



*Environmental  
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Professional Management of Environmental Issues

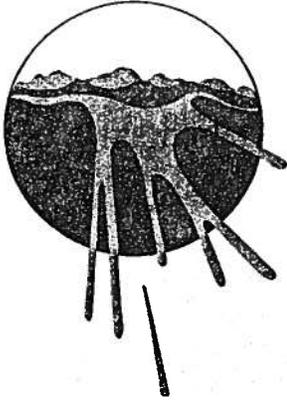
**ANALYTICAL REPORT  
PREPARED FOR**

Qualified Abatement Services, Inc.  
1935 McGraw  
Detroit, MI 48208

*for the asbestos abatement project occurring at*

Quincy Smelter Site  
48991 Maple  
Ripley, MI

**Project Dates: June 10, 2008 through June 13, 2008**



*Environmental  
Testing &  
Consulting, Inc.*

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*Professional Management of Environmental Issues*

June 28, 2008

Tom Ross  
Qualified Abatement Services, Inc.  
1935 McGraw  
Detroit, MI 48208

*RE: Environmental Consulting Services Associated with Air Monitoring and Abatement Activities at Quincy Smelter Site. ETC Job #: R-123392-08.*

Dear Mr. Ross

Pursuant to your request, Environmental Testing & Consulting, Inc. provided consultation, air sampling and laboratory analysis for the abatement project conducted at Quincy Smelter Site. This facility is located at 48991 Maple in Ripley, Michigan. This project was conducted from June 10, 2008 through June 13, 2008.

Enclosed in this report is a detailed summary of the field air monitoring and abatement activities conducted on this project. Also enclosed are copies of the sampling results, daily project log, map of sample locations, daily checklists and contractor employee lists.

Thank you for selecting Environmental Testing & Consulting, Inc.. It has been a pleasure working with you. Further environmental services are available upon request. If you have any questions regarding this report, please refer to the daily project log or contact me at (734) 955-6600.

Sincerely,  
*Environmental Testing & Consulting, Inc.*

*Tracy Westcott*

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Tracy Westcott  
Office Manager

# Table Of Contents

<i>Project Information, Abatement Activities and Methods</i> .....	1 - 2
<i>Field Air Monitoring/Consulting and Analytical Procedures</i> .....	4 - 5

## **APPENDICES:**

*Appendix A – Field Data Sheet*

*Appendix B – Summary of Daily Activities*

*Appendix C - Site Schematic (Maps)*

*Appendix D -Daily Checklists*

*Appendix E - Post Abatement Checklists*

*Appendix F - Contractor Employee Lists*

## *Project Information, Abatement Activities and Methods*

This abatement project was conducted at Quincy Smelter Site located at 48991 Maple in Ripley, Michigan from June 10, 2008 through June 13, 2008. The work at this site involved the following removals:

1. Pipe Insulation and Debris in Building 2,
2. Pipe Insulation and Debris in Building 3,
3. Pipe Insulation and Debris in Building 7,
4. Pipe Insulation and Debris in Building 11,
5. Pipe Insulation and Debris in Building 14,
6. Pipe Insulation and Debris in Building 17 East,
7. Pipe Insulation and Debris in Building 17 West,
8. Pipe Insulation and Debris in Building 18,
9. Pipe Insulation and Debris in Building 19,
10. Pipe Insulation and Debris in Building 20, and
11. Baseboard Separators on the 3<sup>rd</sup> Floor of Building 2.

The abatement contractor for this project was Qualified Abatement Services, Inc.. Their office is located at 48991 McGraw in Detroit, Michigan. Tom Ross of Qualified Abatement Services, Inc. was the competent person on this project. This contractor performed this work using the abatement methods and techniques described below. These abatement methods conform to the current industry standards, accepted work methods and applicable regulatory requirements.

Although a complete and detailed description of these processes are too lengthy to be included here, complete information on these methods and other asbestos related concerns can be found in a publication from the Environmental Protection Agency (EPA) called "Guidance for Controlling Asbestos Containing Materials in Buildings", more commonly known as the Purple Book. Further, sections of these abatement technologies are described in the Occupational Safety and Health (OSHA) regulation 1926.1101.

### ***Glovebag Techniques***

Glovebag techniques were utilized during this project. The glove bag process involves installing the glovebag around the material to be removed (i.e. piping or tanks), putting hands into the rubber gloves that are built in as part of the bag, and proceeding to remove the insulation material. In order to remove the material, the abatement workers must have all appropriate tools to perform the activities within the bag prior to beginning work. Additionally, the glovebags are required to be leak checked with smoke tubes prior to beginning removal. The work must be accomplished while the material is wet (per NESHAPS 40 CFR part 61 regulation) so this requires the personnel to place an airless sprayer into the bag and continue to wet the material while it is being removed to insure that fiber levels are below the PEL of 0.10 f/cc.

Following the removal of the material, the substrate within the glove bag is scrubbed off with wire brushes and scrubbing pads and then washed with water and sprayed with an encapsulant. The encapsulant is a heavy duty paint like substance that fastens down whatever residual fibers may be left on the substrate. After the material has been encapsulated, the bottom of the bag (with the wetted asbestos waste) is twisted closed and sealed with tape.

The twisted area is then covered with duct tape and the top of the bag is separated from the bottom of the bag. The abatement contractor may then safely cut away the bottom of the bag and dispose of the waste. The top of the bag with the tools must then be addressed. The tools within the bag are pulled through one of the glove and sealed with duct tape. These tools (still sealed within the glove) may be transferred to the next glovebag. The remaining top section of the glovebag should then be carefully sliced away from the substrate while a HEPA vacuum is held close to the surface. This will prevent any residual fibers from escaping from within the bag.

Although the glovebag should insure that no fibers escape the enclosed space, it is possible that fibers may escape and all precautions possible must be followed to insure protection to abatement workers and workers in the general environment around the removal area. This means that workers must follow all rules and regulations including wearing disposable coveralls, appropriate respirators, head and foot coverings and following all decontamination methods. Further, partial or complete decontamination facilities and/or staging areas may be required based upon the amount of material being removed.

The following listed items are requirements of using the glovebag process as required by OSHA 1926.1101: 1) The glovebag must be made of a an air tight 6-mil polyethylene bag with a seamless bottom; 2) Before beginning work the glovebag must be smoke tested for leaks. If any leaks are present, they must be repaired before work can begin; 3) Also, before work can begin, any loose or friable material next to the glovebag work area must be sealed with two layers of 6-mil plastic so that it is not disturb during the glovebag operations; 4) Glovebags may not be moved from place to place, they must be used only once; 5) Glovebags can only be used on surfaces whose temperatures do not exceed 150 degrees; 6) At least two people must perform glovebag operations no matter how much material is to be removed.

### ***General Information***

After work in each of these areas was completed, ETC visually inspected the entire area to determine if all asbestos containing materials (ACM) had been removed and that the entire area had been adequately cleaned and encapsulated to prevent any future release of asbestos fibers. The contractor was required to clean all work areas to the satisfaction of the on-site industrial hygienist. If an area did not pass the initial visual inspection, the contractor was required to return to the area and reclean the entire work site again. This process of visual inspections and cleaning was repeated until the area passed as adequately cleaned. After acceptance of the area as clean, the contractor was allowed to encapsulate the area and substrate of the material.

ETC verified that all work was occurring in accord with appropriate regulations, standards and when appropriate the project specifications. In general, ETC was satisfied that the contractor was using appropriate materials, tools and prescribed work methods throughout the project. However, when ETC noted a potential problem, we contacted the contractor and alleviated it before any contamination could occur.

For other information on daily occurrences, site specific problems or activities, please refer to the daily project log included within this report.

There were a variety of samples taken during this project which were analyzed on-site to determine total fiber concentration levels measured in fibers per cubic centimeter of air (f/cc). Each separate type of sample serves a different purpose for the abatement process. The descriptions of the samples taken on this project are included below:

### ***Personal Sampling (PS)***

Personal sampling was conducted through the course of this project by ETC. These samples assist the contractor in complying with CFR 40 1926.56 which requires the contractor to document representative exposures of their employees during abatement projects. These samples are used to monitor fiber levels in the work area during removal practices. They also indicate if there is a need to change respirators types to those that have a higher protection value. It is important to note that these personal sample levels indicate the fiber level inside the work area and do not reflect the fiber levels in the rest of the building.

Personnel sampling is the responsibility of the contractor and should be posted on the worksite within 24 hours of having taken the samples. It is also important that a representative segment of the work staff be monitored. The sampling should be conducted on each type of activity that is occurring on the abatement site.

### ***Personal Excursion Sampling (EX)***

Personal excursion sampling (as required by OSHA) is performed during the suspected highest level of asbestos concentration. This sampling is used as a quick short-term indicator as to maximum fiber concentrations in the work area. By reviewing these results the on-site hygienist can determine whether workers are wearing the proper respirator protection and/or whether adequate wetting (per NESHAPS) is occurring without waiting four (4) hours for initial samples results. This allows the hygienist to respond more quickly to hazardous fiber concentration levels.

### ***Contiguous Samples (CS)***

Contiguous samples are taken to insure that no contamination is occurring outside of the enclosure/work area. These samples give temporary representative results of fiber concentration levels in areas still accessible to building occupants. These samples are not required by any regulation but are extremely important to reduce the potential liability of the building owner. Without these samples, the building owner has no data to prove that occupants outside the removal space were not exposed to high levels of asbestos fibers.

If during the course of the project these samples became elevated, ETC stopped the work and attempted to identify why the sample results were increasing. Once the source of increased contamination was determined, the cause was removed and the abatement activities continued.

### ***Work Area Sampling (WA)***

These samples are run inside the work area both during the set up of the containment and during the removal process. Unlike personal samples, these samples are not attached to the worker; they are set in a fixed location to determine ambient levels in the enclosures. These samples serve two main functions when taken during a removal activity 1) they serve as back ups for the personal sample in case it gets wet or overloaded with material and 2) they also help to determine the proper respirator protection for this project as discussed in the personal sampling section.

### *Polarized Contrast Microscopy Post Abatement Sampling (PA)*

Following an asbestos removal operation, post abatement samples are run to determine if the air in the work area is sufficiently clean to allow building occupants to reoccupy the area. Please note that these samples were below the regulated level of 0.050 f/cc as required by the Michigan Occupation Safety & Health Administration (MIOSHA).

If the initial post abatement sampling proved to be higher than the acceptable clearance criterion, ETC requested the contractor to return to the enclosure and reclean the entire work area. Following a complete recleaning of the work area, ETC ran further test samples to determine if the area was acceptable for reoccupancy, if these samples passed, the contractor was released and allowed to dismantle the enclosure and leave the area.

### *Work Area / Post Abatement Sampling (WP)*

These samples are similar to work area samples but also serve as post abatement samples. These types of samples can only be run on projects involving glove bagging removal, critical barrier removal, clean up projects or on patch and repair projects. As these samples are run within the actual work space during operations they represent the highest levels occurring at the work site. These samples may be run with either a high volume or low volume pumps and the volume of the samples can range significantly.

If these samples are below the clearance criteria during work it is logical that they would represent the highest fiber levels to be encountered on the site. It is not expected that fiber level would increase after work has been completed and the contractor has left the site.

