



July 3, 2018

Mr. Brian Kelly
On-Scene Coordinator
U.S. Environmental Protection Agency
Emergency Response Branch, Region 5
77 West Jackson Boulevard
Chicago, IL 60604

Subject: **Removal Assessment Report, Final
Rock-Tenn Site - RS
Otsego, Allegan County, Michigan
TDD No.: 0001/S05-0001-17-11-001
SRS Contract No.: EP-S5-16-01**

Dear Mr. Kelly:

The Superfund Technical Assessment and Response Team (START) contractor to U.S. EPA Region 5 is submitting the Final Removal Assessment Report for the Rock-Tenn Site (Site) Removal Assessment. The Site is located in Otsego, Allegan County, Michigan. This Removal Assessment Report summarizes Site location and history, removal assessment activities, analytical results, and threats. U.S. EPA comments on the Draft Report, received on July 3, 2018, have been incorporated into the Final document.

START appreciates the opportunity to provide you with this Final Removal Assessment Report. Please contact me at (312) 220 7171 ext. 2227 or Raghu Nagam at (312) 220-7171 ext. 2222 with any questions or comments regarding this submittal.

Sincerely,

Cheryl Kondreck, P.G.
Project Manager

Enclosure

cc: Raghu Nagam, START Program Manager

**REMOVAL ASSESSMENT REPORT
ROCK-TENN SITE
OTSEGO, ALLEGAN COUNTY, MICHIGAN**

Final Report

Prepared for:

U.S. Environmental Protection Agency,
Emergency Response Branch Region 5
77 West Jackson Boulevard Chicago, IL 60604

TDD No.:	0001/S05-0001-17-11-001
Date Prepared:	July 3, 2018
Contract No.:	EP-S5-16-01
Prepared by:	Sustainment and Restoration Services
U.S. EPA On-Scene Coordinator:	Brian Kelly
Telephone No.:	(734) 692-7684



79 W. Monroe Street, Suite 1119
Chicago, IL 60603

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1. INTRODUCTION

Sustainment and Restoration Services LLC (SRS) performed a Removal Assessment (RS) at the Rock-Tenn Site (Site) located at 431 Helen Avenue, in Otsego, Allegan County, Michigan. SRS, the Region 5 Superfund Technical Assessment and Response Team (START) contractor, was tasked by the United States Environmental Protection Agency (U.S. EPA) under contract number EP-S5-16-01 and Technical Direction Document (TDD) No. 0001/S05-0001-17-11-001, to perform this RS. Under this assignment, SRS START was tasked to prepare a site-specific Health and Safety Plan (HASP) and a field Sampling and Analysis Plan (SAP); procure the services of an analytical laboratory; collect bulk asbestos samples; document Site conditions with written logbook notes and photographs; evaluate analytical data; and prepare the RS report. The field investigation and sampling was conducted on April 2, 2018.

This RS report summarizes the Site background; discusses the assessment; provides a summary of the analytical data; and discusses potential site-related threats. The appendices for this report include Figures (Appendix A), analytical results summary table (Appendix B), photographic log (Appendix C), and the analytical data package (Appendix D).

2 SITE BACKGROUND

A brief description of the Site and its history is provided below.

2.1 Site Description

The Rock-Tenn Site is a vacant former paper mill located at 431 Helen Avenue in Otsego, Michigan (Figure 1, Appendix A). The geographical coordinates for the Site are 42.46444444° North latitude and -85.70527778° West longitude. The Site occupies an area of 17 acres and consists of over 40 buildings and structures in a fenced area. The building of interest for this Removal Assessment is the Power House building located on the east central portion of the property (Figure 2, Appendix A). The Site is bounded to the north by W. River Street, to the south by the Kalamazoo River, to the west by vacant land, and to the east by John Street and N. North Street. Nearby land uses include industrial, commercial, residential, and agricultural.

2.2 Site History

MacSimBar Paper Company began papermaking at the Site in 1906. Paper and related products were produced at the Site for 98 years during which time the facility operated under several different names. In July 2004, approximately 100 people were employed at the facility (The Rock-Tenn mill) when it was closed. A fire damaged the plant in 2006 and Cogswell Property LLC, of Redford Township near Detroit, bought the Rock-Tenn mill property in September 2006. The company's plans to revitalize the property never developed and the property entered foreclosure in April 2011 after Cogswell failed to pay overdue property taxes. Currently, the county owns the Site property (OTIE, 2012).

Allegan County and the State of Michigan referred the Site to U.S. EPA Region 5 Superfund Division to conduct a removal assessment in 2011 to help determine the contents of approximately 200 containers of material found on the Site during the County Assessment.

START conducted the removal assessment (2011) and oversaw the removal action (2012) at the Site to properly dispose of onsite drums and containers. At the conclusion of the removal action, the Power House building windows and entrances were boarded and "Asbestos Hazard" signs

were posted on the building to minimize exposure to the public from potential asbestos containing material (ACM).

In March 2014, Environmental Consulting & Technology, Inc (ECT) was hired by the Allegan County Brownfield Redevelopment Authority to provide an estimate for asbestos abatement in the Power House for redevelopment of the Site. ECT's assessment concluded that prior to asbestos abatement, building fortification activities need to be conducted to ensure the building exterior structure isn't damaged or collapsed during the abatement processes (ECT, 2014). On October 25, 2017, ECT on behalf of Allegan County, contacted U.S. EPA to determine whether emergency response funds could be used for the asbestos abatement. U.S. EPA agreed to conduct a site visit to determine the current status of the Power House.

3 REMOVAL ASSESSMENT ACTIVITIES

U.S. EPA and START personnel performed RS activities on April 2, 2018. Assessment activities included Site reconnaissance, bulk asbestos sample collection, and written and photographic documentation. These RS assessment activities are discussed below.

A site-specific SAP was developed prior to mobilizing for the assessment and performing fieldwork. The SAP described the data quality objectives (DQO), sampling strategy, sampling locations, sampling methodology, and analytical procedures for analyzing the samples.

