

**SITE ASSESSMENT REPORT
FOR
JOSEPH STREET ASBESTOS SITE
MARION, MARION COUNTY, OHIO**

NPL STATUS: NON-NPL

Prepared for:

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Emergency Response Branch
Region V
25089 Center Ridge Road
Westlake, OH 44145

Prepared by:

WESTON SOLUTIONS, INC.
6779 Engle Road
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Middleburg Heights, OH 44130

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Andy Kiel
WESTON START Site Lead

Reviewed and
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LIST OF ABBREVIATIONS AND ACRONYMS

ACM	Asbestos-containing material
AHERA	Asbestos Hazard Emergency Response Act
AIHA	American Industrial Hygiene Association
CFR	<i>Code of Federal Regulations</i>
f/cc	Fiber per cubic centimeter
EPA	Environmental Protection Agency
ERB	Emergency Response Branch
MCE	Mixed cellulose ester
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NIOSH	National Institute of Occupational Safety and Health
NVLAP	National Voluntary Laboratory Accreditation Program
Ohio EPA	Ohio Environmental Protection Agency
OSC	On-Scene Coordinator
OSHA	Occupational Safety and Health Administration
PCM	Phase contrast microscopy
PEL	Permissible Exposure Limit
PLM	Polarized light microscopy
RACM	Regulated asbestos-containing material
s/cc	Structure per cubic centimeter
START	Superfund Technical Assessment and Response Team
STAT	STAT Analysis Corporation
SU	Standard unit
TEM	Transmission electron microscopy
TSI	Thermal system insulation
WESTON	Weston Solutions, Inc.

1. INTRODUCTION

The U.S. Environmental Protection Agency (EPA) Region V Emergency Response Branch (ERB) tasked the Weston Solutions, Inc. (WESTON®), Superfund Technical Assessment and Response Team (START) to assist in performing a site assessment at the Joseph Street Asbestos Site in Marion, Marion County, Ohio (the Site; see **Figure 1**). Specifically, under Technical Direction Document No. S05-0001-1303-009, the EPA instructed WESTON START to conduct the following activities:

- Collect samples of suspected asbestos-containing materials (ACM) from on-site debris piles
- Collect stationary and personal air samples for laboratory analysis
- Provide written and photographic documentation of Site conditions
- Document and characterize any potential Site-related threats to the public health or welfare of the United States or the environment

WESTON START mobilized to the Site under the direction of EPA On-Scene Coordinator (OSC) Stephen Wolfe and conducted the site assessment tasks on April 16 and 17 and May 1, 2013.

This site assessment report is organized into the following sections:

- **Section 1, Introduction** – Provides a brief description of the objectives and scope of site assessment activities
- **Section 2, Site Background** – Discusses the Site description and history
- **Section 3, Site Assessment Activities** – Discusses the methods and procedures used during the site assessment
- **Section 4, Analytical Results** – Discusses analytical results for samples collected during the site assessment
- **Section 5, Threats to Human Health and the Environment** – Identifies conditions at the Site that may warrant a removal action under the National Oil and Hazardous Substances Pollution Contingency Plan (NCP)

Figures and tables are presented after Section 5. In addition, this report contains three appendices. **Appendix A** presents photographic documentation of Site conditions at the time of the site assessment. **Appendix B** presents the laboratory analytical results summary report for bulk ACM samples from STAT Analysis Corporation (STAT). **Appendix C** presents the laboratory analytical results summary report for asbestos air samples from STAT.

2. SITE BACKGROUND

This section discusses the Site description and history.

2.1 SITE DESCRIPTION

The Site is located at 333 Joseph Street in Marion, Marion County, Ohio (**Figure 1**). The Site's coordinates are 40°35'43.74" North latitude and 83°08'07.01" West longitude. The Site encompasses approximately 13.68 acres in a mixed residential, commercial, and light industrial area and once contained a commercial/warehouse building measuring approximately 440,000 square feet with a concrete floor. The former building was demolished with ACMs intact, and the Site now contains 10 piles of asbestos-contaminated demolition debris. Portions of the building in the northwest area of the Site still are partially intact. **Figure 2** shows the Site layout and demolition debris pile locations.

The Site is bounded to the north by Joseph Street and light industrial and residential properties; to the east by Mary Street and residential properties; to the south by Silk Street and residential properties; and to the west by Leader Street and light industrial properties. There is no fence surrounding the Site, and Site access is unrestricted. During the site assessment, WESTON START observed signs of graffiti at the Site and some residents accessing the Site.

2.2 SITE HISTORY

On May 13, 2010, HazCorp Environmental Services, Inc. conducted a pre-demolition asbestos inspection of the on-site building. Building materials containing asbestos included exterior decorative panels, sawtooth roof system materials, window glazing, several types of floor tile

and mastic, linoleum, and transite. No thermal system insulation (TSI) was observed. According to the Site owner, all TSI had been removed from the building in 1990.

The Site once contained a commercial/warehouse building measuring approximately 440,000 square feet that was demolished with ACMs intact. The Site now contains 10 piles of asbestos-contaminated demolition debris. The commercial/warehouse building was vacant and has not been used for manufacturing or warehousing purposes since an unknown date. The building was razed and the steel was salvaged as scrap metal. Portions of the building in the northwest area of the Site still are partially intact. 333 Joseph LLC violated the Marion city code by failing to complete the demolition within 1 year of the demolition permit dated April 19, 2010.

On September 14, 2012, HazCorp Environmental Services, Inc. conducted another asbestos inspection of the demolition debris piles after the building had been demolished. The inspection indicated that the ACMs identified during the May 2010 asbestos inspection, which required removal before demolition activities, had not been removed before demolition of the building.

In 2012, the Ohio Environmental Protection Agency (Ohio EPA) conducted a Site investigation and discovered the presence of asbestos within the demolition debris piles. The OEPA served the property owners with a Notice of Violation.

3. SITE ASSESSMENT ACTIVITIES

The purpose of the site assessment tasks requested by the OSC was to evaluate potential asbestos-related threats from the Site to the public health or welfare of the United States or the environment. Site assessment tasks included the identification of suspected ACM and bulk sample collection (Section 3.1), the collection of asbestos air samples (Section 3.2), and the visual assessment of abandoned drums (Section 3.3). Section 4 discusses the laboratory analytical data for the samples collected, and Section 5 discusses Site conditions relevant to potential threats to the public health or welfare of the United States or the environment. **Appendix A** provides a photographic log of Site conditions during the site assessment.

3.1 SUSPECTED ACM BULK SAMPLE COLLECTION

On April 16 and 17 and May 1, 2013, WESTON START collected representative ACM bulk samples from demolished and damaged building materials. A total of 26 homogeneous materials were identified during the site assessment, and a total of 52 investigative ACM bulk samples were collected for laboratory analysis. **Table 1** summarizes the ACM bulk samples collected. **Figure 2** shows the demolition debris pile locations.

Bulk samples were collected from all 10 on-site debris piles of specific building materials suspected of containing asbestos. Representative samples were collected based on specific building material (homogeneous material) and specific debris pile or specific on-site area. Bulk samples also were collected from building materials that are still intact on the building concrete slab and from partially demolished portions of the building (if the area was structurally sound and safe to enter).

Accessible areas of the Site were inspected, and the suspected ACMs were grouped into homogeneous materials. Homogeneous materials are similar in color, texture, and approximate age. Representative samples of each material were collected for laboratory analysis. One to three samples were collected from each homogeneous material group.

To avoid disturbing suspected ACM and to minimize the release of asbestos fibers, WESTON START performed bulk sampling in accordance with generally accepted procedures outlined in current EPA guidance documents. Each sample was collected in a clean, sealable plastic container and labeled with a unique sample identification number. Additional information was recorded in the field notes, including sample collection date, name of the inspector, debris pile from which each sample was collected, brief description of each sample, and type of material sampled. Level C respiratory protection was worn to collect all ACM bulk samples.

The polarized light microscopy (PLM) method (visual estimation) currently recommended by EPA to determine asbestos in bulk samples of friable insulation materials is used to qualitatively identify six morphologically different types of asbestos fibers: chrysotile, amosite, crocidolite, anthophyllite, tremolite, and actinolite asbestos.

The EPA and the Occupational Safety and Health Administration (OSHA) define ACM as any material that contains more than 1 percent asbestos by weight. The method specifies that the asbestos content in a bulk sample be determined by visual estimation and reported as a finite percentage (rounded to the nearest percentage) within the range of 0 to 100. Minute quantities of asbestos in bulk samples may be reported as “trace,” or less than 1 percent. The analytical method determines the “area percent” asbestos, or the percentage of the area of a microscopic field of view occupied by asbestos fibers.

Each debris pile is described below, including a list of samples collected from each debris pile.

Debris Pile 1

Debris Pile 1 is located near the northeast portion of the Site and primarily contains cinder blocks. The debris pile measures approximately 120 by 20 by 4 feet, or 356 cubic yards. During the site assessment, suspected ACM observed within this debris pile included floor tile, floor tile mastic, cellulose wallboard, asphaltic roofing, light-green styrofoam, and black tar on yellow brick. Historical investigations identified no suspect ACM in this pile, and no bulk samples were collected.