For this reason, when these work area samples in the enclosure do not exceed the clearance criteria, a separate set of post abatement samples are not required after work has been completed. *However, if any of the work area samples within the work space at the end of the project exceed the clearance criteria the entire work space must have a separate post abatement sample set run.*

**Appendix A**  
**Field Data Sheet**



Asbestos Removal Project

Contractor: QASI

Client: Qualified Abatement Services

Facility: Quincy Smelter site, Ripley, MI

of Abatement: Building 11, Building 20, Building 14, Building 7

ETC Project #: R-123393-08

Date: 6/10/2008

Hygienist: Jonn Jacobsson

MFA= 0.00785

ECA= 385

Current CV:

Microscope#:

NV Rotometer#

# FIELD DATA SHEET

Sample ID (below)	Sampling Time		Elapsed Time (min)	Sampling Data		Flow Rate (lpm)	Volume (L)	Actual Results (f/cc)	8 Hour TWA (f/cc)	Description and Location
	Start	Stop		Fibers	Fields					
FB1				0.0	100					FIELD BLANK
FB2				0.0	100					FIELD BLANK
CS1	9:09	12:19	190	4.0	100	8.79	1670.10	<0.003		Northeast corner of Building 20, exterior.
EX2	9:42	10:12	30	2.0	100	2.56	76.80	<0.064	0.022	Randy J. Eilber, A25475, Glovebagging.
PS1	9:42	12:12	150	8.0	100	2.56	384.00	<0.013	0.020	Timothy R. Loll, A16227, Glovebagging.
PS2	10:12	12:10	118	14.0	100	2.56	302.08	0.023		Randy J. Eilber, A25475, Glovebagging.
PS1R1	12:12	13:04	52	5.0	100	2.56	133.12	<0.037		Timothy R. Loll, A16227, Glovebagging.
PS2R1	12:10	12:46	36	3.0	100	2.56	92.16	<0.053		Randy J. Eilber, A25475, Glovebagging.
WP2	11:50	13:46	116	9.0	100	15.33	1778.28	<0.003		Midway up stairs' east side in building 20.
CS1R1	12:19	13:50	91	2.0	100	15.33	1395.03	<0.004		Northeast corner of Building 20, exterior.
WP1	11:55	13:48	113	9.0	100	15.33	1732.29	<0.003		Southeast corner of small room in northwest corner of building 11.
PS3	14:05	18:46	281	3.0	100	16.33	4588.73	<0.001	<0.001	Brandt L. Foust, A32441, Glovebagging on west side of building 11.
WP3	14:30	17:51	201	4.0	100	8.79	1766.79	<0.003		10 feet north, 2 feet east of door to second building east of building 2.
PS1R2	14:30	17:15	165	5.0	100	2.56	422.40	<0.012		Timothy R. Loll, A16227, Glovebagging.
PS2R2	14:30	17:17	167	3.0	100	2.56	427.52	<0.011		Randy J. Eilber, A25475, Glovebagging.
WA4	14:05	18:46	281	6.0	100	5.92	1663.52	<0.003		5 feet north, 2 feet east of door to 3rd building east of 20, building 14.
EX1	17:15	17:45	30	1.0	100	2.56	76.80	<0.064		Timothy R. Loll, A16227, Glovebagging.
PS1R4	17:45	18:44	59	2.0	100	2.56	151.04	<0.032		Timothy R. Loll, A16227, Glovebagging.
PS2R4	17:17	18:44	87	3.0	100	2.56	222.72	<0.022		Randy J. Eilber, A25475, Glovebagging.

AA- Ambient Air  
BL- Baseline  
CS-Contiguous

EA- Exhaust Air, EX- Excursion  
PA- Post Abatement  
PP- Personal/Post Abatement

PS- Personal  
WA- Work Area  
WP- Work Area/Post Abatement

# Asbestos Removal Project



Contractor: QASI

Client: Qualified Abatement Services, Inc.

Facility: Quincy Smelter site, Ripley, MI

Area of Abatement: Building 7, Building 3, Building 2

ETC Project #: R-123393-08

Date: 6/11/2008

Hygienist: Jonn Jacobsson

MFA= 0.00785                      ECA= 385 Current CV: Microscope#: 100411 HV Rotometer# HV109 LV Rotometer# LV138  Cassette Lot # Zefon 14451	50 F	<h2 style="margin: 0;">FIELD DATA SHEET</h2>
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Sample ID (below)	Sampling Time		Elapsed Time (min)	Sampling Data		Flow Rate (lpm)	Volume (L)	Actual Results (f/cc)	8 Hour TWA (f/cc)	Description and Location
	Start	Stop		Fibers	Fields					
FB1				0.0	100					FIELD BLANK
FB2				0.0	100					FIELD BLANK
WP1	8:20	10:11	111	9.0	100	15.33	1701.63	<0.003		35 feet north, 8 feet east of door to west entry in building 7.
EX1	7:40	8:10	30	3.0	100	2.56	76.80	<0.064	0.013	Brandt L. Foust, A32441, Glovebagging
PS2	8:02	12:51	289	2.0	100	2.03	586.67	<0.008	0.006	Randy J. Eilber, A25475, Glovebagging
PS1	8:10	12:51	281	4.0	100	2.03	570.43	<0.009		Brandt L. Foust, A32441, Glovebagging
WP2	8:20	12:38	258	19.0	100	6.15	1586.70	0.006		Northeast corner of basement stairs inside lab, building 3, 2 feet below basement ceiling.
PS1R1	14:16	15:40	84	3.0	100	2.56	215.04	<0.023		Brandt L. Foust, A32441, Glovebagging, upper.
EX2	14:16	14:46	30	2.0	100	15.33	459.90	<0.011		Randy J. Eilber, A25475, Glovebagging, lower.
PS2R1	14:46	15:40	54	4.0	100	15.33	827.82	<0.006		Randy J. Eilber, A25475, Glovebagging, lower.
WA3	10:20	14:46	266	5.5	100	6.15	1635.90	<0.003		South side of first post south and east of west door to building 2.
WA3R1	14:46	18:40	234	8.5	100	6.15	1439.10	<0.003		South side of first post south and east of west door to building 2.

AA- Ambient Air  
BL- Baseline  
CS-Contiguous

EA- Exhaust Air, EX- Excursion  
PA- Post Abatement  
PP- Personal/Post Abatement

PS- Personal  
WA- Work Area  
WP- Work Area/Post Abatement

# Asbestos Removal Project



Contractor: QASI

Client: Qualified Abatement Services, Inc.

Facility: Quincy Smelter site, Ripley, MI

Location: Building 2, Building 14, Building 17 East, Building 17 West

ETC Project #: R-123393-08

Date: 6/12/2008

Hygienist: Jonn Jacobsson

MFA= 0.00785                      ECA= 385 Current CV: Microscope#: 100411                      53 F HV Rotometer# HV109 LV Rotometer# LV138  Cassette Lot # Zefon 14451						FIELD DATA SHEET				
Sample ID (below)	Sampling Time		Elapsed Time (min)	Sampling Data		Flow Rate (lpm)	Volume (L)	Actual Results (f/cc)	8 Hour TWA (f/cc)	Description and Location
	Start	Stop		Fibers	Fields					
FB1				0.0	100					FIELD BLANK
FB2				0.0	100					FIELD BLANK
EX1	7:28	8:01	33	2.0	100	2.03	66.99	<0.073	0.012	Curtis W. Maas, A9683, Glovebagging
WP1	7:28	9:36	128	6.5	100	10.98	1405.44	<0.003		South side of first post south and east of west door to building 2.
PA2	7:48	9:10	82	4.0	100	15.33	1257.06	<0.004		18 feet north, 2 feet east of south door to building 14.
PS1	8:01	13:09	308	5.5	100	2.03	625.24	<0.008		Curtis W. Maas, A9683, Glovebagging
WA3	9:53	13:11	198	17.0	100	8.20	1623.60	0.005		North end of door opening from building 17 to 18.
WA2	9:59	13:09	190	12.0	100	8.20	1558.00	0.004		19 feet east of north end of southern west wall entry to building 16.
WA3R1	13:11	18:40	329	20.0	100	5.01	1648.29	0.006		North end of door opening from building 17 to 18.
WP4	13:09	18:38	329	10.0	100	5.01	1648.29	0.003		19 feet east of north end of southern west wall entry to building 16.
PS1R1	14:10	18:41	271	5.0	100	2.03	550.13	<0.009		Curtis W. Maas, A9683, Glovebagging
PS2	14:10	18:06	236	7.0	100	2.56	604.16	<0.008	0.008	Brandt L. Foust, A32441, Glovebagging and HEPA vacuuming.
EX2	18:06	18:41	35	3.0	100	2.56	89.60	<0.055		Brandt L. Foust, A32441, Glovebagging and HEPA vacuuming.

AA- Ambient Air  
BL- Baseline  
CS-Contiguous

EA- Exhaust Air, EX- Excursion  
PA- Post Abatement  
PP- Personal/Post Abatement

PS- Personal  
WA- Work Area  
WP- Work Area/Post Abatement



**Appendix B**  
**Summary of Daily Activities**

# Asbestos Removal Project



Contractor: QASI  
Client: Qualified Abatement Services  
Facility: Quincy Smelter site, Ripley, MI  
of Abatement: Building 11, Building 20, Building 14, Building 7  
ETC Project #: R-123393-08  
Date: 6/10/2008

## Environmental Testing & Consulting, Inc. (ETC) Summary of Daily Activities

7:00 I, Jonn Jacobsson, here to perform environmental service to contractor, Qualified Abatement Service, Inc. as they abate asbestos from the site of the Quincy smelter in Ripley, Michigan. Site consists of several buildings on waterfront. Each is tagged with an Asbestos Danger sign. Walking in from entry gate is building 20 on the right. There is straight run of pipe. South of 20 has debris and a straight run of pipe behind the building. South and east along the water is the lab with an outdoor stack connection with asbestos worn and showing. Inside the lab is a basement with 20-60 feet. Next building east has upstairs with pipe runs behind radiators and elsewhere on floor. Attic area, open to floor below, has large barrels filled with asbestos laying open, and many boiler insulation bricks, also some pipe joints have suspect gasket material. One heavy metal artifact has asbestos enmeshed with metalwork and will have to be inspected as worthy of historical concern; handled by Tom.

There is also a mezzanine crawl space with some piping. The first building east of building 20 has a boiler with a listed 300 square feet and 50 feet of line, the 300 feet may be vacuuming only. There is a dangerous hole in middle of ceiling in attached room. Next building east has easily visible piping at west end up about 20 feet. EPA OSC, On Scene Coordinator, Brian Kelly, and Joel from DEQ are on Quincy Smelter site along with OSHA's contracted scientific workers, Sarah and Jennifer, and Chris Long from Weston. Federal Parks Department came for the demolition of the stack. And the township representative is also here to review the area.

