLOOR. ONE ROLLOFF OF CONSTRUCTION MATERIAL DEBRIS WILL GO OFFSITE FOLLOWING DECONSTRUCTION OF SNOW FENCE.

1430 START-MILLER OFFSITE, EDM SECURES SNOW FENCE

EDM

1245 START - MILLER ONSITE, AT
STAMP MILL HI, EOM ON LUNCH, TOOK
PHOTOS OF FINAL FIRADINT — am

1255 START - MILLER OFFSITE — 1 AM

1430 START - MILLER ONSITE, EOM
COMPLETED FINAL FIRADINT, SNOW
FENCE HAS BEEN REMOVED, PLACED
IN DUMPSTER. PHOTO DOCUMENTATION

EOB START - MILLER / EOM OFFSITE.
& BACKNOTE - EOM REPORTS ONE
TRUCK LOAD Hauled 6/19/19 - ~158
TONS TOTAL FOR LOAD OUT.

WEATHER - 75°F, SUNNY WINDS
E @ 5MPH.

1240 START - MILLER ONSITE AT STAMP
MILL HI - TO COLLECT TRAP AND TIE-
DOWNS — REM

1250 START OFFSITE TO DISPOSE OF
TRAP / TIE DOWNS AT HOUGHTON CO.
TRANSFER STATION

APPENDIX E
PHOTOGRAPHIC DOCUMENTATION LOG



Photographic Documentation Log

Client: U.S. Environmental Protection Agency Region 5
Site Name: Quincy Mining Company Mason Site
Location: Mason, Houghton County, Michigan

Prepared By: Tetra Tech, Inc.
TDD: S05-0001-1808-205

Photograph: 1

Direction: Down

Date: 10/12/18

Photographer:
Ashley Miller

Description:
Example of ACBM
debris on the second
floor of Stamp Mill #1



Photograph: 2

Direction: Down

Date: 10/12/18

Photographer:
Ashley Miller

Description:
Example of the air
monitoring and
sampling equipment
used at each perimeter
air monitoring/sampling
station





Photographic Documentation Log

Client: U.S. Environmental Protection Agency Region 5
Site Name: Quincy Mining Company Mason Site
Location: Mason, Houghton County, Michigan

Prepared By: Tetra Tech, Inc.
TDD: S05-0001-1808-205

Photograph: 3

Direction: Southeast

Date: 10/15/18

Photographer:
Ashley Miller

Description:
View looking southeast
of Stamp Mill #1, prior
to lead and asbestos-
contaminated soil
removal on the second
floor



Photograph: 4

Direction: Down

Date: 10/17/18

Photographer:
Ashley Miller

Description:
START conducting
XRF soil screening to
delineate lead-
contaminated soil
removal areas at the
Power House





Photographic Documentation Log

Client: U.S. Environmental Protection Agency Region 5
Site Name: Quincy Mining Company Mason Site
Location: Mason, Houghton County, Michigan

Prepared By: Tetra Tech, Inc.
TDD: S05-0001-1808-205

Photograph: 5

Direction: Northeast

Date: 10/17/18

Photographer:
Ashley Miller

Description:
Removal of asbestos-contaminated debris from the first floor of Stamp Mill #1



Photograph: 6

Direction: East

Date: 10/30/18

Photographer:
Ashley Miller

Description:
Lead-contaminated soil removal at Stamp Mill #1





Photographic Documentation Log

Client: U.S. Environmental Protection Agency Region 5
Site Name: Quincy Mining Company Mason Site
Location: Mason, Houghton County, Michigan

Prepared By: Tetra Tech, Inc.
TDD: S05-0001-1808-205

Photograph: 7

Direction: Northeast

Date: 11/01/18

Photographer:
Ashley Miller

Description:
Post lead-contamination
soil removal at Stamp
Mill #1 on the second
floor



Photograph: 8

Direction: North

Date: 11/05/18

Photographer:
Ashley Miller

Description:
Asbestos-contaminated
debris removal at the
Shore Plant





Photographic Documentation Log

Client: U.S. Environmental Protection Agency Region 5
Site Name: Quincy Mining Company Mason Site
Location: Mason, Houghton County, Michigan

Prepared By: Tetra Tech, Inc.
TDD: S05-0001-1808-205

Photograph: 9

Direction: Northeast

Date: 11/07/18

Photographer:
Ashley Miller

Description:
Completed debris removal on the first floor of Stamp Mill #1; installed fencing also shown



Photograph: 10

Direction: North

Date: 11/8/18

Photographer:
Ashley Miller

Description:
Scraping lead-contaminated soil at Reclamation Plant





Photographic Documentation Log

Client: U.S. Environmental Protection Agency Region 5
Site Name: Quincy Mining Company Mason Site
Location: Mason, Houghton County, Michigan

Prepared By: Tetra Tech, Inc.
TDD: S05-0001-1808-205

Photograph: 11

Direction: Southwest

Date: 05/20/19

Photographer:
Ashley Miller

Description:
Lead-contaminated soil
removal at Stamp Mill
#2



Photograph: 12

Direction: Northeast

Date: 05/22/19

Photographer:
Ashley Miller

Description:
Lead and asbestos-
contaminated soil
removal at the Power
House







Photographic Documentation Log

Client: U.S. Environmental Protection Agency Region 5
Site Name: Quincy Mining Company Mason Site
Location: Mason, Houghton County, Michigan

Prepared By: Tetra Tech, Inc.
TDD: S05-0001-1808-205

<p>Photograph: 13</p> <p>Direction: North</p> <p>Date: 05/23/19</p> <p>Photographer: Ashley Miller</p> <p>Description: Abandoned container retrieval in the woods near the Reclamation Plant</p>	
<p>Photograph: 14</p> <p>Direction: South</p> <p>Date: 05/28/19</p> <p>Photographer: Ashley Miller</p> <p>Description: Area-wide ACBM pickup</p>	





Photographic Documentation Log

Client: U.S. Environmental Protection Agency Region 5
Site Name: Quincy Mining Company Mason Site
Location: Mason, Houghton County, Michigan

Prepared By: Tetra Tech, Inc.
TDD: S05-0001-1808-205

Photograph: 15

Direction: Northeast

Date: 05/29/19

Photographer:
Ashley Miller

Description:
Scraping and encapsulating asbestos-containing mastic at the Reclamation Plant



Photograph: 16

Direction: West

Date: 05/31/19

Photographer:
Ashley Miller

Description:
ERRS mixing Free-Flow stabilizer with lead-contaminated soil at the Stamp Mill #1 staging area



APPENDIX F
ENVIRONMENTALLY PREFERRED PRACTICES

TDD #:	S05-0001-1808-205
Site Name:	Quincy Mining Company Mason
Site City, State:	Mason, Houghton County, Michigan
Site Project Manager:	Lori Kozel
EPA OSC:	Brian Kelly

Environmentally Preferred General Field Practices				
If a general category is not applicable, then check N/A for the category box, not for each subcategory.	N= Not Used	N/A= Not Applicable	Y = Yes Implemented	Comments Section Justify in the comments for each BMP field as to why the practice was not used, not applicable, or implemented.
Energy				
Use of Energy Efficient Equipment				
Computer Equipment (FEMP/Energy Star)			X	Energy Star laptops
Installation of Electric Service	X			ERRS contractor supplied diesel generator
Reduce Carbon Emissions from Transportation				
Use Internet Based Meetings/Conferences		X		No meetings or conferences held outside of site operation hours
Maximize Carpooling			X	Implemented for on-site travel
Use of Local Labor/Suppliers/Waste Disposal Facilities (50 mile radius)		X		None approved within 50 miles
No idling, except for extreme weather conditions			X	Idling only in cold weather
Use of Alternative Fuels, if available within 10 miles	X			Vehicles not equipped for alternative fuel
Properly Inflated Tires			X	Checked
Email Small Files (less than 8MB)			X	Files transmitted electronically
Reusable Electronic Storage Media or the Cloud			X	Files stored digitally
Water				
Use of Low Flow Sampling Pumps		X		GW sampling did not occur
Waste				
Use of Local Recycling Programs			X	Local recycling used
Use of Rechargeable Batteries			X	All monitoring equipment used rechargeable batteries
Recycling – Other			X	Cardboard/ plastic was recycled
Plastic Reduction			X	When possible
Reuse of Resources			X	Supplies reused when possible
Direct Push Boring		X		Borings were not completed
Materials				
Printing when Required				
Double-sided Printing			X	Used
100% post-consumer recycled paper			X	Used

Environmentally Preferred General Field Practices				
If a general category is not applicable, then check N/A for the category box, not for each subcategory.	N = Not Used	N/A = Not Applicable	Y = Yes Implemented	Comments Section Justify in the comments for each BMP field as to why the practice was not used, not applicable, or implemented.
Land & Ecosystems				
Minimize Disruption to Natural Vegetation			X	Areas were reseeded when disturbed
Use of Non-invasive Investigation Techniques			X	In-situ XRF screening instead of collecting samples
Environmentally Preferred				
Green Procurement				
Environmentally Preferred Vendors			X	Field Environmental Instruments
Green Lodging/Hotels			X	Holiday Inn
Use of Green Laboratories			X	ALS

TDD #:	S05-0001-1808-205
Site Name:	Quincy Mining Company Mason
Site City, State:	Mason, Houghton County, Michigan
Site Project Manager:	Lori Kozel
EPA OSC:	Brian Kelly

Green Metrics		
Metric	Amount	Unit of Measure
Diesel Fuel Used		gallons
Distance Traveled ¹	1,400.00	Miles
Unleaded Fuel Used ²	53.23	gallons
Alternative/E-85 Fuel Used		gallons
Electricity from Coal		kW
Electricity from Natural Gas		kW
Electricity from solar/wind		kW
Electricity from grid/mix		kW
Solid waste reused		lbs
Solid waste recycled		lbs
Water Used		gallons

Greenhouse Gas Emissions (Site Specific)					
Source	Amount Used	Unit of Measure	Methane (CH ₄) (Grams) ³	Nitrous Oxide (N ₂ O) (Grams) ³	Carbon Dioxide (CO ₂) (Kilograms) ³
Gasoline	53.23	X gallons	9.24	22.82	474.30
Diesel		X gallons			
E-85		X gallons			
Electricity Office		X Kilowatts			
Natural Gas		X Therms			
Solid Waste		X lbs			
Other		X Unit of Measure			

Note:

¹ Distance traveled based on number of trips between the Quincy Mining Company Mason site in Mason, Houghton County, MI, and Mannik and Smith Group's Hancock Office (7 miles) in a large sport utility vehicle, which was required for cargo space. A total of 100 trips to/from the office were made by 1 START personnel totaling 1400 miles.

² Fuel consumption based on distance traveled in a large sport utility vehicle. An average fuel efficiency of 26.3 miles per gallon was assumed based on 2016 light duty truck fuel efficiency from "Average Fuel Efficiency of U.S. Light Duty Vehicles," U.S. Department of Transportation, Bureau of Statistics Table 4-23 (Accessed online at http://www.rita.dot.gov/bts/sites/rita.dot.gov/bts/files/publications/national_transportation_statistics/html/table_04_23.html on June 20, 2019).

³ Methane and nitrous oxide emissions based on emission factors of 0.0066 and 0.0163 grams per mile for EPA Tier 2 light duty gasoline trucks from "Voluntary Reporting of Greenhouse Gases Program, Fuel Emission Coefficients, Table 5" (Accessed online at <http://205.254.135.7/oiaf/1605/coefficients.html> on June 20, 2019)

⁴ Carbon dioxide emissions based on emission factors of 8.91 kilograms carbon dioxide per gallon of gasoline and 10.15 kilograms carbon dioxide per gallon of diesel fuel from "Voluntary Reporting of Greenhouse Gases Program, Fuel Emission Coefficients, Table 2" (Accessed online at <http://205.254.135.7/oiaf/1605/coefficients.html> on June 20, 2019).

ATTACHMENT 1
LABORATORY ANALYTICAL REPORTS



ANALYTICAL REQUEST FORM

181010603

1. ☐ REGULAR Status

☒ RUSH Status Requested - ADDITIONAL CHARGE

RESULTS REQUIRED BY 1 DAY TAT
DATE

CONTACT ALS DATACHEM PRIOR TO SENDING SAMPLES

2. Date 10/12/2018 Purchase Order No. _____

3. Company Name Environmental Quality Management

4. Quote No. _____

ALS Project Manager: Joe Ribar

Address 1800 Carillon Blvd, Cincinnati, Ohio 45240

5. Sample Collection

Sampling Site Quincy Mining Company - Mason Site

Person to Contact Eric Corbin, EQM

Industrial Process _____

Telephone 513-532-2118

Date of Collection 10/12/18

Fax Telephone _____

Time Collected See cassettes for run time.

E-mail Address ecorbin@eqm.com

Date of Shipment 10/18/18

Billing Address

Chain of Custody No. _____

1800 Carillon Blvd

Note: Please send results to:

Cincinnati, Ohio 45240

Lori Kozel, Tetra Tech at Lori.Kozel@tetratech.com

Ashley Miller, MSG at amiller@mannaismithgroup.com

6. REQUEST FOR ANALYSES

Laboratory Use Only	Client Sample Number	Matrix*	Sample Volume	ANALYSES REQUESTED - Use method number if known	Units**
01	QMCM-LAS-DW-101218	Air	882.80	NIOSH 7300 (Lead)	µg/m³
02	QMCM-AAS-L-DW-101218	Air	716.70	NIOSH 7400 - PCM (Asbestos)	f/cc
03	QMCM-AAS-H-DW-101218	Air	2828.97	NIOSH 7400 - PCM (Asbestos)	f/cc
04	QMCM-LAS-UW-101218	Air	838.56	NIOSH 7300 (Lead)	µg/m³
05	QMCM-AAS-L-UW-101218	Air	693.52	NIOSH 7400 - PCM (Asbestos)	f/cc
06	QMCM-AAS-H-UW-101218	Air	2815.71	NIOSH 7400 - PCM (Asbestos)	f/cc
07	QMCM-FB-101218	Air	0.00	NIOSH 7300 (Lead)	µg/m³
08	QMCM-FB-101218	Air	0.00	NIOSH 7400 - PCM (Asbestos)	f/cc
09	QMCM-EB1-101218	Air	0.00	NIOSH 7300 (Lead)	µg/m³
10	QMCM-EB1-101218	Air	0.00	NIOSH 7400 - PCM (Asbestos)	f/cc
11	QMCM-EB2-101218	Air	0.00	NIOSH 7300 (Lead)	µg/m³
12	QMCM-EB2-101218	Air	0.00	NIOSH 7400 - PCM (Asbestos)	f/cc

* Specify: Solid sorbent tube, e.g. Charcoal; Filter type; Impinger solution; Bulk sample; Blood; Urine; Tissue; Soil; Water; Other

** 1. mg/sample 2. mg/m³ 3. ppm 4. % 5. _____ (other) Please indicate one or more units in the column entitled Units**

Comments Do not analysis low volume asbestos cassette unless corresponding high volume cassette is overloaded. Analysis

high asbestos cassettes via NIOSH 7402 (TEM) if PCM results exceed 0.001 f/cc.