The ACM bulk samples collected from Debris Pile 1 during this site assessment included the following:

- JS-BLK-01-01a floor tile and JS-BLK-01-01b floor tile mastic
- JS-BLK-01-02a floor tile and JS-BLK-01-02b floor tile mastic
- JS-BLK-01-03a and JS-BLK-01-03b cellulose wallboard
- JS-BLK-01-04a and JS-BLK-01-04b asphaltic roofing
- JS-BLK-01-05a and JS-BLK-01-05b light-green styrofoam
- JS-BLK-01-06a and JS-BLK-01-06b black tar on yellow brick

Debris Pile 2

Debris Pile 2 is located near the eastern portion of the Site and primarily contains wood and roofing material. The debris pile measures approximately 90 by 80 by 8 feet, or 2,133 cubic

yards. During the site assessment, suspected ACM observed within this debris pile included transite fragments, cellulose wallboard, and asphaltic roofing. Historical investigations identified transite fragments throughout this pile; however, no bulk samples were collected.

The ACM bulk samples collected from Debris Pile 2 during this site assessment included the following:

- JS-BLK-02-01a and JS-BLK-02-01b transite
- JS-BLK-02-02a and JS-BLK-02-02b cellulose wallboard
- JS-BLK-02-03a and JS-BLK-02-03b asphaltic roofing

Debris Pile 3

Debris Pile 3 is an elongated pile oriented north to south near the eastern portion of the Site and primarily contains red brick. The debris pile measures approximately 245 by 35 by 2 feet, or 635 cubic yards. During the site assessment, suspected ACM was observed within this debris pile and included transite fragments and asphaltic roofing. Historical investigations identified no suspect ACM in this pile, and no bulk samples were collected.

The ACM bulk samples collected from Debris Pile 3 during this site assessment included the following:

- JS-BLK-03-01a and JS-BLK-03-01b transite
- JS-BLK-03-02a and JS-BLK-03-02b asphaltic roofing

Debris Pile 4

Debris Pile 4 is located near the central portion of the Site and primarily contains wood and roofing materials. The debris pile measures approximately 150 by 90 by 8 feet, or 4,000 cubic yards. During the site assessment, suspected ACM observed within this debris pile included transite, asphaltic roofing, cellulose wallboard, transite fragments, floor tile, floor tile mastic, and electrical panel fragments. Historical ACM sampling results indicate that asphaltic roofing from this pile did not contain asbestos at detectable concentrations.

The ACM bulk samples collected from Debris Pile 4 during this site assessment included the following:

- JS-BLK-04-01a transite
- JS-BLK-04-02a and JS-BLK-04-02b asphaltic roofing

Debris Pile 5

Debris Pile 5 is located in the northeastern portion of the Site and primarily contains brick and cinder block. The debris pile measures approximately 110 by 35 by 1 foot and 250 by 20 by 2 feet, or 513 cubic yards. During the site assessment, suspected ACM observed within this debris pile included floor leveling compound, linoleum, asphaltic roofing, floor tile, and floor tile mastic. Historical ACM sampling results indicate that floor leveling compound from this pile did not contain asbestos at detectable concentrations. In addition, historical investigations indicated that transite fragments were observed on the frontage of the Site along Joseph Street. However, during the site assessment, no transite fragments were observed in this area.

The ACM bulk samples collected from Debris Pile 5 during this site assessment included the following:

- JS-BLK-05-01a and JS-BLK-05-01b floor leveling compound
- JS-BLK-05-02a and JS-BLK-05-02b linoleum

Debris Pile 6

Debris Pile 6 is an elongated pile oriented north to south near the center of the Site and primarily contains brick and concrete. The debris pile measures approximately 230 by 20 by 3 feet, or 511 cubic yards. During the site assessment, suspected ACM observed within this debris pile included asphaltic roofing and transite fragments. Historical investigations identified no suspect ACM in this pile, and no bulk samples were collected. Although suspected ACM was identified within the debris piles, during the site assessment, no bulk samples were collected for laboratory analysis.

Debris Pile 7

Debris Pile 7 is an elongated pile oriented east to west in the southeast corner of the Site and primarily contains brick and cinder block. The debris pile measures approximately 15 by 35 by 4 feet and 200 by 35 by 4 feet, or 1,115 cubic yards. During the site assessment, suspected ACM observed within this debris pile included slate roof material, asphaltic roofing, brick, and tar on precast concrete. Historical ACM sampling results from other investigations indicate that the asphaltic roofing tested positive for asbestos.

The ACM bulk samples collected from Debris Pile 7 during this site assessment included the following:

- JS-BLK-07-01a, JS-BLK-07-01b, and JS-BLK-07-01c slate roof material

Debris Pile 8

Debris Pile 8 is located in the south-central portion of the Site and primarily contains cinder block. The debris pile measures approximately 75 by 45 by 5 feet, or 625 cubic yards. During the site assessment, suspected ACM observed within this debris pile included white granular cement and asphaltic roofing. Historical ACM sampling results indicate that asphaltic roofing from this pile tested positive for asbestos.

The ACM bulk samples collected from Debris Pile 8 during this site assessment included the following:

- JS-BLK-08-01a and JS-BLK-08-01b white granular cement

Debris Pile 9

Debris Pile 9 is located in the west-central portion of the Site and primarily contains wood and roofing material. The debris pile measures approximately 250 by 150 by 5 feet, or 6,945 cubic yards. During the site assessment, suspected ACM observed within this debris pile included white granular cement, white or light-gray material, thin transite, linoleum, floor tile, floor tile mastic, flat transite, asphaltic roofing, and green foam. Historical ACM sampling results indicate that asphaltic roofing from this pile tested positive for asbestos.

The ACM bulk samples collected from Debris Pile 9 during this site assessment included the following:

- JS-BLK-09-01a and JS-BLK-09-01b white granular cement
- JS-BLK-09-02a and JS-BLK-09-02b white or light-gray material
- JS-BLK-09-03a and JS-BLK-09-03b transite
- JS-BLK-09-04a and JS-BLK-09-04b linoleum

Debris Pile 10

Debris Pile 10 is located in the northwestern corner of the Site and primarily contains cinder block and brick. The debris pile measures approximately 300 by 45 by 2 feet, or 1,000 cubic yards. During the site assessment, suspected ACM observed within this debris pile included transite, floor leveling compound, exterior wall surfacing (mortar) layer, drywall, cellulose wallboard, floor tile, floor tile mastic, surfacing material on transite, and asphaltic roofing. Historical ACM sampling results indicate that transite and floor materials from this pile tested positive for asbestos.

The ACM bulk samples collected from Debris Pile 10 during this site assessment included the following:

- JS-BLK-10-01a and JS-BLK-10-01b transite
- JS-BLK-10-02a and JS-BLK-10-02b floor leveling compound
- JS-BLK-10-03a and JS-BLK-10-03b exterior wall surfacing layer
- JS-BLK-10-04a and JS-BLK-10-04b drywall
- JS-BLK-10-05a and JS-BLK-10-05b cellulose wallboard

3.2 ASBESTOS AIR SAMPLE COLLECTION

As discussed below, WESTON START conducted a variety of air sampling activities during the site assessment. **Table 2** lists the air samples collected.

Ambient air sampling was conducted during the collection of ACM bulk samples and the assessment of ACM at the Site. The purpose of the ambient air sampling was to provide

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laboratory data for the detection of airborne fibers and airborne asbestos fibers related to quiescent Site conditions at stationary locations downwind of the suspected ACM debris piles. **Figure 2** shows the stationary air sampling locations. Perimeter air sampling for asbestos was performed in accordance with National Institute for Occupational Safety and Health (NIOSH) Method 7400 (phase contrast microscopy [PCM]) and NIOSH Method 7402 (transmission electron microscopy [TEM]). Stationary air samples were collected using Sensidyne Air Con II high-volume sample pumps. The filter consisted of a 0.8-micron, 25-millimeter mixed cellulose ester (MCE) filter. The flow rate was set at approximately 10 liters per minute to collect samples. On April 13, 2013, WESTON START collected samples JS-AIR-01-01 and JS-AIR-02-01 from stationary air sampling locations. On May 1, 2013, WESTON START collected samples JS-AIR-03-01 through JS-AIR-06-01 from stationary air sampling locations.

WESTON START also collected personal air samples from START personnel during ACM bulk sample collection and ACM assessment. The purpose of the personal air sampling was to provide laboratory data for the detection of airborne fibers and airborne asbestos fibers on personnel within the breathing zone during the intentional disturbance of suspected ACM during the sampling and assessment of suspected ACM. The objective of the sampling was to determine worker exposure to fibers and asbestos fibers during site assessment activities. On April 16 and 17, 2013, WESTON START collected personnel exposure samples JS-PER-AK-01 and JS-PER-AK-02, respectively. On May 1, 2013, WESTON START collected personnel exposure sample JS-PER-AK-03.

Completion of this site assessment activity depended on dry weather conditions. Dry weather and dry demolition debris conditions create a higher probability for asbestos fibers to release into ambient air. The air samples discussed above were collected under the worst-case scenario (dry conditions) for non-intrusive or quiescent Site conditions.

3.3 VISUAL ASSESSMENT OF DRUMS

During the site assessment, WESTON START observed 12 55-gallon plastic drums in Debris Pile 9. The bungs on two of the drums were open. The bungs on the rest of the drums were closed and sealed. All the drums appeared to be intact. A small, damaged label on one drum

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indicated that it contained vinegar. An emblem on the bung seals of the other drums matched the emblem on the one label that was found. . The pH of the liquid contents of one drum was 5 standard units (SU).

4. ANALYTICAL RESULTS

WESTON START reviewed the results provided by STAT. Analytical data related to asbestos analysis does not lend itself to data validation. However, WESTON START reviewed and approved the results provided by STAT. **Appendix B** provides the bulk ACM sample laboratory analytical results summary report from STAT. **Appendix C** provides the asbestos air sample laboratory analytical results summary report from STAT. The following sections briefly discuss the suspected ACM bulk and asbestos air sample analytical results.