15:26 After reviewing the areas of work with Environmental company, the super contractor under Federal contract, a smoke stack was felled and crew worked as security to keep public off trail until danger passed. Crew worked on building 20 and 1st building south inside and outside. A generator is used for power for HEPA vacuum and sample pumps. Used one pump for contiguous at northeast end of building 20 since wind headed north. Concern was raised that the property adjacent to the north was a trail used by public and so CS1 was placed there. Personals were put on workers in each area. Crew lunched from 12 to 1. Then moved shower to truck where they can dress since temperature dips to 53 degrees. Crew is double suiting and truck is directly south of critical barrier exit. Surrounding ground is being surveyed for any suspect material and Loll is picking it up after it is sprayed. While crew is looking at next area, two workers use Randy's to glove bag in 2nd building east of 20, (building 14). Building 20 is being used as ACM storage. Building 2 as used on this day is actually supposed to be building 20, however, the zero is missing on the door sign. I've not seen a detailed map as of yet.

15:54 On to next building. Ready to move lift over to 3rd building east of 2.

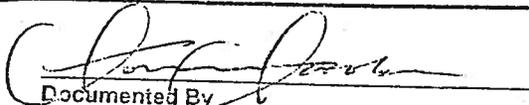
16:12 Started wa4 in building 7. Debris and pipe insulation is being removed under a roof of hanging rusted metal cover half the roof area, the rest open to sky.

16:48 Finished some samples. Will let Tom know counts are low.

17:02 Reviewed sites, nothing to report.

19:00 All leave site for day.

NOTE: Building 20 has a lone two without a zero posted on its door, thusly it was labeled as building 2 and in the middle of the day renamed building 20. This confusion should only exist on this, day one of the project.

  
Documented By  
Jonn Jacobsson

# Asbestos Removal Project

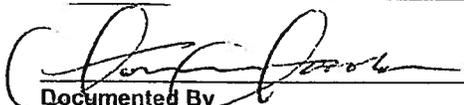


Contractor: QASI  
Client: Qualified Abatement Services, Inc.  
Facility: Quincy Smelter site, Ripley, MI  
Area of Abatement: Building 7, Building 3, Building 2  
ETC Project #: R-123393-08  
Date: 6/11/2008

## *Environmental Testing & Consulting, Inc. (ETC)* *Summary of Daily Activities*

- 7:00 I, Jonn Jacobsson, here to perform environmental service to contractor, Qualified Abatement Service, Inc. as they abate asbestos from the site of the Quincy smelter in Ripley, Michigan. Crew will finish building 7, interior debris and exterior pipe insulation on north side. Building 3, the lab, also starts on west side exterior removal of asbestos coated duct from building to stack and in basement, especially in crawl space at end of stairs downward.
- 13:49 Crew has moved entirely to building 7. Nothing to report.  
Pump for PS2 failing. Will rely on 1 series for rest of day. New pumps will arrive tomorrow morning. Only one pump is needed for this job and area.  
Sample WP2 is at the end of those stairs just below the ground floor level. Building 7 cleared. Crew finished building 3 and moved to building 2.  
Mounted WP2 twice.
- 16:22 returned from lunch  
Crew still working on building 2. Looks as though they will not finish tonight.
- 19:00 Site secured, everyone leaves site.

NOTE: Crew did not finish building 2, therefore sample WP3 will be renamed as WA3R1. Jim does not have enough time to do a complete check inside before 7pm. Also, pump on 2 series died by switch failure. PS2's should be ignore, and in their place PS1's are the representative sampling.

  
Documented By  
Jonn Jacobsson

# Asbestos Removal Project



Contractor: QASI

Client: Qualified Abatement Services, Inc.

Facility: Quincy Smelter site, Ripley, MI

Location: Building 2, Building 14, Building 17 East, Building 17 West

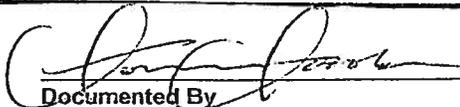
ETC Project #: R-123393-08

Date: 6/12/2008

## **Environmental Testing & Consulting, Inc. (ETC)**

### **Summary of Daily Activities**

- 7:00 I, Jonn Jacobsson, here to perform environmental service to contractor, Qualified Abatement Service, Inc. as they abate asbestos from the site of the Quincy smelter in Ripley, Michigan. Final inspection needs to start in building 2. Building 14 needs another post abatement. Storage continues in building 20. Hoping to start in building 17 when done with 2.
- 8:50 Crew working on building 2 for final cleaning. Took excursion. Weston representative Jennifer monitors the site. Brian from EPA is the OSC, On-Site Coordinator at site office. Began post in building 14 even though only a Class III operation removing a paper was performed yesterday after the other post.
- 13:34 Crew worked in buildings 16, 17, and 18. Only the north half of 17, very little in 18, and not yet starting 19. All are glove bagging pipes on various levels with ladders. Tom and Jim, both, remain outside critical barriers. They lunch from 1 till 2 pm. I change samples and ready personals for return from lunch.
- 17:02 Crew still working in same area. Bags are being stored in building 17 storage. Building 20 remains locked. Dumpster should arrive tomorrow.
- 18:36 Crew to shower out and ready themselves to leave site.
- 19:00 Everyone leaves site.
- NOTE: WA2R1 is changed to WP4 and is a post abatement since all removals are complete in the east end of building 17 which is called building 16 on other maps.

  
Documented By  
Jonn Jacobsson

# Asbestos Removal Project



Contractor: QASI

Client: Qualified Abatement Services, Inc.

Facility: Quincy Smelter site, Ripley, MI

Location: Building 18, 17 West, Building 19, Building 2 3rd Floor

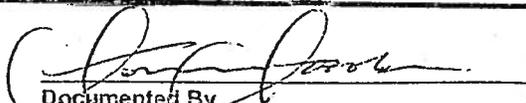
ETC Project #: R-123393-08

Date : 6/13/08

## Environmental Testing & Consulting, Inc. (ETC)

### Summary of Daily Activities

- 7:00 I, Jonn Jacobsson, here to perform environmental service to contractor, Qualified Abatement Service, Inc. as they abate asbestos from the site of the Quincy smelter in Ripley, Michigan. Overnight, building 2 became a concern again. Baseboards of concrete and a foot tall join together every 10-15 feet and the vertical cracks have tested positive for whatever is inside. It seems powdery rather than a caulk-like sticky material. Work continues on the west side of building 17 (all work happens on the north end of 17 and adjacent 18, where a8 is treated as 17 for this report), and will start in building 19.
- 8:23 Set up pumps.
- 8:48 Pulled first excursion. Work progressing well. Most of work happening on far west side.
- 11:18 Checked rates, all fine. Randy almost done in building 7. Jim rechecks area. Julio, contracting company, along with Chris checked the large metal piece resting on broken debris up 20 feet or so, above the connection between buildings 18 and 19. There are two ACM insulated pipes beneath that large metal object and there is concern over whether or not it could fall if disturbed.
- 12:34 Ran excursion before lunch as they might soon start final cleaning. Randy finished building 2's third floor area baseboard verticals. Jim thinks it was magnesium oxide stuffed inside.
- 13:20 Crew takes lunch from 1 to 2pm, left late. Almost done. Waste hauler will return after lunch. Building 2 passed and signage and warning tape removed. Changed samples for afternoon. Will read samples taken.
- 15:02 Outside crew loading bags onto waste disposal truck. Inside crew not viewed.
- 17:24 WP2 was pulled early because of concern that it might be occluding. WP2 will be changed to WA2R1 and will not be used to determine passing clearance, instead a new sample labeled PA2 will determine passage of clearance.
- 19:00 We all made it out and crossed the bridge before 7pm parade start time and met at the Holiday Inn hotel parking lot to exchange the last of the equipment. The final samples passed their respective areas. There will be some report time involved on calculating the personal results.

  
Documented By  
Jonn Jacobsson

**Appendix C**  
**Site Schematics**

# Asbestos Removal Project



Contractor: QASI

Client: Qualified Abatement Services

Facility: Quincy Smelter site, Ripley, MI

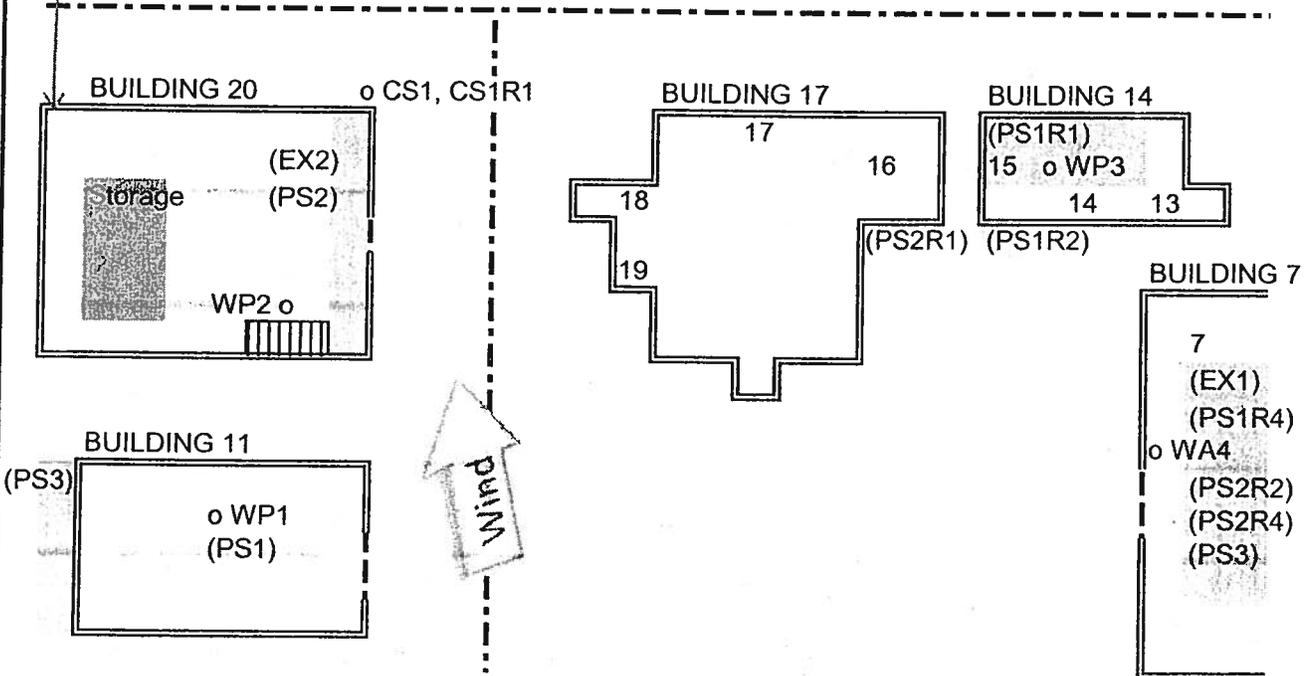
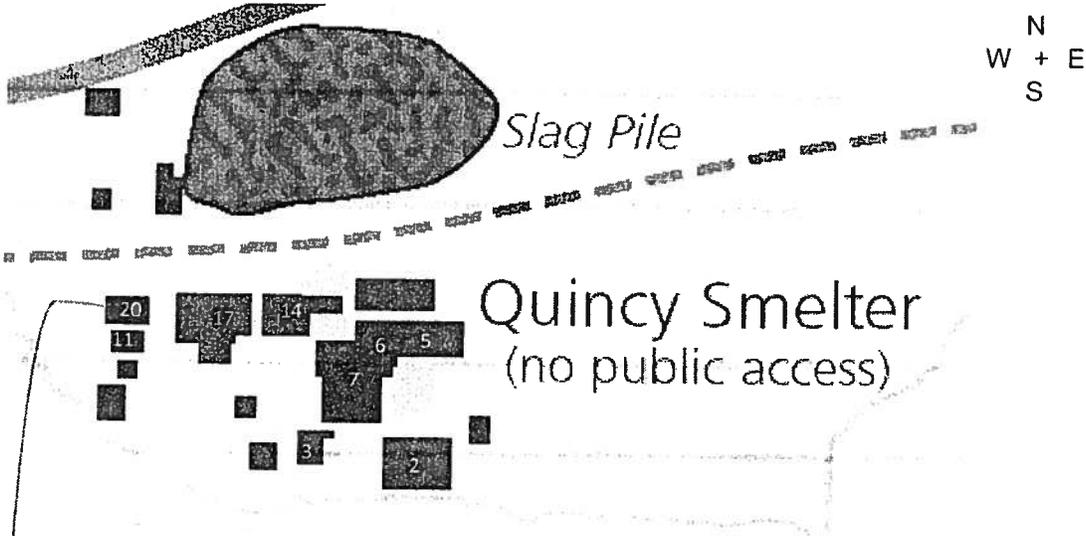
Abatement: Building 11, Building 20, Building 14, Building 7