Possible Contamination and/or Chemical Hazards

Relinquished by ASHLEY MILLER, MSG

Date/Time 10/18/18 1500

Received by FIEDEX

Date/Time 10/18/18 1500

Relinquished by _____

Date/Time _____

Received by _____

Date/Time 10/23/18 1015

Relinquished by _____

Date/Time _____

Received by _____

Date/Time _____

4388 Glendale Milford Rd, Cincinnati, OH 45242

800-280-8071 or 800-458-1943 / FAX: 513-733-5347

ALS Laboratory Group

fedex



ANALYTICAL REQUEST FORM

1. ☐ REGULAR Status

☒ RUSH Status Requested - ADDITIONAL CHARGE

RESULTS REQUIRED BY 1 DAY TAT
DATE

CONTACT ALS DATACHEM PRIOR TO SENDING SAMPLES

18101002

2. Date 10/13/2018 Purchase Order No. _____ 4. Quote No. _____

3. Company Name Environmental Quality Management ALS Project Manager: Joe Ribar

Address 1800 Carillon Blvd, Cincinnati, Ohio 45240 5. Sample Collection

Person to Contact Eric Corbin, EQM Sampling Site Quincy Mining Company - Mason Site

Telephone 513-532-2118 Industrial Process _____

Fax Telephone _____ Date of Collection 10/13/18

E-mail Address ecorbin@eqm.com Time Collected See cassettes for run time.

Billing Address Date of Shipment 10/18/18

1800 Carillon Blvd Chain of Custody No. _____

Cincinnati, Ohio 45240 Note: Please send results to:

Lori Kozel, Tetra Tech at Lori.Kozel@tetratech.com
Ashley Miller, MSG at amiller@manniksmithgroup.com

6. REQUEST FOR ANALYSES

Laboratory Use Only	Client Sample Number	Matrix*	Sample Volume	ANALYSES REQUESTED - Use method number if known	Units**
<u>01</u>	QMCM-LAS-DW-101318	Air	490.55	NIOSH 7300 (Lead)	µg/m³
<u>02</u>	QMCM-AAS-L-DW-101318	Air	411.48	NIOSH 7400 - PCM (Asbestos)	f/cc
<u>03</u>	QMCM-AAS-H-DW-101318	Air	1537.03	NIOSH 7400 - PCM (Asbestos)	f/cc
<u>04</u>	QMCM-LAS-UW-101318	Air	489.78	NIOSH 7300 (Lead)	µg/m³
<u>05</u>	QMCM-AAS-L-UW-101318	Air	408.60	NIOSH 7400 - PCM (Asbestos)	f/cc
<u>06</u>	QMCM-AAS-H-UW-101318	Air	1548.33	NIOSH 7400 - PCM (Asbestos)	f/cc
<u>07</u>	QMCM-FB-101318	Air	0.00	NIOSH 7300 (Lead)	µg/m³
<u>08</u>	QMCM-FB-101318	Air	0.00	NIOSH 7400 - PCM (Asbestos)	f/cc
<u>09</u>					

* Specify: Solid sorbent tube, e.g. Charcoal; Filter type; Impinger solution; Bulk sample; Blood; Urine; Tissue; Soil; Water; Other

** 1. mg/sample 2. mg/m³ 3. ppm 4. % 5. _____ (other) Please indicate one or more units in the column entitled Units**

Comments Do not analysis low volume asbestos cassette unless corresponding high volume cassette is overloaded. Analysis high asbestos cassettes via NIOSH 7402 (TEM) if PCM results exceed 0.001 f/cc.

Possible Contamination and/or Chemical Hazards

Relinquished by ASHLEY MILLER, MSG Date/Time 10/18/18 1520

Received by FEDEx Date/Time 10/18/18 1500

Relinquished by [Signature] Date/Time 10/23/18 1015

Received by _____ Date/Time _____

Relinquished by _____ Date/Time _____

Received by _____ Date/Time _____

4388 Glendale Milford Rd, Cincinnati, OH 45242

800-280-8071 or 800-458-1943 / FAX: 513-733-5347

ALS Laboratory Group

FedEx



ANALYTICAL REQUEST FORM

1. ☐ REGULAR Status



RUSH Status Requested - ADDITIONAL CHARGE

RESULTS REQUIRED BY 1 PM 1/1/18

DATE

CONTACT ALS DATACHEM PRIOR TO SENDING SAMPLES

18101061

2. Date 10/15/2018 Purchase Order No. _____

4. Quote No. _____

3. Company Name Environmental Quality Management

ALS Project Manager: Joe Ribar

Address 1800 Carillon Blvd, Cincinnati, Ohio 45240

5. Sample Collection

Sampling Site Quincy Mining Company - Mason Site

Person to Contact Eric Corbin, EQM

Industrial Process _____

Telephone 513-532-2118

Date of Collection 10/15/18

Fax Telephone _____

Time Collected See cassettes for run time.

E-mail Address ecorbin@eqm.com

Date of Shipment 10/18/18

Billing Address

Chain of Custody No _____

1800 Carillon Blvd

Note: Please send results to:

Cincinnati, Ohio 45240

Lori Kozel, Tetra Tech at Lori.Kozel@tetratech.com

Ashley Miller, MSG at amiller@mannaiksmithgroup.com

6. REQUEST FOR ANALYSES

Laboratory Use Only	Client Sample Number	Matrix*	Sample Volume	ANALYSES REQUESTED - Use method number if known	Units**
01	QMCM-LAS-DW-101518	Air	1609.42	NIOSH 7300 (Lead)	µg/m³
02	QMCM-AAS-L-DW-101518	Air	1322.42	NIOSH 7400 - PCM (Asbestos)	f/cc
03	QMCM-AAS-H-DW-101518	Air	5008.06	NIOSH 7400 - PCM (Asbestos)	f/cc
04	QMCM-LAS-UW-101518	Air	1580.26	NIOSH 7300 (Lead)	µg/m³
05	QMCM-AAS-L-UW-101518	Air	1322.98	NIOSH 7400 - PCM (Asbestos)	f/cc
06	QMCM-AAS-H-UW-101518	Air	4962.40	NIOSH 7400 - PCM (Asbestos)	f/cc
07	QMCM-FB-101518	Air	0.00	NIOSH 7300 (Lead)	µg/m³
08	QMCM-FB-101518	Air	0.00	NIOSH 7400 - PCM (Asbestos)	f/cc

* Specify: Solid sorbent tube, e.g. Charcoal; Filter type; Impinger solution; Bulk sample; Blood; Urine; Tissue; Soil; Water; Other

** 1. mg/sample 2. mg/m³ 3. ppm 4. % 5. ____ (other) Please indicate one or more units in the column entitled Units**

Comments Do not analysis low volume asbestos cassette unless corresponding high volume cassette is overloaded. Analysis high asbestos cassettes via NIOSH 7402 (TEM) if PCM results exceed 0.001 f/cc.

Possible Contamination and/or Chemical Hazards

Relinquished by ASHLEY MILLER, MSG

Date/Time 10/18/18 1520

Received by FEDEX

Date/Time 10/18/18 1520

Relinquished by _____

Date/Time _____

Received by _____

Date/Time 10/23/18 1015

Relinquished by _____

Date/Time _____

Received by _____

Date/Time _____

4388 Glendale Milford Rd, Cincinnati, OH 45242

800-280-8071 or 800-458-1943 / FAX: 513-733-5347

ALS Laboratory Group

FeDEX

ANALYTICAL REQUEST FORM

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES



1810906

1. ☐ REGULAR Status

☒ RUSH Status Requested - ADDITIONAL CHARGE

RESULTS REQUIRED BY 10/18/18
DATE

CONTACT ALS DATACHEM PRIOR TO SENDING SAMPLES

2. Date 10/16/2018 Purchase Order No. _____

4. Quote No. _____

3. Company Name Environmental Quality Management

ALS Project Manager: Joe Ribar

Address 1800 Carillon Blvd, Cincinnati, Ohio 45240

5. Sample Collection

Person to Contact Eric Corbin, EQM

Sampling Site Quincy Mining Company - Mason Site

Telephone 513-532-2118

Industrial Process _____

Fax Telephone _____

Date of Collection 10/16/18

E-mail Address ecorbin@eqm.com

Time Collected See cassettes for run time.

Billing Address

Date of Shipment 10/18/18

1800 Carillon Blvd

Chain of Custody No _____

Cincinnati, Ohio 45240

Note: Please send results to:

Lori Kozel, Tetra Tech at Lori.Kozel@tetratech.com

Ashley Miller, MSG at amiller@manniksmithgroup.com

6. REQUEST FOR ANALYSES

Laboratory Use Only	Client Sample Number	Matrix*	Sample Volume	ANALYSES REQUESTED - Use method number if known	Units**
01	QMCM-LAS-DW-101618	Air	1754.84	NIOSH 7300 (Lead)	µg/m³
02	QMCM-AAS-L-DW-101618	Air	1503.26	NIOSH 7400 - PCM (Asbestos)	f/cc
03	QMCM-AAS-H-DW-101618	Air	6109.99	NIOSH 7400 - PCM (Asbestos)	f/cc
04	QMCM-LAS-UW-101618	Air	1775.87	NIOSH 7300 (Lead)	µg/m³
05	QMCM-AAS-L-UW-101618	Air	1469.16	NIOSH 7400 - PCM (Asbestos)	f/cc
06	QMCM-AAS-H-UW-101618	Air	6560.21	NIOSH 7400 - PCM (Asbestos)	f/cc
07	QMCM-FB-101618	Air	0.00	NIOSH 7300 (Lead)	µg/m³
08	QMCM-FB-101618	Air	0.00	NIOSH 7400 - PCM (Asbestos)	f/cc
09	QMCM-LAS-BG1-101618	Air	1700.24	NIOSH 7300 (Lead)	µg/m³
10	QMCM-AAS-L-BG1-101618	Air	1444.58	NIOSH 7400 - PCM (Asbestos)	f/cc
11	QMCM-AAS-H-BG1-101618	Air	4803.98	NIOSH 7400 - PCM (Asbestos)	f/cc
12	QMCM-LAS-BG2-101618	Air	1726.09	NIOSH 7300 (Lead)	µg/m³
13	QMCM-AAS-L-BG2-101618	Air	1461.16	NIOSH 7400 - PCM (Asbestos)	f/cc
14	QMCM-AAS-H-BG2-101618	Air	5766.06	NIOSH 7400 - PCM (Asbestos)	f/cc

* Specify: Solid sorbent tube, e.g. Charcoal; Filter type; Impinger solution; Bulk sample; Blood; Urine; Tissue; Soil; Water; Other

** 1. mg/sample 2. mg/m³ 3. ppm 4. % 5. _____ (other) Please indicate one or more units in the column entitled Units**

Comments Do not analysis low volume asbestos cassette unless corresponding high volume cassette is overloaded. Analysis

high asbestos cassettes via NIOSH 7402 (TEM) if PCM results exceed 0.001 f/cc.

Possible Contamination and/or Chemical Hazards _____

Relinquished by Ashley Miller, ALSG

Date/Time 10/18/18 1500

Received by FEDEx

Date/Time 10/18/18 1500

Relinquished by Montgomery

Date/Time _____

Received by _____

Date/Time 10/19/18 9:28am

Relinquished by _____

Date/Time _____

Received by _____

Date/Time _____

4388 Glendale Milford Rd, Cincinnati, OH 45242

800-280-8071 or 800-458-1943 / FAX: 513-733-5347

ALS Laboratory Group

FedEx



ANALYTICAL REQUEST FORM

1810907

1. ☐ REGULAR Status

☒ RUSH Status Requested - ADDITIONAL CHARGE
RESULTS REQUIRED BY 1 PM TAT
DATE
CONTACT ALS DATACHEM PRIOR TO SENDING SAMPLES

2. Date 10/17/18 Purchase Order No. _____

4. Quote No. _____

3. Company Name Environmental Quality Management

ALS Project Manager: Joe Ribar

Address 1800 Carillon Blvd, Cincinnati, Ohio 45240

5. Sample Collection

Sampling Site Quincy Mining Company - Mason Site

Person to Contact Eric Corbin, EQM

Industrial Process _____

Telephone 513-532-2118

Date of Collection 10/17/18

Fax Telephone _____

Time Collected See cassettes for run time.

E-mail Address ecorbin@eqm.com

Date of Shipment 10/18/18

Billing Address

Chain of Custody No _____

1800 Carillon Blvd

Note: Please send results to:

Cincinnati, Ohio 45240

Lori Kozel, Tetra Tech at Lori.Kozel@tetratech.com
Ashley Miller, MSG at amiller@manniksmithgroup.com

6. REQUEST FOR ANALYSES

Laboratory Use Only	Client Sample Number	Matrix*	Sample Volume	ANALYSES REQUESTED - Use method number if known	Units**
01	QMCM-LAS-DW-101718	Air	1257.42	NIOSH 7300 (Lead)	µg/m³
02	QMCM-AAS-L-DW-101718	Air	1003.36	NIOSH 7400 - PCM (Asbestos)	f/cc
03	QMCM-AAS-H-DW-101718	Air	4255.84	NIOSH 7400 - PCM (Asbestos)	f/cc
04	QMCM-LAS-UW-101718	Air	1249.96	NIOSH 7300 (Lead)	µg/m³
05	QMCM-AAS-L-UW-101718	Air	1038.04	NIOSH 7400 - PCM (Asbestos)	f/cc
06	QMCM-AAS-H-UW-101718	Air	4013.00	NIOSH 7400 - PCM (Asbestos)	f/cc
07	QMCM-FB-101718	Air	0.00	NIOSH 7300 (Lead)	µg/m³
08	QMCM-FB-101718	Air	0.00	NIOSH 7400 - PCM (Asbestos)	f/cc
09	QMCM-LAS-BG1-101718	Air	1124.23	NIOSH 7300 (Lead)	µg/m³
10	QMCM-AAS-L-BG1-101718	Air	917.68	NIOSH 7400 - PCM (Asbestos)	f/cc
11	QMCM-AAS-H-BG1-101718	Air	3604.15	NIOSH 7400 - PCM (Asbestos)	f/cc
12	QMCM-LAS-BG2-101718	Air	1168.91	NIOSH 7300 (Lead)	µg/m³
13	QMCM-AAS-L-BG2-101718	Air	964.28	NIOSH 7400 - PCM (Asbestos)	f/cc
14	QMCM-AAS-H-BG2-101718	Air	3809.82	NIOSH 7400 - PCM (Asbestos)	f/cc

* Specify: Solid sorbent tube, e.g. Charcoal; Filter type; Impinger solution; Bulk sample; Blood; Urine; Tissue; Soil; Water; Other

** 1. mg/sample 2. mg/m³ 3. ppm 4. % 5. _____ (other) Please indicate one or more units in the column entitled Units**

Comments Do not analysis low volume asbestos cassette unless corresponding high volume cassette is overloaded. Analysis

high asbestos cassettes via NIOSH 7402 (TEM) if PCM results exceed 0.001 f/cc.

Possible Contamination and/or Chemical Hazards _____

Relinquished by ASHLEY MILLER, MSG

Date/Time 10/18/18 1500

Received by FLDEX

Date/Time 10/18/18 1500

Relinquished by Montgomery

Date/Time _____

Received by _____

Date/Time 10/19/18 9:28am

Relinquished by _____

Date/Time _____

Received by _____

Date/Time _____

4388 Glendale Milford Rd, Cincinnati, OH 45242

800-280-8071 or 800-458-1943 / FAX: 513-733-5347

ALS Laboratory Group

Fecker



ANALYTICAL REQUEST FORM

18101064

1. ☒ **REGULAR Status**

☐ **RUSH Status Requested - ADDITIONAL CHARGE**

RESULTS REQUIRED BY _____

DATE

CONTACT ALS DATACHEM PRIOR TO SENDING SAMPLES

2. Date 10/22/2018 Purchase Order No. _____

4. Quote No. _____

3. Company Name Environmental Quality Management

ALS Project Manager: Joe Ribar

Address 1800 Carillon Blvd, Cincinnati, Ohio 45240

5. **Sample Collection**

Person to Contact Eric Corbin, EQM

Sampling Site Quincy Mining Company - Mason Site

Telephone 513-532-2118

Industrial Process _____

Fax Telephone _____

Date of Collection 10/18- 10/19/18

E-mail Address ecorbin@eqm.com

Time Collected See cassettes for run time.