4.1 SUSPECTED ACM BULK SAMPLE ANALYTICAL RESULTS

On April 18 and May 1, 2013, samples of suspected ACM were packaged and shipped under chain of custody to the STAT laboratory in Chicago, Illinois. Each suspected ACM sample was analyzed using PLM techniques in accordance with the prescribed EPA Test Method titled “Method for the Determination of Asbestos in Bulk Building Materials,” Title 40 of the *Code of Federal Regulations* (40 CFR), Part 763, Appendix A to Subpart F (EPA/600/R-93/116). The STAT laboratory is fully accredited by the American Industrial Hygiene Association (AIHA) and National Voluntary Laboratory Accreditation Program (NVLAP). The NVLAP is the quality assurance program for laboratories analyzing bulk samples for asbestos content using PLM.

A total of 26 homogenous materials were identified at the Site. Representative samples of each material were collected for laboratory analysis. **Table 1** summarizes the laboratory analytical results for these samples. A total of 52 bulk samples were collected for laboratory analysis.

The objective of site assessment was to collect bulk samples of building materials only if they represent suspected ACMs that could release airborne asbestos fibers under Site conditions at the time of the demolition removal activities. However, WESTON START did collect bulk samples of suspected ACM that could not, by definition, release asbestos fibers into ambient air.

Assessment categorization of the suspect ACMs was conducted in accordance with the National Emissions Standards for Hazardous Air Pollutants (NESHAP) at 40 CFR, Parts 61.141 and 61.145. Suspected ACM was classified under one of the three categories summarized below (**Table 1**).

- Category I Non-friable ACM is defined as ACM packing, gaskets, resilient floor covering, and asphalt roofing products containing more than 1 percent asbestos. Generally, Category I building materials would not create an airborne release of asbestos fibers during normal demolition activities.
- Category II Non-friable ACM is defined as any material, excluding Category I non-friable ACM, containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to a powder by hand pressure. An example of this ACM is asbestos cement board. Generally, Category II building materials would create an airborne release of asbestos fibers during normal demolition activities.
- Regulated ACM (RACM) is defined as (1) friable ACM; (2) Category I Non-friable ACM that has become friable; (3) Category I Non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading; or (4) Category II Non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by forces expected to act on the material in the course of demolition or renovation operations regulated under Subpart 61.141 of 40 CFR, Part 61 (NESHAP Revision; Final Rule).

The following summary of analytical results is categorized by homogeneous materials or building materials similar in color, texture, and approximate age. **Table 1** summarizes the asbestos bulk sample analytical results.

Samples of suspected ACMs analyzed for asbestos content and reported as non-detect for asbestos are summarized below.

- The following six bulk samples of cellulose wallboard collected from three different debris piles (Debris Piles 1, 2, and 10) tested negative for asbestos: samples JS-BLK-01-03a, JS-BLK-01-03b, JS-BLK-02-02a, JS-BLK-02-02b, JS-BLK-10-05a, and JS-BLK-10-05b).
- The following five bulk samples of asphaltic roofing collected from three debris piles (Debris Piles 1, 2, and 3) tested negative for asbestos: samples JS-BLK-01-03a, JS-BLK-01-03b, JS-BLK-02-03b, JS-BLK-03-02a, and JS-BLK-03-03b.
- Two bulk samples of styrofoam collected from the same debris pile (Debris Pile 1) tested negative for asbestos: samples JS-BLK-01-05a and JS-BLK-01-05b.

- The following four bulk samples of floor leveling compound collected from two different debris piles (Debris Piles 5 and 10) tested negative for asbestos: samples JS-BLK-05-01a, JS-BLK-05-01b, JS-BLK-10-02a, and JS-BLK-10-02b). The floor leveling compound was intact and associated to the nearest debris pile.
- The following three bulk samples of slate roof material collected from Debris Pile 7 tested negative for asbestos: samples JS-BLK-07-01a, JS-BLK-07-01b, and JS-BLK-07-01c.
- The following four bulk samples of white granular cement collected from Debris Piles 8 and 9 tested negative for asbestos: samples JS-BLK-08-01a, JS-BLK-08-01b, JS-BLK-09-01a, and JS-BLK-09-01b.
- Two bulk samples of white or light-gray material collected from Debris Pile 9 tested negative for asbestos: samples JS-BLK-09-02a and JS-BLK-09-02b.
- Two bulk samples of an exterior wall surfacing layer from Debris Pile 10 tested negative for asbestos: samples JS-BLK-10-03a and JS-BLK-10-03b.
- Two bulk samples of drywall collected from Debris Pile 10 tested negative for asbestos: samples JS-BLK-10-04a and JS-BLK-10-04b.

Samples of suspected ACMs analyzed for asbestos content and classified as Category I ACM are summarized below.

- The following four bulk samples of floor tile and floor tile mastic collected from Debris Pile 1 tested positive for asbestos (1 to 5 and 5 to 10 percent asbestos): samples JS-BLK-01-01a, JS-BLK-01-01b, JS-BLK-01-02a, and JS-BLK-01-02b.
- Two bulk samples of black tar on brick collected from Debris Pile 1 tested positive for asbestos (5 to 10 percent asbestos): samples JS-BLK-01-06a and JS-BLK-01-06b.
- The following three bulk samples of asphaltic roofing collected from Debris Piles 2 and 4 tested positive for asbestos (1 to 5, 5 to 10, and 10 to 15 percent asbestos): samples JS-BLK-02-03a, JS-BLK-04-02a, and JS-BLK-04-02b.
- The following four bulk samples of linoleum collected from Debris Piles 5 and 9 tested positive for asbestos (5 to 10 percent asbestos): samples JS-BLK-05-02a, JS-BLK-05-02b, JS-BLK-09-04a, and JS-BLK-09-04b. The linoleum material was identified as damaged but intact on the concrete surface.

Samples of suspected ACMs analyzed for asbestos content and classified as RACM are summarized below.

- The following nine bulk samples of transite collected from Debris Piles 2, 3, 4, 9, and 10 tested positive for asbestos (20 to 25 percent asbestos): samples JS-BLK-02-01a, JS-

BLK-02-01b, JS-BLK-03-01a, JS-BLK-03-01b, JS-BLK-04-01a, JS-BLK-09-03a, JS-BLK-09-03b, JS-BLK-10-01a, and JS-BLK-10-01b.

4.2 ASBESTOS AIR SAMPLE ANALYTICAL RESULTS

WESTON START collected 13 air samples, including field blanks, during the site assessment. Of the 13 samples collected, 6 were stationary air samples, 3 were personal air samples, and 4 were field blanks. All 13 samples were submitted for laboratory analysis using PCM and TEM. **Table 2** summarizes the PCM air sample results, and **Table 3** summarizes the TEM air sample results. The asbestos air sample analytical results are briefly discussed below.

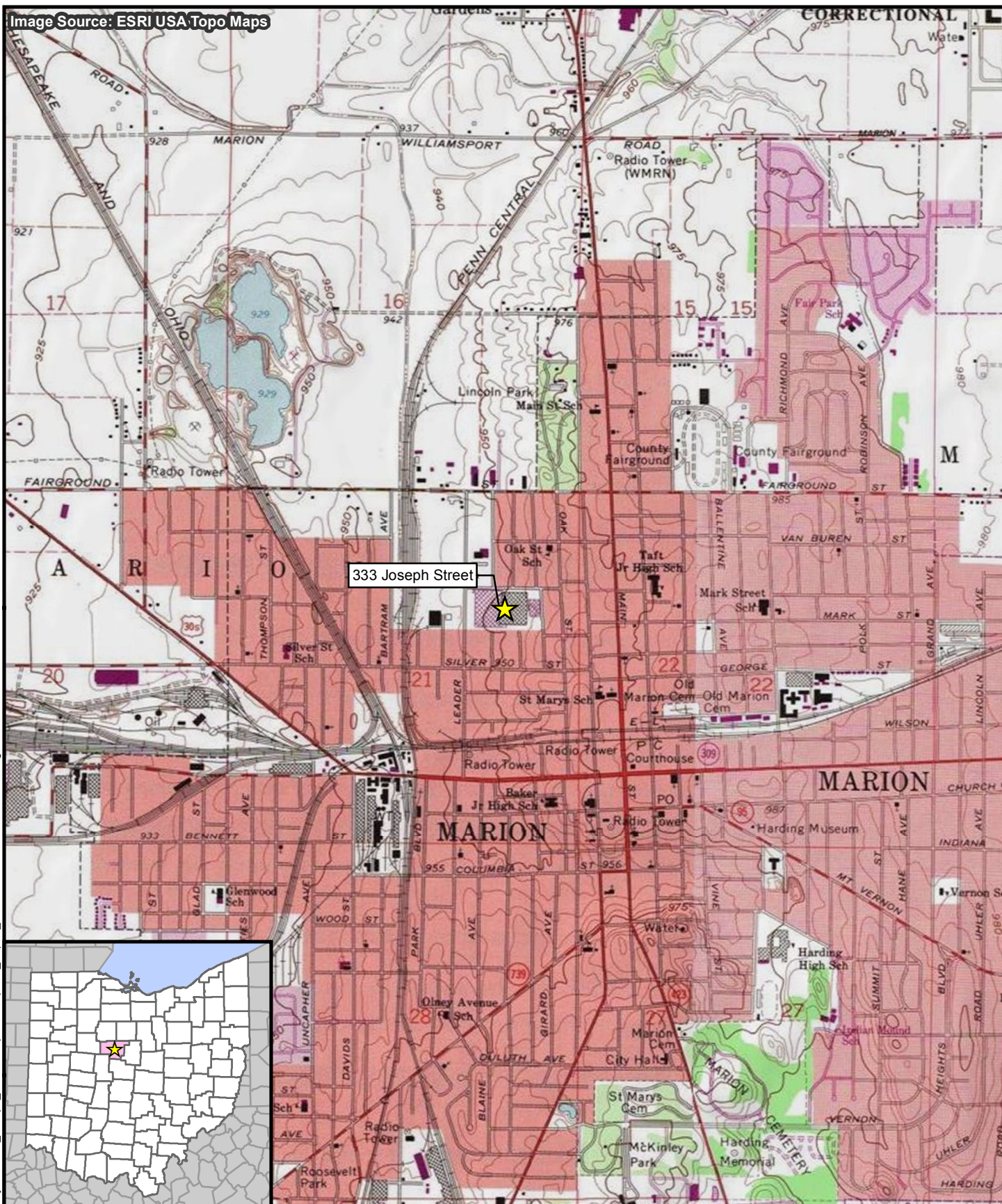
Of the six stationary air samples analyzed using PCM (**Table 2**), results for five samples were below the detection limit of 0.0008 and 0.0009 fiber per cubic centimeter (f/cc). Sample JS-AIR-03-01 contained 0.0009 f/cc. Of the three personal air samples analyzed using PCM, results for two samples were below the detection limit of 0.004 and 0.0047 f/cc. Sample JS-PER-AK-02 contained 0.0314 f/cc, which does not exceed the OSHA Permissible Exposure Limit (PEL) of 0.1 f/cc. TEM analysis of this air sample indicated that none of the detected fibers was asbestos.