ETC Project #: R-123393-08

Date: 6/10/2008

Hygienist: Jonn Jacobsson

NOT TO SCALE



# Asbestos Removal Project



Contractor: QASI

Client: Qualified Abatement Services, Inc.

Facility: Quincy Smelter site, Ripley, MI

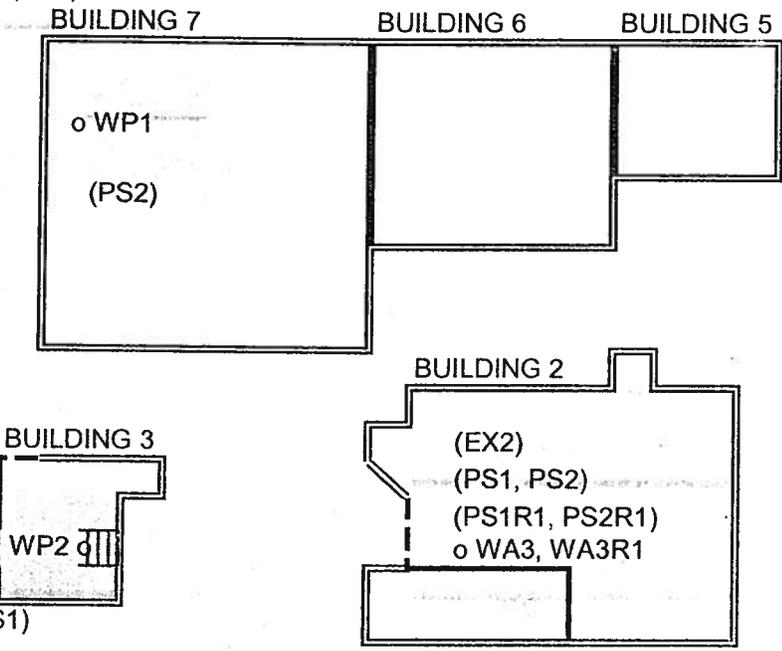
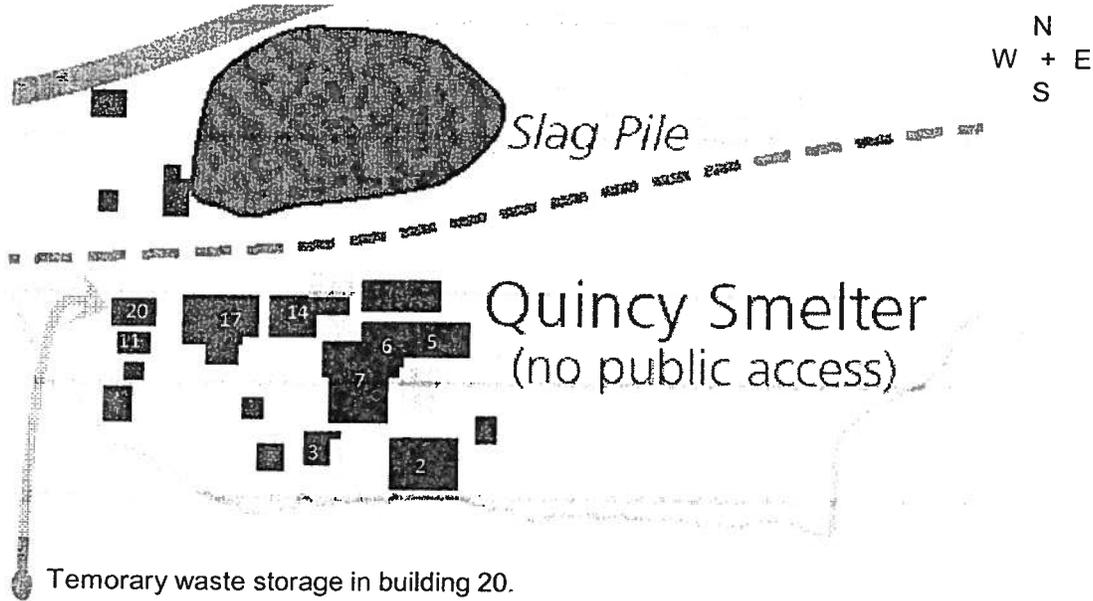
Area of Abatement: Building 7, Building 3, Building 2

ETC Project #: R-123393-08

Date: 6/11/2008

Hygienist: Jonn Jacobsson

NOT TO SCALE

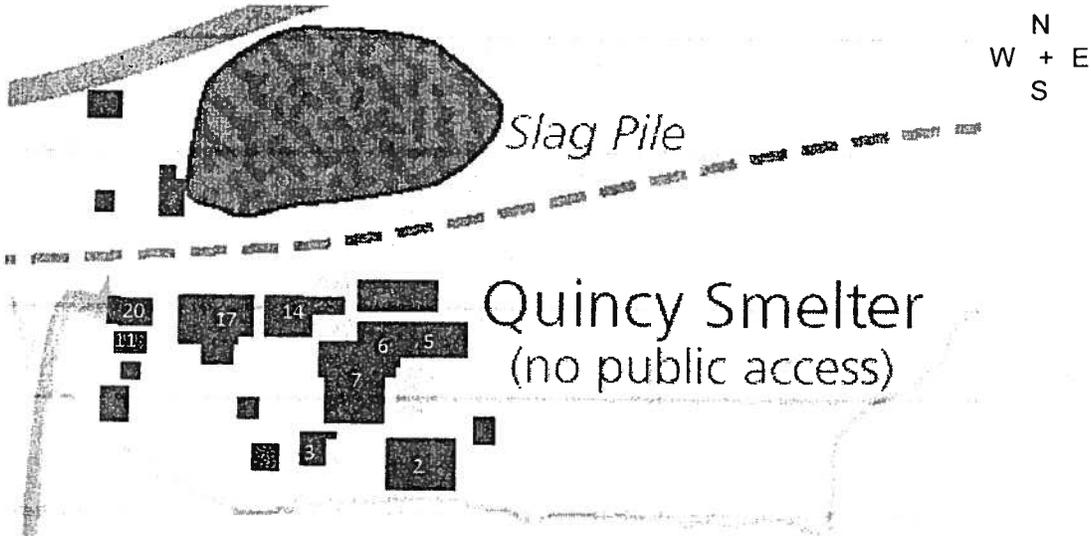


# Asbestos Removal Project

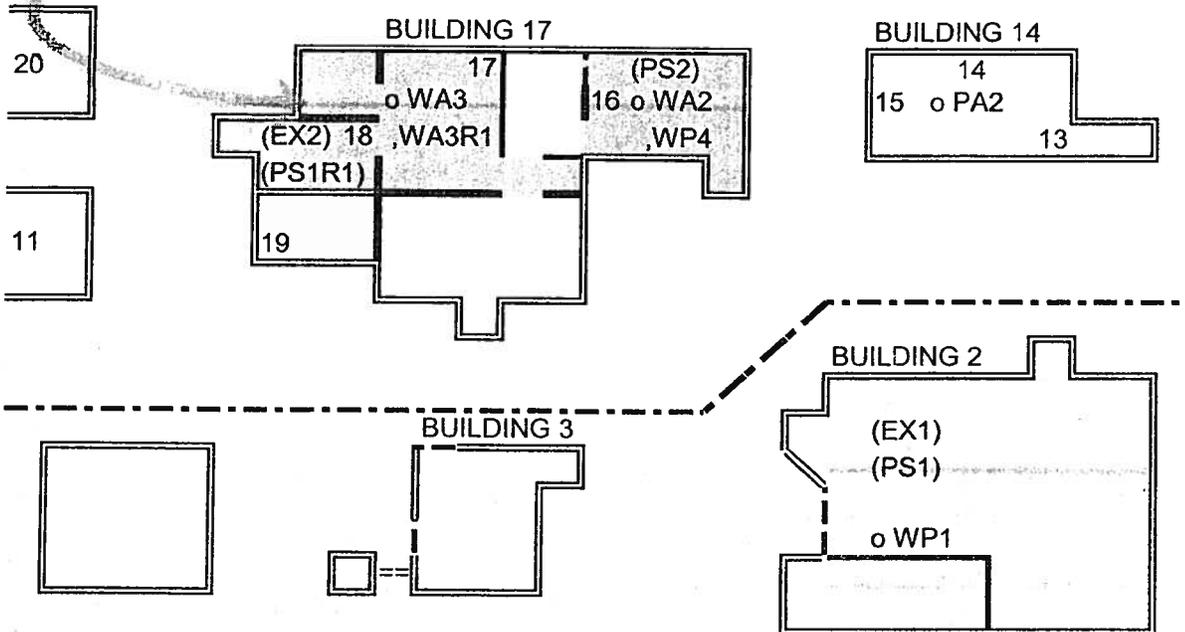


Contractor: QASI  
Client: Qualified Abatement Services, Inc.  
Facility: Quincy Smelter site, Ripley, MI  
Building 2, Building 14, Building 17 East, Building 17 West  
ETC Project #: R-123393-08  
Date: 6/12/2008  
Hygienist: Jonn Jacobsson

NOT TO SCALE



Temporary waste storage continues in building 20 and additional storage is added into building 17.



# Asbestos Removal Project



"Building a Safer Environment"

Contractor: QASI

Client: Qualified Abatement Services, Inc.