Billing Address

Date of Shipment 10/22/2018

1800 Carillon Blvd

Chain of Custody No. _____

Cincinnati, Ohio 45240

Note: Please send results to:

Lori Kozel, Tetra Tech at Lori.Kozel@tetratech.com

Ashley Miller, MSG at amiller@manniksmithgroup.com

6. REQUEST FOR ANALYSES

Laboratory Use Only	Client Sample Number	Matrix*	Sample Volume	ANALYSES REQUESTED - Use method number if known	Units**
01	QMCM-LAS-BG3-101818	Air	1603.29	NIOSH 7300 (Lead)	µg/m³
02	QMCM-AAS-L-BG3-101818	Air	1337.13	NIOSH 7400 - PCM (Asbestos)	f/cc
03	QMCM-AAS-H-BG3-101818	Air	3954.98	NIOSH 7400 - PCM (Asbestos)	f/cc
04	QMCM-LAS-BG4-101818	Air	1602.01	NIOSH 7300 (Lead)	µg/m³
05	QMCM-AAS-L-BG4-101818	Air	1317.60	NIOSH 7400 - PCM (Asbestos)	f/cc
06	QMCM-AAS-H-BG4-101818	Air	3768.13	NIOSH 7400 - PCM (Asbestos)	f/cc
07	QMCM-LAS-BG3-101918	Air	1508.83	NIOSH 7300 (Lead)	µg/m³
08	QMCM-AAS-L-BG3-101918	Air	1249.22	NIOSH 7400 - PCM (Asbestos)	f/cc
09	QMCM-AAS-H-BG3-101918	Air	5042.89	NIOSH 7400 - PCM (Asbestos)	f/cc
10	QMCM-LAS-BG4-101918	Air	1560.93	NIOSH 7300 (Lead)	µg/m³
11	QMCM-AAS-L-BG4-101918	Air	1311.54	NIOSH 7400 - PCM (Asbestos)	f/cc
12	QMCM-AAS-H-BG4-101918	Air	5039.87	NIOSH 7400 - PCM (Asbestos)	f/cc
		Air	0.00		
		Air	0.00		

* Specify: Solid sorbent tube, e.g. Charcoal; Filter type; Impinger solution; Bulk sample; Blood; Urine; Tissue; Soil; Water; Other

** 1. mg/sample 2. mg/m³ 3. ppm 4. % 5. _____ (other) Please indicate one or more units in the column entitled Units**

Comments Do not analyze low volume asbestos cassette unless corresponding high volume cassette is overloaded. Analyze high asbestos cassettes via NIOSH 7402 (TEM) if PCM results exceed 0.001 f/cc.

Possible Contamination and/or Chemical Hazards _____

Relinquished by Ashley Miller MSG

Date/Time 10/22/18 1400

Received by FEDEX

Date/Time 10/22/18 1400

Relinquished by [Signature]

Date/Time 10/23/18 1015

Received by _____

Date/Time _____

Relinquished by _____

Date/Time _____

Received by _____

Date/Time _____

4388 Glendale Milford Rd, Cincinnati, OH 45242

800-280-8071 or 800-458-1943 / FAX: 513-733-5347

ALS Laboratory Group

FEDEX



22-Oct-2018

Erik Corbin
Environmental Quality Management
1800 Carillon Boulevard
Cincinnati, OH 45240

Tel: 513-825-7500
Fax: (513) 825-7495

Re: Quincy Mining Co- Mason Site

Work Order: **1810906**

Dear Erik,

ALS Environmental received 14 samples on 19-Oct-2018 08:28 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 17.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

Shawn Smythe

Electronically approved by: Shawn Smythe

Shawn Smythe
Project Manager

ADDRESS 4388 Glendale Milford Rd Cincinnati, OH 45242- | PHONE (513) 733-5336 | FAX (513) 733-5347

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ALS Environmental

Date: 22-Oct-18

Client: Environmental Quality Management
Project: Quincy Mining Co- Mason Site
Work Order: 1810906

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1810906-01	QMCM-LAS-DW-101618	Air		10/16/2018	10/19/2018	<input type="checkbox"/>
1810906-02	QMCM-AAS-L-DW-101618	Air		10/16/2018	10/19/2018	<input type="checkbox"/>
1810906-03	QMCM-AAS-H-DW-101618	Air		10/16/2018	10/19/2018	<input type="checkbox"/>
1810906-04	QMCM-LAS-UW-101618	Air		10/16/2018	10/19/2018	<input type="checkbox"/>
1810906-05	QMCM-AAS-L-UW-101618	Air		10/16/2018	10/19/2018	<input type="checkbox"/>
1810906-06	QMCM-AAS-H-UW-101618	Air		10/16/2018	10/19/2018	<input type="checkbox"/>
1810906-07	QMCM-FB-101618	Air		10/16/2018	10/19/2018	<input type="checkbox"/>
1810906-08	QMCM-FB-101618	Air		10/16/2018	10/19/2018	<input type="checkbox"/>
1810906-09	QMCM-LAS-BG1-101618	Air		10/16/2018	10/19/2018	<input type="checkbox"/>
1810906-10	QMCM-AAS-L-BG1-101618	Air		10/16/2018	10/19/2018	<input type="checkbox"/>
1810906-11	QMCM-AAS-H-BG1-101618	Air		10/16/2018	10/19/2018	<input type="checkbox"/>
1810906-12	QMCM-LAS-BG2-101618	Air		10/16/2018	10/19/2018	<input type="checkbox"/>
1810906-13	QMCM-AAS-L-BG2-101618	Air		10/16/2018	10/19/2018	<input type="checkbox"/>
1810906-14	QMCM-AAS-H-BG2-101618	Air		10/16/2018	10/19/2018	<input type="checkbox"/>

Client: Environmental Quality Management
Project: Quincy Mining Co- Mason Site
Work Order: 1810906

Case Narrative

Please contact ALS Cincinnati, OH for a complete list of accreditations. Accreditation does not constitute approval or endorsement by any accrediting body or agency of the federal government.

Sample collection is performed outside ALS and is the sole responsibility of the client. If sample collection or submission deviates from any method requirement, then results cannot be interpreted according to the method. Results apply only to portions of samples analyzed. Samples disposed after 60 days. Cover letter signatory indicates ALS LIMS report generation only. Raw data validated by analysts.

Per client request, the samples indicated herein were prepared and analyzed in accordance with the NIOSH Method 7400 Issue 2 outlined in the NIOSH Manual of Analytical Methods (NMAM), Fourth Edition and dated 8/15/94. ALS adheres to all QA/QC guidelines set forth in this method. The QA/QC officer maintains all laboratory quality data.

Asbestos cannot be distinguished from other fibers by any PCM method. Counts and concentrations listed in this report include all fiber types detected and represent the maximum concentrations. Analysis by TEM is required to identify and distinguish specific fiber species. Samples which reference the ALS LIMS Method Code "PCM_N7400" were analyzed using the counting criteria commonly referred to as the A rules detailed in Appendix B of the method. Samples which reference the ALS LIMS Method Code "PCM_N77152_FIBER" were analyzed using the alternate counting rules commonly referred to as the B rules detailed in Appendix C of the method. These originated from the NIOSH fibrous glass criteria document NIOSH 77-152 and were added to NIOSH Method 7400, Rev. 2 dated 8/15/87. Samples which reference an ALS LIMS Method Code bearing the suffix "_IND" were either overloaded and/or exhibited loose material in the cassette. Per client request, these were therefore prepared using an indirect method detailed in ASTM D5755 in which the samples are suspended in de-ionized water and re-filtered for appropriate loading prior to analysis. Indirect preparation incurs an additional fee and may introduce fiber breakage, which can potentially increase or decrease fiber concentrations as compared to the original air filters.

NIOSH Method 7400 requires a minimum volume of 400 Liters on a single sample or on consecutive samples and that 2 field blanks (or 10% of the total samples, whichever is greater) be submitted with each set. NY ELAP requires a minimum sample volume of 900 liters. The results reported are not field blank corrected. Blanks receive a 100-field count, and data are reported for use in background correction by the client. Note that a 25mm filter has an effective filter collection area (EFA) of 385mm², 37mm; 855mm², and 47mm; 1075mm².

The limit of detection (LOD) for this method is 7 Fibers/mm² for a sample volume of ~1200 Liters in an area relatively free of interferences. Since client sample volumes and pass/fail criteria vary, PCM results are reported in the actual calculated fibers/mm² and fibers per filter. When sample air volumes (L) are supplied by the client via the chain of custody results are also reported in fibers/cc (fibers/mL).

Client: Environmental Quality Management
Project: Quincy Mining Co- Mason Site
Work Order: 1810906

Case Narrative

ALS PCM Analyst CV* Values:

Analyst	Range (Fibers/mm2)			
	>5<=25.5	>25.5<=63.7	>63.7<=127.4	>127.4
NEW	0.25	0.25	0.25	0.25
AS	0.68	0.18	0.09	0.48
PH	0.46	0.18	0.20	0.45
ALL LAB	0.77	0.19	0.11	0.19

*CV values are equivalent to Intra-laboratory Sr values.

Low volume PCM cassettes were not analyzed per client request.

ALS Environmental

Date: 22-Oct-18

Client: Environmental Quality Management
Project: Quincy Mining Co- Mason Site

Work Order: 1810906

Analytical Results

Lab ID: 1810906-01A
Client Sample ID: QMCM-LAS-DW-101618

Collection Date: 10/16/2018
Matrix: AIR

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1754.84	Analyst: SRL
Date Analyzed: 10/22/2018 13:47		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Lead	ND	0.20	<0.00011	

Note:

ALS Environmental

Date: 22-Oct-18

Client: Environmental Quality Management
Project: Quincy Mining Co- Mason Site

Work Order: 1810906

Lab ID: 1810906-03A

Collection Date: 10/16/2018

Client Sample ID: QMCM-AAS-H-DW-101618

Matrix: AIR

AirVolume (L): 6109.99

Analyses	Result	Report Limit	Analytical Results
----------	--------	-----------------	--------------------

FIBERS BY PCM NIOSH 7400 MOD.

N7400

Analysis Date: **10/22/2018**

Analyst: **PMJ**

Number of fibers	1.5	
Number of fields	100	
Fiber/field	0.015	
Fibers/mm2	ND	7
Fiber/filter	ND	2695
Fiber/cc	<0.00044	

Note:

ALS Environmental

Date: 22-Oct-18

Client: Environmental Quality Management
Project: Quincy Mining Co- Mason Site

Work Order: 1810906

Analytical Results

Lab ID: 1810906-04A
Client Sample ID: QMCM-LAS-UW-101618

Collection Date: 10/16/2018
Matrix: AIR

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1775.87	Analyst: SRL
Date Analyzed: 10/22/2018 13:51		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Lead	ND	0.20	<0.00011	

Note:

ALS Environmental

Date: 22-Oct-18

Client: Environmental Quality Management
Project: Quincy Mining Co- Mason Site

Work Order: 1810906

Lab ID: 1810906-06A

Collection Date: 10/16/2018

Client Sample ID: QMCM-AAS-H-UW-101618

Matrix: AIR

AirVolume (L): 6560.21

Analyses	Result	Report Limit	Analytical Results
FIBERS BY PCM NIOSH 7400 MOD.		N7400	Analysis Date: 10/22/2018 Analyst: PMJ
Number of fibers	1		
Number of fields	100		
Fiber/field	0.01		
Fibers/mm2	ND	7	
Fiber/filter	ND	2695	
Fiber/cc	<0.00041		

Note:

ALS Environmental

Date: 22-Oct-18

Client: Environmental Quality Management
Project: Quincy Mining Co- Mason Site

Work Order: 1810906

Analytical Results

Lab ID: 1810906-07A
Client Sample ID: QMCM-FB-101618

Collection Date: 10/16/2018
Matrix: AIR

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 0	Analyst: SRL
Date Analyzed: 10/22/2018 13:55		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Lead	ND	0.20	NA	

Note:

ALS Environmental

Date: 22-Oct-18

Client: Environmental Quality Management
Project: Quincy Mining Co- Mason Site

Work Order: 1810906

Lab ID: 1810906-08A

Collection Date: 10/16/2018

Client Sample ID: QMCM-FB-101618

Matrix: AIR

AirVolume (L): 0

Analyses	Result	Report Limit	Analytical Results
FIBERS BY PCM NIOSH 7400 MOD.		N7400	Analysis Date: 10/22/2018 Analyst: PMJ
Number of fibers	ND		
Number of fields	100		
Fiber/field	ND		
Fibers/mm2	ND	7	
Fiber/filter	ND	2695	
Fiber/cc	NA		

Note:

ALS Environmental

Date: 22-Oct-18

Client: Environmental Quality Management
Project: Quincy Mining Co- Mason Site

Work Order: 1810906

Analytical Results

Lab ID: 1810906-09A
Client Sample ID: QMCM-LAS-BG1-101618

Collection Date: 10/16/2018
Matrix: AIR

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1700.24	Analyst: SRL
Date Analyzed: 10/22/2018 13:59		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Lead	ND	0.20	<0.00012	

Note:

ALS Environmental

Date: 22-Oct-18

Client: Environmental Quality Management
Project: Quincy Mining Co- Mason Site

Work Order: 1810906

Lab ID: 1810906-11A

Collection Date: 10/16/2018

Client Sample ID: QMCM-AAS-H-BG1-101618

Matrix: AIR

AirVolume (L): 4803.98

Analyses	Result	Report Limit	Analytical Results
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FIBERS BY PCM NIOSH 7400 MOD.

