

**Attachment F - Part 1**  
**Water Sampling Results (May-July 2019)**



# ARM Group Inc.

Engineers and Scientists

July 3, 2019

Mr. Kevin Moore  
Senior Manager, Mine Planning & Capital  
Specialty Granules LLC  
13424 Pennsylvania Ave  
Suite 303  
Hagerstown, MD 21742

Re: NPDES Permit Application Sampling  
Lower Mill, Charmian Plant  
Blue Ridge Summit, Pennsylvania  
ARM Project 190435

Dear Mr. Moore:

This letter report describes the collection by ARM Group Inc. (ARM) of three (3) 24-hour composite samples of water from Outfall 001 at the Specialty Granules LLC (SGI) Charmian Facility in Blue Ridge Summit, Pennsylvania. ARM understands this work was performed to comply with requests from the Pennsylvania Department of Environmental Protection (PADEP) for asbestos sampling of the effluent from the Charmian Facility.

As specified in the sampling protocol submitted to and approved by PADEP, the three 24-hour composite samples were taken once week apart from the discharge from Lower Mill Pond No. 3 (Outfall 001) at the Charmian Plant. The samples were submitted to RJ Lee Group in Monroeville, PA for analysis of asbestos via EPA Method 100.2

## BACKGROUND

SGI operates a non-coal surface mining (quarry) operations near Blue Ridge Summit in metabasalt rock. Currently, all discharges occurring at the Charmian Facility occur through the Lower Mill Pond system to Miney Branch as authorized under NPDES Permit No. PA0009059. The PADEP District Mining Office advised SGI of the desire for sampling for asbestos in the effluent in order to perform a “reasonable potential analysis”. SGI prepared and submitted to PADEP a proposed sampling and analysis plan on April 2, 2019, which PADEP approved by letter dated April 12, 2019.

As explained in Section 6.3 of the U.S. Environmental Protection Agency (“EPA”) NPDES Permit Writers’ Manual, a “reasonable potential analysis” is part of the analysis to be conducted by a permitting agency to determine if a water quality base effluent limitation (“WQBEL”) should be developed and imposed. It is noted that there are no promulgated federal or state instream water quality standards for asbestos. However, pursuant to the Federal Safe Drinking Water Act, EPA has adopted a maximum contaminant level (“MCL”) for asbestos in drinking water of 7 million fibers per liter longer than 10  $\mu\text{m}$ . 40 C.F.R. §141.62(b). Although there is no public drinking water intake within 15 miles downstream of the SGI Lower Mill Pond discharge, the federal drinking water MCL is the only currently available comparator for purposes of analysis.

## SAMPLING METHODS

In accordance with the PADEP-approved sampling plan, ARM was engaged to collect three samples from the Lower Mill Pond No. 3 (Outfall 001) at least one week apart for analysis of asbestos via USEPA Method 100.2. The samples were specified to be 24-hour composite samples. Such composite samples are defined in Attachment D of the NPDES Permit Application Instructions as involving at least eight individual samples of at least 100 milliliters each per sampling event. Under the Attachment D “composite” sample guidance, samples are designed to be flow-proportional; if the discharge rate is constant then constant volumes at constant time intervals may be collected.

The sampling was coordinated with the SGI facility during times that the discharge from Outfall 001 was expected to remain constant for the 24 hours during the sampling. For the samples collected on May 20-21 and June 4-5, the flow rates were reasonably consistent through the sampling period. During the sampling period on June 12-13, the flow rates increased over the sample collection period for unforeseen reasons. Although the composite sample taken on June 12-13 was taken at even intervals, and was not under these circumstances flow proportional, the sample result reported by RJ Lee Group (where no asbestos fibers > 10 microns in size were found) would indicate that flow proportionality was irrelevant.