Of the six stationary air samples analyzed using TEM (**Table 3**), results for five samples were below the detection limit of 0.0027 structure per cubic centimeter (s/cc). Sample JS-AIR-01-01 contained 0.0001 s/cc, which is significantly less than (1) the Asbestos Hazard Emergency Response Act (AHERA) (40 CFR, Section 763) clearance criterion of 0.022 s/cc and (2) the 0.01 s/cc level established by EPA in 2005 for Hurricane Katrina recovery activities. Of the three personal air samples analyzed using TEM, results for two samples were below the detection limit of 0.0027 s/cc. Sample JS-PER-AK-01 contained 0.0014 s/cc, which is approximately 90 times lower than the risk-based level of 0.009 s/cc established by EPA for occupancy of residential structures surrounding the World Trade Center Complex after 9/11. While the action levels listed above are pertinent to the samples collected during SA activities, it should be noted that there is no national clean air standard for concentrations of airborne asbestos in ambient air.

In addition, as discussed above, sample JS-PER-AK-02 contained 0.0314 f/cc PCM fibers, which does not exceed the OSHA PEL of 0.1 f/cc. However, TEM analysis of this air sample indicated that none of the detected fibers was asbestos.

FIGURES

Image Source: ESRI USA Topo Maps



Legend



Site Location

0 2,000 Feet



Prepared for:
U.S. EPA REGION V

Contract No.: EP-S5-06-04
TDD: S05-0001-1303-009
DCN: 2113-2A-BDOF



Prepared By:
WESTON
SOLUTIONS, INC

6779 Engle Road
Suite I
Middleburg Heights, Ohio 44130

Figure 1

Site Location Map
Joseph Street Site
Marion, Marion County, Ohio

Imagery Source: ESRI World Imagery
Parcel Data Source: Marion County Auditor's Office, GIS Department
mccoprpx.co.marion.oh.us/auditor/index.php



Legend

- ▲ Air Sampling Locations
 - Demolition Debris Piles
 - Road Centerlines
 - Parcel Boundaries
 - Site Boundary
- 0 150 Feet



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Contract No.: EP-S5-06-04
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Prepared By:
WESTON SOLUTIONS
6779 Engle Road
Suite I
Middleburg Heights, Ohio 44130

Figure 2
Demolition Debris Piles and
Air Sampling Locations
Joseph Street Site
Marion, Marion County, Ohio

TABLES

Table 1
Laboratory Analytical Results for ACM Bulk Samples
Joseph Street Asbestos Site

Debris Pile No.	Sample No.	Sampling Date	Material Description	Asbestos Components	Condition	Classification
1	JS-BLK-01-01a	4/16/2013	Floor tile	Chrysotile 5 - 10%	Non-friable	Category I
	JS-BLK-01-01b	4/16/2013	Floor tile mastic	Chrysotile 1 - 5%	Non-friable	Category I
	JS-BLK-01-02a	4/16/2013	Floor tile	Chrysotile 5 - 10%	Non-friable	Category I
	JS-BLK-01-02b	4/16/2013	Floor tile mastic	Chrysotile 1 - 5%	Non-friable	Category I
	JS-BLK-01-03a	4/16/2013	Cellulose wallboard	ND	NA	NA
	JS-BLK-01-03b	4/16/2013	Cellulose wallboard	ND	NA	NA
	JS-BLK-01-04a	4/16/2013	Asphaltic roofing	ND	NA	NA
	JS-BLK-01-04b	4/16/2013	Asphaltic roofing	ND	NA	NA
	JS-BLK-01-05a	4/16/2013	Styrofoam	ND	NA	NA
	JS-BLK-01-05b	4/16/2013	Styrofoam	ND	NA	NA
	JS-BLK-01-06a	4/16/2013	Black tar on brick	Chrysotile 5 - 10%	Non-friable	Category I
	JS-BLK-01-06b	4/16/2013	Black tar on brick	Chrysotile 5 - 10%	Non-friable	Category I
2	JS-BLK-02-01a	4/16/2013	Transite	Chrysotile 20 - 25%	Non-friable	RACM
	JS-BLK-02-01b	4/16/2013	Transite	Chrysotile 20 - 25%	Non-friable	RACM
	JS-BLK-02-02a	4/16/2013	Cellulose wallboard	ND	NA	NA
	JS-BLK-02-02b	4/16/2013	Cellulose wallboard	ND	NA	NA
	JS-BLK-02-03a	4/16/2013	Asphaltic roofing	Chrysotile 1 - 5%	Non-friable	Category I
	JS-BLK-02-03b	4/16/2013	Asphaltic roofing	ND	NA	NA
3	JS-BLK-03-01a	4/16/2013	Transite	Chrysotile 20 - 25%	Non-friable	RACM
	JS-BLK-03-01b	4/16/2013	Transite	Chrysotile 20 - 25%	Non-friable	RACM
	JS-BLK-03-02a	4/16/2013	Asphaltic roofing	ND	NA	NA
	JS-BLK-03-03b	4/16/2013	Asphaltic roofing	ND	NA	NA
4	JS-BLK-04-01a	4/16/2013	Transite	Chrysotile 20 - 25%	Non-friable	RACM
	JS-BLK-04-02a	4/16/2013	Asphaltic roofing	Chrysotile 10 - 15%	Non-friable	Category I
	JS-BLK-04-02b	4/16/2013	Asphaltic roofing	Chrysotile 5 - 10%	Non-friable	Category I
5	JS-BLK-05-01a	4/16/2013	Floor leveling compound	ND	NA	NA
	JS-BLK-05-01b	4/16/2013	Floor leveling compound	ND	NA	NA
	JS-BLK-05-02a	5/1/2013	Linoleum	Chrysotile 5 - 10%	Non-friable	Category I
	JS-BLK-05-02b	5/1/2013	Linoleum	Chrysotile 5 - 10%	Non-friable	Category I
7	JS-BLK-07-01a	4/16/2013	Slate roof material	ND	NA	NA
	JS-BLK-07-01b	4/16/2013	Slate roof material	ND	NA	NA
	JS-BLK-07-01c	4/16/2013	Slate roof material	ND	NA	NA
8	JS-BLK-08-01a	4/16/2013	White granular cement	ND	NA	NA
	JS-BLK-08-01b	4/16/2013	White granular cement	ND	NA	NA
9	JS-BLK-09-01a	4/16/2013	White granular cement	ND	NA	NA
	JS-BLK-09-01b	4/16/2013	White granular cement	ND	NA	NA
	JS-BLK-09-02a	4/16/2013	White or light-gray material	ND	NA	NA
	JS-BLK-09-02b	4/16/2013	White or light-gray material	ND	NA	NA
	JS-BLK-09-03a	4/16/2013	Thin transite	Chrysotile 20 - 25%	Non-friable	RACM
	JS-BLK-09-03b	4/16/2013	Thin transite	Chrysotile 20 - 25%	Non-friable	RACM
	JS-BLK-09-04a	5/1/2013	Linoleum	Chrysotile 5 - 10%	Non-friable	Category I
	JS-BLK-09-04b	5/1/2013	Linoleum	Chrysotile 5 - 10%	Non-friable	Category I
10	JS-BLK-10-01a	4/17/2013	Transite	Chrysotile 20 - 25%	Non-friable	RACM
	JS-BLK-10-01b	4/17/2013	Transite	Chrysotile 20 - 25%	Non-friable	RACM
	JS-BLK-10-02a	4/17/2013	Floor leveling compound	ND	NA	NA
	JS-BLK-10-02b	4/17/2013	Floor leveling compound	ND	NA	NA

Table 1
Laboratory Analytical Results for ACM Bulk Samples
Joseph Street Asbestos Site

Debris Pile No.	Sample No.	Sampling Date	Material Description	Asbestos Components	Condition	Classification
10	JS-BLK-10-03a	4/17/2013	Exterior wall surfacing layer	ND	NA	NA
	JS-BLK-10-03b	4/17/2013	Exterior wall surfacing layer	ND	NA	NA
	JS-BLK-10-04a	4/17/2013	Drywall	ND	NA	NA
	JS-BLK-10-04b	4/17/2013	Drywall	ND	NA	NA
	JS-BLK-10-05a	4/17/2013	Cellulose wallboard	ND	NA	NA
	JS-BLK-10-05b	4/17/2013	Cellulose wallboard	ND	NA	NA

Notes:

ACM = Asbestos-containing material

BLK = Bulk

JS = Joseph Street Asbestos Site

NA = Not applicable

ND = Not detected

RACM = Regulated asbestos-containing material

Table 2
Laboratory Analytical Results for PCM Air Samples
Joseph Street Asbestos Site

Sample No.	Sampling Date	Duration (min)	Flow Rate (L/min)	Volume (L)	Fibers	Calculated Result (f/cc)	Fiber Density (f/mm ²)	Reported Result (f/cc)
JS-AIR-01-01	4/16/2013	357	10	3570	3	0.0004	3.8	< 0.0008
JS-AIR-02-01	4/16/2013	342	10	3420	2	0.0003	2.5	< 0.0008
JS-PER-AK-01	4/16/2013	310	1.85	573.5	5	0.0043	6.4	< 0.0047
JS-PER-AK-02	4/17/2013	180	1.78	320.4	20.5	0.0314	26.1	0.0314
JS-AIR-FB-01	4/17/2013	0	0	0	0	NA	< 7	< 7
JS-AIR-FB-02	4/17/2013	0	0	0	0	NA	< 7	< 7
JS-AIR-03-01	5/1/2013	298	10.6	3159	6	0.0009	7.6	0.0009
JS-AIR-04-01	5/1/2013	297	10.03	2979	5	0.0008	6.4	< 0.0009
JS-AIR-05-01	5/1/2013	300	10.05	3015	3.5	0.0006	4.5	< 0.0009
JS-AIR-06-01	5/1/2013	299	10.04	3002	3	0.0005	3.8	< 0.0009
JS-PER-AK-03	5/1/2013	316	2.11	668	5	0.0037	6.4	< 0.004
JS-AIR-FB-03	5/1/2013	0	0	0	0	NA	< 7	< 7
JS-AIR-FB-04	5/1/2013	0	0	0	0	NA	< 7	< 7

Notes:

Bolded text indicates a detected result.

AIR = Ambient air sample

f/cc = Fiber per cubic centimeter

f/mm² = Fiber per square millimeter

FB = Field blank

JS = Joseph Street Asbestos Site

L = Liter

L/min = Liter per minute

min = Minute

NA = Not applicable

PCM = Phase contrast microscopy

PER = Personal air sample

Table 3
Laboratory Analytical Results for TEM Air Samples
Joseph Street Asbestos Site

Sample No.	Sampling Date	Duration (min)	Flow Rate (L/min)	Volume (L)	Grid Openings Counted	Asbestos Fibers	Total Fibers	Calculated PCM Fibers (f/cc)	PCM Fiber Density (f/mm ²)	TEM Asbestos Fibers (s/cc)	TEM Asbestos Fibers (f/mm ²)
JS-AIR-01-01	4/16/2013	357	10	3570	20	1	4	0.0004	3.8	0.0001	1.0
JS-AIR-02-01	4/16/2013	342	10	3420	20	0	0	0.0003	2.5	< 0.0027	< 7.0
JS-PER-AK-01	4/16/2013	310	1.85	573.5	20	1	3	0.0043	6.4	0.0014	2.1
JS-PER-AK-02	4/17/2013	180	1.78	320.4	20	0	15	0.0314	26.1	< 0.0027	< 7.0
JS-AIR-FB-01	4/17/2013	0	0	0	20	0	0	< 0.0027	< 7.0	< 0.0027	< 7.0
JS-AIR-FB-02	4/17/2013	0	0	0	20	0	0	< 0.0027	< 7.0	< 0.0027	< 7.0
JS-AIR-03-01	5/1/2013	298	10.6	3159	20	0	3	0.0009	7.6	< 0.0027	< 7.0
JS-AIR-04-01	5/1/2013	297	10.03	2979	20	0	3	0.0008	6.4	< 0.0027	< 7.0
JS-AIR-05-01	5/1/2013	300	10.05	3015	20	0	1	0.0006	4.5	< 0.0027	< 7.0
JS-AIR-06-01	5/1/2013	299	10.04	3002	20	0	2	0.0005	3.8	< 0.0027	< 7.0
JS-PER-AK-03	5/1/2013	316	2.11	668	20	0	3	0.0037	6.4	< 0.0027	< 7.0
JS-AIR-FB-03	5/1/2013	0	0	0	20	0	0	< 0.0027	< 7.0	< 0.0027	< 7.0
JS-AIR-FB-04	5/1/2013	0	0	0	20	0	0	< 0.0027	< 7.0	< 0.0027	< 7.0

Notes:

Bolded text indicates a detected result.

AIR = Ambient air sample

f/cc = Fiber per cubic centimeter

f/mm² = Fiber per square millimeter

FB = Field blank

JS = Joseph Street Asbestos Site

L = Liter

L/min = Liter per minute

min = Minute

PCM = Phase contrast microscopy

PER = Personal air sample

s/cc = Structures per cubic centimeter

TEM = Transmission electron microscopy

APPENDIX A
PHOTOGRAPHIC DOCUMENTATION



Site: Joseph Street Asbestos Site
Photograph No.: 1
Direction: West
Subject: Debris Pile 1

Date: 4/16/13
Photographer: A. Kiel



Site: Joseph Street Asbestos Site
Photograph No.: 2
Direction: South
Subject: East and central portions of Debris Pile 2

Date: 4/16/13
Photographer: A. Kiel



Site: Joseph Street Asbestos Site
Photograph No.: 3
Direction: North
Subject: North portion of Debris Pile 3

Date: 4/16/13
Photographer: A. Kiel



Site: Joseph Street Asbestos Site
Photograph No.: 4
Direction: Southwest
Subject: Central portion of Debris Pile 4

Date: 4/16/13
Photographer: A. Kiel



Site: Joseph Street Asbestos Site
Photograph No.: 5
Direction: East
Subject: Debris Pile 5

Date: 4/16/13
Photographer: A. Kiel



Site: Joseph Street Asbestos Site
Photograph No.: 6
Direction: North
Subject: Debris Pile 6

Date: 4/16/13
Photographer: A. Kiel



Site: Joseph Street Asbestos Site
Photograph No.: 7
Direction: West
Subject: Debris Pile 7

Date: 4/16/13
Photographer: A. Kiel



Site: Joseph Street Asbestos Site
Photograph No.: 8
Direction: Northwest
Subject: Debris Pile 8

Date: 4/16/13
Photographer: A. Kiel



Site: Joseph Street Asbestos Site

Photograph No.: 9

Direction: South

Subject: Debris Pile 9

Date: 4/17/13

Photographer: A. Kiel



Site: Joseph Street Asbestos Site

Photograph No.: 10

Direction: Northeast

Subject: Debris Pile 10

Date: 4/17/13

Photographer: A. Kiel



Site: Joseph Street Asbestos Site
Photograph No.: 11
Direction: North
Subject: Drums in Debris Pile 9

Date: 4/16/13
Photographer: A. Kiel



Site: Joseph Street Asbestos Site
Photograph No.: 12
Direction: West
Subject: Stationary air sampling unit

Date: 5/1/13
Photographer: A. Kiel

APPENDIX B

STAT ANALYTICAL CORPORATION BULK ACM SAMPLE LABORATORY ANALYTICAL RESULTS SUMMARY REPORT

**ASBESTOS ANALYSIS BY POLARIZED LIGHT MICROSCOPY**

Method: EPA-600/M4-82-020

Weston Solutions, Inc.
20 N Wacker Drive Suite 1210
Chicago, IL 606062901
Phone: (312) 424-3300
Fax: (312) 424-3330

Reference: 20405.016.001.2114.00
Location: Joseph Street Asbestos SA Marion, Ohio
Batch No.: 306121
Customer No.: 1324

Date Received: 04/19/2013
Date Analyzed: 04/26/2013
Date Reported: 04/26/2013
Turn Around Time: 5 Days

Laboratory Sample	Customer Sample Number	Asbestos Components (%)	Non-Asbestos Components (%)
306121001	JS-BLK-01-01A	Chrysotile 5-10%	Binder 90-95%
306121002	JS-BLK-01-01B	Chrysotile 1-5%	Binder 95-99%
306121003	JS-BLK-01-02A	Chrysotile 5-10%	Binder 90-95%
306121004	JS-BLK-01-02B	Chrysotile 1-5%	Binder 95-99%
306121005	JS-BLK-01-03A	ND	Cellulose 95-99% Binder 1-5%
306121006	JS-BLK-01-03B	ND	Cellulose 95-99% Binder 1-5%
306121007	JS-BLK-01-04A	ND	Cellulose 5-10% Binder 80-85% Glass 5-10%
306121008	JS-BLK-01-04B	ND	Binder 99-100%
306121009	JS-BLK-01-05A	ND	Binder 99-100%
306121010	JS-BLK-01-05B	ND	Binder 99-100%
306121011	JS-BLK-01-06A	Chrysotile 5-10%	Binder 90-95%
306121012	JS-BLK-01-06B	Chrysotile 5-10%	Binder 90-95%
306121013	JS-BLK-02-01A	Chrysotile 20-25%	Binder 75-80%
306121014	JS-BLK-02-01B	Chrysotile 20-25%	Binder 75-80%

ND = Asbestos Not Detected (Not Present) NA = Not Analyzed NS = Not Submitted

Components of inhomogeneous samples are analyzed per our Standard Operating Procedure, or per customer request.

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Analyzed by Name:

Henry Robateau / Microscopist

**Analysis Corporation**

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com



NVLAP Lab Code 101202-0

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20 N Wacker Drive Suite 1210
Chicago, IL 606062901
Phone: (312) 424-3300
Fax: (312) 424-3330

Reference:	20405.016.001.2114.00	Date Received:	04/19/2013
Location:	Joseph Street Asbestos SA Marion, Ohio	Date Analyzed:	04/26/2013
Batch No.:	306121	Date Reported:	04/26/2013
Customer No.:	1324	Turn Around Time:	5 Days

Laboratory Sample	Customer Sample Number	Asbestos Components (%)	Non-Asbestos Components (%)
306121015	JS-BLK-02-02A	ND	Cellulose 95-99% Binder 1-5%
306121016	JS-BLK-02-02B	ND	Cellulose 95-99% Binder 1-5%
306121017	JS-BLK-02-03A	Chrysotile 1-5%	Binder 95-99%
306121018	JS-BLK-02-03B	ND	Binder 99-100%
306121019	JS-BLK-03-01A	Chrysotile 20-25%	Binder 75-80%
306121020	JS-BLK-03-01B	Chrysotile 20-25%	Binder 75-80%
306121021	JS-BLK-03-02A	ND	Cellulose 80-85% Binder 15-20%
306121022	JS-BLK-03-02B	ND	Cellulose 80-85% Binder 15-20%
306121023	JS-BLK-04-01A	Chrysotile 20-25%	Binder 75-80%
306121024	JS-BLK-04-02A	Chrysotile 10-15%	Binder 85-90%
306121025	JS-BLK-04-02B	Chrysotile 5-10%	Binder 90-95%
306121026	JS-BLK-05-01A	ND	Binder 90-95% Other 5-10%
306121027	JS-BLK-05-01B	ND	Binder 90-95% Other 5-10%

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Phone: (312) 424-3300
Fax: (312) 424-3330

Reference: 20405.016.001.2114.00 Date Received: 04/19/2013
Location: Joseph Street Asbestos SA Marion, Ohio Date Analyzed: 04/26/2013
Batch No.: 306121 Date Reported: 04/26/2013
Customer No.: 1324 Turn Around Time: 5 Days


Laboratory Sample	Customer Sample Number	Asbestos Components (%)	Non-Asbestos Components (%)
306121028	JS-BLK-07-01A	ND	Binder 90-95% Other 5-10%
306121029	JS-BLK-07-01B	ND	Binder 90-95% Other 5-10%
306121030	JS-BLK-07-01C	ND	Binder 90-95% Other 5-10%
306121031	JS-BLK-08-01A	ND	Binder 90-95% Other 5-10%
306121032	JS-BLK-08-01B	ND	Binder 90-95% Other 5-10%
306121033	JS-BLK-09-01A	ND	Cellulose 5-10% Binder 90-95%
306121034	JS-BLK-09-01B	ND	Cellulose 5-10% Binder 90-95%
306121035	JS-BLK-09-02A	ND	Binder 90-95% Other 5-10%
306121036	JS-BLK-09-02B	ND	Binder 90-95% Other 5-10%
306121037	JS-BLK-09-03A	Chrysotile 20-25%	Binder 75-80%
306121038	JS-BLK-09-03B	Chrysotile 20-25%	Binder 75-80%

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Phone: (312) 424-3300
Fax: (312) 424-3330

Reference:	20405.016.001.2114.00	Date Received:	04/19/2013
Location:	Joseph Street Asbestos SA Marion, Ohio	Date Analyzed:	04/26/2013
Batch No.:	306121	Date Reported:	04/26/2013
Customer No.:	1324	Turn Around Time:	5 Days

Laboratory Sample	Customer Sample Number	Asbestos Components (%)	Non-Asbestos Components (%)
306121039	JS-BLK-10-01A	Chrysotile 20-25%	Binder 75-80%
306121040	JS-BLK-10-01B	Chrysotile 20-25%	Binder 75-80%
306121041	JS-BLK-10-02A	ND	Binder 90-95% Other 5-10%
306121042	JS-BLK-10-02B	ND	Binder 90-95% Other 5-10%
306121043	JS-BLK-10-03A	ND	Binder 90-95% Other 5-10%
306121044	JS-BLK-10-03B	ND	Binder 90-95% Other 5-10%
306121045	JS-BLK-10-04A	ND	Cellulose 5-10% Binder 90-95%
306121046	JS-BLK-10-04B	ND	Cellulose 5-10% Binder 90-95%
306121047	JS-BLK-10-05A	ND	Cellulose 95-99% Binder 1-5%
306121048	JS-BLK-10-05B	ND	Cellulose 95-99% Binder 1-5%
306121049	JS-BLK-DUP-1	Chrysotile 5-10%	Binder 90-95%
306121050	JS-BLK-DUP-1M	Chrysotile 1-5%	Binder 95-99%

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Phone: (312) 424-3300
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Reference:	20405.016.001.2114.00	Date Received:	04/19/2013
Location:	Joseph Street Asbestos SA Marion, Ohio	Date Analyzed:	04/26/2013
Batch No.:	306121	Date Reported:	04/26/2013
Customer No.:	1324	Turn Around Time:	5 Days

Laboratory Sample	Customer Sample Number	Asbestos Components (%)	Non-Asbestos Components (%)
306121051	JS-BLK-DUP-2	ND	Binder 99-100%
306121052	JS-BLK-DUP-3	ND	Binder 99-100%
306121053	JS-BLK-DUP-4	ND	Binder 90-95% Other 5-10%
306121054	JS-BLK-DUP-5	Chrysotile 20-25%	Binder 75-80%

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Henry Robateau / Microscopist

Analysis Corporation

2242 W. Harrison, Suite 200, Chicago, Illinois 60612 Phone: (312) 733-0551 Fax: (312) 733-2386
e-mail address: STATinfo@STATAnalytics.com AIHA accredited 101160 NVLAP lab code 101202-0

CHAIN OF CUSTODY RECORD

Page: 1 of 2

Client:		<u>WESTON SOLUTIONS, INC.</u>	
Street Address:		<u>20 N. Wacker Dr., Suite 1210</u>	
City, State, Zip:		<u>CHICAGO, ILLINOIS 60606</u>	
Phone:		<u>312-424-3339</u>	
Fax:		<u>312-424-3330</u>	
e-mail/Alt. Fax:		<u>L6RACZYK@CS5-OYM-MC.COM</u>	
Project Number:		<u>20405.016.001.2114.00</u>	
Project Name:		<u>JOB#74 STREET ASBESTOS SA</u>	
Project Location:		<u>MARIETTA, OHIO</u>	
Project Manager:		<u>LISA GREACEYK</u>	
P.O. Number:			

Client Sample Number/Description:	Date Taken	Time		Rate (lpm)	Volume (Liters)	Area Wiped (ft ²)	Laboratory Sample No.	PCM Asbestos	PLM Asbestos (Bulk)	PLM Point Count	PLM Gravimetric	TEM Air Asbestos	TEM Bulk Asbestos	TEM Gravimetric Asb.	TEM Microvac Asb.	TEM Water	Other:	
		On	Off															
<u>J3-BLK-01-01A</u>	<u>4/16/13</u>							✓	✓									
<u>J3-BLK-01-01B</u>								✓										
<u>J3-BLK-01-02A</u>								✓										
<u>J3-BLK-01-02B</u>								✓										
<u>J3-BLK-01-03A</u>								✓										
<u>J3-BLK-01-03B</u>								✓										
<u>J3-BLK-01-04A</u>								✓										
<u>J3-BLK-01-04B</u>								✓										
<u>J3-BLK-01-05A</u>								✓										
<u>J3-BLK-01-05B</u>								✓										
<u>J3-BLK-01-06A</u>								✓										
<u>J3-BLK-01-06B</u>								✓										
<u>J3-BLK-02-01A</u>								✓										

Turn Around:		Immediate:	<input type="checkbox"/>	4 Hrs:	<input type="checkbox"/>	8 Hrs:	<input type="checkbox"/>	24 Hrs:	<input type="checkbox"/>	1 Day:	<input type="checkbox"/>	2 Days:	<input type="checkbox"/>	3 Days:	<input type="checkbox"/>	5 Days:	<input checked="" type="checkbox"/>
Date Due:	<u>4/26/13</u>	Time Due:															

Note: Not all turn around times are available for all analysis.

OFFICE USE ONLY BELOW:	
Batch No. <u>306121</u>	Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>
Samples Accepted:	
Checked by (Initial/Date): <u>[Signature] 4/26/13</u>	
QC by (Initial/Date):	
Reported By (Initial/Date/Time/Method):	
Comments:	

Relinquished by:	<u>[Signature]</u>	Date/Time:	<u>4/18/13 936</u>
Received by:	<u>[Signature]</u>	Date/Time:	<u>4-19-13 12:50 PM</u>
Relinquished by:		Date/Time:	
Received by:		Date/Time:	

Note: Not all turn around times are available for all analysis.

Date/Time: 4/18/13 930

Date/Time: 4-14-15 10:30 PM

Date/Time

Date/Time

Date/Time

Other:

Comments: NO POINT COUNTING ON BULK SAMPLES AT THIS TIME; WASTED W/OUT REVIEW & VET PLANNING

ANALYSIS DATA AND DETERMINING AT POINT COUNTING IS REQUIRED (FOR ALL BULK SAMPLES)

Analysis Corporation

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CHAIN OF CUSTODY RECORD

Page: 2 of 6[illegible]

Comments:

STAT Analysis Corporation

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e-mail address: STATinfo@STATAnalysis.com AIHA accredited 101160 NVLAP lab code 101202-0

CHAIN OF CUSTODY RECORD

Page: 3 of 6

Client: <u>WESTON SOLUTIONS, INC.</u>		Turn Around: Immediate: <input type="checkbox"/> 4 Hrs: <input type="checkbox"/> 8 Hrs: <input type="checkbox"/> 24 Hrs: <input type="checkbox"/> 1 Day: <input type="checkbox"/> 2 Days: <input type="checkbox"/> 3 Days: <input type="checkbox"/> 5 Days: <input checked="" type="checkbox"/>	
Street Address: <u>30 N. Wacker Dr., Suite 1210</u>		Date Due: <u>4/26/13</u> Time Due:	
City, State, Zip: <u>CHICAGO, ILLINOIS 60606</u>		Note: Not all turn around times are available for all analysis.	
Phone: <u>312-424-3339</u>		Relinquished by: <u>[Signature]</u> Date/Time: <u>4/18/13 9:30</u>	
Fax: <u>312-424-3330</u>		Received by: <u>[Signature]</u> Date/Time: <u>4/19/13 12:30</u>	
e-mail/Alt. Fax: <u>LEBACEYK@CGS-DYNAMAC.COM</u>		Relinquished by: <u>[Signature]</u> Date/Time: <u>4/19/13 12:30</u>	
Project Number: <u>20905.016.001.2114.00</u>		Received by: <u>[Signature]</u> Date/Time: <u>4/19/13 12:30</u>	
Project Name: <u>TRIPLEX STREET ASBESTOS SA</u>		Relinquished by: <u>[Signature]</u> Date/Time: <u>4/19/13 12:30</u>	
Project Location: <u>MARIETTA, OHIO</u>		Received by: <u>[Signature]</u> Date/Time: <u>4/19/13 12:30</u>	
Project Manager: <u>LISA GRACEYK</u>		Relinquished by: <u>[Signature]</u> Date/Time: <u>4/19/13 12:30</u>	
P.O. Number:		Received by: <u>[Signature]</u> Date/Time: <u>4/19/13 12:30</u>	
Comments:			
Office Use Only Below:			
Batch No: <u>306121</u>		Samples Acceptable: Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>	
Checked by (Initial/Date): <u>[Signature] 4/24/13</u>		QC by (Initial/Date): <u>[Signature] 4/24/13</u>	
Reported By (Initial/Date/Time/Method):		Relinquished by: <u>[Signature]</u> Date/Time: <u>4/19/13 12:30</u>	
Client Sample Number/Description: Date Taken		Relinquished by: <u>[Signature]</u> Date/Time: <u>4/19/13 12:30</u>	
JS-8LK-05-018	4/16/13	PCM Asbestos	<input checked="" type="checkbox"/>
JS-8LK-07-01A		PLM Asbestos (Bulk)	<input checked="" type="checkbox"/>
JS-8LK-07-01B		PLM Point Count	<input checked="" type="checkbox"/>
JS-8LK-07-01C		PLM Gravimetric	<input checked="" type="checkbox"/>
JS-8LK-08-01A		TEM Air Asbestos	<input checked="" type="checkbox"/>
JS-8LK-08-01B		TEM Bulk Asbestos	<input checked="" type="checkbox"/>
JS-8LK-09-01A		TEM Gravimetric Asb.	<input checked="" type="checkbox"/>
JS-8LK-09-01B		TEM Microvac Asb.	<input checked="" type="checkbox"/>
JS-8LK-09-02A		TEM Water	<input checked="" type="checkbox"/>
JS-8LK-09-02B		Other:	<input checked="" type="checkbox"/>
JS-8LK-09-03A			<input checked="" type="checkbox"/>
JS-8LK-09-03B			<input checked="" type="checkbox"/>
JS-8LK-10-01A	4/17/13		<input checked="" type="checkbox"/>

Comments:

2242 W. Harrison, Suite 200, Chicago, Illinois 60612 Phone: (312) 733-0551 Fax: (312) 733-2386
e-mail address: STATinfo@STATAnalytics.com AHA accredited 101160 NVI AP lab code 101702 0

Phone: (312) 733-0551 Fax: (312) 733-2386
Accredited 101160 NVI AP lab code 101202 0

CHAIN OF CUSTODY RECORD

Page: 4 of 6

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Analysis Corporation

2242 W. Harrison, Suite 200, Chicago, Illinois 60612 Phone: (312) 733-0551 Fax: (312) 733-2386
e-mail address: STATAjny@STATAnubsys.com AIHA accredited 101160 NVLAP lab code 101202-0

CHAIN OF CUSTODY RECORD

Page: 5 of 6[illegible]

ASBESTOS ANALYSIS BY POLARIZED LIGHT MICROSCOPY

Method: EPA-600/M4-82-020

Weston Solutions, Inc.
20 N Wacker Drive Suite 1210
Chicago, IL 606062901
Phone: (312) 424-3300
Fax: (312) 424-3330

Reference: 20405.016.001.2114.00
Location: Marion, Ohio
Batch No.: 306369
Customer No.: 1324

Date Received: 05/03/2013
Date Analyzed: 05/10/2013
Date Reported: 05/10/2013
Turn Around Time: 5 Days

Laboratory Sample	Customer Sample Number	Asbestos Components (%)	Non-Asbestos Components (%)
306369001	JS-BLK-05-02A	Chrysotile 5-10%	Binder 90-95%
306369002	JS-BLK-05-02B	Chrysotile 5-10%	Binder 90-95%
306369003	JS-BLK-05-04A	Chrysotile 5-10%	Binder 90-95%
306369004	JS-BLK-05-04B	Chrysotile 5-10%	Binder 90-95%

ND = Asbestos Not Detected (Not Present) NA = Not Analyzed NS = Not Submitted

Components of inhomogeneous samples are analyzed per our Standard Operating Procedure, or per customer request.

The use of the NVLAP logo does not imply endorsement by NVLAP or any agency of the US Government.

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Analyzed by Name:

Henry Robatek / Microscopist

APPENDIX C

STAT ANALYTICAL CORPORATION ASBESTOS AIR SAMPLE LABORATORY ANALYTICAL RESULTS SUMMARY REPORT

STAT**Analysis Corporation:**

2242 West Harrison St., Suite 200, Chicago, Illinois 60612-3766
 Tel. 312.733.0551; Fax: 312.733.2386; e-mail address: StatInfo@STATAnalysis.com

ASBESTOS ANALYSIS BY**TRANSMISSION ELECTRON MICROSCOPY**

NIOSH 7402

Weston

20 N. Wacker Dr. Suite 1210

Chicago Illinois 60606

Phone: (312) 424-3339

Fax: (312) 424-3330

STAT Batch: 306122

Project Name: Joseph Street Asbestos SA Marion, Ohio

Project Number: 20405.016.001.2114.00

Average G.O. 0.01301 mm²

Date Received: 4/19/13

Date Analyzed: 4/22/13

Date Reported: 4/25/13

Laboratory Sample Number	Client Sample Number	Volume (Liters)	Grid Openings Counted	Asbestos Fibers ≥5µm and type	Total Fibers ≥5µm	PCM Fibers (cc)	PCM Fibers (mm ²)	Asbestos Fibers 7402 (cc)	Asbestos Fibers 7402 (mm ²)
306122-01	JS-AIR-01-01	3570	20	1-Chrysotile	4	0.0004	3.8	0.0001	1.0
306122-02	JS-AIR-02-01	3420	20	0	0	0.0003	2.5	≤ 0.0027	≤ 7.0
306122-03	JS-PER-AK-01	573.5	20	1-Chrysotile	3	0.0043	6.4	0.0014	2.1
306122-04	JS-PER-AK-02	320.4	20	0	15	0.0314	26.1	≤ 0.0027	≤ 7.0
306122-05	JS-AIR-FB-01	0	20	0	0	≤ 0.0027	≤ 7.0	≤ 0.0027	≤ 7.0
306122-06	JS-AIR-FB-02	0	20	0	0	≤ 0.0027	≤ 7.0	≤ 0.0027	≤ 7.0

Analyzed By:

Date:

Robert J. Schumacher
 4/25/2013

STAT Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

AIHA Accreditation # 101160

PHASE CONTRAST MICROSCOPY

Method: NIOSH 7400, Fourth Edition 8/15/94

Weston Solutions, Inc.
20 N Wacker Drive Suite 1210
Chicago, IL 606062901
(312) 424-3300
(312) 424-3330

Reference: 20405.016.001.2114.00
Location: Joseph Street Asbestos SA Marion, Ohio
Batch No.: 306122
Customer No.: 1324

Date Received: 04/19/2013

Date Analyzed: 04/24/2013

Date Reported: 04/24/2013

Turn Around Time: 5 Days

Laboratory Sample Number	Customer Sample Number	Volume (L)	Fibers	Number of Fields	Calculated Result F/cc	Calculated Result F/mm ²	Reported Result
306122001	JS-AIR-01-01	3570	3	100	0.0004	3.8	< 0.0008 F/cc
306122002	JS-AIR-02-01	3420	2	100	0.0003	2.5	< 0.0008 F/cc
306122003	JS-PER-AK-01	573.5	5	100	0.0043	6.4	< 0.0047 F/cc
306122004	JS-PER-AK-02	320.4	20.5	100	0.0314	26.1	0.0314 F/cc
306122005	JS-AIR-FB-01	0	0	100		< 7	< 7 F/mm ²
306122006	JS-AIR-FB-02	0	0	100		< 7	< 7 F/mm ²

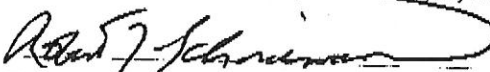
STAT Analysis Laboratory Sr Values: 5-20 fibers/100 fields: 0.2343 >50-100 fibers/100 fields: 0.1324
>20-50 fibers/100 fields: 0.1360 >100 fibers/100 fields: 0.3153

LOD = 7 fibers/mm² or 0.0027 fibers/cc for 1000 Litre sample volume.

All results are field blank corrected, when applicable.

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Signature :



Robert Schreiman / TEM Manager

Date: 04/24/2013

STAT Analysis Corporation

2242 W. Harrison, Suite 200, Chicago, Illinois 60612 Phone: (312) 733-8551 Fax: (312) 733-2386
e-mail address: STATInfo@STATAnalysis.com AIHA accredited 101160 NVLAP lab code 191202-0

CHAIN OF CUSTODY RECORD

Page: 6 of 6

Client: WESTAL SOLUTIONS, INC.

Street Address: 20 N. AVERA DR, SUITE 1210

City, State, Zip: CHICAGO, ILLINOIS 60606

Phone: 312-424-3339

Fax: 312-424-3330

e-mail/Alt. Fax: LENAEZYK@CSS-DYNAMIC.COM

Project Number: 2045, 016, 001, 2114, 00

Project Name: JOSPH STREET ASBESTOS

Project Location: MARION, OHIO

Project Manager: LENAEZYK

P.O. Number: 2151 GANETK

Turn Around: Immediate ☐ 4 Hrs ☐ 8 Hrs ☐ 24 Hrs ☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 5 Days ☒

Date Due: 4/23/13 Time Due: 12:30

Batch: 306122

Office Use Only Below

Checked by (Initial/Date): AK 4/23/13

QC by (Initial/Date): AK 4/23/13

Reported By (Initial/Date/Time/Method): AK 4/23/13

Comments: 17-28 2402

Client Sample Number/Description	Date Taken	Time		Rate (lpm)	Volume (Liters)	Area Wiped (ft ²)	Laboratory Sample No.										
		On	Off														
J3-AIR-01-01	4/16/13	1000	1557	10.0	3,570	—	—	✓									
J3-AIR-02-01	4/16/13	1012	1554	10.0	3,420	—	—	✓									
J3-PEX-AK-01	4/16/13	1037	1547	1.85	573.5	—	—	✓									
J3-PEX-AK-02	4/17/13	0758	1037	1.78	320.4	—	—	✓									
J3-AIR-08-01	4/17/13	—	—	—	0	—	—	✓									
J3-AIR-08-02	4/17/13	—	—	—	0	—	—	✓									

PCM Asbestos
PLM Asbestos (Bulk)
PLM Point Count
PLM Gravimetric
TEM Air Asbestos
TEM Bulk Asbestos
TEM Gravimetric Asb.
TEM Microvac Asb.
TEM Water

Other:

Received by: AK Date/Time: 4/23/13 12:30
Relinquished by: AK Date/Time: 4/23/13 12:30
Received by: AK Date/Time: 4/23/13 12:30
Relinquished by: AK Date/Time: 4/23/13 12:30

Note: Not all turn around times are available for all analysis.

Comments:

STAT**Analysis Corporation:**

2242 West Harrison St., Suite 200, Chicago, Illinois 60612-3766
Tel. 312.733.0551; Fax: 312.733.2386; e-mail address: StatInfo@STATAnalysis.com

**ASBESTOS ANALYSIS BY
TRANSMISSION ELECTRON MICROSCOPY**
NIOSH 7402

Weston
20 N. Wacker Dr. Suite 1210
Chicago Illinois 60606
Phone: (312) 424-3339
Fax: (312) 424-3330

STAT Batch: 306368
Project Name: Joseph Street Asbestos SA Marion, Ohio
Project Number: 20405.016.001.2114.00
Average G.O. 0.01301 mm²

Date Received: 5/3/13
Date Analyzed: 5/10/13
Date Reported: 5/10/13

Laboratory Sample Number	Client Sample Number	Volume (Liters)	Grid Openings Counted	Asbestos Fibers ≥5um and type	Total Fibers ≥5um	PCM Fibers (cc)	PCM Fibers (mm2)	Asbestos Fibers 7402 (cc)	Asbestos Fibers 7402 (mm2)
306368-001	JS-AIR-03-01	3159	20	0	3	0.0009	7.6	≤ 0.0027	≤ 7.0
306368-002	JS-AIR-04-01	2979	20	0	3	0.0008	6.4	≤ 0.0027	≤ 7.0
306368-003	JS-AIR-05-01	3015	20	0	1	0.0006	4.5	≤ 0.0027	≤ 7.0
306368-004	JS-AIR-06-01	3002	20	0	2	0.0005	3.8	≤ 0.0027	≤ 7.0
306368-005	JS-PER-AK-03	668	20	0	3	0.0037	6.4	≤ 0.0027	≤ 7.0
306368-006	JS-AIR-FB-03	0	20	0	0	0.0027	7.0	≤ 0.0027	≤ 7.0
306368-007	JS-AIR-FB-04	0	20	0	0	0.0027	7.0	≤ 0.0027	≤ 7.0

Analyzed By:
Date:


5/10/2013

**Analysis Corporation**

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

AIHA Accreditation # 101160

PHASE CONTRAST MICROSCOPY

Method: NIOSH 7400, Fourth Edition 8/15/94

Weston Solutions, Inc.
20 N Wacker Drive Suite 1210
Chicago, IL 606062901
(312) 424-3300
(312) 424-3330

Reference: 20405.016.001.2114.00
Location: Marion, Ohio
Batch No.: 306368
Customer No.: 1324

Date Received: 05/03/2013
Date Analyzed: 05/03/2013
Date Reported: 05/03/2013
Turn Around Time: 5 Days

Laboratory Sample Number	Customer Sample Number	Volume (L)	Fibers	Number of Fields	Calculated Result		Reported Result
					F/cc	F/mm ²	
306368001	JS-AIR-03-01	3159	6	100	0.0009	7.6	0.0009 F/cc
306368002	JS-AIR-04-01	2979	5	100	0.0008	6.4	< 0.0009 F/cc
306368003	JS-AIR-05-01	3015	3.5	100	0.0006	4.5	< 0.0009 F/cc
306368004	JS-AIR-06-01	3002	3	100	0.0005	3.8	< 0.0009 F/cc
306368005	JS-PER-AK-03	668	5	100	0.0037	6.4	< 0.004 F/cc
306368006	JS-AIR-FB-03	0	0	100		< 7	< 7 F/mm ²
306368007	JS-AIR-FB-04	0	0	100		< 7	< 7 F/mm ²

STAT Analysis Laboratory Sr Values: 5-20 fibers/100 fields: 0.2343 >50-100 fibers/100 fields: 0.1324
>20-50 fibers/100 fields: 0.1360 >100 fibers/100 fields: 0.3153

LOD = 7 fibers/mm² or 0.0027 fibers/cc for 1000 Litre sample volume.

All results are field blank corrected, when applicable.

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Signature :


Robert Schreiman / TEM Manager

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e-mail address: STATinfo@STATanalysis.com AHA accredited 101160 NVLAP lab code 101202-0

CHAIN OF CUSTODY RECORD

Page: 1 of 2

Client:	WESTON SOLUTIONS, INC.		Turn Around:	Immediate:	<input type="checkbox"/> 4 Hrs:	<input type="checkbox"/> 8 Hrs:	<input type="checkbox"/> 24 Hrs:	<input type="checkbox"/> 1 Day:	<input type="checkbox"/> 2 Days:	<input type="checkbox"/> 3 Days:	<input type="checkbox"/> 5 Days:	<input checked="" type="checkbox"/>				
Street Address:	20 N WILDER AVE, SUITE 1210		Date Due:	Time Due:												
City, State, Zip:	CHICAGO, ILLINOIS 60606		OFFICE USE ONLY BELOW:													
Phone:	312-424-3339		Batch No.:	306368												
Fax:	312-424-3330		Samples Acceptable:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>												
e-mail/Alt. Fax:	L6RACZYK@ESS-DYNAMICS.COM		Checked by (Initial/Date):	QA 5/13/13												
Project Number:	20405.016.001.214.00		QC by (Initial/Date):	QA 5/13/13												
Project Name:	JOSEPH STREET ASBESTOS 51		Reported By (Initial/Date/Time/Method):	QA 5/10/13 21:57 TEM 2702												
Project Location:	MICHIGAN CHAD		Comments:													
Project Manager:	LISA RACZYK															
P.O. Number:																
Client Sample Number/Description:	Date Taken	Time	Rate	Volume	Area	Laboratory	PCM Asbestos	PLM Asbestos (Bulk)	PLM Point Count	PLM Gravimetric	TEM Air Asbestos	TEM Bulk Asbestos	TEM Gravimetric Asb.	TEM Microvac Asb.	TEM Water	Other:
		On	Off	(lpm)	(Liters)	(ft ²)	Sample No.									
JS-A12-03-01	5/11/13	1027	1525	10.60	3.157	—	—	✓			✓					
JS-A12-04-01	5/11/13	1031	1528	10.03	2.979	—	—	✓			✓					
JS-A12-05-01	5/11/13	1018	1578	10.05	3.015	—	—	✓			✓					
JS-A12-06-01	5/11/13	1022	1521	10.04	3.022	—	—	✓			✓					
JS-PER-AK-03	5/11/13	1016	1532	2.114	668	—	—	✓			✓					
JS-A12-FB-03	5/11/13	—	—	—	0	—	—	✓			✓					
JS-A12-FB-04	5/11/13	—	—	—	0	—	—	✓			✓					

Tel: 312.733.0551; Fax: 312.733.2386; e-mail address: STATinfo@STATAnalysis.com

Page: of

Date/Time: 5/3/13

Comments:

Fax (2):

$$24 \frac{2}{3} \times 2$$