N7400

Analysis Date: **10/22/2018**

Analyst: **PMJ**

Number of fibers	3	
Number of fields	100	
Fiber/field	0.03	
Fibers/mm2	ND	7
Fiber/filter	ND	2695
Fiber/cc	<0.00056	

Note:

ALS Environmental

Date: 22-Oct-18

Client: Environmental Quality Management
Project: Quincy Mining Co- Mason Site

Work Order: 1810906

Analytical Results

Lab ID: 1810906-12A
Client Sample ID: QMCM-LAS-BG2-101618

Collection Date: 10/16/2018
Matrix: AIR

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1726.09	Analyst: SRL
Date Analyzed: 10/22/2018 14:03		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Lead	ND	0.20	<0.00012	

Note:

ALS Environmental

Date: 22-Oct-18

Client: Environmental Quality Management
Project: Quincy Mining Co- Mason Site

Work Order: 1810906

Lab ID: 1810906-14A

Collection Date: 10/16/2018

Client Sample ID: QMCM-AAS-H-BG2-101618

Matrix: AIR

AirVolume (L): 5766.06

Analyses	Result	Report Limit	Analytical Results
FIBERS BY PCM NIOSH 7400 MOD.		N7400	Analysis Date: 10/22/2018 Analyst: PMJ
Number of fibers	2.5		
Number of fields	100		
Fiber/field	0.025		
Fibers/mm2	ND	7	
Fiber/filter	ND	2695	
Fiber/cc	<0.00047		

Note:

ALS Environmental

Date: 22-Oct-18

Client: Environmental Quality Management
Work Order: 1810906
Project: Quincy Mining Co- Mason Site

QC BATCH REPORT

Batch ID: **54292** Instrument ID **ICP3** Method: **N7300**

MBLK	Sample ID mblk-54292-54292				Units: µg/sample		Analysis Date: 10/22/2018 01:22 PM			
Client ID:	Run ID: ICP3_181022A				SeqNo: 1855209		Prep Date: 10/22/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Lead ND 0.20

LCS	Sample ID lcs-54292-54292				Units: µg/sample		Analysis Date: 10/22/2018 01:30 PM			
Client ID:		Run ID: ICP3_181022A			SeqNo: 1855211		Prep Date: 10/22/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Lead 19.45 0.20 20 0 97.2 80-120 0

LCSD	Sample ID lcsd-54292-54292				Units: µg/sample		Analysis Date: 10/22/2018 01:34 PM			
Client ID:	Run ID: ICP3_181022A				SeqNo: 1855212		Prep Date: 10/22/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Lead 19.18 0.20 20 0 95.9 80-120 19.45 1.4 20

The following samples were analyzed in this batch:

1810906-01a	1810906-04a	1810906-07a
1810906-09a	1810906-12a	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Environmental Quality Management
Project: Quincy Mining Co- Mason Site
WorkOrder: 1810906

QUALIFIERS, ACRONYMS, UNITS

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
E	EPA Method
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SDL	Sample Detection Limit
SW	SW-846 Method

<u>Units Reported</u>	<u>Description</u>
µg/sample	

Sample Receipt Checklist

Client Name: **EQM-CINCINNATI**

Date/Time Received: **19-Oct-18 08:28**

Work Order: **1810906**

Received by: **SRM**

Checklist completed by **Shawn Smythe**

22-Oct-18

Reviewed by: **Shawn Smythe**

22-Oct-18

eSignature

Date

eSignature

Date

Matrices:

Carrier name: **FedEx**

Shipping container/cooler in good condition? Yes ☒ No ☐ Not Present ☐

Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Present ☒

Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒

Chain of custody present? Yes ☒ No ☐

Chain of custody signed when relinquished and received? Yes ☒ No ☐

Chain of custody agrees with sample labels? Yes ☒ No ☐

Samples in proper container/bottle? Yes ☒ No ☐

Sample containers intact? Yes ☒ No ☐

Sufficient sample volume for indicated test? Yes ☒ No ☐

All samples received within holding time? Yes ☒ No ☐

Container/Temp Blank temperature in compliance? Yes ☒ No ☐

Temperature(s)/Thermometer(s):

Cooler(s)/Kit(s):

Water - VOA vials have zero headspace? Yes ☐ No ☐ No VOA vials submitted ☐

Water - pH acceptable upon receipt? Yes ☐ No ☐ N/A ☐

pH adjusted? Yes ☐ No ☐ N/A ☐

pH adjusted by:

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:



22-Oct-2018

Erik Corbin
Environmental Quality Management
1800 Carillon Boulevard
Cincinnati, OH 45240

Tel: 513-825-7500
Fax: (513) 825-7495

Re: Quincy Mining Co- Mason Site

Work Order: **1810907**

Dear Erik,

ALS Environmental received 14 samples on 19-Oct-2018 09:28 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 17.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

Shawn Smythe

Electronically approved by: Shawn Smythe

Shawn Smythe
Project Manager

ADDRESS 4388 Glendale Milford Rd Cincinnati, OH 45242- | PHONE (513) 733-5336 | FAX (513) 733-5347

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ALS Environmental

Date: 22-Oct-18

Client: Environmental Quality Management
Project: Quincy Mining Co- Mason Site
Work Order: 1810907

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1810907-01	QMCM-LAS-DW-101718	Air		10/17/2018	10/19/2018	<input type="checkbox"/>
1810907-02	QMCM-AAS-L-DW-101718	Air		10/17/2018	10/19/2018	<input type="checkbox"/>
1810907-03	QMCM-AAS-H-DW-101718	Air		10/17/2018	10/19/2018	<input type="checkbox"/>
1810907-04	QMCM-LAS-UW-101718	Air		10/17/2018	10/19/2018	<input type="checkbox"/>
1810907-05	QMCM-AAS-L-UW-101718	Air		10/17/2018	10/19/2018	<input type="checkbox"/>
1810907-06	QMCM-AAS-H-UW-101718	Air		10/17/2018	10/19/2018	<input type="checkbox"/>
1810907-07	QMCM-FB-101718	Air		10/17/2018	10/19/2018	<input type="checkbox"/>
1810907-08	QMCM-FB-101718	Air		10/17/2018	10/19/2018	<input type="checkbox"/>
1810907-09	QMCM-LAS-BG1-101718	Air		10/17/2018	10/19/2018	<input type="checkbox"/>
1810907-10	QMCM-AAS-L-BG1-101718	Air		10/17/2018	10/19/2018	<input type="checkbox"/>
1810907-11	QMCM-AAS-H-BG1-101718	Air		10/17/2018	10/19/2018	<input type="checkbox"/>
1810907-12	QMCM-LAS-BG2-101718	Air		10/17/2018	10/19/2018	<input type="checkbox"/>
1810907-13	QMCM-AAS-L-BG2-101718	Air		10/17/2018	10/19/2018	<input type="checkbox"/>
1810907-14	QMCM-AAS-H-BG2-101718	Air		10/17/2018	10/19/2018	<input type="checkbox"/>

Client: Environmental Quality Management
Project: Quincy Mining Co- Mason Site
Work Order: 1810907

Case Narrative

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Sample collection is performed outside ALS and is the sole responsibility of the client. If sample collection or submission deviates from any method requirement, then results cannot be interpreted according to the method. Results apply only to portions of samples analyzed. Samples disposed after 60 days. Cover letter signatory indicates ALS LIMS report generation only. Raw data validated by analysts.

Per client request, the samples indicated herein were prepared and analyzed in accordance with the NIOSH Method 7400 Issue 2 outlined in the NIOSH Manual of Analytical Methods (NMAM), Fourth Edition and dated 8/15/94. ALS adheres to all QA/QC guidelines set forth in this method. The QA/QC officer maintains all laboratory quality data.

Asbestos cannot be distinguished from other fibers by any PCM method. Counts and concentrations listed in this report include all fiber types detected and represent the maximum concentrations. Analysis by TEM is required to identify and distinguish specific fiber species. Samples which reference the ALS LIMS Method Code "PCM_N7400" were analyzed using the counting criteria commonly referred to as the A rules detailed in Appendix B of the method. Samples which reference the ALS LIMS Method Code "PCM_N77152_FIBER" were analyzed using the alternate counting rules commonly referred to as the B rules detailed in Appendix C of the method. These originated from the NIOSH fibrous glass criteria document NIOSH 77-152 and were added to NIOSH Method 7400, Rev. 2 dated 8/15/87. Samples which reference an ALS LIMS Method Code bearing the suffix "_IND" were either overloaded and/or exhibited loose material in the cassette. Per client request, these were therefore prepared using an indirect method detailed in ASTM D5755 in which the samples are suspended in de-ionized water and re-filtered for appropriate loading prior to analysis. Indirect preparation incurs an additional fee and may introduce fiber breakage, which can potentially increase or decrease fiber concentrations as compared to the original air filters.

NIOSH Method 7400 requires a minimum volume of 400 Liters on a single sample or on consecutive samples and that 2 field blanks (or 10% of the total samples, whichever is greater) be submitted with each set. NY ELAP requires a minimum sample volume of 900 liters. The results reported are not field blank corrected. Blanks receive a 100-field count, and data are reported for use in background correction by the client. Note that a 25mm filter has an effective filter collection area (EFA) of 385mm², 37mm; 855mm², and 47mm; 1075mm².

The limit of detection (LOD) for this method is 7 Fibers/mm² for a sample volume of ~1200 Liters in an area relatively free of interferences. Since client sample volumes and pass/fail criteria vary, PCM results are reported in the actual calculated fibers/mm² and fibers per filter. When sample air volumes (L) are supplied by the client via the chain of custody results are also reported in fibers/cc (fibers/mL).

Client: Environmental Quality Management
Project: Quincy Mining Co- Mason Site
Work Order: 1810907

Case Narrative

ALS PCM Analyst CV* Values:

Analyst	Range (Fibers/mm2)			
	>5<=25.5	>25.5<=63.7	>63.7<=127.4	>127.4
NEW	0.25	0.25	0.25	0.25
AS	0.68	0.18	0.09	0.48
PH	0.46	0.18	0.20	0.45
ALL LAB	0.77	0.19	0.11	0.19

*CV values are equivalent to Intra-laboratory Sr values.

Low volume PCM cassettes were not analyzed per client request.

ALS Environmental

Date: 22-Oct-18

Client: Environmental Quality Management
Project: Quincy Mining Co- Mason Site

Work Order: 1810907

Analytical Results

Lab ID: 1810907-01A
Client Sample ID: QMCM-LAS-DW-101718

Collection Date: 10/17/2018
Matrix: AIR

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1257.42	Analyst: SRL
Date Analyzed: 10/22/2018 14:08		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Lead	ND	0.20	<0.00016	

Note:

ALS Environmental

Date: 22-Oct-18

Client: Environmental Quality Management
Project: Quincy Mining Co- Mason Site

Work Order: 1810907

Lab ID: 1810907-03A

Collection Date: 10/17/2018

Client Sample ID: QMCM-AAS-H-DW-101718

Matrix: AIR

AirVolume (L): 4255.84

Analyses	Result	Report Limit	Analytical Results
FIBERS BY PCM NIOSH 7400 MOD.		N7400	Analysis Date: 10/22/2018 Analyst: PMJ
Number of fibers	1		
Number of fields	100		
Fiber/field	0.01		
Fibers/mm2	ND	7	
Fiber/filter	ND	2695	
Fiber/cc	<0.00063		

Note:

ALS Environmental

Date: 22-Oct-18

Client: Environmental Quality Management
Project: Quincy Mining Co- Mason Site

Work Order: 1810907

Analytical Results

Lab ID: 1810907-04A
Client Sample ID: QMCM-LAS-UW-101718

Collection Date: 10/17/2018
Matrix: AIR

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1249.96	Analyst: SRL
Date Analyzed: 10/22/2018 14:12		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Lead	ND	0.20	<0.00016	

Note:

ALS Environmental

Date: 22-Oct-18

Client: Environmental Quality Management
Project: Quincy Mining Co- Mason Site

Work Order: 1810907

Lab ID: 1810907-06A

Collection Date: 10/17/2018

Client Sample ID: QMCM-AAS-H-UW-101718

Matrix: AIR

AirVolume (L): 4013

Analyses	Result	Report Limit	Analytical Results
----------	--------	--------------	--------------------

FIBERS BY PCM NIOSH 7400 MOD.

N7400

Analysis Date: **10/22/2018**

Analyst: **PMJ**

Number of fibers	ND	
Number of fields	100	
Fiber/field	ND	
Fibers/mm2	ND	7
Fiber/filter	ND	2695
Fiber/cc	<0.00067	

Note:

ALS Environmental

Date: 22-Oct-18

Client: Environmental Quality Management
Project: Quincy Mining Co- Mason Site

Work Order: 1810907

Analytical Results

Lab ID: 1810907-07A
Client Sample ID: QMCM-FB-101718

Collection Date: 10/17/2018
Matrix: AIR

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 0	Analyst: SRL
Date Analyzed: 10/22/2018 14:16		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Lead	ND	0.20	NA	

Note:

ALS Environmental

Date: 22-Oct-18

Client: Environmental Quality Management
Project: Quincy Mining Co- Mason Site

Work Order: 1810907

Lab ID: 1810907-08A

Collection Date: 10/17/2018

Client Sample ID: QMCM-FB-101718

Matrix: AIR

AirVolume (L): 0

Analyses	Result	Report Limit	Analytical Results
FIBERS BY PCM NIOSH 7400 MOD.		N7400	Analysis Date: 10/22/2018 Analyst: PMJ
Number of fibers	ND		
Number of fields	100		
Fiber/field	ND		
Fibers/mm2	ND	7	
Fiber/filter	ND	2695	
Fiber/cc	NA		

Note:

ALS Environmental

Date: 22-Oct-18

Client: Environmental Quality Management
Project: Quincy Mining Co- Mason Site

Work Order: 1810907

Analytical Results

Lab ID: 1810907-09A
Client Sample ID: QMCM-LAS-BG1-101718

Collection Date: 10/17/2018
Matrix: AIR

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1124.23	Analyst: SRL
Date Analyzed: 10/22/2018 14:20		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Lead	ND	0.20	<0.00018	

Note:

ALS Environmental

Date: 22-Oct-18

Client: Environmental Quality Management
Project: Quincy Mining Co- Mason Site

Work Order: 1810907

Lab ID: 1810907-11A

Collection Date: 10/17/2018

Client Sample ID: QMCM-AAS-H-BG1-101718

Matrix: AIR

AirVolume (L): 3604.15

Analyses	Result	Report Limit	Analytical Results
FIBERS BY PCM NIOSH 7400 MOD.		N7400	Analysis Date: 10/22/2018 Analyst: PMJ
Number of fibers	1.5		
Number of fields	100		
Fiber/field	0.015		
Fibers/mm2	ND	7	
Fiber/filter	ND	2695	
Fiber/cc	<0.00075		

Note:

ALS Environmental

Date: 22-Oct-18

Client: Environmental Quality Management
Project: Quincy Mining Co- Mason Site

Work Order: 1810907

Analytical Results

Lab ID: 1810907-12A
Client Sample ID: QMCM-LAS-BG2-101718

Collection Date: 10/17/2018
Matrix: AIR

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1168.91	Analyst: SRL
Date Analyzed: 10/22/2018 14:25		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Lead	ND	0.20	<0.00017	

Note:

ALS Environmental

Date: 22-Oct-18

Client: Environmental Quality Management
Project: Quincy Mining Co- Mason Site

Work Order: 1810907

Lab ID: 1810907-14A

Collection Date: 10/17/2018

Client Sample ID: QMCM-AAS-H-BG2-101718

Matrix: AIR

AirVolume (L): 3809.82

Analyses	Result	Report Limit	Analytical Results
FIBERS BY PCM NIOSH 7400 MOD.		N7400	Analysis Date: 10/22/2018 Analyst: PMJ
Number of fibers	2		
Number of fields	100		
Fiber/field	0.02		
Fibers/mm2	ND	7	
Fiber/filter	ND	2695	
Fiber/cc	<0.00071		

Note:

ALS Environmental

Date: 22-Oct-18

Client: Environmental Quality Management
Work Order: 1810907
Project: Quincy Mining Co- Mason Site

QC BATCH REPORT

Batch ID: **54292** Instrument ID **ICP3** Method: **N7300**

MBLK	Sample ID mblk-54292-54292				Units: µg/sample		Analysis Date: 10/22/2018 01:22 PM			
Client ID:	Run ID: ICP3_181022A				SeqNo: 1855209		Prep Date: 10/22/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Lead ND 0.20

LCS	Sample ID lcs-54292-54292				Units: µg/sample		Analysis Date: 10/22/2018 01:30 PM			
Client ID:		Run ID: ICP3_181022A			SeqNo: 1855211		Prep Date: 10/22/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Lead 19.45 0.20 20 0 97.2 80-120 0