This section summarizes site reconnaissance (subsection 3.1) and sampling (subsection 3.2). Table 1 (Appendix B) presents a summary of samples collected during the removal assessment. Site activities were recorded in the field log book and by photographic documentation (Appendix C).

3.1 Site Reconnaissance

U.S. EPA On-Scene Coordinator (OSC) Brian Kelly and two START members mobilized to the Site on April 2, 2018. Site reconnaissance was performed around the Power House building in level “D” personal protective equipment (PPE) in accordance with the site-specific HASP, prior to sample collection.

The focus of the RS was on the Power House building located in the east-central portion of the former paper mill. The Rock-Tenn mill property is enclosed by a fence which was accessible by the City of Otsego at the eastern entrance of the property. During the exterior reconnaissance of the building, it was observed that many of the previously boarded up entrances to the building have been torn down or missing. START photo documented openings on the south side of the building (Photograph 1 & 2) and the northeast corner of the building (Photographs 3 & 4) which were missing boarded up panels and doors. The buildings directly west and adjacent to the Power House also had multiple openings which lead into the Power House building. Unsecured entrances were documented on the east side (Photograph 5) and west side (Photograph 6) of the building to the northeast of the Power house. The building due west, which is connected to the Power House, was also compromised with an opening that led into the Power House (Photograph 7). Additionally,

during the exterior reconnaissance of the buildings, START documented cracks along the exterior walls (Photograph 8) and crumbling concrete and brick near the base of a bay door (Photograph 9).

START entered the building in Level “C” PPE to determine sampling locations with the OSC and document current conditions of the building prior to sample collection. The building has a main 1st level and basement level. The interior condition of the building was severely compromised with fallen debris such as brick, metal piping, and beams (Photograph 10 & 11). Large portions of the main floor were missing next to the boilers with evidence of trespassing throughout the building (Photograph 12). The basement area showed areas of wear in the concrete ceiling (main level) where the rebar was exposed and visible cracks along the posts that hold up the ceiling (Photographs 13 & 14). Potential ACM was observed on both levels of the building throughout both floors. Potential ACM was also observed crumbling from the boiler in the basement level (Photograph 15).

3.2 Sampling

Sampling of bulk asbestos was performed in level “C” PPE in accordance with the site-specific HASP. OSC Kelly tasked the START team to collect samples for bulk asbestos analyses. All sampling was done in accordance with the START SAP (SRS, 2017).

A total of six (6) potential bulk ACM samples and one duplicate sample were collected during the RS investigation. All samples collected were soft, crumbly material that had deposited on the building floor. Two samples were collected on the main 1st level and three samples were collected in the basement level along the northern portion of the basement. One sample was collected from the adjacent building to the west of the Power House which was connected by a corridor in the basement (Figure 2, Appendix A). The samples were placed directly into plastic resealable bags as instructed by the contracted laboratory, ALS Environmental. START documented and photographed sample locations which are presented in Appendix B.

Samples were labeled, logged, and prepared for shipment to the laboratory. Samples were submitted to a U.S. EPA approved commercial laboratory, ALS Environmental, for asbestos determination in bulk building materials using polarized light microscopy (PLM) by U.S.

EPA method 600/R-93/116. Descriptions of the sampled material, locations, photographs, and analytical results are presented in Table 1, Appendix B. Approximate sample locations are shown on Figure 2, Appendix A.

4 ANALYTICAL RESULTS

START reviewed the sample analytical data and supporting quality assurance/quality control (QA/QC) data provided by ALS Environmental. The analytical data package is included in Appendix D.

The following section summarizes laboratory analytical results for samples collected during the RS field activities. The Occupational Safety and Health Administration (OSHA) defines ACM as any material that contains more than one percent asbestos per Code of Federal Regulations (CFR) Title 29 Part 1910.1001. Friable asbestos is listed as a hazardous substance according to 40 CFR Part 302, Table 302.4. Asbestos sample analytical results are summarized in Table 1.

Suspected ACM at the Site was characterized in accordance with 40 CFR, Part 61.141 as Category I Non-Friable ACM, Category II Non-Friable, and Regulated Asbestos Containing Material (RACM).

Category I Non-Friable ACM is defined as ACM packing, gaskets, resilient floor covering, and asphalt roofing products containing more than 1-percent asbestos. Category I building materials generally 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. Category II building materials would create an airborne release of asbestos fibers during normal demolition activities.

RACM is defined as friable ACM; Category I Non-Friable ACM that has become friable; Category I Non-Friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading; or 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 40 CFR, Part 61 Subpart 61.141.

Analytical sample results confirmed ACM in five (5) samples collected during this RS from various crumbling materials that were deposited on the floor of each level. Sample results

ranged from 1% to 40% amosite. The highest amosite result was found in a sample collected from the basement level, RT05. All five ACM samples collected were friable based on the definition in 40 CFR Part 61.141.

5 POTENTIAL SITE RELATED THREATS

Threats posed by on-site contamination and Site conditions were evaluated in accordance with The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) criteria for initiating removal action listed under Title 40 of the CFR, Section 300.415(b) (2).

Paragraph (b) (2) of 40 CFR Section 300.415 lists factors to be considered when determining the appropriateness of a potential removal action at a site. Potential site-related threats to human health and the environment were evaluated based on the criteria listed in Title 29 Part 1910.1001, 40 CFR Part 302, Table 302.4, and 40 CFR, Part 61.141. Factors that may be applicable to the Site are discussed below.

Actual or potential exposure of nearby human populations, animals, or the food chain to hazardous substances or pollutants or contaminants (40 CFR300.415(b)(2)(i))

During the April 2, 2018, Removal Assessment, START documented ACM at the Site. Analytical results confirmed presence of ACM, indicating total asbestos ranging from 1% to 40% in sampled materials. Unrestricted access into Site buildings and evidence of trespassing was observed in several areas of the Site (Photographs 10 & 12). The samples collected were friable ACM, which by definition is a hazardous substance (40 CFR 302.4, Table 302.4). Materials in the Power House building may further deteriorate due to wind and rain entering the unsecured building.

Asbestos is the name of a group of six fibrous minerals (amosite, chrysotile, crocidolite, tremolite, actinolite, and anthrophyllite) that naturally occur in the environment. Asbestos has historically been used in building materials, friction products, heat-resistant fabrics, packaging, gaskets, and coatings. Human exposure to asbestos through inhalation may result in scar-like tissue in the lungs and the pleural membrane (lining) surrounding the lung. The World Health Organization (WHO) and the EPA have determined that asbestos is a human carcinogen (ATSDR, 2001). Major health effects associated with asbestos exposure include lung cancer, mesothelioma, and asbestosis.

6 SUMMARY

On April 2, 2018, U.S. EPA and START conducted a removal assessment at the Rock-Tenn Site located in Otsego, Michigan. During sampling, six (6) samples were collected and submitted for asbestos determination.

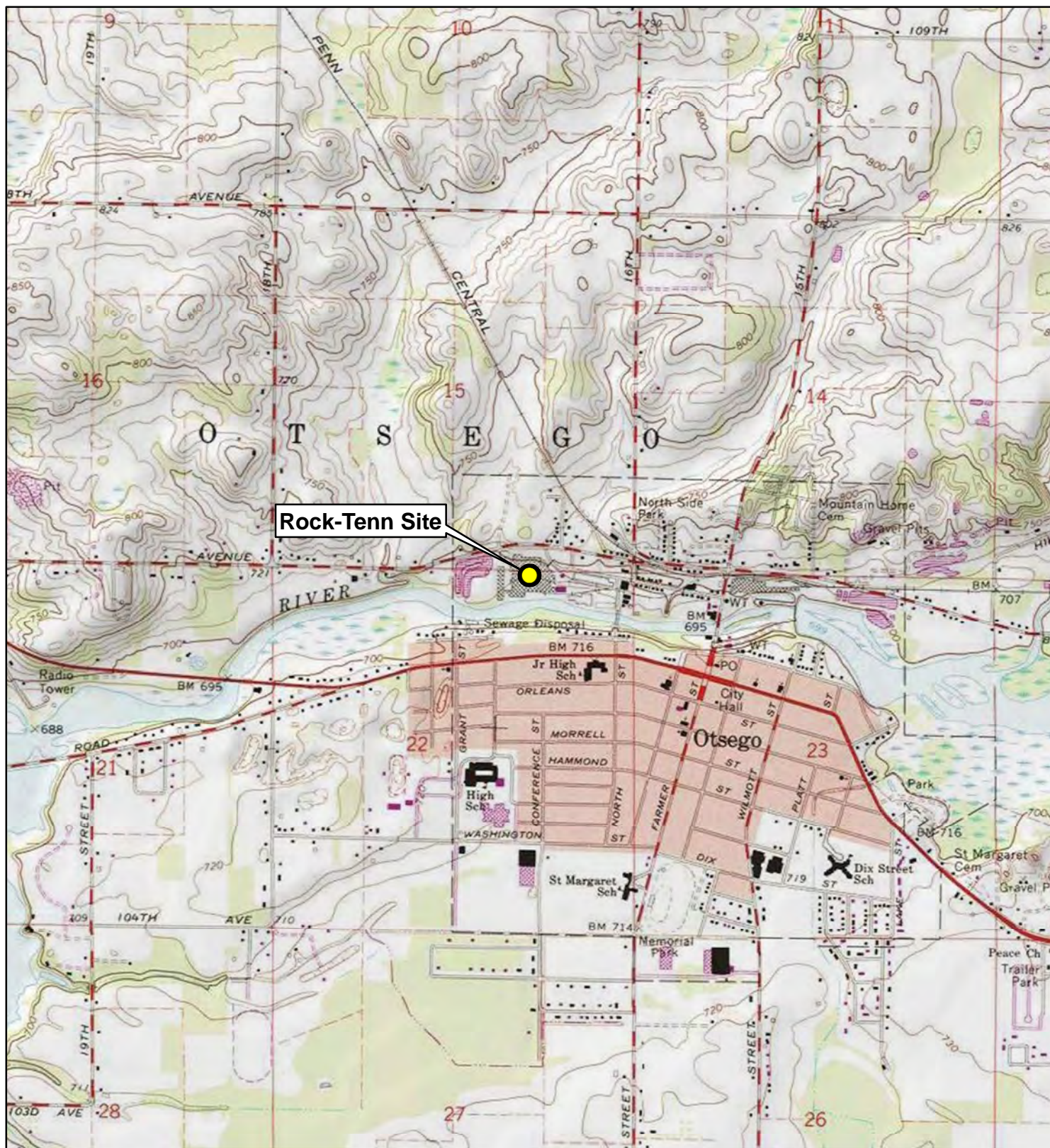
The analytical results for samples collected and analyzed for asbestos indicated five (5) out of six (6) samples as meeting the criteria of ACM as defined by Title 29 Part 1910.1001 and friable as defined by 40 CFR Part 61.141.

ACM are present on the Rock-Tenn Site property and persons that enter the Power House building and adjacent building may become exposed to this hazardous substance. The Power House building has multiple points of entry that have been compromised and are easily accessible to trespassers, if they are to get past the Site-wide fence.

REFERENCES

- ATSDR. 2001. "Toxicological profile for Asbestos." Agency for Toxic Substances and Disease Registry, U.S. Department of Health and Human Services, Public Health Service, September. www.atsdr.cdc.gov/toxprofiles/TP.asp?id=30&tid=4.
- Environmental Consulting & Technology, Inc. (ETC). 2014. Otsego Power Plant Asbestos Abatement Cost Evaluation, Former Rock-Tenn Otsego Paper Mill and Power Plant, 431 Helen Ave, Otsego, Michigan. March.
- Oneida Total Integrated Enterprises (OTIE). 2012. Draft Site Assessment Report, Rock-Tenn Site, Otsego, Allegan County, Michigan. January 16.
- Sustainment & Restoration Service, LLC (SRS). 2017. Final Sampling and Analyses Plan, Rock-Tenn Site – RS Removal Assessment. December 6.
- Title 29, Code of Federal Regulations, Part 1910.1001. https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=standards&p_id=9995
- Title 40, Code of Federal Regulations, Part 61.141. https://www.ecfr.gov/cgi-bin/retrieveECFR?gp=&SID=7827b09c1dec2acc2b5153e792ec60f1&mc=true&n=sp40.10.61.m&r=SUBPART&ty=HTML#se40.10.61_1141
- Title 40, Code of Federal Regulations, Part 302.4(a). https://www.ecfr.gov/cgi-bin/textidx?SID=7b27c58c5ffd5506a5eff0dd58ffca4f&node=pt40.28.302&rgn=div5#se40.30.302_14
- Title 40, Code of Federal Regulations, Part 300.415(b)(2). http://www.ecfr.gov/cgi-bin/textidx?SID=8ec732f4f538f1b3c22207c3300f1e6b&mc=true&node=se40.30.300_1415&rgn=div8. Accessed August 8, 2016.

APPENDIX A
FIGURES



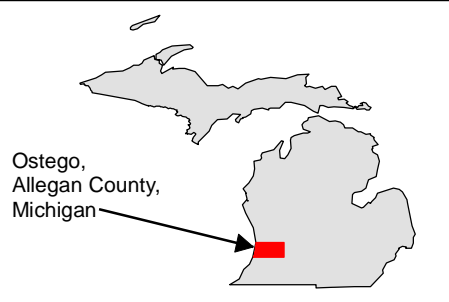
USGS 7.5 MINUTE SOURCE QUAD MAP (MICHIGAN): OTSEGO

Disclaimer: This map is intended for visual orientation use only.
In no way is this map to be used for precise locational use.

Legend

● Site Location

0 2,000 4,000 Feet



Otsego,
Allegan County,
Michigan



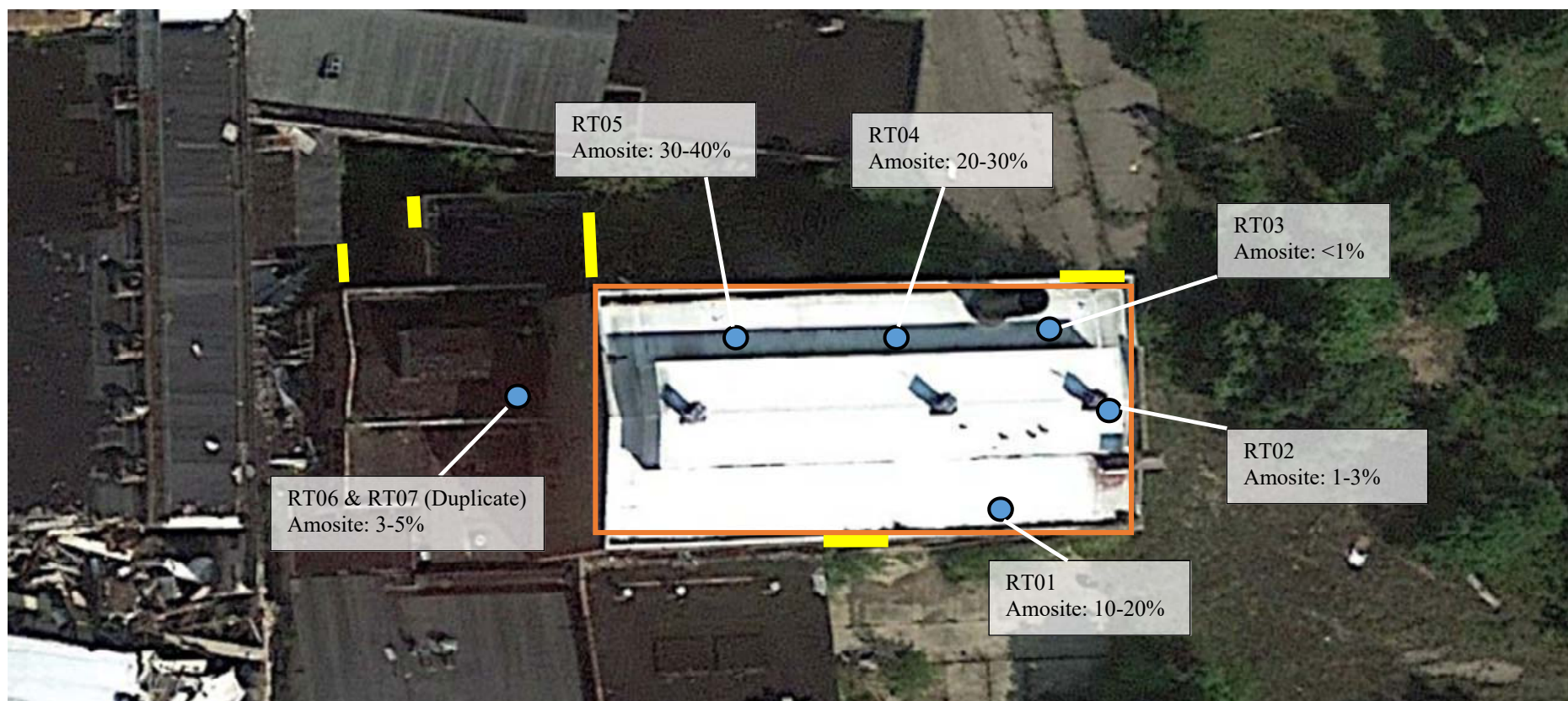
United States Environmental Protection Agency

ROCK-TENN SITE ASSESSMENT
OTSEGO, ALLEGAN COUNTY,
MICHIGAN

TDD No. 0001/S05-0001-17-11-001

FIGURE 1 SITE LOCATION MAP





Legend



Power House Building



Unsecured Entrance to Building



Asbestos Sample Location

Note:
Sample locations are estimated and are not exact locations.

Image from Google 2017 Satellite.

0 35 70



United States Environmental Protection Agency

Rock-Tenn Site - RS

Otsego, Allegan County, Michigan

TDD No. 0001/S05-0001-17-11-0001

FIGURE 2
SAMPLE LOCATION MAP



APPENDIX B

TABLE 1 – ANALYTICAL RESULTS SUMMARY

TABLE 1
ANALYTICAL RESULTS SUMMARY
ROCK-TENN SITE – RS
OTSEGO, ALLEGAN COUNTY, MICHIGAN






Sample ID	RT01	RT02
Sample Location	First level on along the eastern wall	First level along the southern wall
Material Description	Gray homogenous crumbly material - Friable	Gray layers of crumbly material -Friable
	No photo	
Lab Results		
Amosite	10-20%	1-3%
Sample ID	RT03	RT04
Material Description	Basement level	Basement level
Sample Location	Gray/white/black homogeneous crumbly material	Gray/white homogeneous crumbly material - Friable
		
Lab Results		
Amosite	Trace (<1%)	20-30%

TABLE 1
ANALYTICAL RESULTS SUMMARY
ROCK-TENN SITE – RS
OTSEGO, ALLEGAN COUNTY, MICHIGAN

Sample ID	RT05	RT06 & RT07 (Duplicate)
Sample Location	Basement level	Basement level
Material Description	Black homogeneous crumbly material - Friable	Gray homogeneous crumbly material - Friable
		
Lab Results		
Amosite	30-40%	3-5%

Notes:

RT Rock-Tenn Site
% percentage
< less than
bold/highlighted sample result meets ACM criteria

Samples were submitted to ALS Environmental for analysis by PLM under TDD No. 0001/S05-0001-17-11-001. The Occupational Safety and Health Administration (OSHA) defines ACM in 29 CFR 1910.1001 as any material that contains more than one percent asbestos.

APPENDIX C
PHOTOGRAPHIC LOG

Site: Rock-Tenn Site - RS
Contract: EP-S5-16-01
TDD: 0001/S05-0001-17-11-001
OSC: Brian Kelly

Date: April 2, 2018
Photographer: Cheryl Kondreck

Official Photograph No.1:
Southern portion of the Power
House building. Facing northwest.



Site: Rock-Tenn Site - RS
Contract: EP-S5-16-01
TDD: 0001/S05-0001-17-11-001
OSC: Brian Kelly

Date: April 2, 2018
Photographer: Cheryl Kondreck

Official Photograph No. 2:
Southern unsecured bay opening to
Power House building. Facing north.



Site: Rock-Tenn Site - RS
Contract: EP-S5-16-01
TDD: 0001/S05-0001-17-11-001
OSC: Brian Kelly

Date: April 2, 2018
Photographer: Cheryl Kondreck

Official Photograph No.3:
Northeast corner of Power House
building. Unsecured entrance, facing
southwest.



Site: Rock-Tenn Site - RS
Contract: EP-S5-16-01
TDD: 0001/S05-0001-17-11-001
OSC: Brian Kelly

Date: April 2, 2018
Photographer: Cheryl Kondreck

Official Photograph No.4:
Northeast corner of Power House
building. Unsecured entrance,
facing southwest.



Site: Rock-Tenn Site - RS
Contract: EP-S5-16-01
TDD: 0001/S05-0001-17-11-001
OSC: Brian Kelly

Date: April 2, 2018
Photographer: Cheryl Kondreck

Official Photograph No.5:
Northern wall of the Power House
building, western unsecured
entrance, facing southwest.



Site: Rock-Tenn Site - RS
Contract: EP-S5-16-01
TDD: 0001/S05-0001-17-11-001
OSC: Brian Kelly

Date: April 2, 2018
Photographer: Cheryl Kondreck

Official Photograph No.6:
Northwest corner of the Power House
building. Unsecured opening in the
adjacent building, facing west.



Site: Rock-Tenn Site - RS
Contract: EP-S5-16-01
TDD: 0001/S05-0001-17-11-001
OSC: Brian Kelly

Date: April 2, 2018
Photographer: Cheryl Kondreck

Official Photograph No.7:
Northwest of the Power House building.
Unsecured opening in the adjacent
building, facing west.



Site: Rock-Tenn Site - RS
Contract: EP-S5-16-01
TDD: 0001/S05-0001-17-11-001
OSC: Brian Kelly

Date: April 2, 2018
Photographer: Cheryl Kondreck

Official Photograph No.8:
Large crack in the eastern wall of the
Power House building. Facing west.



Site: Hudepohl Site– RS

Contract: EP-S5-16-01

TDD: 0001/S05-0001-17-11-001

OSC: Brian Kelly

Date: April 2, 2018

Photographer: Cheryl Kondreck

Official Photograph No.9:

Crumbling concrete at the base of the bay opening on the southern portion of the Power House building. Facing northwest.



Site: Rock-Tenn Site - RS

Contract: EP-S5-16-01

TDD: 0001/S05-0001-17-11-001

OSC: Brian Kelly

Date: April 2, 2018

Photographer: Cheryl Kondreck

Official Photograph No. 10:

Along the eastern wall interior of the Power House building. Evidence of trespassers is verified by the graffiti on the east wall. Facing south.



Site: Rock-Tenn Site - RS
Contract: EP-S5-16-01
TDD: 0001/S05-0001-17-11-001
OSC: Brian Kelly

Date: April 2, 2018
Photographer: Cheryl Kondreck

Official Photograph No.11:
Fallen debris throughout the first level. Near the center of the Power House interior. Facing north.



Site: Rock-Tenn Site - RS
Contract: EP-S5-16-01
TDD: 0001/S05-0001-17-11-001
OSC: Brian Kelly

Date: April 2, 2018
Photographer: Cheryl Kondreck

Official Photograph No.12:
Near the center of the Power House interior, floor missing next to boiler. Evidence of trespassers can be seen from the graffiti on the boiler. Facing north.



Site: Rock-Tenn Site - RS
Contract: EP-S5-16-01
TDD: 0001/S05-0001-17-11-001
OSC: Brian Kelly

Date: April 2, 2018
Photographer: Cheryl Kondreck

Official Photograph No.13:
Basement of the Power House interior.
Concrete crumbling from ceiling with
rebar exposed. Facing west.



Site: Rock-Tenn Site - RS
Contract: EP-S5-16-01
TDD: 0001/S05-0001-17-11-001
OSC: Brian Kelly

Date: April 2, 2018
Photographer: Cheryl Kondreck

Official Photograph No. 14:
Basement of the Power House
interior. Concrete crumbling from
ceiling with rebar exposed. Facing
west.



Site: Rock-Tenn Site - RS

Contract: EP-S5-16-01

TDD: 0001/S05-0001-17-11-001

OSC: Brian Kelly

Date: April 2, 2018

Photographer: Cheryl Kondreck

Official Photograph No.15:

Basement of the Power House
interior. Possible ACM crumbling
on boilers. Facing southwest.



APPENDIX D
ANALYTICAL DATA PACKAGE



09-Apr-2018

Cheryl Kondreck
SRS
79 W. Monroe St
Suite 1119
Chicago, IL 60603

Tel: (312) 220-7171
Fax:

Re: Rock-Tenn Site

Work Order: **1804041**

Dear Cheryl,

ALS Environmental received 7 samples on 02-Apr-2018 12:55 PM for the analyses presented in the following report.

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

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

The total number of pages in this report is 15.

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

Sincerely,

Shawn Smythe

Electronically approved by: Shawn Smythe

Shawn Smythe
Project Manager

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

ALS GROUP USA, CORP. Part of the ALS Group An ALS Limited Company

Environmental 

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

Client: SRS
Project: Rock-Tenn Site
Work Order: 1804041

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1804041-01	RT01	Bulk		4/2/2018 12:55	4/2/2018 12:55	<input type="checkbox"/>
1804041-02	RT02	Bulk		4/2/2018 12:55	4/2/2018 12:55	<input type="checkbox"/>
1804041-03	RT03	Bulk		4/2/2018 12:55	4/2/2018 12:55	<input type="checkbox"/>
1804041-04	RT04	Bulk		4/2/2018 12:55	4/2/2018 12:55	<input type="checkbox"/>
1804041-05	RT05	Bulk		4/2/2018 12:55	4/2/2018 12:55	<input type="checkbox"/>
1804041-06	RT06	Bulk		4/2/2018 12:55	4/2/2018 12:55	<input type="checkbox"/>
1804041-07	RT07	Bulk		4/2/2018 12:55	4/2/2018 12:55	<input type="checkbox"/>

Client: SRS
Project: Rock-Tenn Site
Work Order: 1804041

Case Narrative

It is the responsibility of the client to notify the lab of any certification requirements in writing via the chain of custody as this may determine the preparation and analytical procedures employed.

Laboratory accreditation does not in any way constitute approval or endorsement by any accrediting body or agency of the federal government. Please contact ALS Cincinnati QA/QC Manager for accreditation identifications and certifications.

All sample collection is performed outside of ALS and is the sole responsibility of the client. Sample condition acceptable upon receipt except where noted. Estimates of concentration are semi-quantitative and are made on an area basis. Results apply only to portions of samples analyzed. Samples disposed after 60 days. Cover letter signatory indicates report generation only. Raw data validated by peer analyst. Analyst responsible for technical content of report.

The reporting limit (RL) for asbestos in bulk materials is 1% and is a function of the quantity of sample analyzed, the nature of any matrix interferences, sample preparation, and fiber size and distribution. Results reported as ND indicate that no asbestos was detected. Results reported as Trace indicate that asbestos was detected at some level confidently determined to be <1% which is considered inconclusive according to New York ELAP.

ALS performs variety of PLM methods for asbestos in bulk building materials including EPA 600/R-93/116, NIOSH 9002, ELAP 198.1, and ELAP 198.6. In addition, we perform a modified uncertified version of EPA 600/R-04/004 for asbestos in vermiculite which reports asbestos as present or absent only, and an in-house developed uncertified method ALS SOP ENV 004 for asbestos in soil. Regardless of the method requested, all samples are examined according to mandatory method protocol. Any optional method protocol are eliminated from the initial analysis but may be performed upon client request. These may include; insufficient sample volume rejection*, phase separation of layered or heterogeneous samples, ashing to remove organic interferences, acid dissolution to remove mineral carbonate interferences, point counting by PLM, and analysis by transmission electron microscopy (TEM) to verify ND results.

All samples are examined by stereomicroscope for the determination of homogeneity, texture, friability, color, and extent of fibrous components. Non-asbestos materials such as foil, paper, metal, plastic, pebbles, or organic debris are ignored and a subsample of the remaining material homogenized by some means for examination by polarized light microscope (PLM). Information obtained via both stereomicroscope and PLM are used in the final qualitative and quantitative analysis of fibrous components.

NOTE: Any visible building debris in soil samples such as pieces of drywall, roofing material, insulation, concrete, etc., are not included in the soil analysis. If present, these are considered possible asbestos containing materials (ACM) and may be analyzed as separate samples upon client request.

*Sufficient sample volume is material dependent. For samples such as floor tiles, roofing felts,

Client: SRS
Project: Rock-Tenn Site
Work Order: 1804041

Case Narrative

sheet insulation, etc., three to four square inches of the layered material is preferred. For materials such as ceiling tiles, loose fill insulation, pipe insulation, etc., one cubic inch (~15cc) is preferred. For samples of thin coating materials such as paints, mastics, spray plasters, etc., a smaller sample size may be suitable. For vermiculite analysis, a one gallon ziploc bag full of dry, loose material is acceptable. For ENV 004 soil samples, a 4oz jar is recommended. The ASTM D7521 Soil method requires a minimum of 8oz and a maximum of 16oz of homogeneous soil.

ALS Environmental

Date: 09-Apr-18

Client: SRS
Project: Rock-Tenn Site

Work Order: 1804041

Lab ID: 1804041-01A
Client Sample ID: RT01

Collection Date: 4/2/2018 12:55:00 PM
Matrix: BULK

Analyses	Result	Units	Analytical Results
Asbestos by PLM			Date Analyzed 4/6/2018
Macroscopic Examination	Prep Date: 4/6/2018	E600/R-93/116	Analyst: MRS
Color	Grey		
Description	Material		
Homogeneity	Homogeneous		
Texture	Crumbly		
Other Materials			E600/R-93/116
Cellulose	ND	%	
Fiberglass	ND	%	
Non-fibrous	>70<=80	%	
Other fibers	ND	%	
Resin/binder	ND	%	
Asbestiform Minerals			E600/R-93/116
Amosite	>10<=20	%	
Anthophyllite	ND	%	
Chrysotile	ND	%	
Crocidolite	ND	%	
Tremolite - actinolite	ND	%	
Total asbestos	>10<=20	%	

Note:

ALS Environmental

Date: 09-Apr-18

Client: SRS
Project: Rock-Tenn Site

Work Order: 1804041

Lab ID: 1804041-02A
Client Sample ID: RT02

Collection Date: 4/2/2018 12:55:00 PM
Matrix: BULK

Analyses	Result	Units	Analytical Results
Asbestos by PLM			Date Analyzed 4/6/2018
Macroscopic Examination	Prep Date: 4/6/2018	E600/R-93/116	Analyst: MRS
Color	Grey		
Description	Material		
Homogeneity	Layered		
Texture	Crumbly		
Other Materials			E600/R-93/116
Cellulose	ND	%	
Fiberglass	>30<=40	%	
Non-fibrous	>50<=60	%	
Other fibers	ND	%	
Resin/binder	ND	%	
Asbestiform Minerals			E600/R-93/116
Amosite	>1<=3	%	
Anthophyllite	ND	%	
Chrysotile	ND	%	
Crocidolite	ND	%	
Tremolite - actinolite	ND	%	
Total asbestos	>1<=3	%	

Note:

ALS Environmental

Date: 09-Apr-18

Client: SRS
Project: Rock-Tenn Site

Work Order: 1804041

Lab ID: 1804041-02B
Client Sample ID: RT02

Collection Date: 4/2/2018 12:55:00 PM
Matrix: BULK

Analyses	Result	Units	Analytical Results
Asbestos by PLM			Date Analyzed 4/6/2018
Macroscopic Examination	Prep Date: 4/6/2018	E600/R-93/116	Analyst: MRS
Color	White		
Description	Material		
Homogeneity	Layered		
Texture	Fibrous		
Other Materials			E600/R-93/116
Cellulose	ND	%	
Fiberglass	ND	%	
Non-fibrous	>5<=10	%	
Other fibers	>80<=90	%	
Resin/binder	ND	%	
Asbestiform Minerals			E600/R-93/116
Amosite	ND	%	
Anthophyllite	ND	%	
Chrysotile	ND	%	
Crocidolite	ND	%	
Tremolite - actinolite	ND	%	
Total asbestos	ND	%	

Note:

ALS Environmental

Date: 09-Apr-18

Client: SRS
Project: Rock-Tenn Site

Work Order: 1804041

Lab ID: 1804041-03A
Client Sample ID: RT03

Collection Date: 4/2/2018 12:55:00 PM
Matrix: BULK

Analyses	Result	Units	Analytical Results
Asbestos by PLM			Date Analyzed 4/6/2018
Macroscopic Examination	Prep Date: 4/6/2018	E600/R-93/116	Analyst: MRS
Color	Black		
Description	Material		
Homogeneity	Homogeneous		
Texture	Crumbly		
Other Materials			E600/R-93/116
Cellulose	ND	%	
Fiberglass	>20<=30	%	
Non-fibrous	>30<=40	%	
Other fibers	ND	%	
Resin/binder	>20<=30	%	
Asbestiform Minerals			E600/R-93/116
Amosite	Trace	%	
Anthophyllite	ND	%	
Chrysotile	ND	%	
Crocidolite	ND	%	
Tremolite - actinolite	ND	%	
Total asbestos	Trace	%	

Note:

ALS Environmental

Date: 09-Apr-18

Client: SRS
Project: Rock-Tenn Site

Work Order: 1804041

Lab ID: 1804041-04A
Client Sample ID: RT04

Collection Date: 4/2/2018 12:55:00 PM
Matrix: BULK

Analyses	Result	Units	Analytical Results
Asbestos by PLM			Date Analyzed 4/6/2018
Macroscopic Examination	Prep Date: 4/6/2018	E600/R-93/116	Analyst: MRS
Color	Grey		
Description	Material		
Homogeneity	Homogeneous		
Texture	Crumbly		
Other Materials			E600/R-93/116
Cellulose	ND	%	
Fiberglass	ND	%	
Non-fibrous	>60<=70	%	
Other fibers	ND	%	
Resin/binder	ND	%	
Asbestiform Minerals			E600/R-93/116
Amosite	>20<=30	%	
Anthophyllite	ND	%	
Chrysotile	ND	%	
Crocidolite	ND	%	
Tremolite - actinolite	ND	%	
Total asbestos	>20<=30	%	

Note:

ALS Environmental

Date: 09-Apr-18

Client: SRS
Project: Rock-Tenn Site

Work Order: 1804041

Lab ID: 1804041-05A
Client Sample ID: RT05

Collection Date: 4/2/2018 12:55:00 PM
Matrix: BULK

Analyses	Result	Units	Analytical Results
Asbestos by PLM			Date Analyzed 4/6/2018
Macroscopic Examination	Prep Date: 4/6/2018	E600/R-93/116	Analyst: MRS
Color	Black		
Description	Material		
Homogeneity	Homogeneous		
Texture	Crumbly		
Other Materials			E600/R-93/116
Cellulose	ND	%	
Fiberglass	>1<=3	%	
Non-fibrous	>50<=60	%	
Other fibers	ND	%	
Resin/binder	ND	%	
Asbestiform Minerals			E600/R-93/116
Amosite	>30<=40	%	
Anthophyllite	ND	%	
Chrysotile	ND	%	
Crocidolite	ND	%	
Tremolite - actinolite	ND	%	
Total asbestos	>30<=40	%	

Note:

ALS Environmental

Date: 09-Apr-18

Client: SRS
Project: Rock-Tenn Site

Work Order: 1804041

Lab ID: 1804041-06A
Client Sample ID: RT06

Collection Date: 4/2/2018 12:55:00 PM
Matrix: BULK

Analyses	Result	Units	Analytical Results
Asbestos by PLM			Date Analyzed 4/6/2018
Macroscopic Examination	Prep Date: 4/6/2018	E600/R-93/116	Analyst: MRS
Color	Grey		
Description	Material		
Homogeneity	Homogeneous		
Texture	Crumbly		
Other Materials			E600/R-93/116
Cellulose	ND	%	
Fiberglass	>3<=5	%	
Non-fibrous	>80<=90	%	
Other fibers	ND	%	
Resin/binder	ND	%	
Asbestiform Minerals			E600/R-93/116
Amosite	>3<=5	%	
Anthophyllite	ND	%	
Chrysotile	ND	%	
Crocidolite	ND	%	
Tremolite - actinolite	ND	%	
Total asbestos	>3<=5	%	

Note:

ALS Environmental

Date: 09-Apr-18

Client: SRS
Project: Rock-Tenn Site

Work Order: 1804041

Lab ID: 1804041-07A
Client Sample ID: RT07

Collection Date: 4/2/2018 12:55:00 PM
Matrix: BULK

Analyses	Result	Units	Analytical Results
Asbestos by PLM			Date Analyzed 4/6/2018
Macroscopic Examination	Prep Date: 4/6/2018	E600/R-93/116	Analyst: MRS
Color	Grey		
Description	Material		
Homogeneity	Homogeneous		
Texture	Crumbly		
Other Materials			E600/R-93/116
Cellulose	ND	%	
Fiberglass	>3<=5	%	
Non-fibrous	>80<=90	%	
Other fibers	ND	%	
Resin/binder	ND	%	
Asbestiform Minerals			E600/R-93/116
Amosite	>3<=5	%	
Anthophyllite	ND	%	
Chrysotile	ND	%	
Crocidolite	ND	%	
Tremolite - actinolite	ND	%	
Total asbestos	>3<=5	%	

Note:

Client: SRS
Project: Rock-Tenn Site
WorkOrder: 1804041

QUALIFIERS, ACRONYMS, UNITS

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

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

<u>Units Reported</u>	<u>Description</u>
%	

Sample Receipt Checklist

Client Name: **SRS-CHICAGO**

Date/Time Received: **02-Apr-18 12:55**

Work Order: **1804041**

Received by: **DNS**

Checklist completed by **Shawn Smythe**

05-Apr-18

Reviewed by: **Shawn Smythe**

05-Apr-18

eSignature

Date

eSignature

Date

Matrices:

Carrier name: **FedEx**

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

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

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

Chain of custody present? Yes ☒ No ☐

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

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

Samples in proper container/bottle? Yes ☒ No ☐

Sample containers intact? Yes ☒ No ☐

Sufficient sample volume for indicated test? Yes ☒ No ☐

All samples received within holding time? Yes ☒ No ☐

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

Temperature(s)/Thermometer(s):

Cooler(s)/Kit(s):

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

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

pH adjusted? Yes ☐ No ☐ N/A ☐

pH adjusted by:

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:

ANALYTICAL REQUEST FORM

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES



1804041

1. ☒ REGULAR Status

☐ RUSH Status Requested - ADDITIONAL CHARGE

RESULTS REQUIRED BY _____

DATE

CONTACT ALS DATACHEM PRIOR TO SENDING SAMPLES

2. Date 4/2/2018 Purchase Order No. _____

3. Company Name SRS

Address 79 W. Monroe St Suite 1119

Chicago, IL 60603

Person to Contact Cheryl Kondreck

Telephone (312) 220-7171 x2227

Fax Telephone _____

E-mail Address CKondreck@srsllc.com

Billing Address _____

see SOW

4. Quote No. _____

ALS Project Manager _____

5. Sample Collection

Sampling Site Rock-Tenn Site

Industrial Process _____

Date of Collection 4/2/2018

Time Collected 1135 ~ 1255

Date of Shipment 4/2/2018

Chain of Custody No. _____

6. REQUEST FOR ANALYSES

Laboratory Use Only	Client Sample Number	Matrix*	Sample Volume	ANALYSES REQUESTED - Use method number if known	Units**
01	RT01	Bulk		Bulk Asbestos per SOW	4
02	RT02				
03	RT03				
04	RT04				
05	RT05				
06	RT06				
07	RT07	↓		↓	↓

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

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

Comments Sample times: RT01-1135; RT02-1147; RT03-1203; RT04-1215; RT05-1231;
RT06-1245; RT07-1255

Possible Contamination and/or Chemical Hazards Asbestos

Relinquished by _____

Date/Time 4/2/2018; 1400

Received by _____

Date/Time 4/2/18 09:28

Relinquished by _____

Date/Time _____

Received by _____

Date/Time _____

Relinquished by _____

Date/Time _____

Received by _____

Date/Time _____

4388 Glendale Milford Rd, Cincinnati, OH 45242

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

ALS Laboratory Group

fed x ~~no cust. seals~~ DMS 4/3/18
custody seals on cooler