

Attachment F - Part 2
Water Sampling Results (September 2019)



ARM Group Inc.

Engineers and Scientists

September 25, 2019

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

Re: Specialty Granules, LLC
Surface Water Sampling
Charmian Plant Property
Blue Ridge Summit, Pennsylvania
ARM Project 190681

Dear Mr. Moore:

This letter report describes the collection of six (6) surface water grab samples from multiple streams by ARM Group Inc. (ARM) for Specialty Granules LLC (SGI). The samples were collected from multiple streams within and adjacent to the Charmian Plant property north of Blue Ridge Summit, Pennsylvania (PA). ARM understands this work was performed to comply with requests from the Pennsylvania Department of Environmental Protection (PADEP) as part of the review of the pending application for the Northern Tract Quarry. The collected samples were submitted to RJ Lee Group in Monroeville, PA for analysis of asbestos via United States Environmental Protection Agency (EPA) Method 100.1. This letter report includes a description of the sampling purpose, the sampling methodology, and an overview of the sampling event. Supporting information includes site photographs and a copy of the laboratory chain of custody.

BACKGROUND

At the Charmian Plant property, SGI operates a non-coal surface mining (quarry) operation in metabasalt rock. The property is located approximately 1.25 miles north of Blue Ridge Summit, PA. Access to the site is via Old Waynesboro Road. The sampling event is related to SGI's proposed Northern Tract Quarry expansion. Land uses adjacent to the Charmian Plant property are predominantly forest and low-density residential (permanent and seasonal) development.

SAMPLING METHODS

A Job Safety Analysis (JSA) was conducted and a JSA form was completed and signed by the ARM representative prior to the sampling event. At each of the six pre-determined sampling sites, ARM's biologist took notes regarding characteristics of the sampling site, the landscape adjacent to the sampling site, and any other features which may affect the quality of the water source. The sample locations were located on unnamed tributaries to Toms Run and unnamed

tributaries to Miney Branch. Each sample location was surveyed using a Trimble GeoXH handheld global positioning system (GPS) device. Representative photographs were taken at the sample locations. The collected samples were subsequently shipped to RJ Lee Group in Monroeville, Pennsylvania, where the laboratory analysis was performed.

SAMPLING EVENT

The surface water sampling was conducted on September 18, 2019 by ARM's biologist Matt Bixler. Weather conditions on the day the field investigation included no measurable precipitation, mostly sunny skies, and air temperature of approximately 75 degrees Fahrenheit. Less than 0.10 inch of rain fell during the three days preceding the sampling event. Less than one inch of rain fell during the month of September, prior to the sampling event. Low flow surface water conditions were present at stations, SS-1, SS-3, SS-13, and SS-30. However, the low flow conditions at the sample stations did not prevent collection of the surface water samples.

ARM arrived onsite at approximately 8:00am on September 18, 2019 for the sampling event. Matt Watson (SGI) accompanied ARM staff during the collection event and identified the six pre-determined sample locations. The water sources sampled consisted of five stream segments and one man-made pond. The six sample station locations are further described below.

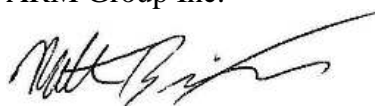
Sample Station	Location (Latitude, Longitude) NAD 83	Description
SS-1	39.759462, -77.438489	Trib 58781 to Toms Creek. Located on private property, east of the Charmian Plant property, west of Iron Springs Road/Gum Springs Road intersection. The sample station is within a forested area and is located upstream of the Gum Springs Road bridge.
SS-3	39.767948, -77.433495	Trib 58781 to Toms Creek. Located on private property, just east of the Charmian Plant property, east of Iron Springs Road. The sample station is within a forested area and is located upstream of the Iron Springs Road bridge.
SS-13	39.742468, -77.455969	Unnamed Tributary (UNT) of Miney Run. Located on private property, just east of the Charmian Plant property, south of Old Waynesboro Road. The sample station is within a forested area. Manmade ponds that are part of the quarry operations are located north of the station.
SS-30	39.743282, -77.459418	UNT of Miney Run. Located within Charmian Plant property, south of Old Waynesboro Road. The sample station is within a forested area. Manmade ponds that are part of the quarry operations are located east of the station.
SS-TC US	39.767747, -77.449317	Trib 58783 to Toms Creek. Located on private property, north of the Charmian Plant property, north of Gum Springs Road. The sample station is within a forested area. Manmade ponds that are part of the quarry operations are located east of the station.
Pitts Pond	39.762338, -77.450409	Manmade pond located within the Charmian Plant property. Quarry operations are located south of the pond and forest is located to the north.



The grab samples were collected in laboratory-provided, unpreserved 1-Liter plastic bottles. The sample locations are illustrated on the Sample Location Map (**Figure 1**) with a topographic base. Photographs and GPS point were collected at each sample location. A photograph log of the sampling locations is included as **Attachment A**. Photographs of station SS-TC US were not collected during the sampling event. Upon completion of the sampling event, the six samples were immediately shipped via FedEx to RJ Lee Group, Monroeville, PA, under their approved chain-of-custody 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.



Matt Bixler, PWS
Project Scientist II



David W. Mooney, P.G
Senior Project Manager

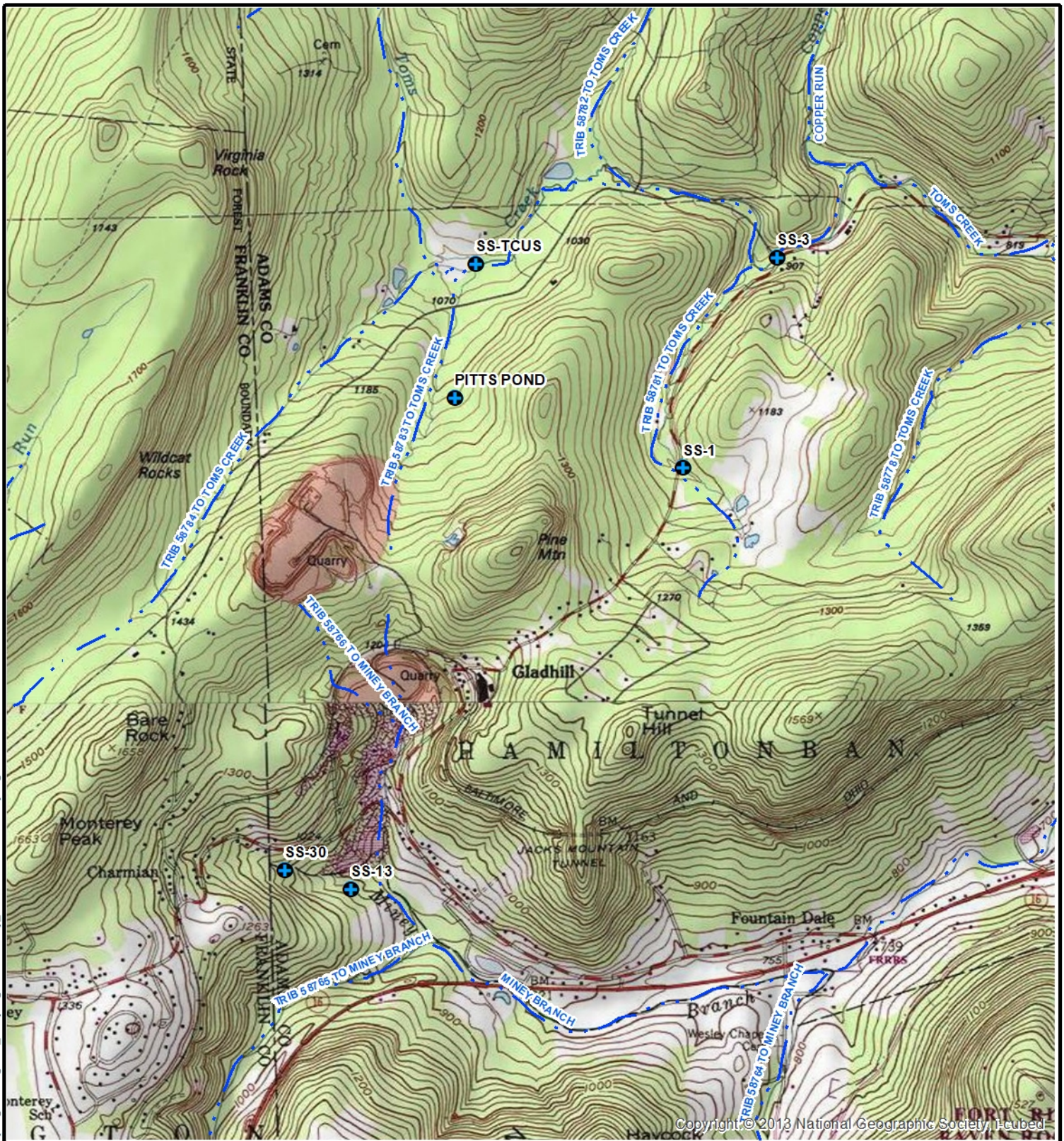
Enclosures: Figure 1: Sample Location Map
Attachment A. Photograph Log
Attachment B. Chain of Custody Form



Figure 1

Site Location Map





REF: Base map from ESRI USA Topo Maps. Refer to USGS 7.5 minute Quads Iron Springs and Blue Ridge Summit, PA.

LEGEND

- + MACROINVERTEBRATE SAMPLE STATION LOCATION
- STREAM

0 2,000 4,000 6,000

SCALE IN FEET

This drawing, its contents, and each component of this drawing are the property of and proprietary to ARM Group Inc. and shall not be reproduced or used in any manner except for the purpose identified on the Title Block, and only by or on behalf of this client for the identified project unless otherwise authorized by the express, written consent of ARM Group Inc.

Sample Location Map

Surface Water Sampling
Specialty Granules Inc
Hamiltonban and Liberty Townships,
Adams County, Pennsylvania

September, 2019

Scale: 1" = 2,000'

190681



ARM Group Inc.

Engineers and Scientists
www.armgroup.net

Figure

1

Attachment A

Photograph Log



PHOTOGRAPH LOG
Surface Water Sampling Project



Photograph 1: This photograph illustrates sample station SS-1. The view is facing west.



Photograph 2: This photograph illustrates sample station SS-3. The view is facing southeast.





Photograph 3: This photograph illustrates sample station SS-13. The view is facing southeast.



Photograph 4: This photograph illustrates sample station SS-30. The view is facing northwest.





Photograph 5: This photograph illustrates the Pitts Pond sample station. The view is facing south.



Attachment B

Laboratory Chain of Custody Form



Request for Environmental and IH Laboratory Analytical Services

Page 1 of 1

ATTENTION TO: Drew Van Orden					Purchase Order No.:					Client Job No.: 190681H																			
Lab Use Only	Project No.:			Client No.:			Date Results Needed			Rush Charges Authorized? (check one)			<input type="checkbox"/> YES <input type="checkbox"/> NO																
	Date Logged In:			Logged In By:																									
Report Results To	Name: Matt Bixler						Drinking Water Sample Only			Sample Purpose: Information <input type="checkbox"/> Regulatory <input type="checkbox"/> Accreditation (please list below): System ID #: DOH Source #: Multiple Sources #s:																			
	Company: ARM Group Inc.																												
	Address: 1129 West Governor Road																												
	City, State, Zip: Hershey, PA 17033									Sample Purpose: A <input type="checkbox"/> B <input type="checkbox"/> Other <input type="checkbox"/>																			
	Phone: 717-364-5574 Fax: 717-533-8605																												
Email Results To: mbixler@armgroup.net						Chemistry Analysis Key			Preservation: Unpres H ₂ SO ₄ 4°C HCl HNO ₃ NaOH Other Na ₂ SO ₄ Matrix: WW=Wastewater GW=Groundwater S=Soil/Sludge E=Extract Container: P=Plastic G=Glass W=Wipe A=Air (filter or tube)																				
Invoice To																													
Name: Dave Mooney If a hard copy of invoice is needed, check here <input type="checkbox"/>																													
Company: ARM Group Inc. Email: dmooney@armgroup.net																													
Address: 1129 West Governor Road																													
City, State, Zip: Hershey, PA 17033						Analysis Requested			Pres. Upon Receipt (Y/N)			Preservation			Matrix			Container Type			pH			No. Containers					
Phone: 717-533-8600 Fax: 717-533-8605																													
Special Instructions						EPA 100.2																							
Client Sample ID		Sample Description		Sample Date		Sample Time		Wipe Area / Air Volume		Sample Location (Please specify if NY state)																			
						Start Stop																							
SS-TC US		Surface Water Sample		09/18/19		0949 0949						1																	
SS-3		Surface Water Sample		09/18/19		0927 0927						1																	
SS-1		Surface Water Sample		09/18/19		0917 0917						1																	
SS-13		Surface Water Sample		09/18/19		0823 0823						1																	
SS-30		Surface Water Sample		09/18/19		0833 0833						1																	
Pitts Pond		Surface Water Sample		09/18/19		0857 0857						1																	

Final Laboratory Report

TEM Non Potable Water Analysis

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

Report Date: 09/27/2019
 Sample Receipt Date: 09/23/2019
 RJ Lee Group Job No.: LLH808740-6
 Authorization/P.O. No.:
 Samples Received: 6
 Client Job No.:

Method: EPA 100.1 600/4-03-043

Client Sample Number	RJLG Sample Number	Date Prepped	Date Analyzed	Filter Area (mm ²)	Volume (ml)	Area Analyzed (mm ²)	Confidence Interval >0.5 µm	Asbestos Structures >0.5 µm		Analytical Sensitivity (MFL) >0.5 µm	Concentration (MFL) >0.5 µm
								Chry	Amph		
SS-TC US	3161170.HTW1	09/24/2019	09/27/2019	1220	50	0.12612	0-4	0	0	0.2	< 0.2
SS-3	3161171.HTW1	09/24/2019	09/27/2019	1220	50	0.12612	0-4	0	0	0.2	< 0.2
SS-1	3161172.HTW1	09/24/2019	09/27/2019	1220	50	0.12612	0-4	0	0	0.2	< 0.2
SS-13	3161173.HTW1	09/24/2019	09/27/2019	1220	50	0.12612	0-4	0	0	0.2	< 0.2
SS-30	3161174.HTW1	09/24/2019	09/27/2019	1220	25	0.25225	0-4	0	0	0.2	< 0.2
Pitts Pond	3161175.HTW1	09/24/2019	09/27/2019	1220	50	0.12612	0-6	0	1	0.2	0.2

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.

RJ Lee Group Job No: LLH808740-6
Client Job No/Name:

Final Laboratory Report (cont'd)

Client: K & L Gates
Report Date: 09\27\2019

Authorized Signature: 
Ashleigh Sload, 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.
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RJL: LLH808740-6	3161170.HTW1	Microscope tem2000fx2	Grid Openings	14
SS-TC US	K & L Gates	Magnification 21 KX	Asbestos	0.0
Vol: 50.0 mL	Grid: 0.009 mm ²	Acc. Voltage 120 KV		
Filter Size: 47 mm	HQ44662	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							

10% Particulate

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

Initial Review: 9/27/2019 8:19:16 AM approve by Jon Swope

Final Review: 9/27/19 11:22 AM approve by Ashleigh Sload

RJL: LLH808740-6	3161171.HTW1	Microscope tem2000fx1	Grid Openings	14
SS-3	K & L Gates	Magnification 21 KX	Asbestos	0.0
Vol: 50.0 mL	Grid: 0.009 mm ²	Acc. Voltage 120 KV		
Filter Size: 47 mm	HQ44662	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							

5% Particulate

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

Initial Review: 9/27/2019 9:25:57 AM approve by Jon Swope

Final Review: 9/27/19 11:22 AM approve by Ashleigh Sload

RJL: LLH808740-6	3161172.HTW1	Microscope tem2000fx2	Grid Openings	14
SS-1	K & L Gates	Magnification 21 KX	Asbestos	0.0
Vol: 50.0 mL	Grid: 0.009 mm ²	Acc. Voltage 120 KV		
Filter Size: 47 mm	HQ44662	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							

7% Particulate

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

Initial Review: 9/27/2019 8:49:36 AM approve by Jon Swope

Final Review: 9/27/19 11:22 AM approve by Ashleigh Sload

RJL: LLH808740-6	3161173.HTW1	Microscope tem2000fx2	Grid Openings	14
SS-13	K & L Gates	Magnification 21 KX	Asbestos	0.0
Vol: 50.0 mL	Grid: 0.009 mm ²	Acc. Voltage 120 KV		
Filter Size: 47 mm	HQ44662	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							

10% Particulate

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

Initial Review: 9/27/2019 8:57:08 AM approve by Jon Swope

Final Review: 9/27/19 11:22 AM approve by Ashleigh Sload

RJL: LLH808740-6	3161174.HTW1	Microscope tem2000fx2	Grid Openings	28
SS-30	K & L Gates	Magnification 21 KX	Asbestos	0.0
Vol: 25.0 mL	Grid: 0.009 mm ²	Acc. Voltage 120 KV		
Filter Size: 47 mm	HQ44662	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							
21				NSD							
22				NSD							
23				NSD							
24				NSD							
25				NSD							
26				NSD							
27				NSD							
28				NSD							

12% Particulate

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

Initial Review: 9/27/2019 9:39:58 AM approve by Jon Swope

Final Review: 9/27/19 11:22 AM approve by Ashleigh Sload

RJL: LLH808740-6	3161175.HTW1	Microscope tem2000fx2	Grid Openings	14
Pitts Pond	K & L Gates	Magnification 21 KX	Asbestos	1.0
Vol: 50.0 mL	Grid: 0.009 mm ²	Acc. Voltage 120 KV		
Filter Size: 47 mm	HQ44662	Operator: Jon Swope		
		Cv = 0.066		

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	1	15.8	0.5	Amphibole	F	MgSiCaFeAl	15493D	Image1 Image2 Image3	Diff1	Acti	Asb
8				NSD							
9				NSD							
10				NSD							
11				NSD							
12				NSD							
13				NSD							
14				NSD							

8% Particulate

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

Initial Review: 9/27/2019 10:28:17 AM approve by Jon Swope

Final Review: 9/27/19 11:23 AM approve by Ashleigh Sload

Request for Environmental and IH Laboratory Analytical Services

ATTENTION TO: Drew Van Orden						Purchase Order No.: _____							Client Job No.: 190681H																
Lab Use Only		Project No.: _____		Client No.: _____		Date Results Needed		Rush Charges Authorized? (check one) YES NO																					
Report Results To		Name: Matt Bixler		Company: ARM Group Inc.		Drinking Water Sample Only		Sample Purpose: Information Regulatory Accreditation (please list below):																					
		Address: 1129 West Governor Road		City, State, Zip: Hershey, PA 17033				System ID #:		DOH Source #:																			
		Phone: 717-364-5574		Fax: 717-533-8605				Multiple Sources #:																					
		Email Results To: mbider@armgroup.net																											
Invoice To		Name: Dave Mooney		If a hard copy of invoice is needed, check here		Chemistry Analysis Key		Preservation: Unpres 4°C HNO ₃ Other Matrix: H ₂ SO ₄ HCl NaOH Na ₂ SO ₄ E=Extract Container: P=Plastic G=Glass W=Wipe A=Air (filter or tube)																					
		Company: ARM Group Inc.		Email: dmooney@armgroup.net																									
		Address: 1129 West Governor Road		City, State, Zip: Hershey, PA 17033																									
Special Instructions		Phone: 717-533-8600		Fax: 717-533-8605																									
Client Sample ID		Sample Description		Sample Date		Sample Time		Wipe Area / Air Volume		Sample Location (Please specify if NY state)		Analysis Requested						Pres. Upon Receipt (Y/N)		Preservation		Matrix		Container Type		pH		No. Containers	
						Start Stop																							
SS-TC US		Surface Water Sample		09/18/19		0949 0949						EPA 100.2								N SW 4P								1	
SS-3		Surface Water Sample		09/18/19		0927 0927														N SW 4P								1	
SS-1		Surface Water Sample		09/18/19		0917 0917														N SW 4P								1	
SS-13		Surface Water Sample		09/18/19		0823 0823														N SW 4P								1	
SS-30		Surface Water Sample		09/18/19		0833 0833														N SW 4P								1	
Pitts Pond		Surface Water Sample		09/18/19		0857 0857														N SW 4P								1	
								</																					

Pennsylvania - HQ
350 Hochberg Road
Monroeville, PA 15146

Washington
Columbia Basin Analytical Laboratories
2710 North 20th Avenue
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