LCSD	Sample ID lcsd-54292-54292				Units: µg/sample		Analysis Date: 10/22/2018 01:34 PM			
Client ID:	Run ID: ICP3_181022A				SeqNo: 1855212		Prep Date: 10/22/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Lead 19.18 0.20 20 0 95.9 80-120 19.45 1.4 20

The following samples were analyzed in this batch:

1810907-01a	1810907-04a	1810907-07a
1810907-09a	1810907-12a	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Environmental Quality Management
Project: Quincy Mining Co- Mason Site
WorkOrder: 1810907

QUALIFIERS, ACRONYMS, UNITS

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
E	EPA Method
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SDL	Sample Detection Limit
SW	SW-846 Method

<u>Units Reported</u>	<u>Description</u>
µg/sample	

Sample Receipt Checklist

Client Name: **EQM-CINCINNATI**

Date/Time Received: **19-Oct-18 09:28**

Work Order: **1810907**

Received by: **SRM**

Checklist completed by **Shawn Smythe**

22-Oct-18

Reviewed by: **Shawn Smythe**

22-Oct-18

eSignature

Date

eSignature

Date

Matrices:

Carrier name: **FedEx**

Shipping container/cooler in good condition? Yes ☒ No ☐ Not Present ☐

Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Present ☒

Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒

Chain of custody present? Yes ☒ No ☐

Chain of custody signed when relinquished and received? Yes ☒ No ☐

Chain of custody agrees with sample labels? Yes ☒ No ☐

Samples in proper container/bottle? Yes ☒ No ☐

Sample containers intact? Yes ☒ No ☐

Sufficient sample volume for indicated test? Yes ☒ No ☐

All samples received within holding time? Yes ☒ No ☐

Container/Temp Blank temperature in compliance? Yes ☒ No ☐

Temperature(s)/Thermometer(s):

Cooler(s)/Kit(s):

Water - VOA vials have zero headspace? Yes ☐ No ☐ No VOA vials submitted ☐

Water - pH acceptable upon receipt? Yes ☐ No ☐ N/A ☐

pH adjusted? Yes ☐ No ☐ N/A ☐

pH adjusted by:

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:



24-Oct-2018

Erik Corbin
Environmental Quality Management
1800 Carillon Boulevard
Cincinnati, OH 45240

Tel: 513-825-7500
Fax: (513) 825-7495

Re: Quincy Mining Co; 030325.0059

Work Order: **18101061**

Dear Erik,

ALS Environmental received 8 samples on 23-Oct-2018 10:15 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 13.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

Shawn Smythe

Electronically approved by: Shawn Smythe

Shawn Smythe
Project Manager

ADDRESS 4388 Glendale Milford Rd Cincinnati, OH 45242- | PHONE (513) 733-5336 | FAX (513) 733-5347

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ALS Environmental

Date: 24-Oct-18

Client: Environmental Quality Management
Project: Quincy Mining Co; 030325.0059
Work Order: 18101061

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
18101061-01	QMCM-LAS-DW-101518	Air		10/15/2018	10/23/2018 10:15	<input type="checkbox"/>
18101061-02	QMCM-AAS-L-DW-101518	Air		10/15/2018	10/23/2018 10:15	<input type="checkbox"/>
18101061-03	QMCM-AAS-H-DW-101518	Air		10/15/2018	10/23/2018 10:15	<input type="checkbox"/>
18101061-04	QMCM-LAS-UW-101518	Air		10/15/2018	10/23/2018 10:15	<input type="checkbox"/>
18101061-05	QMCM-AAS-L-UW-101518	Air		10/15/2018	10/23/2018 10:15	<input type="checkbox"/>
18101061-06	QMCM-AAS-H-UW-101518	Air		10/15/2018	10/23/2018 10:15	<input type="checkbox"/>
18101061-07	QMCM-FB-101518-LEAD	Air		10/15/2018	10/23/2018 10:15	<input type="checkbox"/>
18101061-08	QMCM-FB-101518-PCM	Air		10/15/2018	10/23/2018 10:15	<input type="checkbox"/>

Client: Environmental Quality Management
Project: Quincy Mining Co; 030325.0059
Work Order: 18101061

Case Narrative

Please contact ALS Cincinnati, OH for a complete list of accreditations. Accreditation does not constitute approval or endorsement by any accrediting body or agency of the federal government.

Sample collection is performed outside ALS and is the sole responsibility of the client. If sample collection or submission deviates from any method requirement, then results cannot be interpreted according to the method. Results apply only to portions of samples analyzed. Samples disposed after 60 days. Cover letter signatory indicates ALS LIMS report generation only. Raw data validated by analysts.

Per client request, the samples indicated herein were prepared and analyzed in accordance with the NIOSH Method 7400 Issue 2 outlined in the NIOSH Manual of Analytical Methods (NMAM), Fourth Edition and dated 8/15/94. ALS adheres to all QA/QC guidelines set forth in this method. The QA/QC officer maintains all laboratory quality data.

Asbestos cannot be distinguished from other fibers by any PCM method. Counts and concentrations listed in this report include all fiber types detected and represent the maximum concentrations. Analysis by TEM is required to identify and distinguish specific fiber species. Samples which reference the ALS LIMS Method Code "PCM_N7400" were analyzed using the counting criteria commonly referred to as the A rules detailed in Appendix B of the method. Samples which reference the ALS LIMS Method Code "PCM_N77152_FIBER" were analyzed using the alternate counting rules commonly referred to as the B rules detailed in Appendix C of the method. These originated from the NIOSH fibrous glass criteria document NIOSH 77-152 and were added to NIOSH Method 7400, Rev. 2 dated 8/15/87. Samples which reference an ALS LIMS Method Code bearing the suffix "_IND" were either overloaded and/or exhibited loose material in the cassette. Per client request, these were therefore prepared using an indirect method detailed in ASTM D5755 in which the samples are suspended in de-ionized water and re-filtered for appropriate loading prior to analysis. Indirect preparation incurs an additional fee and may introduce fiber breakage, which can potentially increase or decrease fiber concentrations as compared to the original air filters.

NIOSH Method 7400 requires a minimum volume of 400 Liters on a single sample or on consecutive samples and that 2 field blanks (or 10% of the total samples, whichever is greater) be submitted with each set. NY ELAP requires a minimum sample volume of 900 liters. The results reported are not field blank corrected. Blanks receive a 100-field count, and data are reported for use in background correction by the client. Note that a 25mm filter has an effective filter collection area (EFA) of 385mm², 37mm; 855mm², and 47mm; 1075mm².

The limit of detection (LOD) for this method is 7 Fibers/mm² for a sample volume of ~1200 Liters in an area relatively free of interferences. Since client sample volumes and pass/fail criteria vary, PCM results are reported in the actual calculated fibers/mm² and fibers per filter. When sample air volumes (L) are supplied by the client via the chain of custody results are also reported in fibers/cc (fibers/mL).

Client: Environmental Quality Management
Project: Quincy Mining Co; 030325.0059
Work Order: 18101061

Case Narrative

ALS PCM Analyst CV* Values:

Analyst	Range (Fibers/mm2)			
	>5<=25.5	>25.5<=63.7	>63.7<=127.4	>127.4
NEW	0.25	0.25	0.25	0.25
AS	0.68	0.18	0.09	0.48
PH	0.46	0.18	0.20	0.45
ALL LAB	0.77	0.19	0.11	0.19

*CV values are equivalent to Intra-laboratory Sr values.

Low volume PCM cassettes were not analyzed per client request.

ALS Environmental

Date: 24-Oct-18

Client: Environmental Quality Management
Project: Quincy Mining Co; 030325.0059

Work Order: 18101061

Analytical Results

Lab ID: 18101061-01A
Client Sample ID: QMCM-LAS-DW-101518

Collection Date: 10/15/2018
Matrix: AIR

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1609.42	Analyst: SRL
Date Analyzed: 10/24/2018 14:10		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Lead	ND	0.20	<0.00012	

Note:

ALS Environmental

Date: 24-Oct-18

Client: Environmental Quality Management
Project: Quincy Mining Co; 030325.0059

Work Order: 18101061

Lab ID: 18101061-03A

Collection Date: 10/15/2018

Client Sample ID: QMCM-AAS-H-DW-101518

Matrix: AIR

AirVolume (L): 5008.06

Analyses	Result	Report Limit	Analytical Results
FIBERS BY PCM NIOSH 7400 MOD.		N7400	Analysis Date: 10/23/2018 Analyst: PMJ
Number of fibers	1.5		
Number of fields	100		
Fiber/field	0.015		
Fibers/mm2	ND	7	
Fiber/filter	ND	2695	
Fiber/cc	<0.00054		

Note:

ALS Environmental

Date: 24-Oct-18

Client: Environmental Quality Management
Project: Quincy Mining Co; 030325.0059

Work Order: 18101061

Analytical Results

Lab ID: 18101061-04A
Client Sample ID: QMCM-LAS-UW-101518

Collection Date: 10/15/2018
Matrix: AIR

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1580.26	Analyst: SRL
Date Analyzed: 10/24/2018 14:13		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Lead	ND	0.20	<0.00013	

Note:

ALS Environmental

Date: 24-Oct-18

Client: Environmental Quality Management
Project: Quincy Mining Co; 030325.0059

Work Order: 18101061

Lab ID: 18101061-06A

Collection Date: 10/15/2018

Client Sample ID: QMCM-AAS-H-UW-101518

Matrix: AIR

AirVolume (L): 4962.4

Analyses	Result	Report Limit	Analytical Results
FIBERS BY PCM NIOSH 7400 MOD.		N7400	Analysis Date: 10/23/2018 Analyst: PMJ
Number of fibers	2		
Number of fields	100		
Fiber/field	0.02		
Fibers/mm2	ND	7	
Fiber/filter	ND	2695	
Fiber/cc	<0.00054		

Note:

ALS Environmental

Date: 24-Oct-18

Client: Environmental Quality Management
Project: Quincy Mining Co; 030325.0059

Work Order: 18101061

Analytical Results

Lab ID: 18101061-07A
Client Sample ID: QMCM-FB-101518-LEAD

Collection Date: 10/15/2018
Matrix: AIR

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 0	Analyst: SRL
Date Analyzed: 10/24/2018 14:24		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Lead	ND	0.20	NA	

Note:

ALS Environmental

Date: 24-Oct-18

Client: Environmental Quality Management
Project: Quincy Mining Co; 030325.0059

Work Order: 18101061

Lab ID: 18101061-08A

Collection Date: 10/15/2018

Client Sample ID: QMCM-FB-101518-PCM

Matrix: AIR

AirVolume (L): 0

Analyses	Result	Report Limit	Analytical Results
FIBERS BY PCM NIOSH 7400 MOD.			Analysis Date: 10/23/2018
			Analyst: PMJ
Number of fibers	ND		
Number of fields	100		
Fiber/field	ND		
Fibers/mm2	ND	7	
Fiber/filter	ND	2695	
Fiber/cc	NA		

Note:

ALS Environmental

Date: 24-Oct-18

Client: Environmental Quality Management
Work Order: 18101061
Project: Quincy Mining Co; 030325.0059

QC BATCH REPORT

Batch ID: **54363** Instrument ID **ICP1** Method: **N7300**

MBLK	Sample ID mblk-54363-54363				Units: µg/sample		Analysis Date: 10/24/2018 01:43 PM			
Client ID:	Run ID: ICP1_181024A				SeqNo: 1857868		Prep Date: 10/24/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Lead ND 0.20

LCS	Sample ID lcs-54363-54363				Units: µg/sample		Analysis Date: 10/24/2018 01:51 PM			
Client ID:	Run ID: ICP1_181024A				SeqNo: 1857870		Prep Date: 10/24/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Lead 19.78 0.20 20 0 98.9 80-120 0

LCSD	Sample ID lcsd-54363-54363				Units: µg/sample		Analysis Date: 10/24/2018 01:55 PM			
Client ID:	Run ID: ICP1_181024A				SeqNo: 1857871		Prep Date: 10/24/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Lead 19.73 0.20 20 0 98.6 80-120 19.78 0.253 20

The following samples were analyzed in this batch:

18101061-01a	18101061-04a	18101061-07a
--------------	--------------	--------------

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Environmental Quality Management
Project: Quincy Mining Co; 030325.0059
WorkOrder: 18101061

QUALIFIERS, ACRONYMS, UNITS

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
E	EPA Method
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SDL	Sample Detection Limit
SW	SW-846 Method

<u>Units Reported</u>	<u>Description</u>
µg/sample	

Sample Receipt Checklist

Client Name: **EQM-CINCINNATI**

Date/Time Received: **23-Oct-18 10:15**

Work Order: **18101061**

Received by: **SNH**

Checklist completed by **Stephanie Harrington**

23-Oct-18

Reviewed by: **Shawn Smythe**

24-Oct-18

eSignature

Date

eSignature

Date

Matrices:

Carrier name: **FedEx**

Shipping container/cooler in good condition? Yes ☒ No ☐ Not Present ☐

Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Present ☒

Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒

Chain of custody present? Yes ☒ No ☐

Chain of custody signed when relinquished and received? Yes ☒ No ☐

Chain of custody agrees with sample labels? Yes ☒ No ☐

Samples in proper container/bottle? Yes ☒ No ☐

Sample containers intact? Yes ☒ No ☐

Sufficient sample volume for indicated test? Yes ☒ No ☐

All samples received within holding time? Yes ☒ No ☐

Container/Temp Blank temperature in compliance? Yes ☒ No ☐

Temperature(s)/Thermometer(s):

Cooler(s)/Kit(s):

Water - VOA vials have zero headspace? Yes ☐ No ☐ No VOA vials submitted ☒

Water - pH acceptable upon receipt? Yes ☐ No ☐ N/A ☒

pH adjusted? Yes ☐ No ☐ N/A ☒

pH adjusted by:

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:



24-Oct-2018

Erik Corbin
Environmental Quality Management
1800 Carillon Boulevard
Cincinnati, OH 45240

Tel: 513-825-7500
Fax: (513) 825-7495

Re: Quincy Mining Co; 030325.0059

Work Order: **18101062**

Dear Erik,

ALS Environmental received 8 samples on 23-Oct-2018 10:15 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 13.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

Shawn Smythe

Electronically approved by: Shawn Smythe

Shawn Smythe
Project Manager

ADDRESS 4388 Glendale Milford Rd Cincinnati, OH 45242- | PHONE (513) 733-5336 | FAX (513) 733-5347

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ALS Environmental

Date: 24-Oct-18

Client: Environmental Quality Management
Project: Quincy Mining Co; 030325.0059
Work Order: 18101062

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
18101062-01	QMCM-LAS-DW-101318	Air		10/13/2018	10/23/2018 10:15	<input type="checkbox"/>
18101062-02	QMCM-AAS-L-DW-101318	Air		10/13/2018	10/23/2018 10:15	<input type="checkbox"/>
18101062-03	QMCM-AAS-H-DW-101318	Air		10/13/2018	10/23/2018 10:15	<input type="checkbox"/>
18101062-04	QMCM-LAS-UW-101318	Air		10/13/2018	10/23/2018 10:15	<input type="checkbox"/>
18101062-05	QMCM-AAS-L-UW-101318	Air		10/13/2018	10/23/2018 10:15	<input type="checkbox"/>
18101062-06	QMCM-AAS-H-UW-101318	Air		10/13/2018	10/23/2018 10:15	<input type="checkbox"/>
18101062-07	QMCM-FB-101318-LEAD	Air		10/13/2018	10/23/2018 10:15	<input type="checkbox"/>
18101062-08	QMCM-FB-101318-PCM	Air		10/13/2018	10/23/2018 10:15	<input type="checkbox"/>

Client: Environmental Quality Management
Project: Quincy Mining Co; 030325.0059
Work Order: 18101062

Case Narrative

Please contact ALS Cincinnati, OH for a complete list of accreditations. Accreditation does not constitute approval or endorsement by any accrediting body or agency of the federal government.