Facility: Quincy Smelter site, Ripley, MI

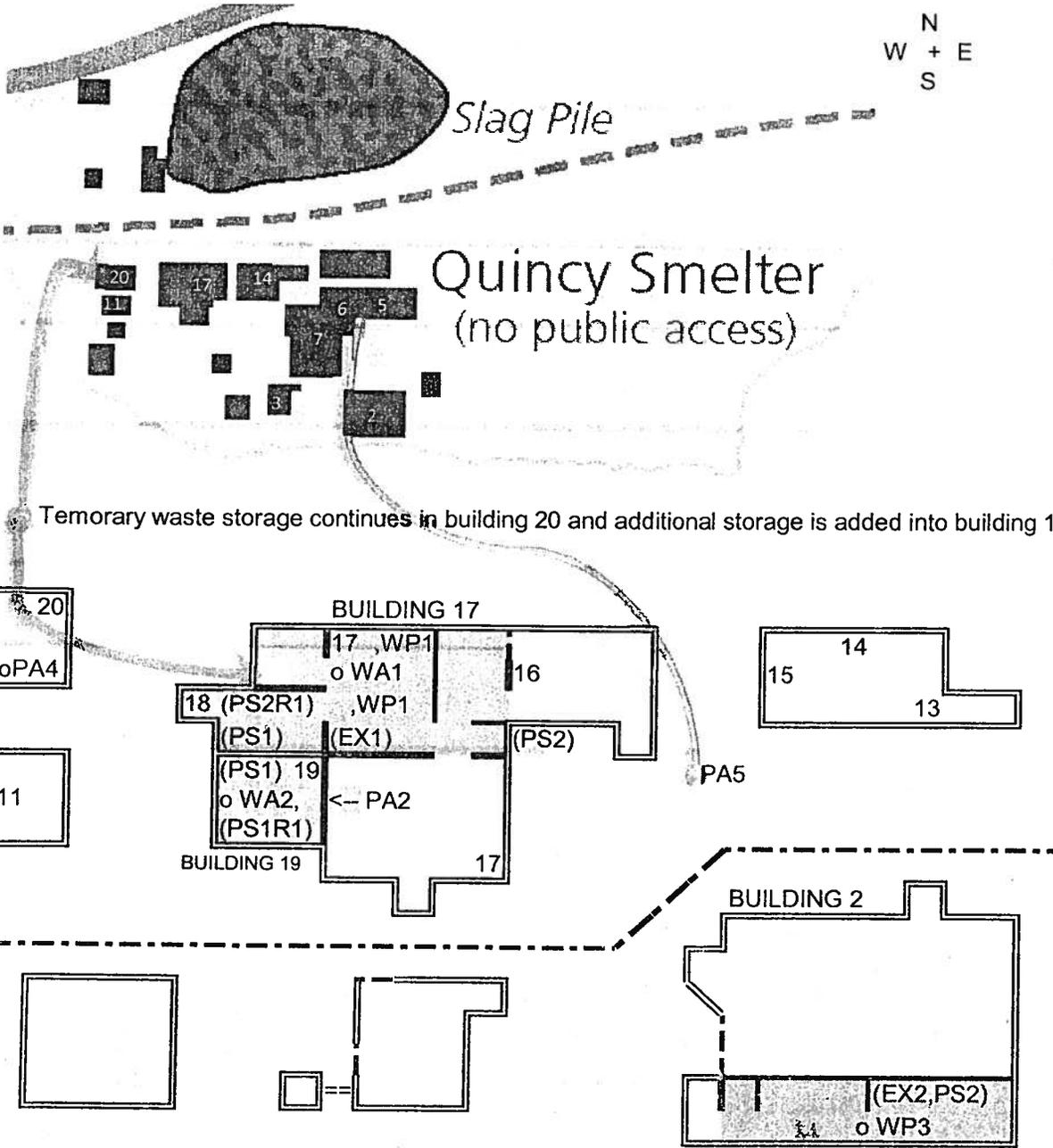
ent: Building 18, 17 West, Building 19, Building 2 3rd Floor

ETC Project #: R-123393-08

Date : 6/13/08

Hygienist: Jonn Jacobsson

NOT TO SCALE



**Appendix D**  
**Daily Checklists**

# Asbestos Removal Project



Contractor: QASI  
 Client: Qualified Abatement Services  
 Facility: Quincy Smelter site, Ripley, MI  
 Abatement: Building 11, Building 20, Building 14, Building 7  
 ETC Project #: R-123393-08  
 Date: 6/10/2008  
 Hygienist: Jonn Jacobsson

## Daily Checklist

YES	NO	N/A		YES	NO	N/A	
			<b>A. General Site Information</b>				<b>D. Enclosure Method / 4. Perimeter Barriers (continued)</b>
		X	1. Are there specifications for this project?			X	c. HVAC system sealed?
	X		2. Are emergency plan/ telephone on site?			X	d. Outlets/light fixtures sealed?
	X		3. Are EPA/OSHA/etc. regs on site?			X	e. All vertical/horizontal openings sealed?
			<b>B. Personal Protective Equipment</b>		X		5. HEPA Ventilation Units
X			1. Are respirators worn properly?			X	a. Is there a manometer on site for Class I work?
X			2. Are disposable work suits being worn?			X	b. Is it reading .02 inches?
X			3. Is there a supply of protective equipment?			X	c. Contractor recording negative pressure levels?
X			4. Is there protective equipment for inspectors?			X	d. Exhaust properly vented?
			<b>C. Work Area Practices</b>			X	e. Exhaust hose intact?
		X	1. Do power tools in use have HEPA vacuum attachments			X	f. Pre-filters changed periodically?
X			2. Are all ACM materials kept wet?				<b>E. Glovebagging</b>
X			3. Are all materials being bagged and labeled?	X			1. Is the Quantity removed >25 lin-ft or 10 sq-ft?
X			4. Is there adequate lighting in work area?	X			a. If so, is there a 3 stage decon unit on site?
X			5. Are emergency / fire exits marked / unobstructed?	X			2. Are there at least 2 persons on site?
X			6. Is there a temporary waste storage area?	X			3. Do workers have proper equipment?
		X	7. Is the dumpster posted and secured?		X		4. Is work occurring on hot pipes?
	X		8. Is there any eating, drinking, smoking or gum/tobacco chewing occurring in the work area?		X		a. Are modified techniques being used (Detail in notes)
X			9. Is there barrier tape and "Danger" signs posted?	X			5. Are all glovebags properly secured?
X			10. Is there a competent person on site?		X		6. Are glovebags smoke tested for leaks?
			<b>D. Enclosure Method</b>	X			7. Are impermeable drop clothes beneath removal activity?
X			1. Clean Room	X			8. Are materials & sides of bags kept adequately wet?
X			a. Floors Clean	X			a. Are both water and encapsulant available in each bag?
X			b. Clothes properly secured	X			9. Is material lowered gently to bottom of bag by hand?
X			c. Sign-in/Sign-out sheet posted?	X			10. Are glovebags properly removed?
X			d. Double flaps at entrance/exit?		X		a. Is a HEPA Vacuum being used during removal?
X			2. Shower Area	X			b. Is the bottom half sealed before removal?
X			a. Hot water available?	X			c. Is substrate completely encapsulated before removal?
X			b. Cold water available?	X			11. Are glovebags used only once? (no sliding)
X			c. Waste water filtered (50 microns)?	X			12. Are all surfaces thoroughly cleaned?
X			d. Soap/shampoo available?	X			a. Have all been wire brushed and/or scrapped?
X			e. Disinfectant available?	X			13. Has all exposed insulation on ends been treated?
X			f. Double flaps at entrance/exit?	X			14. Are glovebags placed in labeled bags or drums?
X			g. Are all workers showering				<b>F. End of Day Procedure</b>
X			3. Dirty Room	X			1. All materials on floor sealed before leaving?
X			a. Excess ACM debris present?	X			2. Water on floor removed?
X			b. Used work clothing place in bag or drum?	X			3. Bags labeled?
X			c. Double flaps at entrance & exit?	X			4. Bags decontaminated and properly sealed?
X			4. Perimeter Barriers	X			5. work area secured and sealed off?
	X		a. Perimeter plastic intact (6 mil)	X			6. Clothing disposed of properly?
	X		b. Windows/doors sealed?	X			7. Respirators cleaned?

## Asbestos Removal Project



Contractor: QASI  
 Client: Qualified Abatement Services, Inc.  
 Facility: Quincy Smelter site, Ripley, MI  
 Area of Abatement: Building 7, Building 3, Building 2  
 ETC Project #: R-123393-08  
 Date: 6/11/2008  
 Hygienist: Jonn Jacobsson

# Daily Checklist

YES	NO	N/A		YES	NO	N/A	
			<b>A. General Site Information</b>				<b>D. Enclosure Method / 4. Perimeter Barriers (continued)</b>
		X	1. Are there specifications for this project?			X	c. HVAC system sealed?
	X		2. Are emergency plan/ telephone on site?			X	d. Outlets/light fixtures sealed?
	X		3. Are EPA/OSHA/etc. regs on site?			X	e. All vertical/horizontal openings sealed?
			<b>B. Personal Protective Equipment</b>		X		5. HEPA Ventilation Units
X			1. Are respirators worn properly?			X	a. Is there a manometer on site for Class I work?
X			2. Are disposable work suits being worn?			X	b. Is it reading .02 inches?
X			3. Is there a supply of protective equipment?			X	c. Contractor recording negative pressure levels?
X			4. Is there protective equipment for inspectors?			X	d. Exhaust properly vented?
			<b>C. Work Area Practices</b>			X	e. Exhaust hose intact?
		X	1. Do power tools in use have HEPA vacum attachments			X	f. Pre-filters changed periodically?
X			2. Are all ACM materials kept wet?				<b>E. Glovebagging</b>
X			3. Are all materials being bagged and labeled?	X			1. Is the Quantity removed >25 lin-ft or 10 sq-ft?
X			4. Is there adequate lighting in work area?	X			a. If so, is there a 3 stage decon unit on site?
X			5. Are emergency / fire exits marked / unobstructed?	X			2. Are there at least 2 persons on site?
X			6. Is there a temporary waste storage area?	X			3. Do workers have proper equipment?
		X	7. Is the dumpster posted and secured?		X		4. Is work occurring on hot pipes?
	X		8. Is there any eating, drinking, smoking or gum/tobacco chewing occurring in the work area?		X		a. Are modified techniques being used (Detail in notes)
X			9. Is there barrier tape and "Danger" signs posted?	X			5. Are all glovebags properly secured?
X			10. Is there a competent person on site?		X		6. Are glovebags smoke tested for leaks?
			<b>D. Enclosure Method</b>	X			7. Are impermeable drop clothes beneath removal activity?
X			1. Clean Room	X			8. Are materials & sides of bags kept adequately wet?
X			a. Floors Clean	X			a. Are both water and encapsulant available in each bag?
X			b. Clothes properly secured	X			9. Is material lowered gently to bottom of bag by hand?
X			c. Sign-in/Sign-out sheet posted?	X			10. Are glovebags properly removed?
X			d. Double flaps at entrance/exit?		X		a. Is a HEPA Vacuum being used during removal?
X			2. Shower Area	X			b. Is the bottom half sealed before removal?
X			a. Hot water available?	X			c. Is substrate completely encapsulated before removal?
X			b. Cold water available?	X			11. Are glovebags used only once? (no sliding)
X			c. Waste water filtered (50 microns)?	X			12. Are all surfaces thoroughly cleaned?
X			d. Soap/shampoo available?	X			a. Have all been wire brushed and/or scrapped?
X			e. Disinfectant available?	X			13. Has all exposed insulation on ends been treated?
X			f. Double flaps at entrance/exit?	X			14. Are glovebags placed in labeled bags or drums?
X			g. Are all workers showering				<b>F. End of Day Procedure</b>
X			3. Dirty Room	X			1. All materials on floor sealed before leaving?
X			a. Excess ACM debris present?	X			2. Water on floor removed?
X			b. Used work clothing place in bag or drum?	X			3. Bags labeled?
X			c. Double flaps at entrance & exit?	X			4. Bags decontaminated and properly sealed?
X			4. Perimeter Barriers	X			5. work area secured and sealed off?
	X		a. Perimeter plastic intact (6 mil)	X			6. Clothing disposed of properly?
	X		b. Windows/doors sealed?	X			7. Respirators cleaned?