ARM collected three composite samples from Lower Mill Pond No. 3 (Outfall 001) using an ISCO 3700 Composite Sampling unit. This unit was selected due to its durability, ease of handling and operation, and its data collection accuracy. Integral components to the ISCO 3700 allow this unit to be placed remotely and run autonomously without an operator. The unit uses an onboard peristaltic pump to draw in each composite aliquot into an internal 7-Liter container. This unit also has seals and covers to prevent atmospheric mixing with the sample train.

Discharge water was sampled at the same location as NPDES samples are taken, an 8” steel pipe connected to the base of the Lower Mill Pond No. 3. Effluent discharge rates average 500 to 1,000-gal/min from this pipe. Since the ISCO 3700 uses vacuum suction via peristalsis, a portion of the sampling stream was diverted into a sampling container by utilizing the existing ½” brass ball-valve sampling port flowing into a sampling container. Schedule 40 PVC and a 5-gallon container were used to divert the flow from the pipe into the container. The discharging pipe was installed to a depth of approximately 2” from the bottom of the container to ensure constant recharge and prevent stagnation in the container. A lid was installed to seal the container from any atmospheric interaction with the water sample. A weir on the side of the container was used to discharge excess water during the 24-hr period. Additional weirs were installed near the bottom of the container to empty it should flow stop during the 24-hr period. If flow stops, the container would empty to a point where no sample could be collected to prevent inaccurate sampling. The sampling unit draws fluids through a combination of polyethylene and vinyl tubing. The tubing was installed near the bottom of the container. A photo log of the sampling setup is included as **Attachment A**.

The ISCO sampler was programmed to pull a sample of approximately 100 ml every hour for 24 hours (24 samples) totaling approximately 2.4 liters, exceeding the minimum composite sample requirements of 8 - 100 ml samples in a 24 hour period. Final samples volumes were collected after each 24-hour period from the 7 liter internal container by mixing the water thoroughly and then pouring directly into the laboratory-supplied 1 liter polyethylene sample bottles. The collection container was then emptied and rinsed with deionized water.

### Event 1: May 20-21, 2019

ARM arrived onsite on May 20, 2019 for the first event. The sampler was rinsed with deionized water and discharge water prior to use. The auto-sampler was started at 10:57AM and left onsite 24 hours. On May



21, 2019 at approximately 9:57 AM, the ISCO 3700 successfully collected the 24-hr composite sample for outfall 001. Samples were placed in laboratory approved 1-Liter plastic bottles and shipped via FedEx to RJ Lee Group under their approved chain-of-custody. The samples were shipped to RJ Lee Group laboratories for analysis. A copy of the chain of custody for this event is included as **Attachment B**.

### **Event 2: June 4-5, 2019**

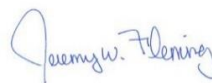
ARM conducted the second sampling event on June 4, 2019. The equipment setup and sampling methods were identical to the initial event. All equipment in contact with the sample train was rinsed with deionized water then discharge water from the 8" pipe. The ISCO 3700 unit was programmed to collect 100 mL every hour for 24 hours starting at 10:01 AM. On June 5, 2019 at approximately 9:01 AM, the ISCO 3700 successfully collected the 24-hr composite sample for outfall 001. Samples were placed in laboratory approved 1-Liter plastic bottles and shipped via FedEx to RJ Lee Group under their approved chain-of-custody. The samples were shipped to RJ Lee Group laboratories for analysis. A copy of the chain of custody for this event is included as **Attachment B**.

### **Event 3: June 12-13, 2019**

ARM conducted the final sampling event on June 12, 2019. The equipment setup and sampling methods were identical to the initial event. All equipment in contact with the sample train was rinsed with deionized water then discharge water from the 8" pipe. The ISCO 3700 unit was programmed to collect 100 mL every hour for 24 hours starting at 11:47 AM. On June 13, 2019 at approximately 10:47 AM, the ISCO 3700 successfully collected the 24-hr composite sample for outfall 001. Samples were placed in laboratory approved 1-Liter plastic bottles and shipped via FedEx to RJ Lee Group under their approved chain-of-custody. The samples were shipped to RJ Lee Group laboratories for analysis. A copy of the chain of custody for this event is included as **Attachment B**.