Sample collection is performed outside ALS and is the sole responsibility of the client. If sample collection or submission deviates from any method requirement, then results cannot be interpreted according to the method. Results apply only to portions of samples analyzed. Samples disposed after 60 days. Cover letter signatory indicates ALS LIMS report generation only. Raw data validated by analysts.

Per client request, the samples indicated herein were prepared and analyzed in accordance with the NIOSH Method 7400 Issue 2 outlined in the NIOSH Manual of Analytical Methods (NMAM), Fourth Edition and dated 8/15/94. ALS adheres to all QA/QC guidelines set forth in this method. The QA/QC officer maintains all laboratory quality data.

Asbestos cannot be distinguished from other fibers by any PCM method. Counts and concentrations listed in this report include all fiber types detected and represent the maximum concentrations. Analysis by TEM is required to identify and distinguish specific fiber species. Samples which reference the ALS LIMS Method Code "PCM_N7400" were analyzed using the counting criteria commonly referred to as the A rules detailed in Appendix B of the method. Samples which reference the ALS LIMS Method Code "PCM_N77152_FIBER" were analyzed using the alternate counting rules commonly referred to as the B rules detailed in Appendix C of the method. These originated from the NIOSH fibrous glass criteria document NIOSH 77-152 and were added to NIOSH Method 7400, Rev. 2 dated 8/15/87. Samples which reference an ALS LIMS Method Code bearing the suffix "_IND" were either overloaded and/or exhibited loose material in the cassette. Per client request, these were therefore prepared using an indirect method detailed in ASTM D5755 in which the samples are suspended in de-ionized water and re-filtered for appropriate loading prior to analysis. Indirect preparation incurs an additional fee and may introduce fiber breakage, which can potentially increase or decrease fiber concentrations as compared to the original air filters.

NIOSH Method 7400 requires a minimum volume of 400 Liters on a single sample or on consecutive samples and that 2 field blanks (or 10% of the total samples, whichever is greater) be submitted with each set. NY ELAP requires a minimum sample volume of 900 liters. The results reported are not field blank corrected. Blanks receive a 100-field count, and data are reported for use in background correction by the client. Note that a 25mm filter has an effective filter collection area (EFA) of 385mm², 37mm; 855mm², and 47mm; 1075mm².

The limit of detection (LOD) for this method is 7 Fibers/mm² for a sample volume of ~1200 Liters in an area relatively free of interferences. Since client sample volumes and pass/fail criteria vary, PCM results are reported in the actual calculated fibers/mm² and fibers per filter. When sample air volumes (L) are supplied by the client via the chain of custody results are also reported in fibers/cc (fibers/mL).

Client: Environmental Quality Management
Project: Quincy Mining Co; 030325.0059
Work Order: 18101062

Case Narrative

ALS PCM Analyst CV* Values:

Analyst	Range (Fibers/mm2)			
	>5<=25.5	>25.5<=63.7	>63.7<=127.4	>127.4
NEW	0.25	0.25	0.25	0.25
AS	0.68	0.18	0.09	0.48
PH	0.46	0.18	0.20	0.45
ALL LAB	0.77	0.19	0.11	0.19

*CV values are equivalent to Intra-laboratory Sr values.

Low volume PCM cassettes were not analyzed per client request.

ALS Environmental

Date: 24-Oct-18

Client: Environmental Quality Management
Project: Quincy Mining Co; 030325.0059

Work Order: 18101062

Analytical Results

Lab ID: 18101062-01A
Client Sample ID: QMCM-LAS-DW-101318

Collection Date: 10/13/2018
Matrix: AIR

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 490.55	Analyst: SRL
Date Analyzed: 10/24/2018 14:28		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Lead	ND	0.20	<0.00041	

Note:

ALS Environmental

Date: 24-Oct-18

Client: Environmental Quality Management
Project: Quincy Mining Co; 030325.0059

Work Order: 18101062

Lab ID: 18101062-03A

Collection Date: 10/13/2018

Client Sample ID: QMCM-AAS-H-DW-101318

Matrix: AIR

AirVolume (L): 1537.03

Analyses	Result	Report Limit	Analytical Results
FIBERS BY PCM NIOSH 7400 MOD.		N7400	Analysis Date: 10/23/2018 Analyst: PMJ
Number of fibers	1		
Number of fields	100		
Fiber/field	0.01		
Fibers/mm2	ND	7	
Fiber/filter	ND	2695	
Fiber/cc	<0.0018		

Note:

ALS Environmental

Date: 24-Oct-18

Client: Environmental Quality Management
Project: Quincy Mining Co; 030325.0059

Work Order: 18101062

Analytical Results

Lab ID: 18101062-04A
Client Sample ID: QMCM-LAS-UW-101318

Collection Date: 10/13/2018
Matrix: AIR

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 489.78	Analyst: SRL
Date Analyzed: 10/24/2018 14:32		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Lead	ND	0.20	<0.00041	

Note:

ALS Environmental

Date: 24-Oct-18

Client: Environmental Quality Management
Project: Quincy Mining Co; 030325.0059

Work Order: 18101062

Lab ID: 18101062-06A

Collection Date: 10/13/2018

Client Sample ID: QMCM-AAS-H-UW-101318

Matrix: AIR

AirVolume (L): 1548.33

Analyses	Result	Report Limit	Analytical Results
FIBERS BY PCM NIOSH 7400 MOD.		N7400	Analysis Date: 10/23/2018 Analyst: PMJ
Number of fibers	ND		
Number of fields	100		
Fiber/field	ND		
Fibers/mm2	ND	7	
Fiber/filter	ND	2695	
Fiber/cc	<0.0017		

Note:

ALS Environmental

Date: 24-Oct-18

Client: Environmental Quality Management
Project: Quincy Mining Co; 030325.0059

Work Order: 18101062

Analytical Results

Lab ID: 18101062-07A
Client Sample ID: QMCM-FB-101318-LEAD

Collection Date: 10/13/2018
Matrix: AIR

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 0	Analyst: SRL
Date Analyzed: 10/24/2018 14:36		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Lead	ND	0.20	NA	

Note:

ALS Environmental

Date: 24-Oct-18

Client: Environmental Quality Management
Project: Quincy Mining Co; 030325.0059

Work Order: 18101062

Lab ID: 18101062-08A

Collection Date: 10/13/2018

Client Sample ID: QMCM-FB-101318-PCM

Matrix: AIR

AirVolume (L): 0

Analyses	Result	Report Limit	Analytical Results
FIBERS BY PCM NIOSH 7400 MOD.		N7400	Analysis Date: 10/23/2018 Analyst: PMJ
Number of fibers	ND		
Number of fields	100		
Fiber/field	ND		
Fibers/mm2	ND	7	
Fiber/filter	ND	2695	
Fiber/cc	NA		

Note:

ALS Environmental

Date: 24-Oct-18

Client: Environmental Quality Management
Work Order: 18101062
Project: Quincy Mining Co; 030325.0059

QC BATCH REPORT

Batch ID: **54363** Instrument ID **ICP1** Method: **N7300**

MBLK	Sample ID mblk-54363-54363				Units: µg/sample		Analysis Date: 10/24/2018 01:43 PM			
Client ID:	Run ID: ICP1_181024A				SeqNo: 1857868		Prep Date: 10/24/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Lead ND 0.20

LCS	Sample ID lcs-54363-54363				Units: µg/sample		Analysis Date: 10/24/2018 01:51 PM			
Client ID:	Run ID: ICP1_181024A				SeqNo: 1857870		Prep Date: 10/24/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Lead 19.78 0.20 20 0 98.9 80-120 0

LCSD	Sample ID lcsd-54363-54363				Units: µg/sample		Analysis Date: 10/24/2018 01:55 PM			
Client ID:	Run ID: ICP1_181024A				SeqNo: 1857871		Prep Date: 10/24/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Lead 19.73 0.20 20 0 98.6 80-120 19.78 0.253 20

The following samples were analyzed in this batch:

18101062-01a 18101062-04a 18101062-07a

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Environmental Quality Management
Project: Quincy Mining Co; 030325.0059
WorkOrder: 18101062

QUALIFIERS, ACRONYMS, UNITS

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
E	EPA Method
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SDL	Sample Detection Limit
SW	SW-846 Method

<u>Units Reported</u>	<u>Description</u>
µg/sample	

Sample Receipt Checklist

Client Name: **EQM-CINCINNATI**

Date/Time Received: **23-Oct-18 10:15**

Work Order: **18101062**

Received by: **SNH**

Checklist completed by **Stephanie Harrington**

23-Oct-18

Reviewed by: **Shawn Smythe**

24-Oct-18

eSignature

Date

eSignature

Date

Matrices:

Carrier name: **FedEx**

Shipping container/cooler in good condition? Yes ☒ No ☐ Not Present ☐

Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Present ☒

Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒

Chain of custody present? Yes ☒ No ☐

Chain of custody signed when relinquished and received? Yes ☒ No ☐

Chain of custody agrees with sample labels? Yes ☒ No ☐

Samples in proper container/bottle? Yes ☒ No ☐

Sample containers intact? Yes ☒ No ☐

Sufficient sample volume for indicated test? Yes ☒ No ☐

All samples received within holding time? Yes ☒ No ☐

Container/Temp Blank temperature in compliance? Yes ☒ No ☐

Temperature(s)/Thermometer(s):

Cooler(s)/Kit(s):

Water - VOA vials have zero headspace? Yes ☐ No ☐ No VOA vials submitted ☒

Water - pH acceptable upon receipt? Yes ☐ No ☐ N/A ☒

pH adjusted? Yes ☐ No ☐ N/A ☒

pH adjusted by:

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:



24-Oct-2018

Erik Corbin
Environmental Quality Management
1800 Carillon Boulevard
Cincinnati, OH 45240

Tel: 513-825-7500
Fax: (513) 825-7495

Re: Quincy Mining Co; 030325.0059

Work Order: **18101063**

Dear Erik,

ALS Environmental received 12 samples on 23-Oct-2018 10:15 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 17.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

Shawn Smythe

Electronically approved by: Shawn Smythe

Shawn Smythe
Project Manager

ADDRESS 4388 Glendale Milford Rd Cincinnati, OH 45242- | PHONE (513) 733-5336 | FAX (513) 733-5347

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RIGHT SOLUTIONS RIGHT PARTNER

ALS Environmental

Date: 24-Oct-18

Client: Environmental Quality Management
Project: Quincy Mining Co; 030325.0059
Work Order: 18101063

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
18101063-01	QMCM-LAS-DW-101218	Air		10/12/2018	10/23/2018 10:15	<input type="checkbox"/>
18101063-02	QMCM-AAS-L-DW-101218	Air		10/12/2018	10/23/2018 10:15	<input type="checkbox"/>
18101063-03	QMCM-AAS-H-DW-101218	Air		10/12/2018	10/23/2018 10:15	<input type="checkbox"/>
18101063-04	QMCM-LAS-UW-101218	Air		10/12/2018	10/23/2018 10:15	<input type="checkbox"/>
18101063-05	QMCM-AAS-L-UW-101218	Air		10/12/2018	10/23/2018 10:15	<input type="checkbox"/>
18101063-06	QMCM-AAS-H-UW-101218	Air		10/12/2018	10/23/2018 10:15	<input type="checkbox"/>
18101063-07	QMCM-FB-101218	Air		10/12/2018	10/23/2018 10:15	<input type="checkbox"/>
18101063-08	QMCM-FB-101218	Air		10/12/2018	10/23/2018 10:15	<input type="checkbox"/>
18101063-09	QMCM-EB1-101218	Air		10/12/2018	10/23/2018 10:15	<input type="checkbox"/>
18101063-10	QMCM-EB1-101218	Air		10/12/2018	10/23/2018 10:15	<input type="checkbox"/>
18101063-11	QMCM-EB2-101218	Air		10/12/2018	10/23/2018 10:15	<input type="checkbox"/>
18101063-12	QMCM-EB2-101218	Air		10/12/2018	10/23/2018 10:15	<input type="checkbox"/>

Client: Environmental Quality Management
Project: Quincy Mining Co; 030325.0059
Work Order: 18101063

Case Narrative

Please contact ALS Cincinnati, OH for a complete list of accreditations. Accreditation does not constitute approval or endorsement by any accrediting body or agency of the federal government.

Sample collection is performed outside ALS and is the sole responsibility of the client. If sample collection or submission deviates from any method requirement, then results cannot be interpreted according to the method. Results apply only to portions of samples analyzed. Samples disposed after 60 days. Cover letter signatory indicates ALS LIMS report generation only. Raw data validated by analysts.

Per client request, the samples indicated herein were prepared and analyzed in accordance with the NIOSH Method 7400 Issue 2 outlined in the NIOSH Manual of Analytical Methods (NMAM), Fourth Edition and dated 8/15/94. ALS adheres to all QA/QC guidelines set forth in this method. The QA/QC officer maintains all laboratory quality data.

Asbestos cannot be distinguished from other fibers by any PCM method. Counts and concentrations listed in this report include all fiber types detected and represent the maximum concentrations. Analysis by TEM is required to identify and distinguish specific fiber species. Samples which reference the ALS LIMS Method Code "PCM_N7400" were analyzed using the counting criteria commonly referred to as the A rules detailed in Appendix B of the method. Samples which reference the ALS LIMS Method Code "PCM_N77152_FIBER" were analyzed using the alternate counting rules commonly referred to as the B rules detailed in Appendix C of the method. These originated from the NIOSH fibrous glass criteria document NIOSH 77-152 and were added to NIOSH Method 7400, Rev. 2 dated 8/15/87. Samples which reference an ALS LIMS Method Code bearing the suffix "_IND" were either overloaded and/or exhibited loose material in the cassette. Per client request, these were therefore prepared using an indirect method detailed in ASTM D5755 in which the samples are suspended in de-ionized water and re-filtered for appropriate loading prior to analysis. Indirect preparation incurs an additional fee and may introduce fiber breakage, which can potentially increase or decrease fiber concentrations as compared to the original air filters.

NIOSH Method 7400 requires a minimum volume of 400 Liters on a single sample or on consecutive samples and that 2 field blanks (or 10% of the total samples, whichever is greater) be submitted with each set. NY ELAP requires a minimum sample volume of 900 liters. The results reported are not field blank corrected. Blanks receive a 100-field count, and data are reported for use in background correction by the client. Note that a 25mm filter has an effective filter collection area (EFA) of 385mm², 37mm; 855mm², and 47mm; 1075mm².

The limit of detection (LOD) for this method is 7 Fibers/mm² for a sample volume of ~1200 Liters in an area relatively free of interferences. Since client sample volumes and pass/fail criteria vary, PCM results are reported in the actual calculated fibers/mm² and fibers per filter. When sample air volumes (L) are supplied by the client via the chain of custody results are also reported in fibers/cc (fibers/mL).

Client: Environmental Quality Management
Project: Quincy Mining Co; 030325.0059
Work Order: 18101063

Case Narrative

ALS PCM Analyst CV* Values:

Analyst	Range (Fibers/mm2)			
	>5<=25.5	>25.5<=63.7	>63.7<=127.4	>127.4
NEW	0.25	0.25	0.25	0.25
AS	0.68	0.18	0.09	0.48
PH	0.46	0.18	0.20	0.45
ALL LAB	0.77	0.19	0.11	0.19

*CV values are equivalent to Intra-laboratory Sr values.