# Asbestos Removal Project



Contractor: QASI  
Client: Qualified Abatement Services, Inc.  
Facility: Quincy Smelter site, Ripley, MI  
Building 2, Building 14, Building 17 East, Building 17 West  
ETC Project #: R-123393-08  
Date: 6/12/2008  
Hygienist: Jonn Jacobsson

## Daily Checklist

YES	NO	N/A		YES	NO	N/A	
			<b>A. General Site Information</b>				<b>D. Enclosure Method / 4. Perimeter Barriers (continued)</b>
		X	1. Are there specifications for this project?			X	c. HVAC system sealed?
	X		2. Are emergency plan/ telephone on site?			X	d. Outlets/light fixtures sealed?
	X		3. Are EPA/OSHA/etc. regs on site?			X	e. All vertical/horizontal openings sealed?
			<b>B. Personal Protective Equipment</b>		X		5. HEPA Ventilation Units
X			1. Are respirators worn properly?			X	a. Is there a manometer on site for Class I work?
X			2. Are disposable work suits being worn?			X	b. Is it reading .02 inches?
X			3. Is there a supply of protective equipment?			X	c. Contractor recording negative pressure levels?
X			4. Is there protective equipment for inspectors?			X	d. Exhaust properly vented?
			<b>C. Work Area Practices</b>			X	e. Exhaust hose intact?
		X	1. Do power tools in use have HEPA vacum attachments			X	f. Pre-filters changed periodically?
X			2. Are all ACM materials kept wet?				<b>E. Glovebagging</b>
X			3. Are all materials being bagged and labeled?	X			1. Is the Quantity removed >25 lin-ft or 10 sq-ft?
X			4. Is there adequate lighting in work area?	X			a. If so, is there a 3 stage decon unit on site?
X			5. Are emergency / fire exits marked / unobstructed?	X			2. Are there at least 2 persons on site?
X			6. Is there a temporary waste storage area?	X			3. Do workers have proper equipment?
		X	7. Is the dumpster posted and secured?		X		4. Is work occurring on hot pipes?
	X		8. Is there any eating, drinking, smoking or gum/tobacco chewing occuring in the work area?		X		a. Are modified techniques being used (Detail in notes)
X			9. Is there barrier tape and "Danger" signs posted?	X			5. Are all glovebags properly secured?
X			10. Is there a competent person on site?		X		6. Are glovebags smoke tested for leaks?
			<b>D. Enclosure Method</b>	X			7. Are impermeable drop clothes beneath removal activity?
X			1. Clean Room	X			8. Are materials & sides of bags kept adequately wet?
X			a. Floors Clean	X			a. Are both water and encapsulant available in each bag?
X			b. Clothes properly secured	X			9. Is material lowered gently to bottom of bag by hand?
X			c. Sign-in/Sign-out sheet posted?	X			10. Are glovebags properly removed?
X			d. Double flaps at entrance/exit?		X		a. Is a HEPA Vacuum being used during removal?
X			2. Shower Area	X			b. Is the bottom half sealed before removal?
X			a. Hot water available?	X			c. Is substrate completely encapsulated before removal?
X			b. Cold water available?	X			11. Are glovebags used only once? (no sliding)
X			c. Waste water filtered (50 microns)?	X			12. Are all surfaces thoroughly cleaned?
X			d. Soap/shampoo available?	X			a. Have all been wire brushed and/or scrapped?
X			e. Disinfectant available?	X			13. Has all exposed insulation on ends been treated?
X			f. Double flaps at entrance/exit?	X			14. Are glovebags placed in labeled bags or drums?
X			g. Are all workers showering				<b>F. End of Day Procedure</b>
X			3. Dirty Room	X			1. All materials on floor sealed before leaving?
X			a. Excess ACM debris present?	X			2. Water on floor removed?
X			b. Used work clothing place in bag or drum?	X			3. Bags labeled?
X			c. Double flaps at entrance & exit?	X			4. Bags decontaminated and properly sealed?
X			4. Perimeter Barriers	X			5. work area secured and sealed off?
	X		a. Perimeter plastic intact (6 mil)	X			6. Clothing disposed of properly?
	X		b. Windows/doors sealed?	X			7. Respirators cleaned?

# Asbestos Removal Project



Contractor: QASI  
 Client: Qualified Abatement Services, Inc.  
 Facility: Quincy Smelter site, Ripley, MI  
 Location: Building 18, 17 West, Building 19, Building 2 3rd Floor  
 ETC Project #: R-123393-08  
 Date: 6/13/08  
 Hygienist: Jonn Jacobsson

## Daily Checklist

YES	NO	N/A		YES	NO	N/A	
			<b>A. General Site Information</b>				<b>D. Enclosure Method / 4. Perimeter Barriers (continued)</b>
		X	1. Are there specifications for this project?			X	c. HVAC system sealed?
	X		2. Are emergency plan/ telephone on site?			X	d. Outlets/light fixtures sealed?
	X		3. Are EPA/OSHA/etc. regs on site?			X	e. All vertical/horizontal openings sealed?
			<b>B. Personal Protective Equipment</b>		X		5. HEPA Ventilation Units
X			1. Are respirators worn properly?			X	a. Is there a manometer on site for Class I work?
X			2. Are disposable work suits being worn?			X	b. Is it reading .02 inches?
X			3. Is there a supply of protective equipment?			X	c. Contractor recording negative pressure levels?
X			4. Is there protective equipment for inspectors?			X	d. Exhaust properly vented?
			<b>C. Work Area Practices</b>			X	e. Exhaust hose intact?
		X	1. Do power tools in use have HEPA vacum attachments			X	f. Pre-filters changed periodically?
X			2. Are all ACM materials kept wet?				<b>E. Glovebagging</b>
X			3. Are all materials being bagged and labeled?	X			1. Is the Quantity removed >25 lin-ft or 10 sq-ft?
X			4. Is there adequate lighting in work area?	X			a. If so, is there a 3 stage decon unit on site?
X			5. Are emergency / fire exits marked / unobstructed?	X			2. Are there at least 2 persons on site?
X			6. Is there a temporary waste storage area?	X			3. Do workers have proper equipment?
		X	7. Is the dumpster posted and secured?		X		4. Is work occurring on hot pipes?
	X		8. Is there any eating, drinking, smoking or gum/tobacco chewing occurring in the work area?		X		a. Are modified techniques being used (Detail in notes)
X			9. Is there barrier tape and "Danger" signs posted?	X			5. Are all glovebags properly secured?
X			10. Is there a competent person on site?		X		6. Are glovebags smoke tested for leaks?
			<b>D. Enclosure Method</b>	X			7. Are impermeable drop clothes beneath removal activity?
X			1. Clean Room	X			8. Are materials & sides of bags kept adequately wet?
X			a. Floors Clean	X			a. Are both water and encapsulant available in each bag?
X			b. Clothes properly secured	X			9. Is material lowered gently to bottom of bag by hand?
X			c. Sign-in/Sign-out sheet posted?	X			10. Are glovebags properly removed?
X			d. Double flaps at entrance/exit?		X		a. Is a HEPA Vacuum being used during removal?
X			2. Shower Area	X			b. Is the bottom half sealed before removal?
X			a. Hot water available?	X			c. Is substrate completely encapsulated before removal?
X			b. Cold water available?	X			11. Are glovebags used only once? (no sliding)
X			c. Waste water filtered (50 microns)?	X			12. Are all surfaces thoroughly cleaned?
X			d. Soap/shampoo available?	X			a. Have all been wire brushed and/or scrapped?
X			e. Disinfectant available?	X			13. Has all exposed insulation on ends been treated?
X			f. Double flaps at entrance/exit?	X			14. Are glovebags placed in labeled bags or drums?
X			g. Are all workers showering				<b>F. End of Day Procedure</b>
X			3. Dirty Room	X			1. All materials on floor sealed before leaving?
X			a. Excess ACM debris present?	X			2. Water on floor removed?
X			b. Used work clothing place in bag or drum?	X			3. Bags labeled?
X			c. Double flaps at entrance & exit?	X			4. Bags decontaminated and properly sealed?
X			4. Perimeter Barriers	X			5. work area secured and sealed off?
		X	a. Perimeter plastic intact (6 mil)	X			6. Clothing disposed of properly?
		X	b. Windows/doors sealed?	X			7. Respirators cleaned?

**Appendix E**  
**Post Abatement Checklists**

# Asbestos Removal Project



Contractor: QASI  
Client: Qualified Abatement Services, Inc.

Facility: Quincy Smelter site, Ripley, MI  
Building 11, Building 20, Building 14, Building 7  
ETC Project #: R-123393-08  
Date: 6/10/2008

## Final Clearance Monitoring

Work Area(s) Description: Building 11

1. This is the 1 post abatement for this area.
2. What was removed during abatement
 

<input checked="" type="checkbox"/> Pipe Insulation	<input type="checkbox"/> Boiler	<input type="checkbox"/> Floor Tile	<input type="checkbox"/> Mastic	<input type="checkbox"/> Spray on	<input type="checkbox"/> Trowelled on
<input type="checkbox"/> Gasket	<input type="checkbox"/> Ceiling Panels	<input type="checkbox"/> Ceiling Tiles	<input type="checkbox"/> Transite Board	<input type="checkbox"/> Tank	<input checked="" type="checkbox"/> Other
3. Were any materials removed friable  Yes  No  Debris
4. Approximate amount of material that was removed: # of sq. ft \_\_\_\_\_ 5. # of lin. Ft \_\_\_\_\_ 80
6. Total number of pumps being used for post abatement: 1  
 Total number of pumps being run inside the work area: 1  
 Total number of pumps being run outside the work area: 1
7. Number of hours since encapsulation NA
8. Is this post abatement aggressive N
9. Has the entire area been disturbed with a leaf blower N

10. Sample Results

Enclosure/ Critical Barriers						
Sample #	PA1	PA2	PA3	PA4	PA5	
Results (f/cc)						

Glovebagging					
Sample #	WP1	WP2	WP3	WP4	WP5
Results (f/cc)	<0.003				
95% UCL (f/cc)					

Passed Clearance       Failed Clearance

**Jonn Jacobsson**  
 Industrial Hygienist



# Asbestos Removal Project

Contractor: QASI  
 Client: Qualified Abatement Services, Inc.

Facility: Quincy Smelter site, Ripley, MI  
 Building 11, Building 20, Building 14, Building 7  
 ETC Project #: R-123393-08  
 Date: 6/10/2008

## Final Clearance Monitoring

Work Area(s) Description: Building 20

1. This is the 1 post abatement for this area.

2. What was removed during abatement

Pipe Insulation   
  Boiler Ceiling Panels   
  Floor Tile   
  Mastic Transite Board   
  Spray on Tank   
  Trowelled on  
 Gasket   
 Panels   
 Ceiling Tiles   
 Board   
 Tank   
 Other

3. Were any materials removed friable     Yes     No     Debris

4. Approximate amount of material that was removed: # of sq. ft. \_\_\_\_\_ 5. # of lin. Ft. 30

6. Total number of pumps being used for post abatement: 1

Total number of pumps being run inside the work area: 1

Total number of pumps being run outside the work area: 0

7. Number of hours since encapsulation NA

8. Is this post abatement aggressive N

9. Has the entire area been disturbed with a leaf blower N

10. Sample Results

Enclosure/ Critical Barriers					
Sample #	PA1	PA2	PA3	PA4	PA5
Results (f/cc)					

Glovebagging					
Sample #	WP1	WP2	WP3	WP4	WP5
Results (f/cc)		<0.003			
95% UCL (f/cc)					

Passed Clearance     Failed Clearance

**Jonn Jacobsson**  
 Industrial Hygienist

# Asbestos Removal Project



Contractor: QASI  
 Client: Qualified Abatement Services, Inc.  
 Facility: Quincy Smelter site, Ripley, MI  
 Building 11, Building 20, Building 14, Building 7  
 ETC Project #: R-123393-08  
 Date: 6/10/2008

## Final Clearance Monitoring

Work Area(s) Description: Building 14

- The is the 1 post abatement for this area.
- What was removed during abatement
 

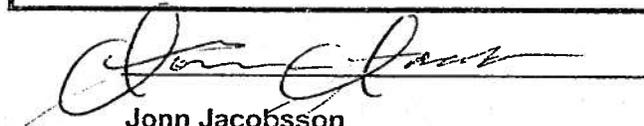
<input checked="" type="checkbox"/> Pipe Insulation	<input type="checkbox"/> Boiler	<input type="checkbox"/> Floor Tile	<input type="checkbox"/> Mastic	<input type="checkbox"/> Spray on	<input type="checkbox"/> Trowelled on
<input type="checkbox"/> Gasket	<input type="checkbox"/> Ceiling Panels	<input type="checkbox"/> Ceiling Tiles	<input type="checkbox"/> Transite Board	<input type="checkbox"/> Tank	<input checked="" type="checkbox"/> Other
- Were any materials removed friable  Yes  No  Debris
- Approximate amount of material that was removed: # of sq. ft \_\_\_\_\_ 5. # of lin. Ft 40
- Total number of pumps being used for post abatement: 1  
 Total number of pumps being run inside the work area: 1  
 Total number of pumps being run outside the work area: 0
- Number of hours since encapsulation NA
- Is this post abatement aggressive N
- Has the entire area been disturbed with a leaf blower N

10. Sample Results

Enclosure/ Critical Barriers					
Sample #	PA1	PA2	PA3	PA4	PA5
Results (f/cc)					

Glovebagging					
Sample #	WP1	WP2	WP3	WP4	WP5
Results (f/cc)			<0.003		
95% UCL (f/cc)					

Passed Clearance  Failed Clearance

  
**Jonn Jacobsson**  
 Industrial Hygienist

# Asbestos Removal Project



Contractor: QASI  
Client: Qualified Abatement Services, Inc.  
Facility: Quincy Smelter site, Ripley, MI  
of Abatement: Building 7, Building 3, Building 2  
ETC Project #: R-123393-08  
Date: 6/11/2008

## Final Clearance Monitoring

Work Area(s) Description: Building 7

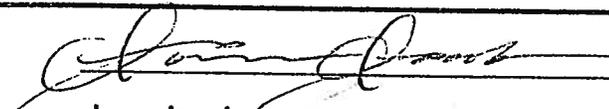
1. This is the 1 post abatement for this area.
2. What was removed during abatement
 

<input checked="" type="checkbox"/> Pipe Insulation	<input type="checkbox"/> Boiler	<input type="checkbox"/> Floor Tile	<input type="checkbox"/> Mastic	<input type="checkbox"/> Spray on	<input type="checkbox"/> Trowelled on
<input type="checkbox"/> Gasket	<input type="checkbox"/> Ceiling Panels	<input type="checkbox"/> Ceiling Tiles	<input type="checkbox"/> Transite Board	<input type="checkbox"/> Tank	<input checked="" type="checkbox"/> Other
3. Were any materials removed friable  Yes  No  Debris
4. Approximate amount of material that was removed: # of sq. ft \_\_\_\_\_ 5. # of lin. Ft 40
6. Total number of pumps being used for post abatement: 1  
 Total number of pumps being run inside the work area: 1  
 Total number of pumps being run outside the work area: 1
7. Number of hours since encapsulation NA
8. Is this post abatement aggressive N
9. Has the entire area been disturbed with a leaf blower N
10. Sample Results

Enclosure/ Critical Barriers					
Sample #	PA1	PA2	PA3	PA4	PA5
Results (f/cc)					

Glovebagging					
Sample #	WP1	WP2	WP3	WP4	WP5
Results (f/cc)	<0.003				
95% UCL (f/cc)					

Passed Clearance       Failed Clearance

  
**Jonn Jacobsson**  
Industrial Hygienist

# Asbestos Removal Project



Contractor: QASI  
 Client: Qualified Abatement Services, Inc.  
 Facility: Quincy Smelter site, Ripley, MI  
 of Abatement: Building 7, Building 3, Building 2  
 ETC Project #: R-123393-08  
 Date: 6/11/2008

## Final Clearance Monitoring

Work Area(s) Description: Building 3

1. This is the 1 post abatement for this area.
2. What was removed during abatement
 

<input checked="" type="checkbox"/> Pipe	<input type="checkbox"/> Boiler	<input type="checkbox"/> Floor Tile	<input type="checkbox"/> Mastic	<input type="checkbox"/> Spray on	<input type="checkbox"/> Trowelled on
<input type="checkbox"/> Insulation	<input type="checkbox"/> Ceiling	<input type="checkbox"/> Ceiling Tiles	<input type="checkbox"/> Transite Board	<input type="checkbox"/> Tank	<input checked="" type="checkbox"/> Other
<input type="checkbox"/> Gasket	<input type="checkbox"/> Panels				
3. Were any materials removed friable  Yes  No  Debris
4. Approximate amount of material that was removed: # of sq. ft. \_\_\_\_\_
5. # of lin. Ft. 60
6. Total number of pumps being used for post abatement: 1  
 Total number of pumps being run inside the work area: 1  
 Total number of pumps being run outside the work area: 0
7. Number of hours since encapsulation NA
8. Is this post abatement aggressive N
9. Has the entire area been disturbed with a leaf blower N

10. Sample Results

Enclosure/ Critical Barriers						
Sample #	PA1	PA2	PA3	PA4	PA5	
Results (f/cc)						

Glovebagging						
Sample #	WP1	WP2	WP3	WP4	WP5	
Results (f/cc)		0.006				
95% UCL (f/cc)						

Passed Clearance  Failed Clearance

  
**Jonn Jacobsson**  
 Industrial Hygienist

# Asbestos Removal Project



Contractor: QASI  
Client: Qualified Abatement Services, Inc.  
Facility: Quincy Smelter site, Ripley, MI  
Building 14, Building 17 East, Building 17 West  
ETC Project #: R-123393-08  
Date: 6/12/2008

## Final Clearance Monitoring

Work Area(s) Description: Building 2

1. This is the 1 post abatement for this area.
2. What was removed during abatement
 

<input checked="" type="checkbox"/> Pipe Insulation	<input type="checkbox"/> Boiler Ceiling Panels	<input type="checkbox"/> Floor Tile	<input type="checkbox"/> Mastic Transite Board	<input type="checkbox"/> Spray on Tank	<input type="checkbox"/> Trowelled on
<input type="checkbox"/> Gasket	<input type="checkbox"/> Ceiling Tiles	<input type="checkbox"/> Ceiling Tiles	<input type="checkbox"/> Board	<input type="checkbox"/> Tank	<input checked="" type="checkbox"/> Other
3. Were any materials removed friable  Yes  No  Debris
4. Approximate amount of material that was removed: # of cu. yards 2 5. # of lin. Ft \_\_\_\_\_
6. Total number of pumps being used for post abatement: 1  
 Total number of pumps being run inside the work area: 1  
 Total number of pumps being run outside the work area: 1
7. Number of hours since encapsulation NA
8. Is this post abatement aggressive N
9. Has the entire area been disturbed with a leaf blower N

10. Sample Results

Enclosure/ Critical Barriers						
Sample #	PA1	PA2	PA3	PA4	PA5	
Results (f/cc)						

Glovebagging					
Sample #	WP1	WP2	WP3	WP4	WP5
Results (f/cc)	<0.003				
95% UCL (f/cc)					

Passed Clearance       Failed Clearance

**Jonn Jacobsson**  
Industrial Hygienist



# Asbestos Removal Project

Contractor: QASI  
 Client: Qualified Abatement Services, Inc.

Facility: Quincy Smelter site, Ripley, MI  
 Building 14, Building 17 East, Building 17 West  
 ETC Project #: R-123393-08  
 Date: 6/12/2008

## Final Clearance Monitoring

Work Area(s) Description: Building 17 East

1. The is the 1 post abatement for this area.
2. What was removed during abatement
 

<input checked="" type="checkbox"/> Pipe Insulation	<input type="checkbox"/> Boiler	<input type="checkbox"/> Floor Tile	<input type="checkbox"/> Mastic	<input type="checkbox"/> Spray on	<input type="checkbox"/> Trowelled on
<input type="checkbox"/> Gasket	<input type="checkbox"/> Ceiling Panels	<input type="checkbox"/> Ceiling Tiles	<input type="checkbox"/> Transite Board	<input type="checkbox"/> Tank	<input checked="" type="checkbox"/> Other
3. Were any materials removed friable
 

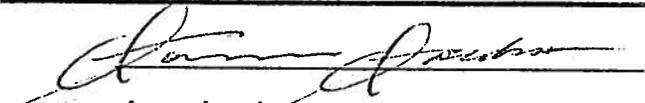
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Debris
---	-----------------------------	--
4. Approximate amount of material that was removed: # of sq. ft \_\_\_\_\_
5. # of lin. Ft 100
6. Total number of pumps being used for post abatement: 1  
 Total number of pumps being run inside the work area: 1  
 Total number of pumps being run outside the work area: 1
7. Number of hours since encapsulation NA
8. Is this post abatement aggressive N
9. Has the entire area been disturbed with a leaf blower N

10. Sample Results

Enclosure/ Critical Barriers					
Sample #	PA1	PA2	PA3	PA4	PA5
Results (f/cc)					

Glovebagging					
Sample #	WP1	WP2	WP3	WP4	WP5
Results (f/cc)				0.003	
95% UCL (f/cc)					

<input checked="" type="checkbox"/>	Passed Clearance	<input type="checkbox"/>	Failed Clearance
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**Jonn Jacobsson**  
 Industrial Hygienist

# Asbestos Removal Project



Contractor: QASI  
 Client: Qualified Abatement Services, Inc.  
 Facility: Quincy Smelter site, Ripley, MI  
 Building 14, Building 17 East, Building 17 West  
 ETC Project #: R-123393-08  
 Date: 6/12/2008

## Final Clearance Monitoring

Work Area(s) Description: Building 14

1. This is the 1 post abatement for this area.

2. What was removed during abatement

Pipe Insulation     Boiler Ceiling Panels     Floor Tile     Mastic Transite Board     Spray on Tank     Trowelled on  
 Gasket     Ceiling Tiles     Other

3. Were any materials removed friable     Yes     No     Debris

4. Approximate amount of material that was removed: # of sq. ft. \_\_\_\_\_ 5. # of lin. Ft. 3

6. Total number of pumps being used for post abatement: 1

Total number of pumps being run inside the work area: 1

Total number of pumps being run outside the work area: 0

7. Number of hours since encapsulation NA

8. Is this post abatement aggressive N

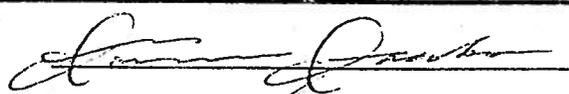
9. Has the entire area been disturbed with a leaf blower N

10. Sample Results

Enclosure/ Critical Barriers					
Sample #	PA1	PA2	PA3	PA4	PA5
Results (f/cc)		<0.004			

Glovebagging					
Sample #	WP1	WP2	WP3	WP4	WP5
Results (f/cc)					
95% UCL (f/cc)					

Passed Clearance     Failed Clearance

  
 Jonn Jacobsson  
 Industrial Hygienist

# Asbestos Removal Project



Contractor: QASI  
 Client: Qualified Abatement Services, Inc.  
 Facility: Quincy Smelter site, Ripley, MI  
 18, 17 West, Building 19, Building 2 3rd Floor  
 ETC Project #: R-123393-08  
 Date: 6/13/08

## Final Clearance Monitoring

Work Area(s) Description: Building 2 3rd Floor

1. This is the 1 post abatement for this area.
2. What was removed during abatement
 

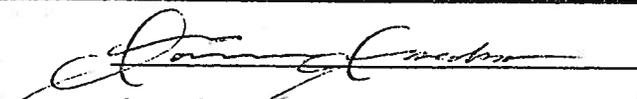
<input type="checkbox"/> Pipe Insulation	<input type="checkbox"/> Boiler	<input type="checkbox"/> Floor Tile	<input type="checkbox"/> Mastic	<input type="checkbox"/> Spray on	<input type="checkbox"/> Trowelled on
<input type="checkbox"/> Gasket	<input type="checkbox"/> Ceiling Panels	<input type="checkbox"/> Ceiling Tiles	<input type="checkbox"/> Transite Board	<input type="checkbox"/> Tank	<input checked="" type="checkbox"/> Other
3. Were any materials removed friable  Yes  No  Baseboard filler
4. Approximate amount of material that was removed: # of sq. ft \_\_\_\_\_ 5. # of lin. Ft 9
6. Total number of pumps being used for post abatement: 1  
 Total number of pumps being run inside the work area: 1  
 Total number of pumps being run outside the work area: 0
7. Number of hours since encapsulation NA
8. Is this post abatement aggressive N
9. Has the entire area been disturbed with a leaf blower N

10. Sample Results

Enclosure/ Critical Barriers					
Sample #	PA1	PA2	PA3	PA4	PA5
Results (f/cc)					

Glovebagging					
Sample #	WP1	WP2	WP3	WP4	WP5
Results (f/cc)			<0.004		
95% UCL (f/cc)					

Passed Clearance  Failed Clearance

  
**Jonn Jacobsson**  
 Industrial Hygienist



# Asbestos Removal Project

Contractor: QASI  
 Client: Qualified Abatement Services, Inc.

Facility: Quincy Smelter site, Ripley, MI  
 18, 17 West, Building 19, Building 2 3rd Floor  
 ETC Project #: R-123393-08  
 Date: 6/13/08

## Final Clearance Monitoring

Work Area(s) Description: Entry Between Buildings 5 & 6

- The is the 1 post abatement for this area.
- What was removed during abatement  

<input type="checkbox"/> Pipe Insulation	<input type="checkbox"/> Boiler Ceiling Panels	<input type="checkbox"/> Floor Tile	<input type="checkbox"/> Mastic Transite Board	<input type="checkbox"/> Spray on Tank	<input type="checkbox"/> Trowelled on
<input type="checkbox"/> Gasket	<input type="checkbox"/> Panels	<input type="checkbox"/> Ceiling Tiles	<input type="checkbox"/> Board	<input type="checkbox"/> Tank	<input checked="" type="checkbox"/> Other
- Were any materials removed friable  
 Yes     No     Debris
- Approximate amount of material that was removed: # of sq. ft 2    5. # of lin. Ft \_\_\_\_\_
- Total number of pumps being used for post abatement: 1  
 Total number of pumps being run inside the work area: 1  
 Total number of pumps being run outside the work area: 0
- Number of hours since encapsulation NA
- Is this post abatement aggressive N
- Has the entire area been disturbed with a leaf blower N

### 10. Sample Results

Enclosure/ Critical Barriers					
Sample #	PA1	PA2	PA3	PA4	PA5
Results (f/cc)					<0.004

Glovebagging					
Sample #	WP1	WP2	WP3	WP4	WP5
Results (f/cc)					
95% UCL (f/cc)					

Passed Clearance     Failed Clearance

Jonn Jacobsson  
 Industrial Hygienist



# Asbestos Removal Project

Contractor: QASI

Client: Qualified Abatement Services, Inc.

Facility: Quincy Smelter site, Ripley, MI  
 18, 17 West, Building 19, Building 2 3rd Floor  
 ETC Project #: R-123393-08

Date: 6/13/08

## Final Clearance Monitoring

Work Area(s) Description: Building 19

- The is the 1 post abatement for this area.
- What was removed during abatement
 

<input checked="" type="checkbox"/> Pipe Insulation	<input checked="" type="checkbox"/> Boiler Insulation	<input type="checkbox"/> Floor Tile	<input type="checkbox"/> Mastic Transite Board	<input type="checkbox"/> Spray on	<input type="checkbox"/> Trowelled on
<input type="checkbox"/> Gasket	<input type="checkbox"/> Ceiling Panels	<input type="checkbox"/> Ceiling Tiles	<input type="checkbox"/> Tank	<input checked="" type="checkbox"/> Other	
- Were any materials removed friable  Yes  No  Debris
- Approximate amount of material that was removed: # of sq. ft 300 5. # of lin. Ft 50
- Total number of pumps being used for post abatement:       
 Total number of pumps being run inside the work area:       
 Total number of pumps being run outside the work area:
- Number of hours since encapsulation NA
- Is this post abatement aggressive N
- Has the entire area been disturbed with a leaf blower N

10. Sample Results

Enclosure/ Critical Barriers						
Sample #	PA1	PA2	PA3	PA4	PA5	
Results (f/cc)		<0.004				

Glovebagging					
Sample #	WP1	WP2	WP3	WP4	WP5
Results (f/cc)					
95% UCL (f/cc)					

Passed Clearance     Failed Clearance

**Jonn Jacobsson**  
 Industrial Hygienist

# Asbestos Removal Project



Contractor: QASI  
Client: Qualified Abatement Services, Inc.  
Facility: Quincy Smelter site, Ripley, MI  
Building 18, 17 West, Building 19, Building 2 3rd Floor  
ETC Project #: R-123393-08  
Date: 6/13/08

## Final Clearance Monitoring

Work Area(s) Description: Building 18, 17 West

1. This is the 1 post abatement for this area.
2. What was removed during abatement
 

<input checked="" type="checkbox"/> Pipe Insulation	<input type="checkbox"/> Boiler	<input type="checkbox"/> Floor Tile	<input type="checkbox"/> Mastic	<input type="checkbox"/> Spray on	<input type="checkbox"/> Trowelled on
<input type="checkbox"/> Gasket	<input type="checkbox"/> Ceiling Panels	<input type="checkbox"/> Ceiling Tiles	<input type="checkbox"/> Transite Board	<input type="checkbox"/> Tank	<input checked="" type="checkbox"/> Other
3. Were any materials removed friable  Yes  No  Debris
4. Approximate amount of material that was removed: # of sq. ft \_\_\_\_\_ 5. # of lin. Ft 50
6. Total number of pumps being used for post abatement: 1  
 Total number of pumps being run inside the work area: 1  
 Total number of pumps being run outside the work area: 1
7. Number of hours since encapsulation NA
8. Is this post abatement aggressive N
9. Has the entire area been disturbed with a leaf blower N

10. Sample Results

Enclosure/ Critical Barriers						
Sample #	PA1	PA2	PA3	PA4	PA5	
Results (f/cc)						

Glovebagging					
Sample #	WP1	WP2	WP3	WP4	WP5
Results (f/cc)	<0.003				
95% UCL (f/cc)					

**Passed Clearance**       **Failed Clearance**

**Jonn Jacobsson**  
Industrial Hygienist

**Appendix F**  
**Contractor Employee Lists**



# Asbestos Removal Project



Contractor: QASI

Client: Qualified Abatement Services, Inc.

Facility: Quincy Smelter site, Ripley, MI

Area of Abatement: Building 7, Building 3, Building 2

ETC Project #: R-123393-08

Date: 6/11/2008

Hygienist: Jonn Jacobsson

Abatement Worker Accreditation Number	Respirator Type	Activity Code	Type of State Card	Card #	Fit Test Exp. Date	Physical Exp. Date
				Expiration. Date		
Thomas B. Ross A10845		OP	C/S	71550.19373 6/15/2008	6/4/2009	6/6/2008
James R. Gorsuch A12263		OP	C/S	74583.21937 4/13/2009	5/13/2009	11/30/2008
Curtis W. Maas A9683	Half	GB	C/S	76816.2333 5/17/2009	3/11/2009	
Matthew S. Novack A30716	Half	GB	C/S	75081.22874 3/17/2009		
Timothy R. Loll A16227	Half	GB	C/S	75506.22922 4/12/2009	6/5/2009	4/17/2009
Jeffrey T. Ball A36719	Half	GB	C/S	71809.19672 6/1/2008	3/3/2009	5/30/2008
Randy J. Eilber A25475	Half	GB	AW	74672.2203 3/28/2009	3/3/2009	4/5/2009
Brandt L. Foust A32441	Half	GB	C/S	71584.19746 6/14/2008	3/11/2009	10/27/2009
<b>CARD CODES</b>	C/S - Supervisor PD - Project Designer		MP - Management Planner			
	WK - Abatement Worker I - Inspector		AS - Abatement Specialist (Ohio Only)			
<b>ACTIVITY CODE</b>	GB - Glovebag CB - Critical Barrier		PR - Patch & Repair			
	CL - Cleaning WP - Worksite Preparation		FE - Full Enclosure			
	OP - Outside Person					