Please contact us if you have any questions regarding this summary report.

Respectfully submitted,  
ARM Group Inc.



Jeremy Fleming  
Project Geologist II



David W. Mooney, P.G  
Senior Project Manager

Enclosures:   A. Photolog  
                  B. Chain of Custody Forms





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## **Attachment A**

### **Photograph Log**

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**Photo 1 – 5/13/19**

001 Outfall Location



**Photo 2 – 5/13/19**

Sample point connection  
valve.





**Photo 3 – 5/13/19**

Sampling connections and  
stilling bucket for ISCO 3700  
sampler.



**Photo 4 – 5/13/19**

ISCO 3700 Composite  
sampler.







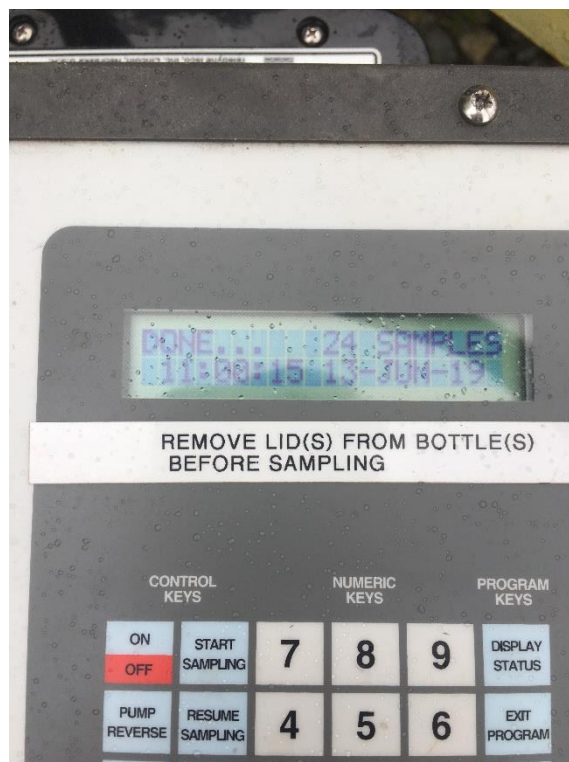
**Photo 5 – 6/12/19**

View of sampling system  
before departure.



**Photo 6 – 6/13/19**

Completed 24-hour  
composite sample.



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## **Attachment B**

### **Laboratory Chain of Custody Forms**

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## Page of

R5 05302018

**RJ LEE GROUP**  
DELIVERING SCIENTIFIC RESOLUTION



170  
200  
**FedEx**  
Express  
Package  
US Airbill  
FedEx Tracking Number  
8130 2289 5546

1 From  
Date 5/21/16

Sender's Name  
Jeremy Fleming  
Phone 717 500-8400

Company  
MAY GROUP, INC.

Address  
1000 W. BROADWAY  
PHILADELPHIA, PA 19102  
Dpt./Floor/Suite/Room

City  
PHILADELPHIA  
State PA ZIP 19102-1176

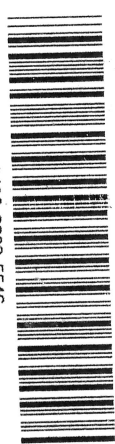
2 Your Internal Billing Reference

3 To  
Recipient's Name  
Sample Receiving  
Phone 724 325-1716

Company  
RS Lee Group

Address  
350 Hoberg Rd  
Dpt./Floor/Suite/Room

City  
Monroeville  
State PA ZIP 15146



8130 2289 5546

REF ID: A60150001

Form ID No. 0215

4 Express Package Service \*To most locations.

Packages up to 150 lbs.  
For packages over 150 lbs., use the  
FedEx Express Freight US Airbill.

Next Business Day

☐ FedEx First Overnight  
Earliest next business morning delivery to select locations. Next business morning delivery is selected on Monday unless Saturday delivery is selected.

☐ FedEx Priority Overnight  
Next business morning. \*Friday shipments will be delivered on Monday unless Saturday delivery is selected.

☒ FedEx Standard Overnight  
Next business afternoon.  
Saturday delivery NOT available.

2 or 3 Business Days

☐ FedEx 2Day AM.  
Second business morning.  
Saturday delivery NOT available.

☐ FedEx 2Day  
Second business afternoon. \*Thursday shipments delivered on Monday unless Saturday delivery is selected.

☐ FedEx Express Saver  
Third business day.  
Saturday delivery NOT available.

5 Packaging \*Declared value limit \$500.

☐ FedEx Envelope\*

☐ FedEx Pak\*

☐ FedEx Box

☐ FedEx Tube

☒ Other

6 Special Handling and Delivery Signature Options \*Fees may apply. See the FedEx Service Guide.

☐ Saturday Delivery  
NOT available for FedEx Standard Overnight, FedEx 2Day AM, or FedEx Express Saver.

☒ No Signature Required  
Package may be left without obtaining a signature for delivery.

☐ Direct Signature  
Someone at recipient's address may sign for delivery.

☐ Does this shipment contain dangerous goods?  
One box must be checked.  
Yes ☐ No ☐ As per attached Shipper's Declaration. Shipper's Declaration not required.

☐ Indirect Signature  
If no one is available at recipient's address, someone at a neighboring residential address only.

☐ Restricted items apply for dangerous goods — see the current FedEx Service Guide.

7 Payment Bill to:

Sender ☒ Recipient ☐ Third Party ☐ Credit Card ☐ Cash/Check

Total Packages 10 Total Weight 10 lbs.

Credit Card Auth. [blacked out]

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R5 05302018

**RJ LEE GROUP**  
DELIVERING SCIENTIFIC RESOLUTION



edEx  
Express

06.06  
1506  
A

FedEx  
Tracking  
Number

8146 6149 1506

Form  
ID No. 0215

4 Express Package Service

\*To most locations.

Packages up to  
For packages over 60  
FedEx Express Freight

Next Business Day

- ☐ FedEx First Overnight  
Earliest next business morning delivery to select locations. Friday shipments will be delivered on Monday unless Saturday Delivery is selected.
- ☐ FedEx Priority Overnight  
Next business morning.\* Friday shipments will be delivered on Monday unless Saturday Delivery is selected.
- ☒ FedEx Standard Overnight  
Next business afternoon.\* Saturday Delivery NOT available.

2 or 3 Business Days

- ☐ FedEx 2Day A.M.  
Second business morning.\* Saturday Delivery NOT available.
- ☐ FedEx 2Day  
Second business afternoon.\* Thursday shipments will be delivered on Monday unless Saturday Delivery is selected.
- ☐ FedEx Express Saver  
Third business day.\* Saturday Delivery NOT available.

5 Packaging

\*Declared value limit \$500.

- ☐ FedEx Envelope\* ☐ FedEx Pak\* ☐ FedEx Box ☐ FedEx Tube ☒ Other

6 Special Handling and Delivery Signature Options

Fees may apply. See the FedEx Service Guide.

- ☐ Saturday Delivery  
NOT available for FedEx Standard Overnight, FedEx 2Day A.M., or FedEx Express Saver.

- ☒ No Signature Required  
Package may be left without obtaining a signature for delivery.

- ☐ Direct Signature  
Someone at recipient's address may sign for delivery.

- ☐ Indirect Signature  
If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only.

Does this shipment contain dangerous goods?

One box must be checked.

- ☐ No ☐ Yes  
As per attached Shipper's Declaration. ☐ Yes  
Shipper's Declaration not required. ☐ Dry Ice  
Dry Ice, 5, UN 1845 x kg

Restrictions apply for dangerous goods — see the current FedEx Service Guide.

- ☐ Cargo Aircraft Only

7 Payment Bill to:

Enter FedEx Acct. No. or Credit Card No. below.

Obtain recip. Acct. No. ☐

- ☒ Sender Acct. No. in Section 1 will be billed. ☐ Recipient ☐ Third Party ☐ Credit Card ☐ Cash/Check

Total Packages Total Weight Credit Card Auth.

lbs.

\*Our liability is limited to US\$100 unless you declare a higher value. See the current FedEx Service Guide for details.

Rev. Date 5/15 • Part #153134 • ©1994-2015 FedEx • PRINTED IN U.S.A. SRM

From

Date 6/5/19

Sender's Name Jeremy Fleming

Phone 717 593-8600

Company RFL GROUP INC.

Address 1129 W. COVERDALE RD

Dept./Floor/Suite/Room

City MIDDLEBURY

State PA

ZIP 17056-9173

2 Your Internal Billing Reference

3 To

Recipient's Name Sample Receiving

Phone 700 460-0715

Company RFL Group

Address 350 Hocking Road

Dept./Floor/Suite/Room

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address Use this line for the HOLD location address or for continuation of your shipping address.

City MARIETTA

State PA

ZIP 15110



8146 6149 1506

## Page of

R5 05302018

**RJ LEE GROUP**  
DELIVERING SCIENTIFIC RESOLUTION

1046

1200

**FedEx**  
Express  
Package  
US Airbill

FedEx Tracking Number 8146 6149 1469

MUR3

Form 10 No. 0215

fedex.com 1800.GoFedEx 1800.463.3339

**1 From**  
Date 6-13-19  
Sender's Name Jeremy Fleming  
Company ARM GROUP INC  
Address 1127 W GOVERNOR RD  
City HUMMELSTOWN State PA ZIP 17036-9175  
Dept./Floor/Suite/Room

**2 Your Internal Billing Reference**  
140435-1

**3 To**  
Recipient's Name Sample Receiving  
Company RJ We Group  
Address 350 Hackberg Rd  
City Monacaeville State PA ZIP 15146  
Dept./Floor/Suite/Room



8146 6149 1469

**4 Express Package Service** \*To most locations.  
**Next Business Day**  
☐ FedEx First Overnight  
☐ FedEx Priority Overnight  
☒ FedEx Standard Overnight  
**2 or 3 Business Days**  
☐ FedEx 2Day A.M.  
☐ FedEx 2Day  
☐ FedEx Express Saver

**5 Packaging** \*Declared value limit \$500.  
☐ FedEx Envelope\*  
☐ FedEx Pak\*  
☐ FedEx Box  
☐ FedEx Tube  
☒ Other

**6 Special Handling and Delivery Signature Options** Fees may apply. See the FedEx Service Guide.  
☐ Saturday Delivery  
☒ No Signature Required  
☐ Direct Signature  
☐ Indirect Signature  
Does this shipment contain dangerous goods?  
☐ No  
☐ Yes  
☐ Yes

**7 Payment Bill to:**  
Sender Acct. No. in Section 1 will be billed.  
Recipient  
Third Party  
Total Packages  
Total Weight  
lbs.

Your liability is limited to US\$100 unless you declare a higher value. See the current FedEx Service Guide.

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fedex.com 1800.GoFedEx 1800.463.3339

6 15:00  
146  
06.1  
kg  
465  
B01

## Final Laboratory Report

### TEM EPA Water Analysis

Mr. R. Timothy Weston  
K & L Gates  
17 North Second Street  
18th Floor  
Harrisburg, PA 17101  
US

Report Date: 05/31/2019  
Sample Receipt Date: 05/22/2019  
RJ Lee Group Job No.: LLH808740-2  
Authorization/P.O. No.:  
Samples Received: 1  
Client Job No.:

Method: EPA Method 100.2 600/R-94-134

Client Sample Number	RJLG Sample Number	Date Prepped	Date Analyzed	Filter Area (mm <sup>2</sup> )	Volume (ml)	Area Analyzed (mm <sup>2</sup> )	Confidence Interval >10 µm	Asbestos Structures >10 µm		Analytical Sensitivity (MFL) >10 µm	Concentration (MFL) >10 µm
								Chry	Amph		
001	3158580.HTW1	05/22/2019	05/28/2019	1220	2	0.18806	0-4	0	0	3.2	< 3.2

Authorized Signature: \_\_\_\_\_



Ashleigh Sload, Analyst

#### NOTES

1. Water samples collected more than 24 hours before receipt may be out of compliance. Drinking water samples are filtered within 24 hours of receipt.
2. "<" indicates results less than analytical sensitivity. "----" indicates that sample was not analyzed.
3. Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA #100364, NVLAP #101208-0, NY ELAP #10884) facility.
4. If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.
5. Abbreviations: N/A-Not Applicable, Chry-Chrysotile Asbestos, Amph-Amphibole Asbestos, MFL-million fibers per liter.
6. Samples will be held for 30 days and then disposed of per Federal regulations.
7. These results are submitted pursuant to RJ Lee Group's current terms and conditions of sale, including the company's standard warranty and limitation of liability provisions. No responsibility or liability is assumed for the manner in which these results are used or interpreted.

#### DISCLAIMER

RJ Lee Group, Inc. is accredited by the New York Department of Health Environmental Laboratory Program (NY ELAP) and the Pennsylvania Department of Environmental Protection (PA DEP) for asbestos in water analysis by TEM. This report may not be used to claim product endorsement by NY ELAP, PA DEP or any other regulatory or laboratory accrediting agency. Any reproduction of this document must be in full in order for the report to be valid. This report is not valid unless it bears the name of a NY ELAP and PA-DEP approved signatory.

These results are submitted pursuant to RJ Lee Group's current terms and conditions of sale, including the company's standard warranty and limiting provisions and no responsibility or liability is assumed for the manner in which the results are used or interpreted. Unless notified in writing to return the samples covered by this report, RJ Lee Group will store the samples for a period of thirty (30) days before discarding. A shipping and handling fee will be assessed for the return of any sample.

RJL: LLH808740-2	3158580.HTW1	Microscope tem2000fx2	Grid Openings	20
001	K & L Gates	Magnification 21 KX	Asbestos	0.0
Vol: 2.0 mL	Grid: 0.0094 mm <sup>2</sup>	Acc. Voltage 120 KV		
Filter Size: 47 mm	HQ44284	Operator: Jon Swope		
		Cv = 0		

Field	Fiber	Length	Width	FiberType	Morph	EDX	File #	Photo	SAED	AmplID	C/A
1				NSD							
2				NSD							
3				NSD							
4				NSD							
5				NSD							
6				NSD							
7				NSD							
8				NSD							
9				NSD							
10				NSD							
11				NSD							
12				NSD							
13				NSD							
14				NSD							
15				NSD							
16				NSD							
17				NSD							
18				NSD							
19				NSD							
20				NSD							

**7% Particulate**

Abbreviations: F - Fiber, C - Cluster, B - Bundle, M - Matrix, Cle - Cleavage, Asb - Asbestiform, Bys - Byssolite

Initial Review: 5/28/2019 1:27:25 PM approve by Jon Swope

Final Review: 5/30/19 8:15 AM approve by Ashleigh Sload



## Final Laboratory Report

### TEM EPA Water Analysis

Mr. R. Timothy Weston  
K & L Gates  
17 North Second Street  
18th Floor  
Harrisburg, PA 17101  
US

Report Date: 06/17/2019  
Sample Receipt Date: 06/06/2019  
RJ Lee Group Job No.: LLH808740-3  
Authorization/P.O. No.:  
Samples Received: 1  
Client Job No.:

Method: EPA Method 100.2 600/R-94-134

Client Sample Number	RJLG Sample Number	Date Prepped	Date Analyzed	Filter Area (mm <sup>2</sup> )	Volume (ml)	Area Analyzed (mm <sup>2</sup> )	Confidence Interval >10 µm	Asbestos Structures >10 µm		Analytical Sensitivity (MFL) >10 µm	Concentration (MFL) >10 µm
								Chry	Amph		
002	3158888.HTW3	06/06/2019	06/14/2019	1220	12.5	0.49289	0-4	0	0	0.2	< 0.2

Authorized Signature: \_\_\_\_\_

Monica McGrath-Koerner, Scientist

#### NOTES

1. Water samples collected more than 24 hours before receipt may be out of compliance. Drinking water samples are filtered within 24 hours of receipt.
2. "<" indicates results less than analytical sensitivity. "----" indicates that sample was not analyzed.
3. Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA #100364, NVLAP #101208-0, NY ELAP #10884) facility.
4. If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.
5. Abbreviations: N/A-Not Applicable, Chry-Chrysotile Asbestos, Amph-Amphibole Asbestos, MFL-million fibers per liter.
6. Samples will be held for 30 days and then disposed of per Federal regulations.
7. These results are submitted pursuant to RJ Lee Group's current terms and conditions of sale, including the company's standard warranty and limitation of liability provisions. No responsibility or liability is assumed for the manner in which these results are used or interpreted.

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**RJ Lee Group, Inc.**  
**TEM Count Sheet**

RJL: LLH808740-3	3158888.HTW3	Microscope tem2000fx1	Grid Openings	52
002	K & L Gates	Magnification 21 KX	Asbestos	0.0
Vol: 12.5 mL	Grid: 0.0095 mm <sup>2</sup>	Acc. Voltage 120 KV		
Filter Size: 47 mm	HQ44354	Operator: Ashleigh Sload		
		Cv = 0		

Field	Fiber	Length	Width	FiberType	Morph	EDX	File #	Photo	SAED	AmplID	C/A
1				NSD							
2				NSD							
3				NSD							
4				NSD							
5				NSD							
6				NSD							
7				NSD							
8				NSD							
9				NSD							
10				NSD							
11				NSD							
12				NSD							
13				NSD							
14				NSD							
15				NSD							
16				NSD							
17				NSD							
18				NSD							
19				NSD							
20				NSD							
21				NSD							
22				NSD							
23				NSD							
24				NSD							
25				NSD							
26				NSD							
27				NSD							
28				NSD							
29				NSD							
30				NSD							
31				NSD							
32				NSD							
33				NSD							
34				NSD							
35				NSD							
36				NSD							
37				NSD							
38				NSD							
39				NSD							
40				NSD							
41				NSD							
42				NSD							
43				NSD							
44				NSD							

RJL: LLH808740-3	3158888.HTW3	Microscope tem2000fx1	Grid Openings	52
002	K & L Gates	Magnification 21 KX	Asbestos	0.0
Vol: 12.5 mL	Grid: 0.0095 mm <sup>2</sup>	Acc. Voltage 120 KV		
Filter Size: 47 mm	HQ44354	Operator: Ashleigh Sload		
		Cv = 0		

Field	Fiber	Length	Width	FiberType	Morph	EDX	File #	Photo	SAED	AmplID	C/A
45				NSD							
46				NSD							
47				NSD							
48				NSD							
49				NSD							
50				NSD							
51				NSD							
52				NSD							

**12% Particulate**

Abbreviations: F - Fiber, C - Cluster, B - Bundle, M - Matrix, Cle - Cleavage, Asb - Asbestiform, Bys - Byssolite

Initial Review: 6/14/2019 9:36:21 AM approve by Jon Swope

Final Review: 6/17/19 10:55 AM approve by Monica Mcgrath



## Final Laboratory Report

### TEM EPA Water Analysis

Mr. R. Timothy Weston  
K & L Gates  
17 North Second Street  
18th Floor  
Harrisburg, PA 17101  
US

Report Date: 06/19/2019  
Sample Receipt Date: 06/14/2019  
RJ Lee Group Job No.: LLH808740-4  
Authorization/P.O. No.:  
Samples Received: 1  
Client Job No.:

Method: EPA Method 100.2 600/R-94-134

Client Sample Number	RJLG Sample Number	Date Prepped	Date Analyzed	Filter Area (mm <sup>2</sup> )	Volume (ml)	Area Analyzed (mm <sup>2</sup> )	Confidence Interval >10 µm	Asbestos Structures >10 µm		Analytical Sensitivity (MFL) >10 µm	Concentration (MFL) >10 µm
								Chry	Amph		
003	3159023.HTW2	06/14/2019	06/18/2019	1220	25	0.24645	0-4	0	0	0.2	< 0.2

Authorized Signature: \_\_\_\_\_

Monica McGrath-Koerner, Scientist

#### NOTES

1. Water samples collected more than 24 hours before receipt may be out of compliance. Drinking water samples are filtered within 24 hours of receipt.
2. "<" indicates results less than analytical sensitivity. "----" indicates that sample was not analyzed.
3. Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA #100364, NVLAP #101208-0, NY ELAP #10884) facility.
4. If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.
5. Abbreviations: N/A-Not Applicable, Chry-Chrysotile Asbestos, Amph-Amphibole Asbestos, MFL-million fibers per liter.
6. Samples will be held for 30 days and then disposed of per Federal regulations.
7. These results are submitted pursuant to RJ Lee Group's current terms and conditions of sale, including the company's standard warranty and limitation of liability provisions. No responsibility or liability is assumed for the manner in which these results are used or interpreted.

#### DISCLAIMER

RJ Lee Group, Inc. is accredited by the New York Department of Health Environmental Laboratory Program (NY ELAP) and the Pennsylvania Department of Environmental Protection (PA DEP) for asbestos in water analysis by TEM. This report may not be used to claim product endorsement by NY ELAP, PA DEP or any other regulatory or laboratory accrediting agency. Any reproduction of this document must be in full in order for the report to be valid. This report is not valid unless it bears the name of a NY ELAP and PA-DEP approved signatory.

These results are submitted pursuant to RJ Lee Group's current terms and conditions of sale, including the company's standard warranty and limiting provisions and no responsibility or liability is assumed for the manner in which the results are used or interpreted. Unless notified in writing to return the samples covered by this report, RJ Lee Group will store the samples for a period of thirty (30) days before discarding. A shipping and handling fee will be assessed for the return of any sample.

**RJ Lee Group, Inc.**  
**TEM Count Sheet**

Date Analyzed: 6/18/2019

RJL: LLH808740-4	3159023.HTW2	Microscope tem2000fx1	Grid Openings	26
003	K & L Gates	Magnification 21 KX	Asbestos	0.0
Vol: 25. mL	Grid: 0.0095 mm <sup>2</sup>	Acc. Voltage 120 KV		
Filter Size: 47 mm	HQ44356	Operator: Ashleigh Sload		
		Cv = 0		

Field	Fiber	Length	Width	FiberType	Morph	EDX	File #	Photo	SAED	AmplID	C/A
1				NSD							
2				NSD							
3				NSD							
4				NSD							
5				NSD							
6				NSD							
7				NSD							
8				NSD							
9				NSD							
10				NSD							
11				NSD							
12				NSD							
13				NSD							
14				NSD							
15				NSD							
16				NSD							
17				NSD							
18				NSD							
19				NSD							
20				NSD							
21				NSD							
22				NSD							
23				NSD							
24				NSD							
25				NSD							
26				NSD							

14% Particulate

Abbreviations: F - Fiber, C - Cluster, B - Bundle, M - Matrix, Cle - Cleavage, Asb - Asbestiform, Bys - Byssolite

Initial Review: 6/18/2019 11:13:02 AM approve by Ashleigh Sload

Final Review: 6/18/19 4:39 PM approve by Monica McGrath