Low volume PCM cassettes were not analyzed per client request.

ALS Environmental

Date: 24-Oct-18

Client: Environmental Quality Management
Project: Quincy Mining Co; 030325.0059

Work Order: 18101063

Analytical Results

Lab ID: 18101063-01A
Client Sample ID: QMCM-LAS-DW-101218

Collection Date: 10/12/2018
Matrix: AIR

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 882.8	Analyst: SRL
Date Analyzed: 10/24/2018 14:40		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Lead	ND	0.20	<0.00023	

Note:

ALS Environmental

Date: 24-Oct-18

Client: Environmental Quality Management
Project: Quincy Mining Co; 030325.0059

Work Order: 18101063

Lab ID: 18101063-03A

Collection Date: 10/12/2018

Client Sample ID: QMCM-AAS-H-DW-101218

Matrix: AIR

AirVolume (L): 2828.97

Analyses	Result	Report Limit	Analytical Results
FIBERS BY PCM NIOSH 7400 MOD.		N7400	Analysis Date: 10/23/2018 Analyst: PMJ
Number of fibers	ND		
Number of fields	100		
Fiber/field	ND		
Fibers/mm2	ND	7	
Fiber/filter	ND	2695	
Fiber/cc	<0.00095		

Note:

ALS Environmental

Date: 24-Oct-18

Client: Environmental Quality Management
Project: Quincy Mining Co; 030325.0059

Work Order: 18101063

Analytical Results

Lab ID: 18101063-04A
Client Sample ID: QMCM-LAS-UW-101218

Collection Date: 10/12/2018
Matrix: AIR

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 838.56	Analyst: SRL
Date Analyzed: 10/24/2018 14:43		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Lead	ND	0.20	<0.00024	

Note:

ALS Environmental

Date: 24-Oct-18

Client: Environmental Quality Management
Project: Quincy Mining Co; 030325.0059

Work Order: 18101063

Lab ID: 18101063-06A

Collection Date: 10/12/2018

Client Sample ID: QMCM-AAS-H-UW-101218

Matrix: AIR

AirVolume (L): 2815.71

Analyses	Result	Report Limit	Analytical Results
FIBERS BY PCM NIOSH 7400 MOD.		N7400	Analysis Date: 10/23/2018 Analyst: PMJ
Number of fibers	1.5		
Number of fields	100		
Fiber/field	0.015		
Fibers/mm2	ND	7	
Fiber/filter	ND	2695	
Fiber/cc	<0.00096		

Note:

ALS Environmental

Date: 24-Oct-18

Client: Environmental Quality Management
Project: Quincy Mining Co; 030325.0059

Work Order: 18101063

Analytical Results

Lab ID: 18101063-07A
Client Sample ID: QMCM-FB-101218

Collection Date: 10/12/2018
Matrix: AIR

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 0	Analyst: SRL
Date Analyzed: 10/24/2018 14:47		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Lead	ND	0.20	NA	

Note:

ALS Environmental

Date: 24-Oct-18

Client: Environmental Quality Management
Project: Quincy Mining Co; 030325.0059

Work Order: 18101063

Lab ID: 18101063-08A
Client Sample ID: QMCM-FB-101218

Collection Date: 10/12/2018

Matrix: AIR

AirVolume (L): 0

Analyses	Result	Report Limit	Analytical Results	
FIBERS BY PCM NIOSH 7400 MOD.			N7400	Analysis Date: 10/23/2018 Analyst: PMJ
Number of fibers	ND			
Number of fields	100			
Fiber/field	ND			
Fibers/mm2	ND	7		
Fiber/filter	ND	2695		
Fiber/cc	NA			

Note:

ALS Environmental

Date: 24-Oct-18

Client: Environmental Quality Management
Project: Quincy Mining Co; 030325.0059

Work Order: 18101063

Analytical Results

Lab ID: 18101063-09A
Client Sample ID: QMCM-EB1-101218

Collection Date: 10/12/2018
Matrix: AIR

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 0	Analyst: SRL
Date Analyzed: 10/24/2018 14:51		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Lead	ND	0.20	NA	

Note:

ALS Environmental

Date: 24-Oct-18

Client: Environmental Quality Management
Project: Quincy Mining Co; 030325.0059

Work Order: 18101063

Lab ID: 18101063-10A

Collection Date: 10/12/2018

Client Sample ID: QMCM-EB1-101218

Matrix: AIR

AirVolume (L): 0

Analyses	Result	Report Limit	Analytical Results
FIBERS BY PCM NIOSH 7400 MOD.		N7400	Analysis Date: 10/23/2018 Analyst: PMJ
Number of fibers	1		
Number of fields	100		
Fiber/field	0.01		
Fibers/mm2	ND	7	
Fiber/filter	ND	2695	
Fiber/cc	NA		

Note:

ALS Environmental

Date: 24-Oct-18

Client: Environmental Quality Management
Project: Quincy Mining Co; 030325.0059

Work Order: 18101063

Analytical Results

Lab ID: 18101063-11A
Client Sample ID: QMCM-EB2-101218

Collection Date: 10/12/2018
Matrix: AIR

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 0	Analyst: SRL
Date Analyzed: 10/24/2018 14:55		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Lead	ND	0.20	NA	

Note:

ALS Environmental

Date: 24-Oct-18

Client: Environmental Quality Management
Project: Quincy Mining Co; 030325.0059

Work Order: 18101063

Lab ID: 18101063-12A

Collection Date: 10/12/2018

Client Sample ID: QMCM-EB2-101218

Matrix: AIR

AirVolume (L): 0

Analyses	Result	Report Limit	Analytical Results
FIBERS BY PCM NIOSH 7400 MOD.		N7400	Analysis Date: 10/23/2018 Analyst: PMJ
Number of fibers	ND		
Number of fields	100		
Fiber/field	ND		
Fibers/mm2	ND	7	
Fiber/filter	ND	2695	
Fiber/cc	NA		

Note:

ALS Environmental

Date: 24-Oct-18

Client: Environmental Quality Management
Work Order: 18101063
Project: Quincy Mining Co; 030325.0059

QC BATCH REPORT

Batch ID: **54363** Instrument ID **ICP1** Method: **N7300**

MBLK	Sample ID mblk-54363-54363				Units: µg/sample		Analysis Date: 10/24/2018 01:43 PM			
Client ID:	Run ID: ICP1_181024A				SeqNo: 1857868		Prep Date: 10/24/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Lead ND 0.20

LCS	Sample ID lcs-54363-54363				Units: µg/sample		Analysis Date: 10/24/2018 01:51 PM			
Client ID:	Run ID: ICP1_181024A				SeqNo: 1857870		Prep Date: 10/24/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Lead 19.78 0.20 20 0 98.9 80-120 0

LCSD	Sample ID lcsd-54363-54363				Units: µg/sample		Analysis Date: 10/24/2018 01:55 PM			
Client ID:	Run ID: ICP1_181024A				SeqNo: 1857871		Prep Date: 10/24/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Lead 19.73 0.20 20 0 98.6 80-120 19.78 0.253 20

The following samples were analyzed in this batch:

18101063-01a	18101063-04a	18101063-07a
18101063-09a	18101063-11a	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Environmental Quality Management
Project: Quincy Mining Co; 030325.0059
WorkOrder: 18101063

QUALIFIERS, ACRONYMS, UNITS

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
E	EPA Method
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SDL	Sample Detection Limit
SW	SW-846 Method

<u>Units Reported</u>	<u>Description</u>
µg/sample	

Sample Receipt Checklist

Client Name: **EQM-CINCINNATI**

Date/Time Received: **23-Oct-18 10:15**

Work Order: **18101063**

Received by: **SNH**

Checklist completed by **Shawn Smythe**

24-Oct-18

Reviewed by: **Shawn Smythe**

24-Oct-18

eSignature

Date

eSignature

Date

Matrices:

Carrier name: **FedEx**

Shipping container/cooler in good condition?

Yes ☒

No ☐

Not Present ☐

Custody seals intact on shipping container/cooler?

Yes ☐

No ☐

Not Present ☒

Custody seals intact on sample bottles?

Yes ☐

No ☐

Not Present ☒

Chain of custody present?

Yes ☒

No ☐

Chain of custody signed when relinquished and received?

Yes ☒

No ☐

Chain of custody agrees with sample labels?

Yes ☒

No ☐

Samples in proper container/bottle?

Yes ☒

No ☐

Sample containers intact?

Yes ☒

No ☐

Sufficient sample volume for indicated test?

Yes ☒

No ☐

All samples received within holding time?

Yes ☒

No ☐

Container/Temp Blank temperature in compliance?

Yes ☒

No ☐

Temperature(s)/Thermometer(s):

Cooler(s)/Kit(s):

Water - VOA vials have zero headspace?

Yes ☐

No ☐

No VOA vials submitted ☐

Water - pH acceptable upon receipt?

Yes ☐

No ☐

N/A ☐

pH adjusted?

Yes ☐

No ☐

N/A ☐

pH adjusted by:

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:



30-Oct-2018

Erik Corbin
Environmental Quality Management
1800 Carillon Boulevard
Cincinnati, OH 45240

Tel: 513-825-7500
Fax: (513) 825-7495

Re: Quincy Mining Co; 030325.0059

Work Order: **18101064**

Dear Erik,

ALS Environmental received 12 samples on 23-Oct-2018 10:15 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 15.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

Shawn Smythe

Electronically approved by: Rob Neman

Shawn Smythe
Project Manager

ADDRESS 4388 Glendale Milford Rd Cincinnati, OH 45242- | PHONE (513) 733-5336 | FAX (513) 733-5347

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Environmental

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RIGHT SOLUTIONS RIGHT PARTNER

Client: Environmental Quality Management
Project: Quincy Mining Co; 030325.0059
Work Order: 18101064

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
18101064-01	QMCM-LAS-BG3-101818	Filter		10/18/2018	10/23/2018 10:15	<input type="checkbox"/>
18101064-02	QMCM-AAS-L-BG3-101818	Filter		10/18/2018	10/23/2018 10:15	<input type="checkbox"/>
18101064-03	QMCM-AAS-H-BG3-101818	Filter		10/18/2018	10/23/2018 10:15	<input type="checkbox"/>
18101064-04	QMCM-LAS-BG4-101818	Filter		10/18/2018	10/23/2018 10:15	<input type="checkbox"/>
18101064-05	QMCM-AAS-L-BG4-101818	Filter		10/18/2018	10/23/2018 10:15	<input type="checkbox"/>
18101064-06	QMCM-AAS-H-BG4-101818	Filter		10/18/2018	10/23/2018 10:15	<input type="checkbox"/>
18101064-07	QMCM-LAS-BG3-101918	Filter		10/19/2018	10/23/2018 10:15	<input type="checkbox"/>
18101064-08	QMCM-AAS-L-BG3-101918	Filter		10/19/2018	10/23/2018 10:15	<input type="checkbox"/>
18101064-09	QMCM-AAS-H-BG3-101918	Filter		10/19/2018	10/23/2018 10:15	<input type="checkbox"/>
18101064-10	QMCM-LAS-BG4-101918	Filter		10/19/2018	10/23/2018 10:15	<input type="checkbox"/>
18101064-11	QMCM-AAS-L-BG4-101918	Filter		10/19/2018	10/23/2018 10:15	<input type="checkbox"/>
18101064-12	QMCM-AAS-H-BG4-101918	Filter		10/19/2018	10/23/2018 10:15	<input type="checkbox"/>

Client: Environmental Quality Management
Project: Quincy Mining Co; 030325.0059
Work Order: 18101064

Case Narrative

Please contact ALS Cincinnati, OH for a complete list of accreditations. Accreditation does not constitute approval or endorsement by any accrediting body or agency of the federal government. Sample collection is performed outside ALS and is the sole responsibility of the client. If sample collection or submission deviates from any method requirement, then results cannot be interpreted according to the method. Results apply only to portions of samples analyzed. Samples disposed after 60 days. Cover letter signatory indicates ALS LIMS report generation only. Raw data validated by analysts.

Per client request, the samples indicated herein were prepared and analyzed in accordance with the NIOSH Method 7400 Issue 2 outlined in the NIOSH Manual of Analytical Methods (NMAM), Fourth Edition and dated 8/15/94. ALS adheres to all QA/QC guidelines set forth in this method. The QA/QC officer maintains all laboratory quality data.

Asbestos cannot be distinguished from other fibers by any PCM method. Counts and concentrations listed in this report include all fiber types detected and represent the maximum concentrations. Analysis by TEM is required to identify and distinguish specific fiber species. Samples which reference the ALS LIMS Method Code "PCM_N7400" were analyzed using the counting criteria commonly referred to as the A rules detailed in Appendix B of the method. Samples which reference the ALS LIMS Method Code "PCM_N77152_FIBER" were analyzed using the alternate counting rules commonly referred to as the B rules detailed in Appendix C of the method. These originated from the NIOSH fibrous glass criteria document NIOSH 77-152 and were added to NIOSH Method 7400, Rev. 2 dated 8/15/87. Samples which reference an ALS LIMS Method Code bearing the suffix "_IND" were either overloaded and/or exhibited loose material in the cassette. Per client request, these were therefore prepared using an indirect method detailed in ASTM D5755 in which the samples are suspended in de-ionized water and re-filtered for appropriate loading prior to analysis. Indirect preparation incurs an additional fee and may introduce fiber breakage, which can potentially increase or decrease fiber concentrations as compared to the original air filters.

NIOSH Method 7400 requires a minimum volume of 400 Liters on a single sample or on consecutive samples and that 2 field blanks (or 10% of the total samples, whichever is greater) be submitted with each set. NY ELAP requires a minimum sample volume of 900 liters. The results reported are not field blank corrected. Blanks receive a 100-field count, and data are reported for use in background correction by the client. Note that a 25mm filter has an effective filter collection area (EFA) of 385mm², 37mm; 855mm², and 47mm; 1075mm².

The limit of detection (LOD) for this method is 7 Fibers/mm² for a sample volume of ~1200 Liters in an area relatively free of interferences. Since client sample volumes and pass/fail criteria vary, PCM results are reported in the actual calculated fibers/mm² and fibers per filter. When sample air volumes (L) are supplied by the client via the chain of custody results are also reported in fibers/cc (fibers/mL).

Client: Environmental Quality Management
Project: Quincy Mining Co; 030325.0059
Work Order: 18101064

Case Narrative

ALS PCM Analyst CV* Values:

	Range (Fibers/mm2)			
Analyst	>5<=25.5	>25.5<=63.7	>63.7<=127.4	>127.4
NEW	0.25	0.25	0.25	0.25
AS	0.68	0.18	0.09	0.48
PH	0.46	0.18	0.20	0.45
ALL LAB	0.77	0.19	0.11	0.19

*CV values are equivalent to Intra-laboratory Sr values.

ALS Environmental

Date: 30-Oct-18

Client: Environmental Quality Management
Project: Quincy Mining Co; 030325.0059

Work Order: 18101064**Analytical Results**

Lab ID: 18101064-01A
Client Sample ID: QMCM-LAS-BG3-101818

Collection Date: 10/18/2018
Matrix: FILTER

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1603.29	Analyst: SRL
Date Analyzed: 10/29/2018 15:31		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Lead	ND	0.20	<0.00012	

Lab ID: 18101064-04A
Client Sample ID: QMCM-LAS-BG4-101818

Collection Date: 10/18/2018
Matrix: FILTER

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1602.01	Analyst: SRL
Date Analyzed: 10/29/2018 15:35		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Lead	ND	0.20	<0.00012	

Lab ID: 18101064-07A
Client Sample ID: QMCM-LAS-BG3-101918

Collection Date: 10/19/2018
Matrix: FILTER

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1508.83	Analyst: SRL
Date Analyzed: 10/29/2018 17:36		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Lead	ND	0.20	<0.00013	

Lab ID: 18101064-10A
Client Sample ID: QMCM-LAS-BG4-101918

Collection Date: 10/19/2018
Matrix: FILTER

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1560.93	Analyst: SRL
Date Analyzed: 10/29/2018 17:40		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Lead	ND	0.20	<0.00013	

Note:

ALS Environmental

Date: 30-Oct-18

Client: Environmental Quality Management
Project: Quincy Mining Co; 030325.0059**Work Order:** 18101064**Lab ID:** 18101064-02A**Collection Date:** 10/18/2018**Client Sample ID:** QMCM-AAS-L-BG3-101818**Matrix:** FILTER**AirVolume (L):** 1337.13

Analyses	Result	Report Limit	Analytical Results
FIBERS BY PCM NIOSH 7400 MOD.		N7400	Analysis Date: 10/24/2018 Analyst: PMJ
Number of fibers	1		
Number of fields	100		
Fiber/field	0.01		
Fibers/mm2	ND	7	
Fiber/filter	ND	2695	
Fiber/cc	<0.002		

Lab ID: 18101064-03A**Collection Date:** 10/18/2018**Client Sample ID:** QMCM-AAS-H-BG3-101818**Matrix:** FILTER**AirVolume (L):** 3954.98

Analyses	Result	Report Limit	Analytical Results
FIBERS BY PCM NIOSH 7400 MOD.		N7400	Analysis Date: 10/24/2018 Analyst: PMJ
Number of fibers	0.5		
Number of fields	100		
Fiber/field	0.005		
Fibers/mm2	ND	7	
Fiber/filter	ND	2695	
Fiber/cc	<0.00068		

Lab ID: 18101064-05A**Collection Date:** 10/18/2018**Client Sample ID:** QMCM-AAS-L-BG4-101818**Matrix:** FILTER**AirVolume (L):** 1317.6

Analyses	Result	Report Limit	Analytical Results
FIBERS BY PCM NIOSH 7400 MOD.		N7400	Analysis Date: 10/24/2018 Analyst: PMJ
Number of fibers	ND		
Number of fields	100		
Fiber/field	ND		
Fibers/mm2	ND	7	
Fiber/filter	ND	2695	
Fiber/cc	<0.002		

Note:

ALS Environmental

Date: 30-Oct-18

Client: Environmental Quality Management
Project: Quincy Mining Co; 030325.0059**Work Order:** 18101064**Lab ID:** 18101064-06A**Collection Date:** 10/18/2018**Client Sample ID:** QMCM-AAS-H-BG4-101818**Matrix:** FILTER**AirVolume (L):** 3768.13

Analyses	Result	Report Limit	Analytical Results
FIBERS BY PCM NIOSH 7400 MOD.		N7400	Analysis Date: 10/24/2018 Analyst: PMJ
Number of fibers	1		
Number of fields	100		
Fiber/field	0.01		
Fibers/mm2	ND	7	
Fiber/filter	ND	2695	
Fiber/cc	<0.00072		

Lab ID: 18101064-08A**Collection Date:** 10/19/2018**Client Sample ID:** QMCM-AAS-L-BG3-101918**Matrix:** FILTER**AirVolume (L):** 1249.22

Analyses	Result	Report Limit	Analytical Results
FIBERS BY PCM NIOSH 7400 MOD.		N7400	Analysis Date: 10/24/2018 Analyst: PMJ
Number of fibers	1.5		
Number of fields	100		
Fiber/field	0.015		
Fibers/mm2	ND	7	
Fiber/filter	ND	2695	
Fiber/cc	<0.0022		

Lab ID: 18101064-09A**Collection Date:** 10/19/2018**Client Sample ID:** QMCM-AAS-H-BG3-101918**Matrix:** FILTER**AirVolume (L):** 5042.89

Analyses	Result	Report Limit	Analytical Results
FIBERS BY PCM NIOSH 7400 MOD.		N7400	Analysis Date: 10/24/2018 Analyst: PMJ
Number of fibers	7		
Number of fields	100		
Fiber/field	0.07		
Fibers/mm2	8.9	7	
Fiber/filter	3427	2695	
Fiber/cc	0.00068		

Note:

ALS Environmental**Date:** 30-Oct-18**Client:** Environmental Quality Management
Project: Quincy Mining Co; 030325.0059**Work Order:** 18101064**Lab ID:** 18101064-11A**Collection Date:** 10/19/2018**Client Sample ID:** QMCM-AAS-L-BG4-101918**Matrix:** FILTER**AirVolume (L):** 1311.54

Analyses	Result	Report Limit	Analytical Results
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FIBERS BY PCM NIOSH 7400 MOD.**N7400**

Analysis Date: 10/24/2018

Analyst: **PMJ**

Number of fibers	2.5	
Number of fields	100	
Fiber/field	0.025	
Fibers/mm2	ND	7
Fiber/filter	ND	2695
Fiber/cc	<0.0021	

Lab ID: 18101064-12A**Collection Date:** 10/19/2018**Client Sample ID:** QMCM-AAS-H-BG4-101918**Matrix:** FILTER**AirVolume (L):** 5039.87

Analyses	Result	Report Limit	Analytical Results
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FIBERS BY PCM NIOSH 7400 MOD.**N7400**

Analysis Date: 10/24/2018

Analyst: **PMJ**

Number of fibers	8.5	
Number of fields	100	
Fiber/field	0.085	
Fibers/mm2	10.8	7
Fiber/filter	4158	2695
Fiber/cc	0.00083	

Note:

ALS Environmental

Date: 30-Oct-18

Client: Environmental Quality Management
Work Order: 18101064
Project: Quincy Mining Co; 030325.0059

QC BATCH REPORT

Batch ID: **R157934** Instrument ID: **PCM1** Method: **N7400**

DUP Sample ID: 18101078-05a DUP				Units:		Analysis Date: 10/24/2018				
Client ID:		Run ID: PCM1_181024D			SeqNo: 1857094		Prep Date: 10/24/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Number of fibers	6	0	0	0	0		7	0		
Number of fields	100	0	0	0	0		100	0		
Fiber/field	0.06	0	0	0	0		0.07	0		
Fibers/mm2	7.6	7.0	0	0	0		8.9	15.8		
Fiber/filter	2926	2,700	0	0	0		3427	15.8		
Fiber/cc	0.0022	0	0	0	0		0.0026	0		

DUP Sample ID: 18101079-03a DUP				Units:		Analysis Date: 10/24/2018				
Client ID:		Run ID: PCM1_181024D		SeqNo: 1857098		Prep Date: 10/24/2018		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Number of fibers	4.5	0	0	0	0		5	0		
Number of fields	100	0	0	0	0		100	0		
Fiber/field	0.045	0	0	0	0		0.05	0		
Fibers/mm2	ND	7.0	0	0	0		0	0		
Fiber/filter	ND	2,700	0	0	0		0	0		
Fiber/cc	0.001334	0	0	0	0		0.001334	0		

DUP Sample ID: 18101080-03a DUP				Units:		Analysis Date: 10/24/2018				
Client ID:		Run ID: PCM1_181024D			SeqNo: 1857109		Prep Date: 10/24/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Number of fibers	1.5	0	0	0	0		1	0		
Number of fields	100	0	0	0	0		100	0		
Fiber/field	0.015	0	0	0	0		0.01	0		
Fibers/mm2	ND	7.0	0	0	0		0	0		
Fiber/filter	ND	2,700	0	0	0		0	0		
Fiber/cc	0.001345	0	0	0	0		0.001345	0		

DUP Sample ID: 18101081-05a DUP				Units:		Analysis Date: 10/24/2018				
Client ID:		Run ID: PCM1_181024D			SeqNo: 1857115		Prep Date: 10/24/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Number of fibers	1	0	0	0	0		0			
Number of fields	100	0	0	0	0		0			
Fiber/field	0.01	0	0	0	0		0			
Fibers/mm2	ND	7.0	0	0	0		0			
Fiber/filter	ND	2,700	0	0	0		0			
Fiber/cc	0.001492	0	0	0	0		0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Environmental Quality Management
Work Order: 18101064
Project: Quincy Mining Co; 030325.0059

QC BATCH REPORT

Batch ID: **R157934** Instrument ID: **PCM1** Method: **N7400**

DUP		Sample ID: 18101064-03a DUP				Units:		Analysis Date: 10/24/2018		
Client ID: QMCM-AAS-H-BG3-101818		Run ID: PCM1_181024D				SeqNo: 1857119		Prep Date: 10/24/2018		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Number of fibers	ND	0	0	0	0		0			
Number of fields	100	0	0	0	0		0			
Fiber/field	ND	0	0	0	0		0			
Fibers/mm2	ND	7.0	0	0	0		0			
Fiber/filter	ND	2,700	0	0	0		0			
Fiber/cc	0.0006814	0	0	0	0		0			

DUP		Sample ID: 18101064-06a DUP				Units:		Analysis Date: 10/24/2018		
Client ID: QMCM-AAS-H-BG4-101818		Run ID: PCM1_181024D				SeqNo: 1857122		Prep Date: 10/24/2018		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Number of fibers	ND	0	0	0	0		0			
Number of fields	100	0	0	0	0		0			
Fiber/field	ND	0	0	0	0		0			
Fibers/mm2	ND	7.0	0	0	0		0			
Fiber/filter	ND	2,700	0	0	0		0			
Fiber/cc	0.0007152	0	0	0	0		0			

DUP		Sample ID: 18101064-09a DUP				Units:		Analysis Date: 10/24/2018		
Client ID: QMCM-AAS-H-BG3-101918		Run ID: PCM1_181024D				SeqNo: 1857125		Prep Date: 10/24/2018		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Number of fibers	6.5	0	0	0	0		0			
Number of fields	100	0	0	0	0		0			
Fiber/field	0.065	0	0	0	0		0			
Fibers/mm2	8.3	7.0	0	0	0		0			
Fiber/filter	3196	2,700	0	0	0		0			
Fiber/cc	0.00063	0	0	0	0		0			

DUP		Sample ID: 18101064-11a DUP				Units:		Analysis Date: 10/24/2018		
Client ID: QMCM-AAS-L-BG4-101918		Run ID: PCM1_181024D				SeqNo: 1857127		Prep Date: 10/24/2018		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Number of fibers	2.5	0	0	0	0		0			
Number of fields	100	0	0	0	0		0			
Fiber/field	0.025	0	0	0	0		0			
Fibers/mm2	ND	7.0	0	0	0		0			
Fiber/filter	ND	2,700	0	0	0		0			
Fiber/cc	0.002055	0	0	0	0		0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Environmental Quality Management
Work Order: 18101064
Project: Quincy Mining Co; 030325.0059

QC BATCH REPORT

Batch ID: **R157934** Instrument ID: **PCM1** Method: **N7400**

The following samples were analyzed in this batch:

18101064-02a	18101064-03a	18101064-05a
18101064-06a	18101064-08a	18101064-09a
18101064-11a	18101064-12a	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Environmental Quality Management
Work Order: 18101064
Project: Quincy Mining Co; 030325.0059

QC BATCH REPORT

Batch ID: **54478** Instrument ID: **ICP1** Method: **N7300**

MBLK	Sample ID: mblk-54478-54478			Units: µg/sample			Analysis Date: 10/29/2018 01:45 PM			
Client ID:	Run ID: ICP1_181029A			SeqNo: 1861299			Prep Date: 10/29/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Lead ND 0.20

LCS	Sample ID: lcs-54478-54478			Units: µg/sample			Analysis Date: 10/29/2018 01:53 PM			
Client ID:	Run ID: ICP1_181029A			SeqNo: 1861301			Prep Date: 10/29/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Lead 19.71 0.20 20 0 98.6 80-120 0

LCSD	Sample ID: lcsc-54478-54478			Units: µg/sample			Analysis Date: 10/29/2018 01:56 PM			
Client ID:	Run ID: ICP1_181029A			SeqNo: 1861302			Prep Date: 10/29/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Lead 19.58 0.20 20 0 97.9 80-120 19.71 0.662 20

The following samples were analyzed in this batch:

18101064-01a 18101064-04a

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Environmental Quality Management
Work Order: 18101064
Project: Quincy Mining Co; 030325.0059

QC BATCH REPORT

Batch ID: **54479** Instrument ID: **ICP3** Method: **N7300**

MBLK	Sample ID: mblk-54479-54479			Units: µg/sample			Analysis Date: 10/29/2018 05:24 PM			
Client ID:	Run ID: ICP3_181029B			SeqNo: 1862156			Prep Date: 10/29/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Lead	ND	0.20								

LCS	Sample ID: lcs-54479-54479			Units: µg/sample			Analysis Date: 10/29/2018 05:28 PM			
Client ID:	Run ID: ICP3_181029B			SeqNo: 1862157			Prep Date: 10/29/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Lead	20.48	0.20	20	0	102	80-120	0			

LCSD	Sample ID: lcscd-54479-54479			Units: µg/sample			Analysis Date: 10/29/2018 05:32 PM			
Client ID:	Run ID: ICP3_181029B			SeqNo: 1862158			Prep Date: 10/29/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Lead	19.5	0.20	20	0	97.5	80-120	20.48	4.91	20	

The following samples were analyzed in this batch:

18101064-07a 18101064-10a

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Environmental

Date: 30-Oct-18

Client: Environmental Quality Management
Project: Quincy Mining Co; 030325.0059
WorkOrder: 18101064

QUALIFIERS, ACRONYMS, UNITS

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
E	EPA Method
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SDL	Sample Detection Limit
SW	SW-846 Method

<u>Units Reported</u>	<u>Description</u>
µg/sample	

Sample Receipt Checklist

Client Name: **EQM-CINCINNATI**

Date/Time Received: **23-Oct-18 10:15**

Work Order: **18101064**

Received by: **SNH**

Checklist completed by: **Shawn Smythe**

24-Oct-18

Reviewed by: **Shawn Smythe**

24-Oct-18

eSignature

Date

eSignature

Date

Matrices:

Carrier name: **FedEx**

Shipping container/cooler in good condition?

Yes ☒

No ☐

Not Present ☐

Custody seals intact on shipping container/cooler?

Yes ☐

No ☐

Not Present ☒

Custody seals intact on sample bottles?

Yes ☐

No ☐

Not Present ☒

Chain of custody present?

Yes ☒

No ☐

Chain of custody signed when relinquished and received?

Yes ☒

No ☐

Chain of custody agrees with sample labels?

Yes ☒

No ☐

Samples in proper container/bottle?

Yes ☒

No ☐

Sample containers intact?

Yes ☒

No ☐

Sufficient sample volume for indicated test?

Yes ☒

No ☐

All samples received within holding time?

Yes ☒

No ☐

Container/Temp Blank temperature in compliance?

Yes ☒

No ☐

Temperature(s)/Thermometer(s):

Cooler(s)/Kit(s):

Water - VOA vials have zero headspace?

Yes ☐

No ☐

No VOA vials submitted ☐

Water - pH acceptable upon receipt?

Yes ☐

No ☐

N/A ☐

pH adjusted?

Yes ☐

No ☐

N/A ☐

pH adjusted by:

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction: