

**Attachment I**  
**Processed Material and Product Sampling Results**

A041017356-0



**MINERALS INC**

34 Charles Street • Hagerstown MD 21740-3899 • Tel: 301-797-7797 • Fax: 301-797-7796

May 27, 2011

RJ Lee Group, Inc.  
350 Hochberg Road  
Monroeville, PA 15146  
Attn: Matthew Sanchez

Via: Federal Express: 7971-4568-1537

RE: Fiber - PLM and Crystalline Silica - XRD Analyses.

Dear Mr. Sanchez:

Enclosed are the following samples for the required analyses. All samples are crushed rock and classified as a volcanic rock (meta-basalt, meta-andesite, and rhyolite). Also enclosed is an MSDS sheet.

**Fiber and Crystalline Silica:**

For each sample listed (34 samples), complete the following analyses:

1. Polarized Light Microscopy (PLM): Bulk Analyses – 1,000 Point Count (Untreated) for regulated asbestiform fibers (EPA 600/R-93/116).
2. Total Crystalline Silica (Bulk Analysis) by quantitative XRD.
3. A 10 - day turn-around service is requested for both the PLM and XRD analyses.

Twelve samples of rock granules (-8 mesh x 35 mesh). (200 grams each):

8706 - Granules

8707 - Granules

8708 - Granules

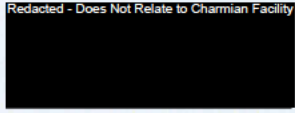
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RCVD 05-31-11 10:25AM  
Linda Margus  
RJ Lee Group




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Twenty-two samples of rock fines (-8 mesh x 35 mesh). (200 grams each):

8684 - Fines  
8685 - Fines  
8686 - Fines  
8687 - Fines  
8688 - Fines  
8689 - Fines  
8690 - Fines  
8691 - Fines

Redacted - Does Not Relate to Charmian Facility



Please send the lab results directly to:

Celeste Wills  
ISP  
1361 Alps Road  
Wayne, NJ 07470  
973-628-3035  
[cwills@ispcorp.com](mailto:cwills@ispcorp.com)

Payment will be made through ISP Purchase Order CH-38452.

Please call me with any questions.

Sincerely,

Ted Heath  
Geologist  
ISP Minerals Inc  
(301) 714-1332  
(518) 859-4156 (cell)  
[theath@ispcorp.com](mailto:theath@ispcorp.com)

C.C.  
G. Kamas – ISP  
D. Dinkins – ISP  
A. Shepeck – ISP  
Celeste Wills – ISP

ISP Minerals: MIS-11 Sample Identification Sheet for RJ Lee Data

Date: 6/23/11

Plant	SRM#	Sample
Charmian	8706	Granules
Charmian	8707	Granules
Charmian	8708	Granules

Redacted - Does Not Relate to Charmian Facility

Charmian	8684	Fines
Charmian	8685	Fines
Charmian	8686	Fines
Charmian	8687	Fines
Charmian	8688	Fines
Charmian	8689	Fines
Charmian	8690	Fines
Charmian	8691	Fines

Redacted - Does Not Relate to Charmian Facility

## Laboratory Report

ISP Minerals Inc.  
1361 Alps road  
Wayne, NJ 07470  
United States  
Attention: Celeste Wills  
Telephone: 9723-628-3035

Report Date 06/14/2011  
Sample Receipt Date 05/31/2011  
RJ Lee Group Job No. AOH1017356-0  
Authorization/P.O. No. CH38452  
Client Job No./Name

Analysis: Asbestos in Bulk Samples by Point Count

Method: EPA/600/R-93/116

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10154197.HPL	8706-Granules	Yes	1	ND		100.00	Q, CA, AM, F, MI, M	CH-06/09/2011
Description: Green rock granules. 1000 point count. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10154198.HPL	8707-Granules	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-06/09/2011
Description: Green rock granules. 1000 point count. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10154199.HPL	8708-Granules	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-06/09/2011
Description: Green rock granules. 1000 point count. No asbestiform minerals detected.								
Weight Loss: 0.0%								



Client Job No./Name:

RJ Lee Group Job No: AOH1017356-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
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**Redacted - Does Not Relate to Charmian Facility**

Client Job No./Name:

RJ Lee Group Job No: AOH1017356-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
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# Redacted - Does Not Relate to Charmian Facility

10154209.HPL	8684-Fines	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-06/09/2011
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Description: Green rock dust. 1000 point count.  
No asbestiform minerals detected.

Weight Loss: 0.0%

10154210.HPL	8685-Fines	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-06/09/2011
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Description: Light green rock dust. 1000 point count.  
No asbestiform minerals detected.

Weight Loss: 0.0%

10154211.HPL	8686-Fines	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-06/09/2011
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Description: Light green rock dust. 1000 point count.  
No asbestiform minerals detected.

Weight Loss: 0.0%

**Client Job No./Name:**
**RJ Lee Group Job No: AOH1017356-0**

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10154212.HPL	8687-Fines	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-06/09/2011
Description: Light green rock dust. 1000 point count. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10154213.HPL	8688-Fines	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-06/09/2011
Description: Green rock dust. 1000 point count. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10154214.HPL	8689-Fines	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-06/09/2011
Description: Green rock dust. 1000 point count. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10154215.HPL	8690-Fines	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-06/09/2011
Description: Green rock dust. 1000 point count. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10154216.HPL	8691-Fines	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-06/09/2011
Description: Green rock dust. 1000 point count. No asbestiform minerals detected.								
Weight Loss: 0.0%								

# Redacted - Does Not Relate to Charmian Facility

Client Job No./Name:

RJ Lee Group Job No: AOH1017356-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
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**Redacted - Does Not Relate to Charmian Facility**



Client Job No./Name:

RJ Lee Group Job No: AOH1017356-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
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**Redacted - Does Not Relate to Charmian Facility**

Client Job No./Name:

RJ Lee Group Job No: AOH1017356-0

RJLG Sample  
Number

Client Sample  
Number

Homogeneous

# of Layers

Asbestos  
Detected(%)

Non-Asbestos  
Fibers(%)

Non-Fibrous  
Materials(%)

Matrix  
Material

Analyst - Analysis  
Date

**Redacted - Does Not Relate to Charmian Facility**

Client Job No./Name:

RJ Lee Group Job No: AOH1017356-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
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Authorized Signature:



Matt Sanchez, Analyst

**ASBESTOS**

AM = Amosite  
 AC = Actinolite  
 AN = Anthophyllite  
 CH = Chrysotile  
 CR = Crocidolite  
 TR = Tremolite

**NON-ASBESTOS**

CE = Cellulose  
 MW = Mineral Wool  
 FG = Fibrous Glass  
 SF = Synthetic Fibers  
 H = Hair  
 W = Wollastonite  
 OF = Other Fibers

**NON-FIBROUS MATERIALS**

AM = Amphibole  
 B = Binder  
 CA = Carbonates  
 CL = Clay  
 F = Feldspar  
 G = Gypsum  
 HY = Hydromagnesite  
 M = Miscellaneous  
 MI = Mica  
 OP = Opaque  
 OR = Organic  
 P = Perlite  
 Q = Quartz  
 T = Tar  
 V = Vermiculite

**DISCLAIMER NOTES**

- "ND" indicates no asbestos was detected; the method detection limit is 0.1%.
- "Trace" or "<1" indicates asbestos was identified in the sample, but the concentration is less than the method quantitation limit of 0.1%. PLM coefficients of variance range from approximately 1.8 at the quantitation limit of 0.1% to 0.32 at high fiber concentrations.
- Samples are archived for three months following analysis and are then properly discarded.
- 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.
- This test report relates to the items tested.
- This report is not valid unless it bears the name of a NVLAP-approved signatory.
- Any reproduction of this document must be in full in order for the report to be valid.
- This report may not be used to claim product endorsement by NVLAP, any agency of the U.S. Government or any other laboratory accrediting agency.
- Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar nonfriable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as "non-asbestos-containing."
- Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA #100364) facility.
- If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.

A0H 1018790-0



**MINERALS INC**

34 Charles Street • Hagerstown MD 21740-3899 • Tel: 301-797-7797 • Fax: 301-797-7796

August 31, 2011

RJ Lee Group, Inc.  
350 Hochberg Road  
Monroeville, PA 15146  
Attn: Matthew Sanchez

Via: Federal Express: 7974-6853-3818

RE: Fiber - PLM and Crystalline Silica - XRD Analyses.

Dear Mr. Sanchez:

Enclosed are the following samples for the required analyses. All samples are crushed rock and classified as a volcanic rock (meta-basalt, meta-andesite, and rhyolite). Also enclosed is an MSDS sheet.

**Fiber and Crystalline Silica:**

26 samples 09-01-11 XRM

For each sample listed (34 samples), complete the following analyses:

1. Polarized Light Microscopy (PLM): Bulk Analyses – 1,000 Point Count (Untreated) for regulated asbestiform fibers (EPA 600/R-93/116).
2. Total Crystalline Silica (Bulk Analysis) by quantitative XRD.
3. A 10 - day turn-around service is requested for both the PLM and XRD analyses.

Twelve samples of rock granules (-8 mesh x 35 mesh). (200 grams each):

Redacted - Does Not Relate to Charmian Facility


8709 - Granules  
8730 - Granules  
8748 - Granules

Redacted - Does Not Relate to Charmian Facility

Rec'd 09-01-11  
Linda Maigret  
RJ Lee Group, Inc.

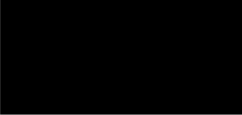


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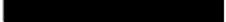
Fourteen samples of rock fines (-35 mesh x 325 mesh). (200 grams each):

Redacted - Does Not Relate to Charmian Facility



8726 - Fines


Redacted - Does Not Relate to Charmian Facility



8751 - Fines

8750 - Fines

Redacted - Does Not Relate to Charmian Facility



Please send the lab results directly to:

Celeste Wills

ISP

1361 Alps Road

Wayne, NJ 07470

973-628-3035

[cwills@ispcorp.com](mailto:cwills@ispcorp.com)

Payment will be made through ISP Purchase Order CH-39584.

Please call me with any questions.

Sincerely,

Ted Heath  
Geologist  
ISP Minerals Inc  
(301) 714-1332  
(518) 859-4156 (cell)

[theath@ispcorp.com](mailto:theath@ispcorp.com)

C.C.

G. Kamas – ISP

D. Dinkins – ISP

A. Shepeck – ISP

Celeste Wills – ISP

Commercial Lab Analysis Samples for all Four Plants (Q2)

Date: 8/31/11

Plant	SRM #s	Type	
Charmian	8686	Fines	*
Charmian	8691	Fines	*
Redacted - Does Not Relate to Charmian Facility			*
			*
Charmian	8726	Fines	
Charmian	8751	Fines	
Charmian	8725	Fines	
Charmian	8750	Fines	
Redacted - Does Not Relate to Charmian Facility			

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Plant	SRM #s	Type
Redacted - Does Not Relate to Charmian Facility		
Charmian	8730	Granules
Charmian	8748	Granules
Charmian	8709	Granules
Redacted - Does Not Relate to Charmian Facility		

12

\* Completed with Q1 samples

## Laboratory Report

ISP Minerals Inc.  
1361 Alps road  
Wayne, NJ 07470  
United States  
Attention: Celeste Wills  
Telephone: 9723-628-3035

Report Date 09/28/2011  
Sample Receipt Date 09/01/2011  
RJ Lee Group Job No. AOH1018890-0  
Authorization/P.O. No. CH39584  
Client Job No./Name Crushed Rock

Analysis: Asbestos in Bulk Samples by Point Count  
Method: EPA/600/R-93/116

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
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**Redacted - Does Not Relate to Charmian Facility**



Client Job No./Name: Crushed Rock

RJ Lee Group Job No: AOH1018890-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10165030.HPL	8709-Granules	Yes	1	ND		100.00	Q, CA, CL, AM, OP, M	MSS-09/28/2011
Description:	Green Crushed Rock No Asbestiform Minerals Detected							
Weight Loss: 0.0%								
10165031.HPL	8730-Granules	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	CH-09/28/2011
Description:	Green rock dust. No asbestiform minerals detected.							
Weight Loss: 0.0%								
10165032.HPL	8748-Granules	Yes	1	ND		100.00	Q, CL, AM, OP, M	MSS-09/28/2011
Description:	Green Crushed Rock No Asbestiform Minerals Detected							
Weight Loss: 0.0%								

**Redacted - Does Not Relate to Charmian Facility**

Client Job No./Name: Crushed Rock

RJ Lee Group Job No: AOH1018890-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
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**Redacted - Does Not Relate to Charmian Facility**

Client Job No./Name: Crushed Rock

RJ Lee Group Job No: AOH1018890-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10165042.HPL	8726-Fines	Yes	1	ND		100.00	Q, CA, AM, OP, M	WHP-09/28/2011
Description: Gray Green Rock Fines No Asbestiform Minerals Detected								
Weight Loss: 0.0%								
10165043.HPL	8725-Fines	Yes	1	<0.1 AC		100.00	Q, T, AM, F, OP, MI, M	CH-09/28/2011
Description: Green rock dust. Actinolite asbestos observed, but not counted. Concentration <0.1%								
Weight Loss: 0.0%								
10165044.HPL	8751-Fines	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-09/28/2011
Description: Gray-green rock fines. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10165045.HPL	8750-Fines	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-09/28/2011
Description: Green rock dust. No asbestiform minerals detected.								
Weight Loss: 0.0%								

# Redacted - Does Not Relate to Charmian Facility

Client Job No./Name: Crushed Rock

RJ Lee Group Job No: AOH1018890-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
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**Redacted - Does Not Relate to Charmian Facility**

Client Job No./Name: Crushed Rock

RJ Lee Group Job No: AOH1018890-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
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Authorized Signature: \_\_\_\_\_

*J. Craig Huntington*

Craig Huntington, Analyst

#### ASBESTOS

AM = Amosite  
AC = Actinolite  
AN = Anthophyllite  
CH = Chrysotile  
CR = Crocidolite  
TR = Tremolite

#### NON-ASBESTOS

CE = Cellulose  
MW = Mineral Wool  
FG = Fibrous Glass  
SF = Synthetic Fibers  
H = Hair  
W = Wollastonite  
OF = Other Fibers

#### NON-FIBROUS MATERIALS

AM = Amphibole  
B = Binder  
CA = Carbonates  
CL = Clay  
F = Feldspar  
G = Gypsum  
HY = Hydromagnesite  
M = Miscellaneous  
MI = Mica  
OP = Opaque  
OR = Organic  
P = Perlite  
Q = Quartz  
T = Tar  
V = Vermiculite

#### DISCLAIMER NOTES

- "ND" indicates no asbestos was detected; the method detection limit is 0.1%.
- "Trace" or "<1" indicates asbestos was identified in the sample, but the concentration is less than the method quantitation limit of 0.1%. PLM coefficients of variance range from approximately 1.8 at the quantitation limit of 0.1% to 0.32 at high fiber concentrations.
- Samples are archived for three months following analysis and are then properly discarded.
- 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.
- This test report relates to the items tested.
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- Any reproduction of this document must be in full in order for the report to be valid.
- This report may not be used to claim product endorsement by NVLAP, any agency of the U.S. Government or any other laboratory accrediting agency.
- Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar nonfriable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as "non-asbestos-containing."
- Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA #100364) facility.
- If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.



## Final Laboratory Report

### TEM Bulk Protocol

Ms. Celeste Wills  
ISP - Speciality Granules  
1361 Alps road  
Wayne, NJ 07470  
US

Report Date: 7/19/2012  
Sample Receipt Date: 7/12/2012  
RJ Lee Group Job No.: AOH1018890-2  
Authorization/P.O. No.: CH42232  
Samples Received: 1  
Client Job No./Name: Crushed Rock

Method: ASTM D-5756 Standard Test Method, Modified

TABLE 1 -- Weight Percent of Asbestos, Cleavage Fragment Amphibole and Non-Asbestos

Client Sample Number	RJLG Sample Number	-----Total Structures-----				-----Weight Percent-----			
						Total Structures			
						Analytical Sensitivity			
		Chry	Amph	Cleavage	Non-Asbestos	Chrysotile	Asb	Cleavage Fragment	Non-Asbestos
8725- Fines	10165043	0	0	18	12	<2.0E-7	<2.4E-7	1.9E-2	1.2E-3
						2.0E-7	2.4E-7	1.5E-7	2.5E-8

#### Notes:

1. "<" indicates results less than analytical sensitivity. "---" indicates that sample was not analyzed.
2. Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA #100364, NVLAP #101208-0, NY ELAP #10844) facility.
3. If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.
4. Density of amphibole:  $3 * 10^{-3} \text{ ng}/\mu\text{m}^3$ , density of chrysotile:  $2.55 * 10^{-3} \text{ ng}/\mu\text{m}^3$ , density of non-asbestos:  $3.00 * 10^{-3} \text{ ng}/\mu\text{m}^3$ .
5. Abbreviations: N/A-Not Applicable, Chry-Chrysotile Asbestos, Amph-Amphibole Asbestos, Asb-Asbestos Amphibole, Cleavage-Cleavage Amphibole.
6. Samples will be held for 90 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.

RJ Lee Group Job No: AOH1018890-2

ISP - Speciality Granules

Client Job No/Name: Crushed Rock

Report Date: 7/19/2012

**TABLE 2 -- Weight Percent of Asbestos, Cleavage Fragment Amphibole and Non-Asbestos  $\geq 5 \mu\text{m}$** 

Client Sample Number	RJLG Sample Number	-----Structures $\geq 5 \mu\text{m}$ -----				-----Weight Percent----- Structures $\geq 5 \mu\text{m}$			
		Chry	Amph	Cleavage	Non- asbestos	Analytical Sensitivity			
						-----Amphibole-----		Non-Asbestos	
						Chry	Asb	Cleavage Fragment	
8725- Fines	10165043	0	0	9	12	<2.0E-6	<2.4E-6	1.0E-2	1.2E-3
						2.0E-6	2.4E-6	1.5E-6	2.5E-7

**Notes:**

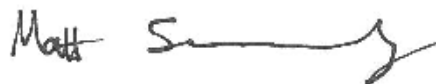
1. "<" indicates results less than analytical sensitivity. "---" indicates that sample was not analyzed.
2. Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA #100364, NVLAP #101208-0, NY ELAP #10844) facility.
3. If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.
4. Density of amphibole:  $3 * 10^{-3} \text{ ng}/\mu\text{m}^3$ , density of chrysotile:  $2.55 * 10^{-3} \text{ ng}/\mu\text{m}^3$ , density of non-asbestos:  $3.00 * 10^{-3} \text{ ng}/\mu\text{m}^3$ .
5. Abbreviations: N/A-Not Applicable, Chry-Chrysotile Asbestos, Amph-Amphibole Asbestos, Asb-Asbestos Amphibole, Cleavage-Cleavage Amphibole.
6. Samples will be held for 90 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.

RJ Lee Group Job No: AOH1018890-2  
Client Job No/Name: Crushed Rock

ISP - Speciality Granules  
Report Date: 7/19/2012

TABLE 3-- Miscellaneous

Client Sample Number	RJLG Sample Number	Material Used (gm)	Area Analyzed Total (mm <sup>2</sup> )	Area Analyzed $\geq 5\mu\text{m}$ (mm <sup>2</sup> )	Effective Filter Area (mm <sup>2</sup> )	Dilution Factor
8725- Fines	10165043	0.1987	0.32385	0.32385	385	0.0100/0.0010



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

Matt Sanchez, Manager Analytical Services

## Notes:

1. "<" indicates results less than analytical sensitivity. "---" indicates that sample was not analyzed.
2. Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA #100364, NVLAP #101208-0, NY ELAP #10844) facility.
3. If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.
4. Density of amphibole:  $3 * 10^{-3} \text{ ng}/\mu\text{m}^3$ , density of chrysotile:  $2.55 * 10^{-3} \text{ ng}/\mu\text{m}^3$ .
5. Abbreviations: N/A-Not Applicable, Chry-Chrysotile Asbestos, Amph-Amphibole Asbestos.
6. Samples will be held for 90 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

Caution must be applied when interpreting the results of samples prepared using indirect sample preparation techniques. Studies have shown that indirect preparation techniques may result in substantial increases in the fiber count when compared to fiber counts which would have been obtained using direct sample preparation.

RJ Lee Group, Inc. is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) for select test methods for airborne asbestos analysis (TEM), asbestos fiber analysis (PLM), New York Department of HEALTH Environmental Laboratory Program (ELAP), and by the American Industrial Hygiene Association (AIHA). This test report relates only to the items tested. This report may not be used to claim product endorsement by NVLAP, any agency of the US Government, or any other 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 NVLAP-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 ninety (90) days before discarding. A shipping and handling fee will be assessed for the return of any sample.

August 10, 2012

Ms. Celeste Levine  
Specialty Granules Inc.  
1361 Alps Road  
Wayne, NJ 07470

RE:     Crushed Rock Sample 8725-Fines  
          RJ Lee Group Project Number AOH1018890-3  
          Purchase Order Number CH42232

Dear Ms. Levine,

RJ Lee Group Inc. (RJLG) has completed the polarized light microscopy (PLM) and transmission electron microscopy (TEM) analysis of the 8725-Fines sample. PLM observed suspected actinolite asbestos in concentrations < 0.1 percent. Transmission electron microscopy (TEM) analysis on the same material observed no asbestiform actinolite or other fiber types, based on these results no asbestos was detected in sample 8725-Fines. Table 1 contains the results of both the TEM and PLM results.

Figures 1 and 2 illustrate the suspected asbestiform actinolite observed by PLM and representative observed actinolite particulate by TEM. In Figure 1 the suspect bundle is composed of primarily large particles with a few much thinner particles extending out of the ends. The asbestiform habit is characterized by fibers of diameters < 0.5 microns occurring in bundles, the particle illustrated in Figure 1 partially exhibits these features. Therefore TEM was employed to ascertain if particles consistent with actinolite asbestos could be observed at higher magnifications. The sample was prepared for TEM analysis by taking the material used in the point count and depositing onto a pre-weighed filter. After the weight was determined the materials was prepared using indirect deposit techniques. These techniques are known to disaggregate asbestos fibers therefore increasing asbestos structures in the sample, but no asbestiform structures were observed by TEM. As a result, the suspect asbestiform actinolite observed by PLM was not confirmed; TEM analysis determined that this particle is a cleavage fragment.

RJLG received instructions on July 24, 2012 to analyze sample 8725-Fines for asbestos. This sample was originally submitted to RJLG on September 1<sup>st</sup>, 2011 as part of ongoing asbestos testing for Specialty Granules Inc. (SGI). The samples were assigned the RJLG project number AOH1018890-3 and an RJLG sample number. The sample was analyzed for asbestos by PLM using a 1000 point count per EPA 600/R-93/116 and by TEM using a modified ASTM 5756-02 protocol. The results of the analyses are shown in Table 1.

RJLG is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP, #101208-00) for asbestos fiber analysis. This report may not be used to claim product endorsement by NVLAP or any agency of the US government. This report relates only to the samples tested and may be reproduced in full.

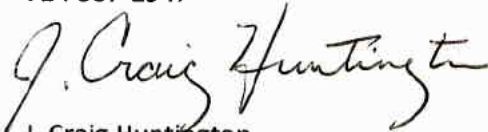
These results are submitted pursuant to RJ Lee Group's current terms and conditions of sale, including the company's standard warranty and limitation of liability provisions. No responsibility or liability is assumed for the manner in which the results are used or interpreted. Unless notified to return the samples covered in this report, RJ Lee Group will store them for a period of thirty (90) days before discarding.

Should you have any questions regarding this information, please do not hesitate to contact me.

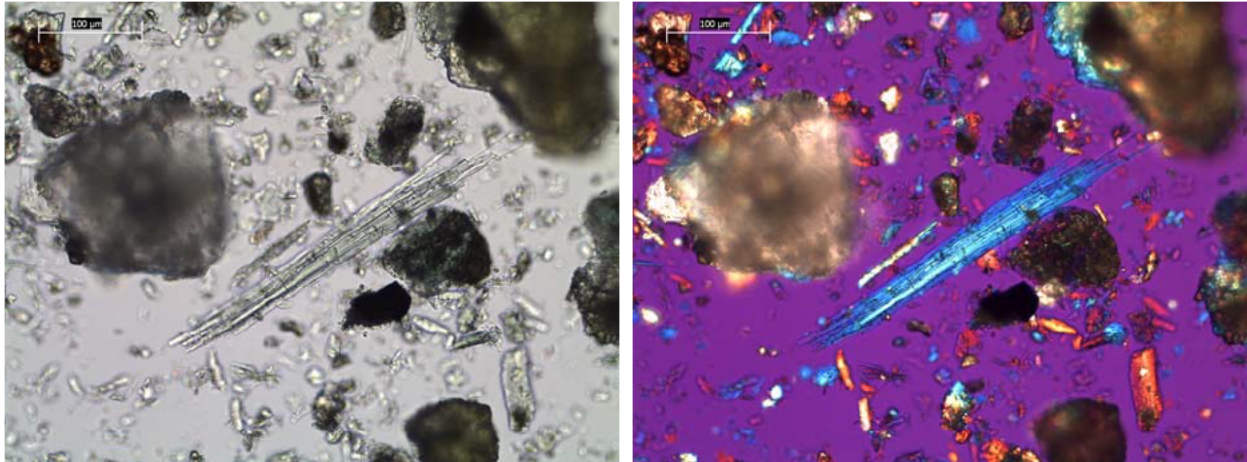
Sincerely,

A handwritten signature in blue ink, appearing to read "Matt S.", followed by a long horizontal line.

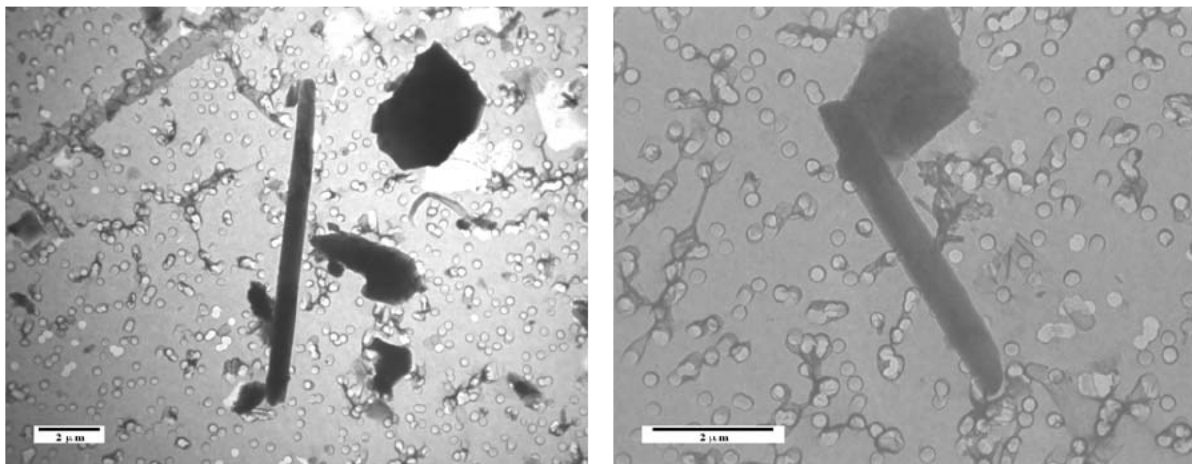
Matthew S. Sanchez  
Manager, Analytical Services  
[msanchez@rjlg.com](mailto:msanchez@rjlg.com)  
724 387-1947

A handwritten signature in black ink, appearing to read "J. Craig Huntington".

J. Craig Huntington  
Scientist  
[chuntington@rjlg.com](mailto:chuntington@rjlg.com)



**Figure 1.** Photomicrographs of suspected actinolite asbestos observed in PLM. The particle in question exhibited an extinction angle and pseudo-bundle morphology.



**Figure 2.** TEM photomicrographs of actinolite particulate observed exhibiting brittle fracture and therefore are the result of cleavage not the asbestiform habit.

**Table 1.** Analytical results for both the PLM and TEM analyses with respective detection limits.

Specialty Granules Sample #	RJLG Sample #	Chrysotile		Amphibole Asbestos (type)	
		PLM (%)	TEM (%)	PLM (%)	TEM (%)
8725-Fines	10165043	ND	ND	*<0.1 (act)	ND
Detection limit		0.1	7.3E-8	0.1	8.9E-8

\* Suspected asbestiform actinolite observed by PLM ruled out by TEM analysis.



## Final Laboratory Report

### TEM Bulk Protocol

Ms. Celeste Levine  
ISP - Speciality Granules  
1361 Alps road  
Wayne, NJ 07470  
US

Report Date: 8/10/2012  
Sample Receipt Date: 7/12/2012  
RJ Lee Group Job No.: AOH1018890-4  
Authorization/P.O. No.: CH42232  
Samples Received: 1  
Client Job No./Name: Crushed Rock

Method: ASTM D-5756 Standard Test Method, Modified

TABLE 1 -- Weight Percent of Asbestos, Cleavage Fragment Amphibole and Non-Asbestos

Client Sample Number	RJLG Sample Number	-----Total Structures-----				-----Weight Percent-----			
		Total Structures				Total Structures			
		Analytical Sensitivity				Analytical Sensitivity			
		Chry	Amph	Cleavage	Non-Asbestos	Chrysotile	Asb	Cleavage Fragment	Non-Asbestos
8725- Fines	10165043	0	0	34	13	<7.3E-8	<8.9E-8	1.4E-2	7.1E-4
						7.3E-8	8.9E-8	5.6E-8	9.1E-9

#### Notes:

1. "<" indicates results less than analytical sensitivity. "----" indicates that sample was not analyzed.
2. Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA #100364, NVLAP #101208-0, NY ELAP #10844) facility.
3. If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.
4. Density of amphibole:  $3.1 \times 10^{-3}$  ng/ $\mu\text{m}^3$ , density of chrysotile:  $2.55 \times 10^{-3}$  ng/ $\mu\text{m}^3$ , density of non-asbestos:  $3.00 \times 10^{-3}$  ng/ $\mu\text{m}^3$ .
5. Abbreviations: N/A-Not Applicable, Chry-Chrysotile Asbestos, Amph-Amphibole Asbestos, Asb-Asbestos Amphibole, Cleavage-Cleavage Amphibole.
6. Samples will be held for 90 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.

RJ Lee Group Job No: AOH1018890-4

ISP - Speciality Granules

Client Job No/Name: Crushed Rock

Report Date: 8/10/2012

**TABLE 2 -- Weight Percent of Asbestos, Cleavage Fragment Amphibole and Non-Asbestos  $\geq 5 \mu\text{m}$** 

Client Sample Number	RJLG Sample Number	-----Structures $\geq 5 \mu\text{m}$ -----				-----Weight Percent----- Structures $\geq 5 \mu\text{m}$			
		Chry	Amph	Cleavage	Non- asbestos	Analytical Sensitivity			
						-----Amphibole-----		Non-	
						Chry	Asb	Cleavage Fragment	Asbestos
8725- Fines	10165043	0	0	11	8	<7.3E-7	<8.9E-7	1.3E-2	6.5E-4
						7.3E-7	8.9E-7	5.6E-7	9.1E-8

**Notes:**

1. "<" indicates results less than analytical sensitivity. "---" indicates that sample was not analyzed.
2. Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA #100364, NVLAP #101208-0, NY ELAP #10844) facility.
3. If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.
4. Density of amphibole:  $3.1 \times 10^{-3} \text{ ng}/\mu\text{m}^3$ , density of chrysotile:  $2.55 \times 10^{-3} \text{ ng}/\mu\text{m}^3$ , density of non-asbestos:  $3.00 \times 10^{-3} \text{ ng}/\mu\text{m}^3$ .
5. Abbreviations: N/A-Not Applicable, Chry-Chrysotile Asbestos, Amph-Amphibole Asbestos, Asb-Asbestos Amphibole, Cleavage-Cleavage Amphibole.
6. Samples will be held for 90 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.

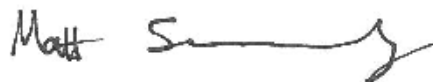
RJ Lee Group Job No: AOH1018890-4  
Client Job No/Name: Crushed Rock

ISP - Speciality Granules  
Report Date: 8/10/2012

TABLE 3-- Miscellaneous

Client Sample Number	RJLG Sample Number	Material Used (gm)	Area Analyzed Total (mm <sup>2</sup> )	Area Analyzed $\geq 5\mu\text{m}$ (mm <sup>2</sup> )	Effective Filter Area (mm <sup>2</sup> )	Dilution Factor
8725- Fines	10165043	0.0408	0.32383	0.32383	385	0.1000

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



Matt Sanchez, Manager Analytical Services

## Notes:

1. "<" indicates results less than analytical sensitivity. "---" indicates that sample was not analyzed.
2. Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA #100364, NVLAP #101208-0, NY ELAP #10844) facility.
3. If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.
4. Density of amphibole:  $3.1 \times 10^{-3} \text{ ng}/\mu\text{m}^3$ , density of chrysotile:  $2.55 \times 10^{-3} \text{ ng}/\mu\text{m}^3$ .
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6. Samples will be held for 90 days and then disposed of per Federal regulations.
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October 12, 2011

RJ Lee Group, Inc.  
350 Hochberg Road  
Monroeville, PA 15146  
Attn: Matthew Sanchez

Via: Federal Express: 7976-1599-8564

RE: Fiber - PLM and Crystalline Silica - XRD Analyses.

Dear Mr. Sanchez:

Enclosed are the following samples for the required analyses. All samples are crushed rock and classified as a volcanic rock (meta-basalt, meta-andesite, and rhyolite). Also enclosed is an MSDS sheet.

**Fiber and Crystalline Silica:**

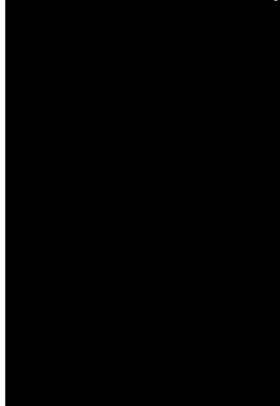
For each sample listed (24 samples), complete the following analyses:

1. Polarized Light Microscopy (PLM): Bulk Analyses – 1,000 Point Count (Untreated) for regulated asbestiform fibers (EPA 600/R-93/116).
2. Total Crystalline Silica (Bulk Analysis) by quantitative XRD.
3. A 10 - day turn-around service is requested for both the PLM and XRD analyses.

Twenty-four samples of rock granules (-8 mesh x 35 mesh). (Minimum 50 grams each):

8733 - Granules  
8734 - Granules  
8735 - Granules  
8736 - Granules  
8737 - Granules  
8738 - Granules  
8739 - Granules  
8740 - Granules  
8741 - Granules  
8742 - Granules

Redacted - Does Not Relate to Charnian Facility



Rec'd 10-13-11 9:45AM  
Amela Mangano  
RJ Lee Group



**SPECIALTY GRANULES INC.**

ISP Minerals Inc. is now **Specialty Granules Inc.**, dedicated for over 85 years to providing the highest quality granules and customer service to the roofing industry.



Redacted - Does Not Relate to Charmian Facility

Please address and send the lab results directly to:

Celeste Wills  
GAF/ELK  
1361 Alps Road  
Wayne, NJ 07470  
973-628-3035  
[cwills@gaf.com](mailto:cwills@gaf.com)

with a copy sent to:

Ted Heath  
Specialty Granules Inc.  
34 Charles St  
Hagerstown, MD 21740  
(301) 714-1332  
[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

Payment will be made through SGI Purchase Order CH-40004

Please call me with any questions.

Sincerely,

Ted Heath  
Geologist  
Specialty Granules Inc.  
[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

c.c.

G. Kamas – SGI  
D. Dinkins – SGI  
A. Shepeck – SGI  
Celeste Wills – SGI



MIS- 11 Finished Colored Granules In Bucket For Testing - Round 1

Date: 10/12/11

Plant	Color	SRM#
Charmian	560	8741
Charmian	115	8738
Charmian	556	8740
Charmian	760	8734
Charmian	340	8736
Charmian	546	8739
Charmian	801	8733
Charmian	552	8742
Charmian	341	8737
Charmian	720	8735

Redacted - Does Not Relate to Charmian Facility



## Laboratory Report

GAF/ELK  
1361 Alps road  
Wayne, NJ 07470  
United States  
Attention: Celeste Wills  
Telephone: 9723-628-3035

Report Date 10/31/2011  
Sample Receipt Date 10/13/2011  
RJ Lee Group Job No. AOH1019542-0  
Authorization/P.O. No. CH40004  
Client Job No./Name Crushed Rock

Analysis: Asbestos in Bulk Samples by Point Count

Method: EPA/600/R-93/116

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10171176.HPL	8733 - Granules	Yes	1	ND		100.00	Q, CA, AM, OP, MI, M	WHP-10/31/2011
Description:	Gray rock dust. No asbestiform minerals detected.							
Weight Loss:	0.0%							
10171177.HPL	8734 - Granules	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	WHP-10/27/2011
Description:	Gray rock dust. No asbestiform minerals detected.							
Weight Loss:	0.0%							
10171178.HPL	8735 - Granules	Yes	1	ND		100.00	Q, CA, AM, OP, MI, M	WHP-10/31/2011
Description:	Gray rock dust. No asbestiform minerals detected.							
Weight Loss:	0.0%							

Client Job No./Name: Crushed Rock

RJ Lee Group Job No: AOH1019542-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10171179.HPL	8736 - Granules	Yes	1	ND		100.00	Q, CA, AM, OP, MI, M	WHP-10/31/2011
Description: Gray rock dust. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10171180.HPL	8737 - Granules	Yes	1	ND		100.00	CA, CL, AM, F, OP, MI, M	CH-10/27/2011
Description: Green rock dust. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10171181.HPL	8738 - Granules	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	CH-10/27/2011
Description: Green rock dust. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10171182.HPL	8739 - Granules	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	CH-10/27/2011
Description: Brown rock dust. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10171183.HPL	8740 - Granules	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	CH-10/27/2011
Description: Gray rock dust. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10171184.HPL	8741 - Granules	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	CH-10/27/2011
Description: Green rock dust. No asbestiform minerals detected.								
Weight Loss: 0.0%								

Client Job No./Name: Crushed Rock

RJ Lee Group Job No: AOH1019542-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10171185.HPL	8742 - Granules	Yes	1	ND		100.00	Q, CA, CL, AM, OP, MI, M	CH-10/27/2011
Description:	Gray rock dust. No asbestiform minerals detected.							

Weight Loss: 0.0%

**Redacted - Does Not Relate to Charmian Facility**

Client Job No./Name: Crushed Rock

RJ Lee Group Job No: AOH1019542-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
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Redacted - Does Not Relate to Charmian Facility

Client Job No./Name: Crushed Rock

RJ Lee Group Job No: AOH1019542-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
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**Redacted - Does Not Relate to Charmian Facility**



Client Job No./Name: Crushed Rock

RJ Lee Group Job No: AOH1019542-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
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Authorized Signature: 

Craig Huntington, Analyst

#### ASBESTOS

AM = Amosite  
AC = Actinolite  
AN = Anthophyllite  
CH = Chrysotile  
CR = Crocidolite  
TR = Tremolite

#### NON-ASBESTOS

CE = Cellulose  
MW = Mineral Wool  
FG = Fibrous Glass  
SF = Synthetic Fibers  
H = Hair  
W = Wollastonite  
OF = Other Fibers

#### NON-FIBROUS MATERIALS

AM = Amphibole  
B = Binder  
CA = Carbonates  
CL = Clay  
F = Feldspar  
G = Gypsum  
HY = Hydromagnesite  
M = Miscellaneous  
MI = Mica  
OP = Opaque  
OR = Organic  
P = Perlite  
Q = Quartz  
T = Tar  
V = Vermiculite

#### DISCLAIMER NOTES

- "ND" indicates no asbestos was detected; the method detection limit is 0.1%.
- "Trace" or "<1" indicates asbestos was identified in the sample, but the concentration is less than the method quantitation limit of 0.1%. PLM coefficients of variance range from approximately 1.8 at the quantitation limit of 0.1% to 0.32 at high fiber concentrations.
- Samples are archived for three months following analysis and are then properly discarded.
- 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.
- This test report relates to the items tested.
- This report is not valid unless it bears the name of a NVLAP-approved signatory.
- Any reproduction of this document must be in full in order for the report to be valid.
- This report may not be used to claim product endorsement by NVLAP, any agency of the U.S. Government or any other laboratory accrediting agency.
- Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar nonfriable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as "non-asbestos-containing."
- Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA #100364) facility.
- If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.



October 19, 2011

RJ Lee Group, Inc.  
350 Hochberg Road  
Monroeville, PA 15146  
Attn: Matthew Sanchez

Via: Federal Express: 7976-4533-9686

RE: Fiber - PLM and Crystalline Silica - XRD Analyses.

Dear Mr. Sanchez:

Enclosed are the following samples for the required analyses. All samples are crushed rock and classified as a volcanic rock (meta-basalt, meta-andesite, and rhyolite). Also enclosed is an MSDS sheet.

**Fiber and Crystalline Silica:**

For each sample listed (21 samples), complete the following analyses:

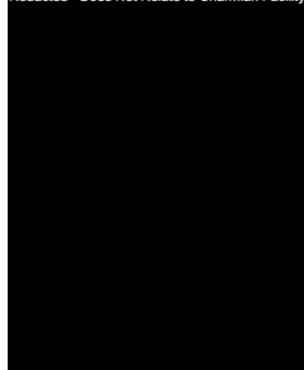
1. Polarized Light Microscopy (PLM): Bulk Analyses – 1,000 Point Count (Untreated) for regulated asbestiform fibers (EPA 600/R-93/116).
2. Total Crystalline Silica (Bulk Analysis) by quantitative XRD.
3. A 10 - day turn-around service is requested for both the PLM and XRD analyses.

Twenty-one samples of rock granules (-8 mesh x 35 mesh). (Minimum 50 grams each):

8828 - Granules  
8827 - Granules  
8829 - Granules  
8830 - Granules

Redacted - Does Not Relate to Charmian Facility

Redacted - Does Not Relate to Charmian Facility



Rec'd 10-21-11 9:30AM  
Linda Manguerra  
RJ Lee Group



**SPECIALTY GRANULES INC.**

ISP Minerals Inc. is now **Specialty Granules Inc.**, dedicated for over 85 years to providing the highest quality granules and customer service to the roofing industry.



Redacted - Does Not Relate to Charmian Facility

Please address and send the lab results directly to:

Celeste Wills  
GAF/ELK  
1361 Alps Road  
Wayne, NJ 07470  
973-628-3035  
[cwills@gaf.com](mailto:cwills@gaf.com)

with a copy sent to:

Ted Heath  
Specialty Granules Inc.  
34 Charles St  
Hagerstown, MD 21740  
(301) 714-1332  
[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

Payment will be made through SGI Purchase Order CH-40067.

Please call me with any questions.

Sincerely,

Ted Heath  
Geologist  
Specialty Granules Inc.  
[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

c.c.

G. Kamas – SGI  
D. Dinkins – SGI  
A. Shepeck – SGI  
Celeste Wills – SGI



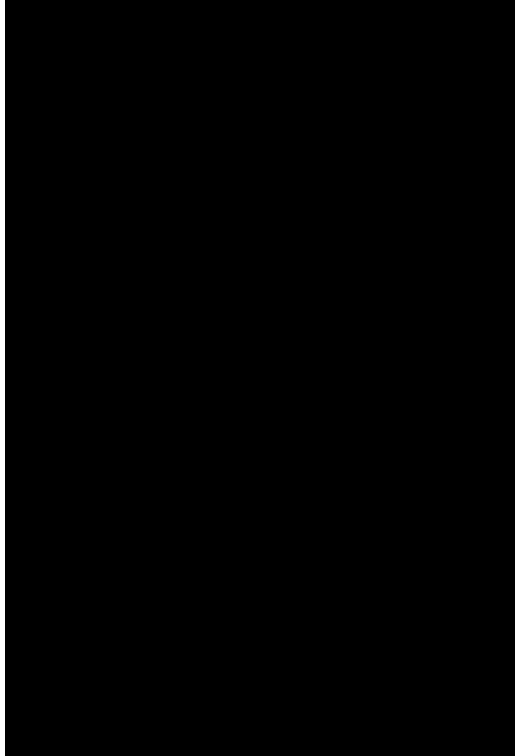
**SPECIALTY GRANULES INC.**

*ISP Minerals Inc. is now Specialty Granules Inc., dedicated for over 85 years to providing the highest quality granules and customer service to the roofing industry.*

MIS- 11 Finished Colored Granules In Bucket For Testing - Round 2  
Date: 10/14/11

Plant	Color	SRM #
Charmian	555	8828
Charmian	171	8827
Charmian	201	8829
Charmian	615	8830

Redacted - Does Not Relate to Charmian Facility



## Laboratory Report

GAF/ELK  
1361 Alps road  
Wayne, NJ 07470  
United States  
Attention: Celeste Wills  
Telephone: 9723-628-3035

Report Date 11/11/2011  
Sample Receipt Date 10/21/2011  
RJ Lee Group Job No. AOH1019652-0  
Authorization/P.O. No. CH40067  
Client Job No./Name Crushed Rock

Analysis: Asbestos in Bulk Samples by Point Count

Method: EPA/600/R-93/116

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10171974.HPL	8828 - Granules	Yes	1	ND		100.00	Q, AM, F, OP, MI, M	CH-11/11/2011
Description: Gray rock dust. 1000 Point Count. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10171975.HPL	8827 - Granules	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-11/11/2011
Description: Green rock dust. 1000 Point Count. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10171976.HPL	8829 - Granules	Yes	1	ND		100.00	Q, AM, F, OP, MI, M	CH-11/11/2011
Description: Brown rock dust. 1000 Point Count. No asbestiform minerals detected.								
Weight Loss: 0.0%								

Client Job No./Name: Crushed Rock

RJ Lee Group Job No: AOH1019652-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10171977.HPL	8830 - Granules	Yes	1	ND		100.00	Q, AM, F, OP, MI, M	CH-11/11/2011

Description: Green-gray rock dust. 1000 Point Count.  
No asbestiform minerals detected.

Weight Loss: 0.0%

**Redacted - Does Not Relate to Charmian Facility**

Client Job No./Name: Crushed Rock

RJ Lee Group Job No: AOH1019652-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
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**Redacted - Does Not Relate to Charmian Facility**

Client Job No./Name: Crushed Rock

RJ Lee Group Job No: AOH1019652-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
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**Redacted - Does Not Relate to Charmian Facility**



Client Job No./Name: Crushed Rock

RJ Lee Group Job No: AOH1019652-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
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Authorized Signature:



Craig Huntington, Analyst

**ASBESTOS**

AM = Amosite  
 AC = Actinolite  
 AN = Anthophyllite  
 CH = Chrysotile  
 CR = Crocidolite  
 TR = Tremolite

**NON-ASBESTOS**

CE = Cellulose  
 MW = Mineral Wool  
 FG = Fibrous Glass  
 SF = Synthetic Fibers  
 H = Hair  
 W = Wollastonite  
 OF = Other Fibers

**NON-FIBROUS MATERIALS**

AM = Amphibole  
 B = Binder  
 CA = Carbonates  
 CL = Clay  
 F = Feldspar  
 G = Gypsum  
 HY = Hydromagnesite  
 M = Miscellaneous  
 MI = Mica  
 OP = Opaque  
 OR = Organic  
 P = Perlite  
 Q = Quartz  
 T = Tar  
 V = Vermiculite

**DISCLAIMER NOTES**

- "ND" indicates no asbestos was detected; the method detection limit is 0.1%.
- "Trace" or "<1" indicates asbestos was identified in the sample, but the concentration is less than the method quantitation limit of 0.1%. PLM coefficients of variance range from approximately 1.8 at the quantitation limit of 0.1% to 0.32 at high fiber concentrations.
- Samples are archived for three months following analysis and are then properly discarded.
- 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.
- This test report relates to the items tested.
- This report is not valid unless it bears the name of a NVLAP-approved signatory.
- Any reproduction of this document must be in full in order for the report to be valid.
- This report may not be used to claim product endorsement by NVLAP, any agency of the U.S. Government or any other laboratory accrediting agency.
- Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar nonfriable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as "non-asbestos-containing."
- Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA #100364) facility.
- If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.



November 22, 2011

RJ Lee Group, Inc.  
350 Hochberg Road  
Monroeville, PA 15146  
Attn: Matthew Sanchez

Via: Federal Express: 7977-6399-6040

RE: Fiber - PLM and Crystalline Silica - XRD Analyses.

Dear Mr. Sanchez:

Enclosed are the following samples for the required analyses. All samples are crushed rock and classified as a volcanic rock (meta-basalt, meta-andesite, and rhyolite). Also enclosed is an MSDS sheet.

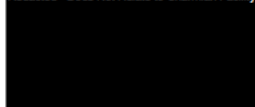
**Fiber and Crystalline Silica:**

For each sample listed (30 samples), complete the following analyses:

1. Polarized Light Microscopy (PLM): Bulk Analyses – 1,000 Point Count (Untreated) for regulated asbestiform fibers (EPA 600/R-93/116).
2. Total Crystalline Silica (Bulk Analysis) by quantitative XRD.
3. A 10 - day turn-around service is requested for both the PLM and XRD analyses.

Twelve samples of rock granules (-8 mesh x 35 mesh). (200 grams each):

Redacted - Does Not Relate to Chamian Facility

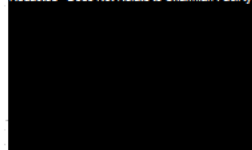


8786 - Granules

8792 - Granules

8809 - Granules

Redacted - Does Not Relate to Chamian Facility



Rec'd 11-23-11 10:09 AM  
Linda Murgus  
RJ Lee Group

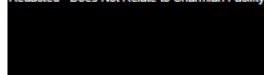


**SPECIALTY GRANULES INC.**

ISP Minerals Inc. is now **Specialty Granules Inc.**, dedicated for over 85 years to providing the highest quality granules and customer service to the roofing industry.



Redacted - Does Not Relate to Charman Facility



Eighteen samples of rock fines (-35 mesh x 325 mesh). (200 grams each):

8788 - Fines

8790 - Fines

8800 - Fines

8789 - Fines

8791 - Fines

8801 - Fines

Redacted - Does Not Relate to Charman Facility



Please address and send the lab results directly to:

Celeste Wills  
GAF/ELK  
1361 Alps Road  
Wayne, NJ 07470  
973-628-3035  
[cwills@gaf.com](mailto:cwills@gaf.com)

with a copy sent to:

Ted Heath  
Specialty Granules Inc.  
34 Charles St  
Hagerstown, MD 21740  
(301) 714-1332  
[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

Payment will be made through SGI Purchase Order CH-40294.



**SPECIALTY GRANULES INC.**

*ISP Minerals Inc. is now **Specialty Granules Inc.**, dedicated for over 85 years to providing the highest quality granules and customer service to the roofing industry.*



**SPECIALTY GRANULES INC.**

34 Charles St // Hagerstown, MD 21740 // Tel: 301-733-4000 // Fax: 301-733-4003

**TECHNICAL CENTER**

**[www.specialtygranules.com](http://www.specialtygranules.com)**

Please call me with any questions.

Sincerely,

Ted Heath  
Geologist  
Specialty Granules Inc.  
[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

C.C.

G. Kamas – SGI

D. Dinkins – SGI

A. Shepeck – SGI

Celeste Wills – SGI



**SPECIALTY GRANULES INC.**

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Commercial Lab Analysis Samples for all Four Plants (Q3)

Date: 11/22/11

Plant	SRM #s	Type
Redacted - Does Not Relate to Charmian Facility		
Charmian	8788	Fines
Charmian	8790	Fines
Charmian	8800	Fines
Charmian	8789	Fines
Charmian	8791	Fines
Charmian	8801	Fines
Redacted - Does Not Relate to Charmian Facility		

Plant	SRM #s	Type
Redacted - Does Not Relate to Charmian Facility		
Charmian	8786	Granules
Charmian	8792	Granules
Charmian	8809	Granules
Redacted - Does Not Relate to Charmian Facility		

## Laboratory Report

GAF/ELK  
1361 Alps road  
Wayne, NJ 07470  
United States  
Attention: Celeste Wills  
Telephone: 9723-628-3035

Report Date 12/09/2011  
Sample Receipt Date 11/23/2011  
RJ Lee Group Job No. AOH1020169-0  
Authorization/P.O. No. CH40294  
Client Job No./Name Crushed Rock

Analysis: Asbestos in Bulk Samples by Point Count  
Method: EPA/600/R-93/116

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
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Redacted - Does Not Relate to Charmian Facility

Client Job No./Name: Crushed Rock

RJ Lee Group Job No: AOH1020169-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10176063.HPL	8786 - Granules	Yes	1	ND		100.00	Q, CA, F, OP, MI	MSS-12/02/2011
Description:		Light green rock dust. 1000 point count. No asbestiform minerals detected. DL =0.1%						
Weight Loss: 0.0%								
10176064.HPL	8792 - Granules	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-12/02/2011
Description:		Light green rock dust. 1000 point count. No asbestiform minerals detected. DL=0.1%						
Weight Loss: 0.0%								
10176065.HPL	8809 - Granules	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-12/02/2011
Description:		Green rock dust. 1000 point count. No asbestiform minerals detected. DL=0.1%						
Weight Loss: 0.0%								

# Redacted - Does Not Relate to Charmian Facility

Client Job No./Name: Crushed Rock

RJ Lee Group Job No: AOH1020169-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
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# Redacted - Does Not Relate to Charmian Facility

10176072.HPL	8788 - Fines	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-12/02/2011
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Description: Green rock dust. 1000 point count.  
No asbestiform minerals detected. DL=0.1%

Weight Loss: 0.0%

10176073.HPL	8790 - Fines	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-12/02/2011
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Description: Green rock dust. 1000 point count.  
No asbestiform minerals detected. DL=0.1%

Weight Loss: 0.0%

10176074.HPL	8800 - Fines	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-12/02/2011
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Description: Green rock dust. 1000 point count.  
No asbestiform minerals detected. DL=0.1%

Weight Loss: 0.0%



Client Job No./Name: Crushed Rock

RJ Lee Group Job No: AOH1020169-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10176075.HPL	8789 - Fines	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-12/02/2011
Description: Light green rock dust. 1000 point count. No asbestiform minerals detected. DL=0.1%								
Weight Loss: 0.0%								
10176076.HPL	8791 - Fines	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-12/02/2011
Description: Light green rock dust. 1000 point count. No asbestiform minerals detected. DL=0.1%								
Weight Loss: 0.0%								
10176077.HPL	8801 - Fines	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-12/02/2011
Description: Light green rock dust. 1000 point count. No asbestiform minerals detected. DL=0.1%								
Weight Loss: 0.0%								

**Redacted - Does Not Relate to Charmian Facility**

Client Job No./Name: Crushed Rock

RJ Lee Group Job No: AOH1020169-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
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**Redacted - Does Not Relate to Charmian Facility**

Client Job No./Name: Crushed Rock

RJ Lee Group Job No: AOH1020169-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
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**Redacted - Does Not Relate to Charmian Facility**

Client Job No./Name: Crushed Rock

RJ Lee Group Job No: AOH1020169-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
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Authorized Signature:



Craig Huntington, Analyst

**ASBESTOS**

AM = Amosite  
 AC = Actinolite  
 AN = Anthophyllite  
 CH = Chrysotile  
 CR = Crocidolite  
 TR = Tremolite

**NON-ASBESTOS**

CE = Cellulose  
 MW = Mineral Wool  
 FG = Fibrous Glass  
 SF = Synthetic Fibers  
 H = Hair  
 W = Wollastonite  
 OF = Other Fibers

**NON-FIBROUS MATERIALS**

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 B = Binder  
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 CL = Clay  
 F = Feldspar  
 G = Gypsum  
 HY = Hydromagnesite  
 M = Miscellaneous  
 MI = Mica  
 OP = Opaque  
 OR = Organic  
 P = Perlite  
 Q = Quartz  
 T = Tar  
 V = Vermiculite

**DISCLAIMER NOTES**

- "ND" indicates no asbestos was detected; the method detection limit is 0.1%.
- "Trace" or "<1" indicates asbestos was identified in the sample, but the concentration is less than the method quantitation limit of 0.1%. PLM coefficients of variance range from approximately 1.8 at the quantitation limit of 0.1% to 0.32 at high fiber concentrations.
- Samples are archived for three months following analysis and are then properly discarded.
- 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.
- This test report relates to the items tested.
- This report is not valid unless it bears the name of a NVLAP-approved signatory.
- Any reproduction of this document must be in full in order for the report to be valid.
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- Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar nonfriable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as "non-asbestos-containing."
- Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA #100364) facility.
- If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.



A041020932-0

February 1, 2011

RJ Lee Group, Inc.  
350 Hochberg Road  
Monroeville, PA 15146  
Attn: Matthew Sanchez

Via: Federal Express: 7980-1027-4853

RE: Fiber - PLM and Crystalline Silica - XRD Analyses.

Dear Mr. Sanchez:

Enclosed are the following samples for the required analyses. All samples are crushed rock and classified as a volcanic rock (meta-basalt, meta-andesite, and rhyolite). Also enclosed is an MSDS sheet.

**Fiber and Crystalline Silica:**

For each sample listed (27 samples), complete the following analyses:

1. Polarized Light Microscopy (PLM): Bulk Analyses – 1,000 Point Count (Untreated) for regulated asbestiform fibers (EPA 600/R-93/116). If fibrous material is detected retain sample for additional testing.
2. Total Crystalline Silica (Bulk Analysis) by quantitative XRD.
3. A 10 - day turn-around service is requested for both the PLM and XRD analyses.

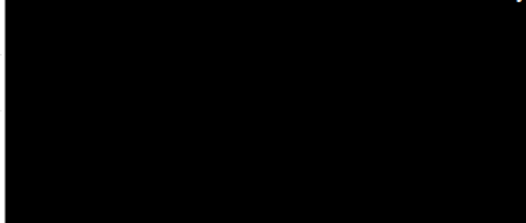
Nineteen samples of rock granules (-8 mesh x 35 mesh). (15 - 200 grams each):

8846 - Granules 8868 -Granules

8847 - Granules 8870 -Granules

8878 - Granules 8869 -Granules

Redacted - Does Not Relate to Charmian Facility



Received 37 samples  
02-02-12 9:27 AM  
Ymela Marquez  
RJ Lee Group.

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Redacted - Does Not Relate to Charmian Facility



Eighteen samples of rock fines (-35 mesh x 325 mesh). (60 - 200 grams each):

8848 - Fines

8853 - Fines

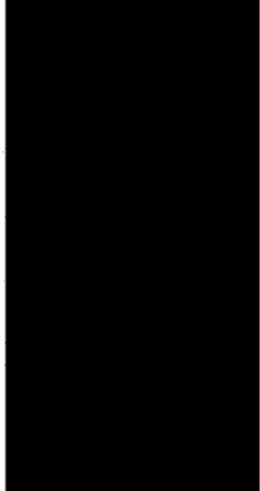
8854 - Fines

8876 - Fines

8877 - Fines

8849 - Fines

Redacted - Does Not Relate to Charmian Facility



Please address and send the lab results directly to:

Celeste Wills  
GAF/ELK  
1361 Alps Road  
Wayne, NJ 07470  
973-628-3035  
[cwills@gaf.com](mailto:cwills@gaf.com)

with a copy sent to:

Ted Heath  
Specialty Granules Inc.  
34 Charles St  
Hagerstown, MD 21740  
(301) 714-1332  
[theath@specialtygranules.com](mailto:theath@specialtygranules.com)



**SPECIALTY GRANULES INC.**

ISP Minerals Inc. is now **Specialty Granules Inc.**, dedicated for over 85 years to providing the highest quality granules and customer service to the roofing industry.



Payment will be made through SGI Purchase Order CH-40746. Please copy Ted Heath and not Celeste Wills on the invoice.

Please call me with any questions.

Sincerely,

Ted Heath  
Geologist  
Specialty Granules Inc.  
[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

C.C.

G. Kamas – SGI

D. Dinkins – SGI

A. Shepeck – SGI

Celeste Wills – SGI



**SPECIALTY GRANULES INC.**

*ISP Minerals Inc. is now **Specialty Granules Inc.**, dedicated for over 85 years to providing the highest quality granules and customer service to the roofing industry.*

**MIS- 11 4th Quarter Inventory of Material In Buckets For Testing****1/30/2012**

Plant	SRM#	Color/ Type	RJ Lee Sample in g	Sierra Sample in g	Retain Sample in g
Charmian	8846	Raw Granules	400	200	4000
Charmian	8847	Raw Granules	400	200	3500
Charmian	8878	Raw Granules	400	200	2800
Charmian	8848	Fines	400	600	2100
Charmian	8853	Fines	400	600	3900
Charmian	8854	Fines	400	600	2600
Charmian	8876	Fines	400	600	1500
Charmian	8877	Fines	60	300	660
Charmian	8849	Fines	60	300	26
Charmian	8868	G-358	60	100	191

Redacted - Does Not Relate to Charmian Facility





## Laboratory Report

GAF/ELK  
1361 Alps road  
Wayne, NJ 07470  
United States  
Attention: Celeste Wills  
Telephone: 9723-628-3035

Report Date 02/14/2012  
Sample Receipt Date 02/02/2012  
RJ Lee Group Job No. AOH1020932-0  
Authorization/P.O. No. CH40746  
Client Job No./Name Crushed Rock

Analysis: Asbestos in Bulk Samples by Point Count

Method: EPA/600/R-93/116

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10186952.HPL	8846 - Granules	Yes	1	ND		100.00	Q, AM, F, OP, MI, M	CH-02/13/2012
Description:		Green rock granules. 1000 point count. DL=0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10186953.HPL	8847 - Granules	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-02/13/2012
Description:		Green rock granules. 1000 point count. DL=0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10186954.HPL	8878 - Granules	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-02/13/2012
Description:		Green rock granules. 1000 point count. DL=0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								

Client Job No./Name: Crushed Rock

RJ Lee Group Job No: AOH1020932-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
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Redacted - Does Not Relate to Charmian Facility

Client Job No./Name: Crushed Rock

RJ Lee Group Job No: AOH1020932-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10186961.HPL	8868 - Granules	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-02/13/2012

Description: Dark gray rock granules. 1000 point count. DL=0.1%.  
No asbestiform minerals detected.

Weight Loss: 0.0%

**Redacted - Does Not Relate to Charmian Facility**

Client Job No./Name: Crushed Rock

RJ Lee Group Job No: AOH1020932-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
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**Redacted - Does Not Relate to Charmian Facility**

10186971.HPL	8848 - Fines	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-02/14/2012
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Description: Light green rock dust. 1000 point count. DL=0.1%.  
No asbestiform minerals detected.

Weight Loss: 0.0%

10186972.HPL	8853 - Fines	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-02/14/2012
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Description: Green rock dust. 1000 point count. DL=0.1%.  
No asbestiform minerals detected.

Weight Loss: 0.0%

**Client Job No./Name:** Crushed Rock

**RJ Lee Group Job No:** AOH1020932-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10186973.HPL	8854 - Fines	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-02/14/2012
Description:		Green rock dust. 1000 point count. DL=0.1%. No asbestiform minerals detected.						
Weight Loss:		0.0%						
10186974.HPL	8876 - Fines	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-02/14/2012
Description:		Green rock dust. 1000 point count. DL=0.1%. No asbestiform minerals detected.						
Weight Loss:		0.0%						
10186975.HPL	8877 - Fines	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-02/14/2012
Description:		Green rock dust. 1000 point count. DL=0.1%. No asbestiform minerals detected.						
Weight Loss:		0.0%						
10186976.HPL	8849 - Fines	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-02/14/2012
Description:		Green rock dust. 1000 point count. DL=0.1%. No asbestiform minerals detected.						
Weight Loss:		0.0%						

# Redacted - Does Not Relate to Charmian Facility

Client Job No./Name: Crushed Rock

RJ Lee Group Job No: AOH1020932-0

RJLG Sample  
Number

Client Sample  
Number

Homogeneous

# of Layers

Asbestos  
Detected(%)

Non-Asbestos  
Fibers(%)

Non-Fibrous  
Materials(%)

Matrix  
Material

Analyst - Analysis  
Date

Redacted - Does Not Relate to Charmian Facility

Client Job No./Name: Crushed Rock

RJ Lee Group Job No: AOH1020932-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
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**Redacted - Does Not Relate to Charmian Facility**

Client Job No./Name: Crushed Rock

RJ Lee Group Job No: AOH1020932-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
-----------------------	-------------------------	-------------	-------------	-------------------------	---------------------------	-----------------------------	--------------------	----------------------------

Authorized Signature:



Craig Huntington, Analyst

**ASBESTOS**

AM = Amosite  
 AC = Actinolite  
 AN = Anthophyllite  
 CH = Chrysotile  
 CR = Crocidolite  
 TR = Tremolite

**NON-ASBESTOS**

CE = Cellulose  
 MW = Mineral Wool  
 FG = Fibrous Glass  
 SF = Synthetic Fibers  
 H = Hair  
 W = Wollastonite  
 OF = Other Fibers

**NON-FIBROUS MATERIALS**

AM = Amphibole  
 B = Binder  
 CA = Carbonates  
 CL = Clay  
 F = Feldspar  
 G = Gypsum  
 HY = Hydromagnesite  
 M = Miscellaneous  
 MI = Mica  
 OP = Opaque  
 OR = Organic  
 P = Perlite  
 Q = Quartz  
 T = Tar  
 V = Vermiculite

**DISCLAIMER NOTES**

- "ND" indicates no asbestos was detected; the method detection limit is 0.1%.
- "Trace" or "<1" indicates asbestos was identified in the sample, but the concentration is less than the method quantitation limit of 0.1%. PLM coefficients of variance range from approximately 1.8 at the quantitation limit of 0.1% to 0.32 at high fiber concentrations.
- Samples are archived for three months following analysis and are then properly discarded.
- 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.
- This test report relates to the items tested.
- This report is not valid unless it bears the name of a NVLAP-approved signatory.
- Any reproduction of this document must be in full in order for the report to be valid.
- This report may not be used to claim product endorsement by NVLAP, any agency of the U.S. Government or any other laboratory accrediting agency.
- Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar nonfriable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as "non-asbestos-containing."
- Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA #100364) facility.
- If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.





June 1, 2011

RJ Lee Group, Inc.  
350 Hochberg Road  
Monroeville, PA 15146  
Attn: Matthew Sanchez

Via: Federal Express: 7936-3083-0537

RE: Fiber - PLM and Crystalline Silica - XRD Analyses.

Dear Mr. Sanchez:

Enclosed are the following samples for the required analyses. All samples are crushed rock and classified as a volcanic rock (meta-basalt). Also enclosed is an MSDS sheet.

**Fiber and Crystalline Silica:**

For each sample listed (8 samples), complete the following analyses:

1. Polarized Light Microscopy (PLM): Bulk Analyses – 1,000 Point Count (Untreated) for regulated asbestiform fibers (EPA 600/R-93/116). If fibrous material is observed, notify SGI and proceed with TEM testing of the material.
2. Total Crystalline Silica (Bulk Analysis) by quantitative XRD.
3. A 10 - day turn-around service is requested for both the PLM and XRD analyses.

Four samples of rock granules (-8 mesh x 35 mesh). (200 grams each):

8941 - Fines  
8942 - Fines  
8943 - Fines  
8944 - Fines

Four samples of rock fines (-35 mesh x 325 mesh). (200 grams each):

8941 - Fines  
8942 - Fines

RCVD 06-04-12 10:15AM  
Linda Margolis  
RJ Lee Group

06-04-12 Confirmed with Ted Heath we were to only receive 4 samples.



**SPECIALTY GRANULES INC.**

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8943 - Fines

8944 - Fines

Please address and send the lab results directly to:

Celeste Wills  
GAF/ELK  
1361 Alps Road  
Wayne, NJ 07470  
973-628-3035  
[cwills@gaf.com](mailto:cwills@gaf.com)

with a copy sent to:

Ted Heath  
Specialty Granules Inc.  
34 Charles St  
Hagerstown, MD 21740  
(301) 714-1332  
[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

Payment will be made through SGI Purchase Order CH-41807. Please copy Ted Heath and not Celeste Wills on the invoice.

Please call me with any questions.

Sincerely,

Ted Heath  
Geologist  
Specialty Granules Inc.  
[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

C.C.  
G. Kamas – SGI  
D. Dinkins – SGI  
A. Shepeck – SGI  
Celeste Wills – SGI



**Waste Byproducts Testing**

**587-097**

**5/25/2012**

<b>Plant</b>	<b>SRM#</b>	<b>Conveyor Number</b>	<b>Color/ Type</b>	<b>RJ Lee Sample in g</b>	<b>Sierra Sample in g</b>	<b>Retain Sample in g</b>
Charmian	8941	980	Fines	400	600	1000
Charmian	8942	976	Fines	400	600	1000
Charmian	8943	19	Fines	400	600	1000
Charmian	8944	58	Fines	400	600	1000

## Laboratory Report

GAF/ELK  
1361 Alps road  
Wayne, NJ 07470  
United States  
Attention: Celeste Wills  
Telephone: 9723-628-3035

Report Date 06/12/2012  
Sample Receipt Date 06/04/2012  
RJ Lee Group Job No. AOH1022477-0  
Authorization/P.O. No. CH41807  
Client Job No./Name Rock Fines

Analysis: Asbestos in Bulk Samples by Point Count

Method: EPA/600/R-93/116

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10203145.HPL	8941 - Fines	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	WHP-06/12/2012
Description: Gray Crushed Rock 1000 Point Count. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10203146.HPL	8942 - Fines	Yes	1	ND		100.00	Q, CA, AM, OP, MI, M	WHP-06/12/2012
Description: Gray Crushed Rock 1000 Point Count. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10203147.HPL	8943 - Fines	Yes	1	ND		100.00	Q, CA, OP, MI, M	WHP-06/12/2012
Description: Gray Crushed Rock 1000 Point Count. No asbestiform minerals detected.								
Weight Loss: 0.0%								

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Client Job No./Name: Rock Fines

RJ Lee Group Job No: AOH1022477-0

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RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10203148.HPL	8944 - Fines	Yes	1	ND		100.00	Q, CA, OP, MI, M	WHP-06/12/2012
Description:	Gray Crushed Rock 1000 Point Count. No asbestiform minerals detected.							
Weight Loss:	0.0%							

---

Client Job No./Name: Rock Fines

RJ Lee Group Job No: AOH1022477-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
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Authorized Signature:

William H. Powers, Manager-Optical

**ASBESTOS**

AM = Amosite  
 AC = Actinolite  
 AN = Anthophyllite  
 CH = Chrysotile  
 CR = Crocidolite  
 TR = Tremolite

**NON-ASBESTOS**

CE = Cellulose  
 MW = Mineral Wool  
 FG = Fibrous Glass  
 SF = Synthetic Fibers  
 H = Hair  
 W = Wollastonite  
 OF = Other Fibers

**NON-FIBROUS MATERIALS**

AM = Amphibole  
 B = Binder  
 CA = Carbonates  
 CL = Clay  
 F = Feldspar  
 G = Gypsum  
 HY = Hydromagnesite  
 M = Miscellaneous  
 MI = Mica  
 OP = Opaque  
 OR = Organic  
 P = Perlite  
 Q = Quartz  
 T = Tar  
 V = Vermiculite

**DISCLAIMER NOTES**

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- "Trace" or "<1" indicates asbestos was identified in the sample, but the concentration is less than the method quantitation limit of 0.1%. PLM coefficients of variance range from approximately 1.8 at the quantitation limit of 0.1% to 0.32 at high fiber concentrations.
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- 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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- Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar nonfriable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as "non-asbestos-containing."
- Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA #100364) facility.
- If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.



December 18, 2012

RJ Lee Group, Inc.  
350 Hochberg Road  
Monroeville, PA 15146  
Attn: Matthew Sanchez

Via: Federal Express: 7943-4565-2309

RE: Fiber - PLM and Crystalline Silica - XRD Analyses.

Dear Mr. Sanchez:

Enclosed are the following samples for the required analyses. All samples are crushed rock and classified as a volcanic rock (meta-basalt). Also enclosed is an MSDS sheet.

**Fiber and Crystalline Silica:**

For each sample listed (7 samples), complete the following analyses:

1. Polarized Light Microscopy (PLM): Bulk Analyses – 1,000 Point Count (Untreated) for regulated asbestiform fibers (EPA 600/R-93/116). If fibrous material is detected contact SGI and retain sample for additional TEM testing.
2. Total Crystalline Silica (Bulk Analysis) by quantitative XRD.
3. A 10 - day turn-around service is requested for both the PLM and XRD analyses.

Three samples of rock granules (-8 mesh x 35 mesh). (50 grams each):

9014 - Granules  
9015 - Granules  
9016 - Granules

Four samples of rock fines (-35 mesh x 325 mesh). (50 grams each):

9008 - Fines  
9009 - Fines

Rec'd 12-20-12 10:40 AM  
Linda Marquez  
RJ Lee Group Inc



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A0141025129-0



**SPECIALTY GRANULES INC.**

34 Charles St // Hagerstown, MD 21740 // Tel: 301-733-4000 // Fax: 301-733-4003

**TECHNICAL CENTER**

[www.specialtygranules.com](http://www.specialtygranules.com)

9012 - Fines

9013 - Fines

Please address and send the lab results directly to:

with a copy sent to:

Celeste Levine (Electronic Copy)  
GAF/ELK  
1361 Alps Road  
Wayne, NJ 07470  
973-628-3035  
[clevine@gaf.com](mailto:clevine@gaf.com)

Ted Heath (Hard & Electronic Copy)  
Specialty Granules Inc.  
34 Charles St  
Hagerstown, MD 21740  
(301) 714-1332  
[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

Payment will be made through SGI Purchase Order CH-43436. Please copy Ted Heath and not Celeste Levine on the invoice.

Please call me with any questions.

Sincerely,

Ted Heath  
Geologist  
Specialty Granules Inc.  
[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

C.C.

G. Kamas – SGI

D. Dinkins – SGI

A. Shepeck – SGI

Celeste Levine – SGI



**SPECIALTY GRANULES INC.**

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Shipment Inventory

12/17/2012

	SRM #	Description	QTY	Amount (g)
CHARMIAN	9008	Headlap Plant Jan - Aug Composite	2	50
CHARMIAN	9009	Lower Mill Jan - Aug Composite	2	50
CHARMIAN	9012	Headlap Plant Sept - Oct Composite	2	50
CHARMIAN	9013	Lower Mill Sept - Oct Composite	2	50
CHARMIAN	9014	Raw Granules Q1 Composite	2	50
CHARMIAN	9015	Raw Granules Q2 Composite	2	50
CHARMIAN	9016	Raw Granules Q3 Composite	2	50

## Laboratory Report

Specialty Granules Inc.  
34 Charles St.  
Hagerstown, MD 21740  
United States  
Attention: Ted Heath  
Telephone: 301-714-1332

Report Date 01/04/2013  
Sample Receipt Date 12/20/2012  
RJ Lee Group Job No. AOH1025129-0  
Authorization/P.O. No. CH43436  
Client Job No./Name Crushed Rock-Volcanic Rock

Analysis: Asbestos in Bulk Samples by Point Count

Method: EPA/600/R-93/116

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10222972.HPL	9014 - Granules	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	WHP-01/03/2013
Description:		Green rock granules. No asbestiform minerals detected. 1000 point count. DL=0.1%.						
Weight Loss: 0.0%								
10222973.HPL	9015 - Granules	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	WHP-01/03/2013
Description:		Green rock granules. No asbestiform minerals detected. 1000 point count. DL=0.1%.						
Weight Loss: 0.0%								
10222974.HPL	9016 - Granules	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	WHP-01/03/2013
Description:		Green rock granules. No asbestiform minerals detected. 1000 point count. DL=0.1%.						
Weight Loss: 0.0%								

**Client Job No./Name:** Crushed Rock-Volcanic Rock

**RJ Lee Group Job No:** AOH1025129-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10222975.HPL	9008 - Fines	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	WHP-01/03/2013
Description:		Green rock fines. No asbestiform minerals detected. 1000 point count. DL=0.1%.						
Weight Loss:		0.0%						
10222976.HPL	9009 - Fines	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	WHP-01/03/2013
Description:		Green rock fines. No asbestiform minerals detected. 1000 point count. DL=0.1%.						
Weight Loss:		0.0%						
10222977.HPL	9012 - Fines	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	WHP-01/03/2013
Description:		Green rock fines. No asbestiform minerals detected. 1000 point count. DL=0.1%.						
Weight Loss:		0.0%						
10222978.HPL	9013 - Fines	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	WHP-01/03/2013
Description:		Green rock fines. No asbestiform minerals detected. 1000 point count. DL=0.1%.						
Weight Loss:		0.0%						

Client Job No./Name: Crushed Rock-Volcanic Rock

RJ Lee Group Job No: AOH1025129-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
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Authorized Signature: \_\_\_\_\_

William H. Powers, Manager-Optical

**ASBESTOS**

AM = Amosite  
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AN = Anthophyllite  
CH = Chrysotile  
CR = Crocidolite  
TR = Tremolite

**NON-ASBESTOS**

CE = Cellulose  
MW = Mineral Wool  
FG = Fibrous Glass  
SF = Synthetic Fibers  
H = Hair  
W = Wollastonite  
OF = Other Fibers

**NON-FIBROUS MATERIALS**

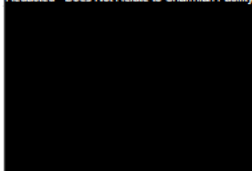
AM = Amphibole  
B = Binder  
CA = Carbonates  
CL = Clay  
F = Feldspar  
G = Gypsum  
HY = Hydromagnesite  
M = Miscellaneous  
MI = Mica  
OP = Opaque  
OR = Organic  
P = Perlite  
Q = Quartz  
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- "Trace" or "<1" indicates asbestos was identified in the sample, but the concentration is less than the method quantitation limit of 0.1%. PLM coefficients of variance range from approximately 1.8 at the quantitation limit of 0.1% to 0.32 at high fiber concentrations.
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- Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA #100364) facility.
- If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.



Redacted - Does Not Relate to Charnian Facility



Nineteen samples of rock granules (-8 mesh x 35 mesh). (100 grams each):

9072 - G760	9076 - G340	9080 - G556	9084 - G720	9088 - G11
9073 - G115	9077 - G341	9081 - G560	9085 - G801	9089 - G11
9074 - G171	9078 - G546	9082 - G552	9086 - G11D	9090 - G11
9075 - G201	9079 - G555	9083 - G615	9087 - G11	

Please address and send the lab results directly to:

Celeste Levine (Electronic Copy)  
GAF/ELK  
1361 Alps Road  
Wayne, NJ 07470  
973-628-3035  
[clevine@gaf.com](mailto:clevine@gaf.com)

with a copy sent to:

Ted Heath (Hard & Electronic Copy)  
Specialty Granules Inc.  
34 Charles St  
Hagerstown, MD 21740  
(301) 714-1332  
[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

Payment will be made through SGI Purchase Order CH-44695. Please copy Ted Heath and not Celeste Levine on the invoice.

Please call me with any questions.

Sincerely,

Ted Heath  
Geologist  
Specialty Granules Inc.  
[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

c.c.

G. Kamas - SGI

M. Carver 05-17-13 09110



SPECIALTY GRANULES INC.

ISP Minerals Inc. is now **Specialty Granules Inc.**, dedicated for over 85 years to providing the highest quality granules and customer service to the roofing industry.



**SPECIALTY GRANULES INC.**

A0H1027032-0

**TECHNICAL CENTER**

34 Charles St // Hagerstown, MD 21740 // Tel: 301-733-4000 // Fax: 301-733-4003

[www.specialtygranules.com](http://www.specialtygranules.com)

R. Collins – SGI  
A. Shepeck – SGI  
C. Levine – SGI

M. Carree 05-17-13 09:10



**SPECIALTY GRANULES INC.**

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MIS- 11 2012 Yearly Samples In Buckets  
5/6/2013

			RJ Lee Sample	Sierra
Plant	SRM#	Color/ Type	in g	Sample in g
Charmian	9055	Fines	100	0
Charmian	9056	Fines	0	600
Charmian	9057	Fines	100	0
Charmian	9058	Fines	0	600
Charmian	9062	Raw Granules	100	0
Charmian	9063	Raw Granules	0	200
Charmian	9072	G-760	100	200
Charmian	9073	G-115	100	200
Charmian	9074	G-171	100	200
Charmian	9075	G-201	100	200
Charmian	9076	G-340	100	200
Charmian	9077	G-341	100	200
Charmian	9078	G-546	100	200
Charmian	9079	G-555	100	200
Charmian	9080	G-556	100	200
Charmian	9081	G-560	100	200
Charmian	9082	G-552	100	200
Charmian	9083	G-615	100	200
Charmian	9084	G-720	100	200
Charmian	9085	G-801	100	200
Charmian	9086	G-11D	100	200
Charmian	9087	G-11	100	200
Charmian	9088	G-11	100	200
Charmian	9089	G-11	100	200
Charmian	9090	G-11	100	200

Redacted - Does Not Relate to Charmian Facility

## Laboratory Report

GAF/ELK  
1361 Alps road  
Wayne, NJ 07470  
United States  
Attention: Celeste Levine  
Telephone: 973-628-3035

Report Date 06/05/2013  
Sample Receipt Date 05/17/2013  
RJ Lee Group Job No. AOH1027032-0  
Authorization/P.O. No. CH 44695  
Client Job No./Name

Analysis: Asbestos in Bulk Samples by Point Count  
Method: EPA/600/R-93/116

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10241543.HPL	9062 - Granules	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-06/05/2013

Description: Gray / green rock granules. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.

Weight Loss: 0.0%

**Redacted - Does Not Relate to Charmian Facility**



**Client Job No./Name:**
**RJ Lee Group Job No:** AOH1027032-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10241547.HPL	9055 - Fines	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-06/03/2013

**Description:** Pale green rock fines. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.

**Weight Loss:** 0.0%

10241548.HPL	9057 - Fines	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-06/05/2013
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**Description:** Pale green rock fines. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.

**Weight Loss:** 0.0%

# Redacted - Does Not Relate to Charmian Facility

10241553.HPL	9072 - G760	Yes	1	ND		100.00	Q, CA, AM, F, M	CW-06/05/2013
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**Description:** Light Gray Rock Granules. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.

**Weight Loss:** 0.0%

**Client Job No./Name:**
**RJ Lee Group Job No: AOH1027032-0**

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10241554.HPL	9073 - G115	Yes	1	ND		100.00	Q, CA, AM, F, OP, M	CW-06/05/2013
Description: Pale Gray Rock Granules. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10241555.HPL	9074 - G171	Yes	1	ND		100.00	Q, CA, AM, F, OP, M	CW-06/05/2013
Description: Dark Green Rock Granules. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10241556.HPL	9075 - G201	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-06/05/2013
Description: Rust colored rock granules. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10241557.HPL	9076 - G340	Yes	1	ND		100.00	Q, CA, AM, F, OP, M	CW-06/05/2013
Description: Black Rock Granules. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10241558.HPL	9077 - G341	Yes	1	ND		100.00	Q, CA, AM, F, M	CW-06/05/2013
Description: Dark Gray Rock Granules. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10241559.HPL	9078 - G546	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-06/05/2013
Description: Rust colored rock granules. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10241560.HPL	9079 - G555	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-06/05/2013
Description: Brown colored rock granules. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								

**Client Job No./Name:**
**RJ Lee Group Job No: AOH1027032-0**

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10241561.HPL	9080 - G556	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-06/05/2013
Description:		Brown colored rock granules. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10241562.HPL	9081 - G560	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-06/05/2013
Description:		Tan colored rock granules. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10241563.HPL	9082 - G552	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-06/05/2013
Description:		Brown colored rock granules. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10241564.HPL	9083 - G615	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-06/05/2013
Description:		Blue colored rock granules. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10241565.HPL	9084 - G720	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-06/05/2013
Description:		Light gray colored rock granules. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10241566.HPL	9085 - G801	Yes	1	ND		100.00	Q, CA, AM, F, M	CW-06/05/2013
Description:		Brown Rock Granules. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10241567.HPL	9086 - G11D	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-06/05/2013
Description:		Black colored rock granules. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								

Client Job No./Name:

RJ Lee Group Job No: AOH1027032-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10241568.HPL	9087 - G11	Yes	1	ND		100.00	Q, CA, AM, F, OP, M	CW-06/05/2013
Description: Dark Gray/Black Rock Granules. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10241569.HPL	9088 - G11	Yes	1	ND		100.00	Q, CA, AM, F, OP, M	CW-06/05/2013
Description: Black Rock Granules. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10241570.HPL	9089 - G11	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-06/05/2013
Description: Gray colored rock granules. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10241571.HPL	9090 - G11	Yes	1	ND		100.00	Q, CA, AM, F, OP, M	CW-06/05/2013
Description: Dark Gray/ Black Rock Granules. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								

Client Job No./Name:

RJ Lee Group Job No: AOH1027032-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
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*Courtney N. Weir*

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

Courtney N. Weir, Microscopist

#### ASBESTOS

AM = Amosite  
AC = Actinolite  
AN = Anthophyllite  
CH = Chrysotile  
CR = Crocidolite  
TR = Tremolite

#### NON-ASBESTOS

CE = Cellulose  
MW = Mineral Wool  
FG = Fibrous Glass  
SF = Synthetic Fibers  
H = Hair  
W = Wollastonite  
OF = Other Fibers

#### NON-FIBROUS MATERIALS

AM = Amphibole  
B = Binder  
CA = Carbonates  
CL = Clay  
F = Feldspar  
G = Gypsum  
HY = Hydromagnesite  
M = Miscellaneous  
MI = Mica  
OP = Opaque  
OR = Organic  
P = Perlite  
Q = Quartz  
T = Tar  
V = Vermiculite

#### DISCLAIMER NOTES

- "ND" indicates no asbestos was detected; the method detection limit is 0.1%.
- "Trace" or "<1" indicates asbestos was identified in the sample, but the concentration is less than the method quantitation limit of 0.1%. PLM coefficients of variance range from approximately 1.8 at the quantitation limit of 0.1% to 0.32 at high fiber concentrations.
- Samples are archived for three months following analysis and are then properly discarded.
- 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.
- This test report relates to the items tested.
- This report is not valid unless it bears the name of a NVLAP-approved signatory.
- Any reproduction of this document must be in full in order for the report to be valid.
- This report may not be used to claim product endorsement by NVLAP, any agency of the U.S. Government or any other laboratory accrediting agency.
- Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar nonfriable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as "non-asbestos-containing."
- Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA #100364) facility.
- If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.

A0H1028146-0



**SPECIALTY GRANULES INC.**

34 Charles St // Hagerstown, MD 21740 // Tel: 301-733-4000 // Fax: 301-733-4003

**TECHNICAL CENTER**

[www.specialtygranules.com](http://www.specialtygranules.com)

August 6, 2013

RJ Lee Group, Inc.  
350 Hochberg Road  
Monroeville, PA 15146  
Attn: Matthew Sanchez

Via: Federal Express: 7997-7738-3488

RE: Fiber - PLM and Crystalline Silica - XRD Analyses.

Dear Mr. Sanchez:

Enclosed are the following samples for the required analyses. All samples are crushed rock and classified as a volcanic rock (meta-basalt). Also enclosed are the MSDS sheets.

**Fiber and Crystalline Silica:**

For each sample listed (7 samples), complete the following analyses:

1. Polarized Light Microscopy (PLM): Bulk Analyses – 1,000 Point Count (Untreated) for regulated asbestiform fibers (EPA 600/R-93/116). If fibrous material is detected contact SGI and retain sample for additional TEM testing.
2. Total Crystalline Silica (Bulk Analysis) by quantitative XRD.
3. A 24 - day turn-around service is requested for both the PLM and XRD analyses.

**Two samples of rock granules (-8 mesh x 35 mesh). (200 grams each):**

SRM 9137 - Granules  
SRM 9138 - Granules

**Five samples of rock fines (-35 mesh x 325 mesh). (200 grams each):**

SRM 9139 - Fines      622-45 SRM 9121 - Fines  
SRM 9140 - Fines  
SRM 9141 - Fines  
SRM 9142 - Fines

*Rec'd 08-06-13 9:07 AM  
Linda Margen  
RJ Lee Group*



**SPECIALTY GRANULES INC.**

ISP Minerals Inc. is now **Specialty Granules Inc.**, dedicated for over 85 years to providing the highest quality granules and customer service to the roofing industry.



ADH1028146-0  
**SPECIALTY GRANULES INC.**

34 Charles St // Hagerstown, MD 21740 // Tel: 301-733-4000 // Fax: 301-733-4003

**TECHNICAL CENTER**

[www.specialtygranules.com](http://www.specialtygranules.com)

One Sample Complete Total Respirable Silica (NIOSH 7500/0600). (200grams)

622-45 SRM 9121 - Fines

Please address and send the lab results directly to:

Celeste Levine (Electronic Copy)

GAF/ELK

1361 Alps Road

Wayne, NJ 07470

973-628-3035

[clevine@gaf.com](mailto:clevine@gaf.com)

with a copy sent to:

Ted Heath (Hard & Electronic Copy)

Specialty Granules Inc.

34 Charles St

Hagerstown, MD 21740

(301) 714-1332

[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

Payment will be made through SGI Purchase Order CH-44695. Please copy Ted Heath and not Celeste Levine on the invoice.

Please call me with any questions.

Sincerely,

Ted Heath

Geologist

Specialty Granules Inc.

[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

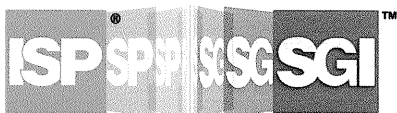
C.C.

G. Kamas – SGI

R. Collins – SGI

A. Shepeck – SGI

C. Levine – SGI



**SPECIALTY GRANULES INC.**

ISP Minerals Inc. is now **Specialty Granules Inc.**, dedicated for over 85 years to providing the highest quality granules and customer service to the roofing industry.



SRM#	Collector	Date	Remarks	Type
9135	Plant	5/1-31/13	Daily Samples Collected For Monthly Composite	Raw Granules
9136	Plant	6/3-28/13	" " " "	" "
9137	Plant	1,2,3/2013	1 <sup>st</sup> Qrt./Monthly Composites Combined For Testing	Raw Granules
9138	Plant	4,5,6/13	2 <sup>nd</sup> Qrt./Monthly Composites Combined For Testing	" "
9139	Plant	1,2,3/13	1 <sup>st</sup> Qrt./Monthly Composites Combined For Testing	Fines
9140	Plant	1,2,3/2013	Monthly Composites Combined For 1 <sup>st</sup> Qrt For Testing	Fines
9141	Plant	4,5,6/2013	Monthly Composites Combined For 2nd Qrt Composite	" "
9142	Plant	4,5,6/2013	" " " "	" "

Amount	Source	Location
6400	Mixer Floor	Charmian
5600	" "	" "
1500g		Charmian
1500g		Charmian
1500	CH-A Lower Mill	Charmian
1500	107 HLP	Charmian
1500	CH-A Lower Mill	" "
1500	107 HLP	Charmian

Redacted - Does Not Relate to Charmian Facility

Continued on Page \_\_\_\_\_

Read and Understood By _____			
Signed _____	Date _____	Signed _____	Date _____

Read and Understood By _____			
Signed _____	Date _____	Signed _____	Date _____



## Laboratory Report

GAF/ELK  
1361 Alps road  
Wayne, NJ 07470  
United States  
Attention: Celeste Levine  
Telephone: 973-628-3035

Report Date 08/08/2013  
Sample Receipt Date 08/06/2013  
RJ Lee Group Job No. AOH1028146-0  
Authorization/P.O. No. CH45345  
Client Job No./Name

Analysis: Asbestos in Bulk Samples by Point Count

Method: EPA/600/R-93/116

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10249521.HPL	SRM 9137 - Granules	Yes	1	ND		100.00	Q, AM, F, OP, MI, M	WHP-08/06/2013
Description: Gray Crushed Rock 1000 points counted. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10249522.HPL	SRM 9138 - Granules	Yes	1	ND		100.00	Q, CA, AM, OP, MI, M	WHP-08/06/2013
Description: Gray Crushed Rock 1000 points counted. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10249523.HPL	SRM 9139 - Fines	Yes	1	ND		100.00	Q, CA, AM, OP, MI, M	WHP-08/06/2013
Description: Gray Crushed Rock 1000 points counted. No asbestiform minerals detected.								
Weight Loss: 0.0%								

Client Job No./Name:

RJ Lee Group Job No: AOH1028146-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10249524.HPL	SRM 9140 - Fines	Yes	1	ND		100.00	Q, CA, AM, OP, MI, M	WHP-08/06/2013
Description:	Gray Crushed Rock 1000 points counted. No asbestiform minerals detected.							
Weight Loss:	0.0%							
10249525.HPL	SRM 9141 - Fines	Yes	1	ND		100.00	Q, CA, AM, OP, MI, M	WHP-08/08/2013
Description:	Gray Crushed Rock 1000 points counted. No asbestiform minerals detected.							
Weight Loss:	0.0%							
10249526.HPL	SRM 9142 - Fines	Yes	1	ND		100.00	Q, CA, AM, OP, MI, M	WHP-08/08/2013
Description:	Gray Crushed Rock 1000 points counted. No asbestiform minerals detected.							
Weight Loss:	0.0%							
10249527.HPL	622-45 SRM 9121 - Fines	Yes	1	ND		100.00	Q, CA, AM, OP, MI, M	WHP-08/08/2013
Description:	Gray Crushed Rock 1000 points counted. No asbestiform minerals detected.							
Weight Loss:	0.0%							

Client Job No./Name:

RJ Lee Group Job No: AOH1028146-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
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*William H. Powers*

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

William H. Powers, Manager-Optical

#### ASBESTOS

AM = Amosite  
AC = Actinolite  
AN = Anthophyllite  
CH = Chrysotile  
CR = Crocidolite  
TR = Tremolite

#### NON-ASBESTOS

CE = Cellulose  
MW = Mineral Wool  
FG = Fibrous Glass  
SF = Synthetic Fibers  
H = Hair  
W = Wollastonite  
OF = Other Fibers

#### NON-FIBROUS MATERIALS

AM = Amphibole  
B = Binder  
CA = Carbonates  
CL = Clay  
F = Feldspar  
G = Gypsum  
HY = Hydromagnesite  
M = Miscellaneous  
MI = Mica  
OP = Opaque  
OR = Organic  
P = Perlite  
Q = Quartz  
T = Tar  
V = Vermiculite

#### DISCLAIMER NOTES

- "ND" indicates no asbestos was detected; the method detection limit is 0.1%.
- "Trace" or "<1" indicates asbestos was identified in the sample, but the concentration is less than the method quantitation limit of 0.1%. PLM coefficients of variance range from approximately 1.8 at the quantitation limit of 0.1% to 0.32 at high fiber concentrations.
- Samples are archived for three months following analysis and are then properly discarded.
- 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.
- This test report relates to the items tested.
- This report is not valid unless it bears the name of a NVLAP-approved signatory.
- Any reproduction of this document must be in full in order for the report to be valid.
- This report may not be used to claim product endorsement by NVLAP, any agency of the U.S. Government or any other laboratory accrediting agency.
- Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar nonfriable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as "non-asbestos-containing."
- Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA #100364) facility.
- If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratorys results are limited to the reported values.



March 25, 2014

RJ Lee Group, Inc.  
350 Hochberg Road  
Monroeville, PA 15146  
Attn: Matthew Sanchez

Via: Federal Express: 7983-2319-3615

RE: Fiber - PLM and Crystalline Silica - XRD Analyses.

Dear Mr. Sanchez:

Enclosed are the following samples for the required analyses. All samples are crushed rock and classified as a volcanic rock (meta-basalt, meta-andesite, and rhyolite). Also enclosed are the MSDS sheets.

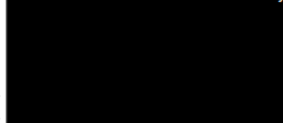
**Fiber and Crystalline Silica:**

For each sample listed (84 samples), complete the following analyses:

1. Polarized Light Microscopy (PLM): Bulk Analyses – 1,000 Point Count (Untreated) for regulated asbestiform fibers (EPA 600/R-93/116). If fibrous material is detected contact SGI and retain sample for additional TEM testing.
2. Total Crystalline Silica (Bulk Analysis) by quantitative XRD.
3. A 10 - day turn-around service is requested for both the PLM and XRD analyses.

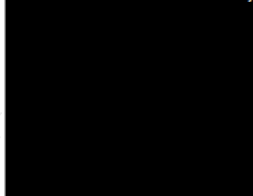
Three samples of rock granules (-8 mesh x 35 mesh). (200 grams each):

Redacted - Does Not Relate to Charmian Facility



Four samples of rock fines (-35 mesh x 325 mesh). (200 grams each):

Redacted - Does Not Relate to Charmian Facility



RECD 03-26-14 9:28 AM  
Yvonne Margolis  
RJ Lee Group



Seventy-seven samples of finished product (-8 mesh x 35 mesh). (50 grams each):

See attached Table 1.

Please address and send the lab results directly to:

Celeste Levine (Electronic Copy)  
GAF/ELK  
1361 Alps Road  
Wayne, NJ 07470  
973-628-3035  
[clevine@gaf.com](mailto:clevine@gaf.com)

with a copy sent to:

Ted Heath (Hard & Electronic Copy)  
Specialty Granules Inc.  
34 Charles St  
Hagerstown, MD 21740  
(301) 714-1332  
[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

Payment will be made through SGI Purchase Order CH-47262. Please copy Ted Heath and not Celeste Levine on the invoice.

Please call me with any questions.

Sincerely,

Ted Heath  
Geologist  
Specialty Granules Inc.  
[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

c.c.

G. Kamas – SGI  
R. Collins – SGI  
A. Shepeck – SGI  
C. Levine – SGI

A0H1031320-0

**Table 1: Finished Product Samples**

3/18/2014

**2013 Q1 Samples**

SRM#	Product
9351	G-115 composite
9352	G-171 comp.
9353	G-201 comp.
9354	G-340 comp.
9355	G-341 comp.
9357	G-546 comp.
9356	G-552 comp.
9358	G-555 comp.
9359	G-556 comp.
9360	G-560 comp.
9361	G-615 comp.
9362	G-720 comp.
9363	G-760 comp.
9364	G-801 comp.
9365	G-11D comp.
9366	G-11 L. Mill Oil Only
9367	G-11 L. Mill Oil+Sil.
9368	G-11 HLP Oil Only
9369	G-11 HLP Oil+ Sil.

**2013 Q2 Samples**

SRM#	Product
9370	G-115 comp.
9371	G-171 comp.
9372	G-201 comp.
9373	G-340 comp.
9374	G-341 comp.
9376	G-546 comp.
9375	G-552 comp.
9377	G-555 comp.
9378	G-556 comp.
9379	G-560 comp.
9380	G-615 comp.
9381	G-720 comp.
9382	G-760 comp.
9383	G-801 comp.
9384	G-11D comp.
9385	G-11 L. Mill Oil Only
9386	G-11 L. Mill Oil+Sil.
9387	G-11 HLP Oil Only
9388	G-11 HLP Oil+ Sil.

**2013 Q3 Samples**

SRM#	Product
9389	G-115 comp.
9390	G-171 comp.
9391	G-201 comp.
9392	G-340 comp.
9393	G-341 comp.
9394	G-546 comp.
9395	G-552 comp.
9396	G-555 comp.
9397	G-556 comp.
9398	G-560 comp.
9399	G-615 comp.
9400	G-720 comp.
9401	G-760 comp.
9402	G-801 comp.
9403	G-11D comp.
9404	G-11 L. Mill Oil Only
9405	G-11 L. Mill Oil+Sil.
9406	G-11 HLP Oil Only
9407	G-11 HLP Oil+ Sil.

**2013 Q4 Samples**

SRM#	Product
9408	G-115 comp.
9409	G-171 comp.
9410	G-201 comp.
9411	G-340 comp.
9412	G-341 comp.
9413	G-546 comp.
9414	G-552 comp.
9415	G-555 comp.
9417	G-556 comp.
9416	G-560 comp.
9418	G-615 comp.
9419	G-720 comp.
9420	G-760 comp.
9421	G-801 comp.
9422	G-11D comp.
9446	Backsurfacing
9442	G-11 L. Mill Oil Only
9443	G-11 L. Mill Oil+Sil.
9444	G-11 HLP Oil Only
9445	G-11 HLP Oil+ Sil.

Bucket Inventory For RJ Lee

			RJ Lee	Number of
Plant	SRM#	Color/ Type	Sample in g	Samples
Redacted - Does Not Relate to Charmian Facility				
Charmian	9351	1st Qrt. G-115 composite	50	2
Charmian	9352	1st Qrt. G-171 comp.	50	2
Charmian	9353	1st Qrt. G-201 comp.	50	2
Charmian	9354	1st Qrt. G-340 comp.	50	2
Charmian	9355	1st Qrt. G-341 comp.	50	2
Charmian	9357	1st Qrt. G-546 comp.	50	2
Charmian	9356	1st Qrt. G-552 comp.	50	2
Charmian	9358	1st Qrt. G-555 comp.	50	2
Charmian	9359	1st Qrt. G-556 comp.	50	2
Charmian	9360	1st Qrt. G-560 comp.	50	2
Charmian	9361	1st Qrt. G-615 comp.	50	2
Charmian	9362	1st Qrt. G-720 comp.	50	2
Charmian	9363	1st Qrt. G-760 comp.	50	2
Charmian	9364	1st Qrt. G-801 comp.	50	2
Charmian	9365	1st Qrt. G-11D comp.	50	2
Charmian	9366	1st Qrt. G-11 L. Mill Oil Only	50	2
Charmian	9367	1st Qrt. G-11 L. Mill Oil+Sil.	50	2
Charmian	9368	1st Qrt. G-11 HLP Oil Only	50	2
Charmian	9369	1st Qrt. G-11 HLP Oil+ Sil.	50	2
Charmian	9370	2nd Qrt. G-115 comp.	50	2
Charmian	9371	2nd Qrt. G-171 comp.	50	2
Charmian	9372	2nd Qrt. G-201 comp.	50	2
Charmian	9373	2nd Qrt. G-340 comp.	50	2
Charmian	9374	2nd Qrt. G-341 comp.	50	2
Charmian	9376	2nd Qrt. G-546 comp.	50	2
Charmian	9375	2nd Qrt. G-552 comp.	50	2
Charmian	9377	2nd Qrt. G-555 comp.	50	2
Charmian	9378	2nd Qrt. G-556 comp.	50	2
Charmian	9379	2nd Qrt. G-560 comp.	50	2
Charmian	9380	2nd Qrt. G-615 comp.	50	2
Charmian	9381	2nd Qrt. G-720 comp.	50	2
Charmian	9382	2nd Qrt. G-760 comp.	50	2
Charmian	9383	2nd Qrt. G-801 comp.	50	2
Charmian	9384	2nd Qrt. G-11D comp.	50	2
Charmian	9385	2nd Qrt. G-11 L. Mill Oil Only	50	2
Charmian	9386	2nd Qrt. G-11 L. Mill Oil+Sil.	50	2
Charmian	9387	2nd Qrt. G-11 HLP Oil Only	50	2
Charmian	9388	2nd Qrt. G-11 HLP Oil+ Sil.	50	2

Bucket Inventory For RJ Lee Continued

			RJ Lee	Number of
Plant	SRM#	Color/ Type	Sample in g	Samples
Charmian	9389	3rd Qrt. G-115 comp.	50	2
Charmian	9390	3rd Qrt. G-171 comp.	50	2
Charmian	9391	3rd Qrt. G-201 comp.	50	2
Charmian	9392	3rd Qrt. G-340 comp.	50	2
Charmian	9393	3rd Qrt. G-341 comp.	50	2
Charmian	9394	3rd Qrt. G-546 comp.	50	2
Charmian	9395	3rd Qrt. G-552 comp.	50	2
Charmian	9396	3rd Qrt. G-555 comp.	50	2
Charmian	9397	3rd Qrt. G-556 comp.	50	2
Charmian	9398	3rd Qrt. G-560 comp.	50	2
Charmian	9399	3rd Qrt. G-615 comp.	50	2
Charmian	9400	3rd Qrt. G-720 comp.	50	2
Charmian	9401	3rd Qrt. G-760 comp.	50	2
Charmian	9402	3rd Qrt. G-801 comp.	50	2
Charmian	9403	3rd Qrt. G-11D comp.	50	2
Charmian	9404	3rd Qrt. G-11 L. Mill Oil Only	50	2
Charmian	9405	3rd Qrt. G-11 L. Mill Oil+Sil.	50	2
Charmian	9406	3rd Qrt. G-11 HLP Oil Only	50	2
Charmian	9407	3rd Qrt. G-11 HLP Oil+ Sil.	50	2
Charmian	9408	4th Qrt. G-115 comp.	50	2
Charmian	9409	4th Qrt. G-171 comp.	50	2
Charmian	9410	4th Qrt. G-201 comp.	50	2
Charmian	9411	4th Qrt. G-340 comp.	50	2
Charmian	9412	4th Qrt. G-341 comp.	50	2
Charmian	9413	4th Qrt. G-546 comp.	50	2
Charmian	9414	4th Qrt. G-552 comp.	50	2
Charmian	9415	4th Qrt. G-555 comp.	50	2
Charmian	9417	4th Qrt. G-556 comp.	50	2
Charmian	9416	4th Qrt. G-560 comp.	50	2
Charmian	9418	4th Qrt. G-615 comp.	50	2
Charmian	9419	4th Qrt. G-720 comp.	50	2
Charmian	9420	4th Qrt. G-760 comp.	50	2
Charmian	9421	4th Qrt. G-801 comp.	50	2
Charmian	9422	4th Qrt. G-11D comp.	50	2
Charmian	9446	4th Qrt. Backsurfacing	50	2
Charmian	9442	4th Qrt. G-11 L. Mill Oil Only	50	2
Charmian	9443	4th Qrt. G-11 L. Mill Oil+Sil.	50	2
Charmian	9444	4th Qrt. G-11 HLP Oil Only	50	2
Charmian	9445	4th Qrt. G-11 HLP Oil+ Sil.	50	2

## Laboratory Report

GAF/ELK  
1361 Alps Road  
Wayne, NJ 07470  
United States  
Attention: Celeste Levine  
Telephone: 973-628-3035

Report Date 04/16/2014  
Sample Receipt Date 03/26/2014  
RJ Lee Group Job No. AOH1031320-0  
Authorization/P.O. No. CH47262  
Client Job No./Name Crushed Rock

Analysis: Asbestos in Bulk Samples by Point Count  
Method: EPA/600/R-93/116

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
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Redacted - Does Not Relate to Charmian Facility



Client Job No./Name: Crushed Rock

RJ Lee Group Job No: AOH1031320-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
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**Redacted - Does Not Relate to Charmian Facility**

10279284.HPL	SRM 9351	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	CH-03/28/2014
Description:		Gray-green crushed rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss:		0.0%						

10279285.HPL	SRM 9352	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	CH-03/28/2014
Description:		Gray-green crushed rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss:		0.0%						

Client Job No./Name: Crushed Rock

RJ Lee Group Job No: AOH1031320-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10279286.HPL	SRM 9353	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	CH-03/28/2014
Description:		Gray crushed rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10279287.HPL	SRM 9354	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	CH-03/28/2014
Description:		Gray crushed rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10279288.HPL	SRM 9355	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	CH-03/28/2014
Description:		Gray crushed rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10279289.HPL	SRM 9357	Yes	1	ND		100.00	Q, CL, AM, F, OP, MI, M	MM-04/02/2014
Description:		Tan crushed rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10279290.HPL	SRM 9356	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	CH-03/28/2014
Description:		Gray-green crushed rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10279291.HPL	SRM 9358	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	CH-04/15/2014
Description:		Gray crushed rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								

Client Job No./Name: Crushed Rock

RJ Lee Group Job No: AOH1031320-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10279292.HPL	SRM 9359	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	CH-03/28/2014
Description:		Gray crushed rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10279293.HPL	SRM 9360	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	CH-03/28/2014
Description:		Gray-green crushed rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10279294.HPL	SRM 9361	Yes	1	ND	<1 SF	100.00	Q, CA, CL, AM, F, OP, G, MI, M	MM-04/02/2014
Description:		Gray-green crushed rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10279295.HPL	SRM 9362	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	MM-04/02/2014
Description:		Gray-green crushed rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10279296.HPL	SRM 9363	Yes	1	ND		100.00	Q, CA, AM, F, OP, M	CW-03/31/2014
Description:		Green-gray crushed rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10279297.HPL	SRM 9364	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, M	CW-03/31/2014
Description:		Green-gray crushed rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								

**Client Job No./Name: Crushed Rock**
**RJ Lee Group Job No: AOH1031320-0**

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10279298.HPL	SRM 9365	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, M	CW-03/31/2014
Description:		Gray crushed rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10279299.HPL	SRM 9366	Yes	1	ND		100.00	Q, CA, CL, F, OP, MI, M	RW-04/02/2014
Description:		Gray-green crushed rock dust 1000 point count. Detection limit = 0.1% No asbestiform minerals detected.						
Weight Loss: 0.0%								
10279300.HPL	SRM 9367	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, M	CW-03/31/2014
Description:		Green-gray crushed rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10279301.HPL	SRM 9368	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, M	CW-03/31/2014
Description:		Green-gray crushed rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10279302.HPL	SRM 9369	Yes	1	ND		100.00	Q, CA, CL, AM, OP, MI, M	MM-04/15/2014
Description:		Gray-green crushed rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10279303.HPL	SRM 9370	Yes	1	ND		100.00	Q, CL, AM, OP, MI, M	MM-04/02/2014
Description:		Gray crushed rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								

Client Job No./Name: Crushed Rock

RJ Lee Group Job No: AOH1031320-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10279304.HPL	SRM 9371	Yes	1	ND	<1 CE	100.00	Q, CA, CL, AM, F, OP, MI, M	MM-04/02/2014
Description:		Green crushed rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10279305.HPL	SRM 9372	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, M	CW-04/01/2014
Description:		Brown crushed rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10279306.HPL	SRM 9373	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	CW-04/01/2014
Description:		Gray crushed rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10279307.HPL	SRM 9374	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	CW-04/01/2014
Description:		Gray crushed rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10279308.HPL	SRM 9376	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	CW-04/01/2014
Description:		Brown crushed rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10279309.HPL	SRM 9375	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	CW-04/01/2014
Description:		Gray crushed rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								

Client Job No./Name: Crushed Rock

RJ Lee Group Job No: AOH1031320-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10279310.HPL	SRM 9377	Yes	1	ND		100.00	Q, CA, CL, F, OP, MI, M	RW-04/02/2014
Description:		Gray-green crushed rock dust 1000 point count. Detection limit = 0.1% No asbestiform minerals detected.						
Weight Loss: 0.0%								
10279311.HPL	SRM 9378	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	CW-04/01/2014
Description:		Gray-green crushed rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10279312.HPL	SRM 9379	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	CW-04/02/2014
Description:		Gray crushed rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10279313.HPL	SRM 9380	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	MM-04/02/2014
Description:		Grey crushed rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10279314.HPL	SRM 9381	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	MM-04/02/2014
Description:		Gray crushed rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10279315.HPL	SRM 9382	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	CW-04/02/2014
Description:		Gray crushed rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								

**Client Job No./Name: Crushed Rock**
**RJ Lee Group Job No: AOH1031320-0**

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10279316.HPL	SRM 9383	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	CW-04/02/2014
Description:		Gray crushed rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10279317.HPL	SRM 9384	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	CW-04/02/2014
Description:		Gray crushed rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10279318.HPL	SRM 9385	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	CW-04/02/2014
Description:		Gray-green crushed rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10279319.HPL	SRM 9386	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	CW-04/02/2014
Description:		Gray-green crushed rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10279320.HPL	SRM 9387	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	MM-04/02/2014
Description:		Gray crushed rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10279321.HPL	SRM 9388	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	MM-04/02/2014
Description:		Gray crushed rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								

**Client Job No./Name: Crushed Rock**
**RJ Lee Group Job No: AOH1031320-0**

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10279322.HPL	SRM 9389	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	MM-04/02/2014
Description:		Light gray crushed rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10279323.HPL	SRM 9390	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	MM-04/07/2014
Description:		Green crushed rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals found.						
Weight Loss: 0.0%								
10279324.HPL	SRM 9391	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	CW-04/04/2014
Description:		Brown crushed rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10279325.HPL	SRM 9392	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	CW-04/04/2014
Description:		Gray crushed rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10279326.HPL	SRM 9393	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	CW-04/04/2014
Description:		Gray-green crushed rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10279327.HPL	SRM 9394	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	CW-04/04/2014
Description:		Tan crushed rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								



**Client Job No./Name: Crushed Rock**
**RJ Lee Group Job No: AOH1031320-0**

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10279328.HPL	SRM 9395	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	CW-04/04/2014
Description:		Gray crushed rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10279329.HPL	SRM 9396	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	CW-04/04/2014
Description:		Gray crushed rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10279330.HPL	SRM 9397	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	CW-04/04/2014
Description:		Tan crushed rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10279331.HPL	SRM 9398	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	CW-04/04/2014
Description:		Gray-green crushed rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10279332.HPL	SRM 9399	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	CW-04/04/2014
Description:		Gray crushed rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10279333.HPL	SRM 9400	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	CW-04/04/2014
Description:		Gray-green crushed rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								

Client Job No./Name: Crushed Rock

RJ Lee Group Job No: AOH1031320-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10279334.HPL	SRM 9401	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	MM-04/09/2014
Description:		Gray-green crushed rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals found.						
Weight Loss: 0.0%								
10279335.HPL	SRM 9402	Yes	1	ND	<1 CE	100.00	Q, CA, CL, AM, F, OP, MI, M	MM-04/09/2014
Description:		Medium gray crushed rock dust. 1000 point count. Detection limit 0.1%. No asbestiform minerals found.						
Weight Loss: 0.0%								
10279336.HPL	SRM 9403	Yes	1	ND	<1 CE	100.00	Q, CA, CL, AM, F, OP, MI, M	MM-04/09/2014
Description:		Dark gray crushed rock dust. 1000 point count. Detection limit 0.1%. No asbestiform minerals found.						
Weight Loss: 0.0%								
10279337.HPL	SRM 9404	Yes	1	ND		100.00	Q, CA, CL, AM, OP, MI, M	MM-04/09/2014
Description:		Light gray crushed rock dust. 1000 point count. Detection limit 0.1%. No asbestiform minerals found.						
Weight Loss: 0.0%								
10279338.HPL	SRM 9405	Yes	1	ND		100.00	Q, CA, CL, AM, OP, MI, M	MM-04/09/2014
Description:		Green-gray crushed rock dust. 1000 point count. Detection limit 0.1%. No asbestiform minerals found.						
Weight Loss: 0.0%								
10279339.HPL	SRM 9406	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	CW-04/09/2014
Description:		Gray crushed rock dust. 1000 point count. Limit of detection = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								

**Client Job No./Name: Crushed Rock**
**RJ Lee Group Job No: AOH1031320-0**

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10279340.HPL	SRM 9407	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	CW-04/09/2014
Description:		Gray crushed rock dust. 1000 point count. Limit of detection = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10279341.HPL	SRM 9408	Yes	1	ND		100.00	Q, CA, CL, F, OP, MI, M	CW-04/09/2014
Description:		Gray-green crushed rock dust. 1000 point count. Limit of detection = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10279342.HPL	SRM 9409	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	CW-04/09/2014
Description:		Gray-green crushed rock dust. 1000 point count. Limit of detection = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10279343.HPL	SRM 9410	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	CW-04/09/2014
Description:		Brown crushed rock dust. 1000 point count. Limit of detection = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10279344.HPL	SRM 9411	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	CW-04/09/2014
Description:		Gray crushed rock dust. 1000 point count. Limit of detection = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10279345.HPL	SRM 9412	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	CW-04/09/2014
Description:		Gray-green crushed rock dust. 1000 point count. Limit of detection = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								

Client Job No./Name: Crushed Rock

RJ Lee Group Job No: AOH1031320-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10279346.HPL	SRM 9413	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	CW-04/09/2014
Description:		Brown crushed rock dust. 1000 point count. Limit of detection = 0.1%. No asbestiform minerals detected.						
Weight Loss:		0.0%						
10279347.HPL	SRM 9414	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	MM-04/09/2014
Description:		Light tan crushed rock dust. 1000 point count. Detection limit 0.1%. No asbestiform minerals found.						
Weight Loss:		0.0%						
10279348.HPL	SRM 9415	Yes	1	ND	<1 CE	100.00	Q, CA, CL, AM, OP, MI, M	MM-04/09/2014
Description:		Light tan crushed rock dust. 1000 point count. Detection limit 0.1%. No asbestiform minerals found.						
Weight Loss:		0.0%						
10279349.HPL	SRM 9416	Yes	1	ND		100.00	Q, CA, CL, AM, OP, MI, M	MM-04/09/2014
Description:		Pale olive green crushed rock dust. 1000 point count. Detection limit 0.1%. No asbestiform minerals found.						
Weight Loss:		0.0%						
10279350.HPL	SRM 9417	Yes	1	ND		100.00	Q, CA, CL, AM, OP, MI, M	MM-04/10/2014
Description:		Tan crushed rock dust. 1000 point count. Detection limit 0.1%. No asbestiform minerals found.						
Weight Loss:		0.0%						
10279351.HPL	SRM 9418	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	MM-04/10/2014
Description:		Green crushed rock dust. 1000 point count. Detection limit 0.1%. No asbestiform minerals found.						
Weight Loss:		0.0%						

Client Job No./Name: Crushed Rock

RJ Lee Group Job No: AOH1031320-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10279352.HPL	SRM 9419	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	CW-04/11/2014
Description:		Gray-green crushed rock dust. 1000 point count. Limit of detection = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10279353.HPL	SRM 9420	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	CW-04/11/2014
Description:		Gray-green crushed rock dust. 1000 point count. Limit of detection = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10279354.HPL	SRM 9421	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	CW-04/11/2014
Description:		Gray crushed rock dust. 1000 point count. Limit of detection = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10279355.HPL	SRM 9422	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	CW-04/11/2014
Description:		Gray crushed rock dust. 1000 point count. Limit of detection = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10279356.HPL	SRM 9446	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	CW-04/11/2014
Description:		Gray-green crushed rock dust. 1000 point count. Limit of detection = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10279357.HPL	SRM 9442	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	CW-04/11/2014
Description:		Gray-green crushed rock dust. 1000 point count. Limit of detection = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								

Client Job No./Name: Crushed Rock

RJ Lee Group Job No: AOH1031320-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10279358.HPL	SRM 9443	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	CW-04/11/2014
Description:		Gray-green crushed rock dust. 1000 point count. Limit of detection = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10279359.HPL	SRM 9444	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	CW-04/11/2014
Description:		Gray-green crushed rock dust. 1000 point count. Limit of detection = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10279360.HPL	SRM 9445	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	CW-04/11/2014
Description:		Gray-green crushed rock dust. 1000 point count. Limit of detection = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								

Client Job No./Name: Crushed Rock

RJ Lee Group Job No: AOH1031320-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos F bers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
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*Courtney N. Weir*

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

Courtney N. Weir, Microscopist

#### ASBESTOS

AM = Amosite  
AC = Actinolite  
AN = Anthophyllite  
CH = Chrysotile  
CR = Crocidolite  
TR = Tremolite

#### NON-ASBESTOS

CE = Cellulose  
MW = Mineral Wool  
FG = Fibrous Glass  
SF = Synthetic Fibers  
H = Hair  
W = Wollastonite  
OF = Other Fibers

#### NON-FIBROUS MATERIALS

AM = Amphibole  
B = Binder  
CA = Carbonates  
CL = Clay  
F = Feldspar  
G = Gypsum  
HY = Hydromagnesite  
M = Miscellaneous  
MI = Mica  
OP = Opaque  
OR = Organic  
P = Perlite  
Q = Quartz  
T = Tar  
V = Vermiculite

#### DISCLAIMER NOTES

- "ND" indicates no asbestos was detected; the method detection limit is 0.1%.
- "Trace" or "<1" indicates asbestos was identified in the sample, but the concentration is less than the method quantitation limit of 0.1%. PLM coefficients of variance range from approximately 1.8 at the quantitation limit of 0.1% to 0.32 at high fiber concentrations.
- Samples are archived for three months following analysis and are then properly discarded.
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- Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA #100364) facility.
- If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratorys results are limited to the reported values.



June 12, 2014

RJ Lee Group, Inc.  
350 Hochberg Road  
Monroeville, PA 15146  
Attn: Matthew Sanchez

Via: Federal Express: 7702-8096-3784

RE: Fiber - PLM and Crystalline Silica - XRD Analyses.

Dear Mr. Sanchez:

Enclosed are the following samples for the required analyses. All samples are crushed rock and classified as a volcanic rock (meta-basalt). Also enclosed are the MSDS sheets.

**Fiber and Crystalline Silica:**

For each sample listed (4 samples), complete the following analyses:

1. Polarized Light Microscopy (PLM): Bulk Analyses – 1,000 Point Count (Untreated) for regulated asbestiform fibers (EPA 600/R-93/116). If fibrous material is detected contact SGI and retain sample for additional TEM testing.
2. Total Crystalline Silica (Bulk Analysis) by quantitative XRD.
3. A 10 - day turn-around service is requested for both the PLM and XRD analyses.

One sample of rock granules (-8 mesh x 35 mesh). (200 grams each):

9491 - Granules

Two samples of rock fines (-35 mesh x 325 mesh). (200 grams each):

9487 - Fines

9489 - Fines

RECD 061314 9:19AM  
Lynda Margolis  
RJ Lee Group





One sample of finished product (-8 mesh x 35 mesh). (50 grams each):

9505-Fines

Please address and send the lab results directly to:

Celeste Levine (Electronic Copy)

GAF/ELK

1361 Alps Road

Wayne, NJ 07470

973-628-3035

[clevine@gaf.com](mailto:clevine@gaf.com)

with a copy sent to:

Ted Heath (Hard & Electronic Copy)

Specialty Granules Inc.

34 Charles St

Hagerstown, MD 21740

(301) 714-1332

[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

Payment will be made through SGI Purchase Order CH-47965. Please copy Ted Heath and not Celeste Levine on the invoice.

Please call me with any questions.

Sincerely,

Ted Heath

Geologist

Specialty Granules Inc.

[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

c.c.

G. Kamas – SGI

R. Collins – SGI

A. Shepeck – SGI

C. Levine – SGI

**2014 1st Quarter MIS-11 Bucket Inventory For RJ Lee**

Date: 6/12/2014

<b>Location</b>	<b>SRM #</b>	<b>Material Type</b>	<b>Number of Samples</b>	<b>Grams in each Sample</b>
Charmian	9491	Raw Granules	2	200
Charmian LM	9487	Fines	2	200
Charmian HLP	9489	Fines	2	200
Charmian	9505	Backsurfacing	2	100

## Laboratory Report

Revised

GAF/ELK  
1361 Alps Road  
Wayne, NJ 07470  
United States  
Attention: Celeste Levine  
Telephone: 973-628-3035

Report Date 07/01/2014  
Sample Receipt Date 06/13/2014  
RJ Lee Group Job No. AOH1032484-0  
Authorization/P.O. No. CH47965  
Client Job No./Name Crushed Rock

Analysis: Asbestos in Bulk Samples by Point Count

Method: EPA/600/R-93/116

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10289617.HPL	9491 - Granules	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CW-06/27/2014
Description: Green granules. 1000 point count. Limit of detection = 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10289618.HPL	9487 - Fines	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CW-06/25/2014
Description: Pale green crushed rock dust. 1000 point count. Limit of detection = 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10289619.HPL	9489 - Fines	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	CW-06/25/2014
Description: Pale green crushed rock dust. 1000 point count. Limit of detection = 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								

Client Job No./Name: Crushed Rock

RJ Lee Group Job No: AOH1032484-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10289620.HPL	9505 - Fines	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CW-06/27/2014

Description: Green crushed rock dust. 1000 point count. Limit of detection = 0.1%. No asbestiform minerals detected.

Weight Loss: 0.0%

Client Job No./Name: Crushed Rock

RJ Lee Group Job No: AOH1032484-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos F bers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
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*Courtney N. Weir*

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

Courtney N. Weir, Microscopist

#### ASBESTOS

AM = Amosite  
AC = Actinolite  
AN = Anthophyllite  
CH = Chrysotile  
CR = Crocidolite  
TR = Tremolite

#### NON-ASBESTOS

CE = Cellulose  
MW = Mineral Wool  
FG = Fibrous Glass  
SF = Synthetic Fibers  
H = Hair  
W = Wollastonite  
OF = Other Fibers

#### NON-FIBROUS MATERIALS

AM = Amphibole  
B = Binder  
CA = Carbonates  
CL = Clay  
F = Feldspar  
G = Gypsum  
HY = Hydromagnesite  
M = Miscellaneous  
MI = Mica  
OP = Opaque  
OR = Organic  
P = Perlite  
Q = Quartz  
T = Tar  
V = Vermiculite

#### DISCLAIMER NOTES

- "ND" indicates no asbestos was detected; the method detection limit is 0.1%.
- "Trace" or "<1" indicates asbestos was identified in the sample, but the concentration is less than the method quantitation limit of 0.1%. PLM coefficients of variance range from approximately 1.8 at the quantitation limit of 0.1% to 0.32 at high fiber concentrations.
- Samples are archived for three months following analysis and are then properly discarded.
- 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.
- This test report relates to the items tested.
- This report is not valid unless it bears the name of a NVLAP-approved signatory.
- Any reproduction of this document must be in full in order for the report to be valid.
- This report may not be used to claim product endorsement by NVLAP, any agency of the U.S. Government or any other laboratory accrediting agency.
- Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar nonfriable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as "non-asbestos-containing."
- Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA #100364) facility.
- If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratorys results are limited to the reported values.



June 20, 2014

RJ Lee Group, Inc.  
350 Hochberg Road  
Monroeville, PA 15146  
Attn: Matthew Sanchez

Via: Federal Express: 7703-6928-7806

RE: Fiber - PLM and Crystalline Silica - XRD Analyses.

Dear Mr. Sanchez:

Enclosed are the following samples for the required analyses. All samples are crushed rock and classified as a volcanic rock (meta-basalt). Also enclosed are the MSDS sheets.

**Fiber and Crystalline Silica:**

For each sample listed (17 samples), complete the following analyses:

1. Polarized Light Microscopy (PLM): Bulk Analyses – 1,000 Point Count (Untreated) for regulated asbestiform fibers (EPA 600/R-93/116). If fibrous material is detected contact SGI and retain sample for additional TEM testing.
2. Total Crystalline Silica (Bulk Analysis) by quantitative XRD.
3. A 10 - day turn-around service is requested for both the PLM and XRD analyses.

Seventeen samples of finished product (-8 mesh x 35 mesh). (100 grams each):

See attached Table 1.

Please address and send the lab results directly to:

Celeste Levine (Electronic Copy)  
GAF/ELK  
1361 Alps Road  
Wayne, NJ 07470  
973-628-3035  
[clevine@gaf.com](mailto:clevine@gaf.com)

with a copy sent to:

Ted Heath (Hard & Electronic Copy)  
Specialty Granules Inc.  
34 Charles St  
Hagerstown, MD 21740  
(301) 714-1332  
[theath@specialtygranules.com](mailto:theath@specialtygranules.com)



**SPECIALTY GRANULES INC.**

A0141032590-0

13424 Pennsylvania Ave, Suite 303 // Hagerstown, MD 21742 // Tel: 301-733-4000 // Fax: 301-733-4003

[www.specialtygranules.com](http://www.specialtygranules.com)

Payment will be made through SGI Purchase Order CH-48064. Please copy Ted Heath and not Celeste Levine on the invoice.

Please call me with any questions.

Sincerely,

Ted Heath  
Geologist  
Specialty Granules Inc.  
[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

C.C.

G. Kamas – SGI

R. Collins – SGI

A. Shepeck – SGI

C. Levine – SGI

A011032590-0

**Table 1: Samples PLM - XRD Testing**

6/19/2014

Plant	SRM#	Color/ Type	RJ Lee Sample in g	Number of Samples
Charmian	<b>9506</b>	G-11 w/ oil	100	2
Charmian	<b>9507</b>	G-11 w/ oil & siloxane	100	2
Charmian	<b>9508</b>	G - 115 oiled	100	2
Charmian	<b>9509</b>	G - 171 oiled	100	2
Charmian	<b>9510</b>	G - 201 oiled	100	2
Charmian	<b>9511</b>	G - 340 oiled	100	2
Charmian	<b>9512</b>	G - 341 oiled	100	2
Charmian	<b>9513</b>	G - 546 oiled	100	2
Charmian	<b>9514</b>	G - 552 oiled	100	2
Charmian	<b>9515</b>	G - 555 oiled	100	2
Charmian	<b>9516</b>	G - 556 oiled	100	2
Charmian	<b>9517</b>	G - 560 oiled	100	2
Charmian	<b>9518</b>	G - 615 oiled	100	2
Charmian	<b>9519</b>	G - 720 oiled	100	2
Charmian	<b>9520</b>	G - 760 oiled	100	2
Charmian	<b>9521</b>	G - 801 oiled	100	2
Charmian	<b>9522</b>	G - 11D oiled	100	2

Revo 06-23-14 8:30 AM

Imela Mauger  
RJ Lee Group



## Laboratory Report

GAF/ELK  
1361 Alps Road  
Wayne, NJ 07470  
United States  
Attention: Celeste Levine  
Telephone: 973-628-3035

Report Date 07/09/2014  
Sample Receipt Date 06/23/2014  
RJ Lee Group Job No. AOH1032590-0  
Authorization/P.O. No. CH48064  
Client Job No./Name

Analysis: Asbestos in Bulk Samples by Point Count

Method: EPA/600/R-93/116

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10290355.HPL	9506	Yes	1	ND		100.00	AM, M	AKB-07/07/2014
Description:	Green Powdered Material Limit Of Detection = 0.1%. No Asbestiform Minerals Detected.							
Weight Loss: 0.0%								
10290356.HPL	9507	Yes	1	ND	<1 CE	100.00	AM, M	AKB-07/07/2014
Description:	Green Powdered Material Limit Of Detection = 0.1%. No Asbestiform Minerals Detected.							
Weight Loss: 0.0%								
10290357.HPL	9508	Yes	1	ND	<1 CE	100.00	AM, M	AKB-07/07/2014
Description:	Gray Granule Material Limit Of Detection = 0.1%. No Asbestiform Minerals Detected.							
Weight Loss: 0.0%								

Client Job No./Name:

RJ Lee Group Job No: AOH1032590-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10290358.HPL	9509	Yes	1	ND	<1 CE	100.00	AM, M	AKB-07/07/2014
Description: Green Granule Material Limit Of Detection = 0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								
10290359.HPL	9510	Yes	1	ND	<1 CE <1 SF	100.00	M	AKB-07/07/2014
Description: Gray Powdered Material Limit Of Detection = 0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								
10290360.HPL	9511	Yes	1	ND		100.00	Q, CA, AM, OP, M	LKS-07/09/2014
Description: Gray Powder Limit Of Detection = 0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								
10290361.HPL	9512	Yes	1	ND		100.00	Q, CA, AM, OP, M	LKS-07/09/2014
Description: Gray Powder Limit Of Detection = 0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								
10290362.HPL	9513	Yes	1	ND	<1 CE	100.00	M	AKB-07/08/2014
Description: Gray Powdered Material Limit Of Detection = 0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								

**Client Job No./Name:**
**RJ Lee Group Job No: AOH1032590-0**

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10290363.HPL	9514	Yes	1	ND	<1 CE <1 FG	100.00	AM, M	AKB-07/08/2014
Description: Gray Powdered Material Limit Of Detection = 0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								
10290364.HPL	9515	Yes	1	ND	<1 CE	100.00	AM, M	AKB-07/09/2014
Description: Gray Powdered Material Limit Of Detection = 0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 100.0%								
10290365.HPL	9516	Yes	1	ND	<1 CE	100.00	AM, M	AKB-07/09/2014
Description: Olive Powdered Material Limit Of Detection = 0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								
10290366.HPL	9517	Yes	1	ND		100.00	Q, CA, AM, OP, M	LKS-07/09/2014
Description: Gray Powder Limit Of Detection = 0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								
10290367.HPL	9518	Yes	1	ND		100.00	Q, CA, AM, OP, M	LKS-07/09/2014
Description: Gray Powder Limit Of Detection = 0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								

**Client Job No./Name:**
**RJ Lee Group Job No: AOH1032590-0**

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10290368.HPL	9519	Yes	1	ND		100.00	Q, CA, AM, OP, M	LKS-07/09/2014
Description: Gray Powder Limit Of Detection = 0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								
10290369.HPL	9520	Yes	1	ND	<1 CE	100.00	AM, M	LKS-07/09/2014
Description: Green Powdered Material Limit Of Detection = 0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								
10290370.HPL	9521	Yes	1	ND		100.00	Q, CA, AM, OP, M	LKS-07/09/2014
Description: Grey Powder Limit Of Detection = 0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								
10290371.HPL	9522	Yes	1	ND		100.00	AM, M	AKB-07/09/2014
Description: Gray Powered Material Limit Of Detection = 0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								

Client Job No./Name:

RJ Lee Group Job No: AOH1032590-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
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Authorized Signature:



Allan K. Bullock, Microscopist

**ASBESTOS**

AM = Amosite  
 AC = Actinolite  
 AN = Anthophyllite  
 CH = Chrysotile  
 CR = Crocidolite  
 TR = Tremolite

**NON-ASBESTOS**

CE = Cellulose  
 MW = Mineral Wool  
 FG = Fibrous Glass  
 SF = Synthetic Fibers  
 H = Hair  
 W = Wollastonite  
 OF = Other Fibers

**NON-FIBROUS MATERIALS**

AM = Amphibole  
 B = Binder  
 CA = Carbonates  
 CL = Clay  
 F = Feldspar  
 G = Gypsum  
 HY = Hydromagnesite  
 M = Miscellaneous  
 MI = Mica  
 OP = Opaque  
 OR = Organic  
 P = Perlite  
 Q = Quartz  
 T = Tar  
 V = Vermiculite

**DISCLAIMER NOTES**

- "ND" indicates no asbestos was detected; the method detection limit is 0.1%.
- "Trace" or "<1" indicates asbestos was identified in the sample, but the concentration is less than the method quantitation limit of 0.1%. PLM coefficients of variance range from approximately 1.8 at the quantitation limit of 0.1% to 0.32 at high fiber concentrations.
- Samples are archived for three months following analysis and are then properly discarded.
- 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.
- This test report relates to the items tested.
- This report is not valid unless it bears the name of a NVLAP-approved signatory.
- Any reproduction of this document must be in full in order for the report to be valid.
- This report may not be used to claim product endorsement by NVLAP, any agency of the U.S. Government or any other laboratory accrediting agency.
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- Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA #100364) facility.
- If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.

A0H1033854-0



**SPECIALTY GRANULES INC.**

13424 Pennsylvania Ave, Suite 303 // Hagerstown, MD 21742 // Tel: 301-733-4000 // Fax: 301-733-4003

[www.specialtygranules.com](http://www.specialtygranules.com)

September 29, 2014

RJ Lee Group, Inc.  
350 Hochberg Road  
Monroeville, PA 15146  
Attn: Matthew Sanchez

Via: Federal Express: 7713-1822-2686

RE: Fiber - PLM and Crystalline Silica - XRD Analyses.

Dear Mr. Sanchez:

Enclosed are the following samples for the required analyses. All samples are crushed rock and classified as a volcanic rock (meta-basalt). Also enclosed are the MSDS sheets.

**Fiber and Crystalline Silica:**

For each sample listed (4 samples), complete the following analyses:

1. Polarized Light Microscopy (PLM): Bulk Analyses – 1,000 Point Count (Untreated) for regulated asbestiform fibers (EPA 600/R-93/116). If fibrous material is detected contact SGI and retain sample for additional TEM testing.
2. Total Crystalline Silica (Bulk Analysis) by quantitative XRD.
3. A 10 - day turn-around service is requested for both the PLM and XRD analyses.

**One sample of rock granules (-8 mesh x 35 mesh). (200 grams each):**

9540 - Granules

**Two samples of rock fines (-35 mesh x 325 mesh). (200 grams each):**

9542 - Fines

9543 - Fines

Revd 10-01-14 9:22 AM  
Linda Margolis  
RJ Lee Group

A0H1033854-0



**SPECIALTY GRANULES INC.**

13424 Pennsylvania Ave, Suite 303 // Hagerstown, MD 21742 // Tel: 301-733-4000 // Fax: 301-733-4003

[www.specialtygranules.com](http://www.specialtygranules.com)

Twenty samples of finished product (-8 mesh x 35 mesh). (50 grams each):

See attached Table 1

Please address and send the lab results directly to:

Celeste Levine (Electronic Copy)  
GAF/ELK  
1361 Alps Road  
Wayne, NJ 07470  
973-628-3035  
[clevine@gaf.com](mailto:clevine@gaf.com)

with a copy sent to:

Ted Heath (Hard & Electronic Copy)  
Specialty Granules Inc.  
34 Charles St  
Hagerstown, MD 21740  
(301) 714-1332  
[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

Payment will be made through SGI Purchase Order CH-48800. Please copy Ted Heath and not Celeste Levine on the invoice.

Please call me with any questions.

Sincerely,

Ted Heath  
Geologist  
Specialty Granules Inc.  
[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

c.c.

G. Kamas – SGI  
R. Collins – SGI  
A. Shepeck – SGI  
C. Levine – SGI

A041033854-0

**Table 1: Samples PLM - XRD Testing**

9/26/2014

Plant	SRM#	Color/ Type	RJ Lee Sample in g	Number of Samples
Charmian	9583	BackSurfacing	100	2
Charmian	9579	G-11 w/ oil L. Mill	100	2
Charmian	9580	G-11 w/ oil & siloxane L. Mill	100	2
Charmian	9581	G-11 w/ oil HLP	100	2
Charmian	9582	G-11 w/ oil & siloxane HLP	100	2
Charmian	9565	G - 115 oiled	100	2
Charmian	9587	G - 171 oiled	100	2
Charmian	9566	G - 201 oiled	100	2
Charmian	9567	G- 340 oiled	100	2
Charmian	9568	G - 341 oiled	100	2
Charmian	9569	G - 546 oiled	100	2
Charmian	9570	G - 552 oiled	100	2
Charmian	9571	G -555 oiled	100	2
Charmian	9572	G -556 oiled	100	2
Charmian	9573	G - 560 oiled	100	2
Charmian	9574	G -615 oiled	100	2
Charmian	9575	G - 720 oiled	100	2
Charmian	9576	G - 760 oiled	100	2
Charmian	9577	G - 801 oiled	100	2
Charmian	9578	G - 11D oiled	100	2



## Laboratory Report

GAF/ELK  
1361 Alps Road  
Wayne, NJ 07470  
United States  
Attention: Celeste Levine  
Telephone: 973-628-3035

Report Date 10/16/2014  
Sample Receipt Date 10/01/2014  
RJ Lee Group Job No. AOH1033854-0  
Authorization/P.O. No. CH48800  
Client Job No./Name

Analysis: Asbestos in Bulk Samples by Point Count

Method: EPA/600/R-93/116

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10299707.HPL	9540 - Granules	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-10/16/2014
Description: Pale green-gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10299708.HPL	9542 - Fines	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-10/16/2014
Description: Pale green-gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10299709.HPL	9543 - Fines	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-10/16/2014
Description: Pale green-gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10299710.HPL	9583	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-10/16/2014
Description: Pale green-gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								

**Client Job No./Name:**
**RJ Lee Group Job No: AOH1033854-0**

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10299711.HPL	9579	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-10/13/2014
Description: Pale green-gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10299712.HPL	9580	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-10/13/2014
Description: Gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10299713.HPL	9581	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-10/16/2014
Description: Pale green-gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10299714.HPL	9582	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-10/13/2014
Description: Pale green-gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10299715.HPL	9565	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-10/16/2014
Description: Gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10299716.HPL	9587	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-10/16/2014
Description: Gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								

**Client Job No./Name:**
**RJ Lee Group Job No: AOH1033854-0**

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10299717.HPL	9566	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-10/16/2014
Description:		Gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10299718.HPL	9567	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-10/13/2014
Description:		Dark gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10299719.HPL	9568	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-10/16/2014
Description:		Pale green-gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10299720.HPL	9569	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-10/13/2014
Description:		Pale brown-gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10299721.HPL	9570	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-10/16/2014
Description:		Gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10299722.HPL	9571	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-10/13/2014
Description:		Pale green-gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								

Client Job No./Name:

RJ Lee Group Job No: AOH1033854-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10299723.HPL	9572	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-10/16/2014
Description:		Brown-gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10299724.HPL	9573	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-10/16/2014
Description:		Gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10299725.HPL	9574	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-10/13/2014
Description:		Gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10299726.HPL	9575	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-10/16/2014
Description:		Gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10299727.HPL	9576	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-10/16/2014
Description:		Light gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10299728.HPL	9577	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-10/13/2014
Description:		Pale green-gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								

Client Job No./Name:

RJ Lee Group Job No:

AOH1033854-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10299729.HPL	9578	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-10/13/2014
Description:	Pale green-gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.							
Weight Loss:	0.0%							

Client Job No./Name:

RJ Lee Group Job No: AOH1033854-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
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Authorized Signature:



Craig Huntington, Analyst

**ASBESTOS**

AM = Amosite  
 AC = Actinolite  
 AN = Anthophyllite  
 CH = Chrysotile  
 CR = Crocidolite  
 TR = Tremolite

**NON-ASBESTOS**

CE = Cellulose  
 MW = Mineral Wool  
 FG = Fibrous Glass  
 SF = Synthetic Fibers  
 H = Hair  
 W = Wollastonite  
 OF = Other Fibers

**NON-FIBROUS MATERIALS**

AM = Amphibole  
 B = Binder  
 CA = Carbonates  
 CL = Clay  
 F = Feldspar  
 G = Gypsum  
 HY = Hydromagnesite  
 M = Miscellaneous  
 MI = Mica  
 OP = Opaque  
 OR = Organic  
 P = Perlite  
 Q = Quartz  
 T = Tar  
 V = Vermiculite

**DISCLAIMER NOTES**

- "ND" indicates no asbestos was detected; the method detection limit is 0.1%.
- "Trace" or "<1" indicates asbestos was identified in the sample, but the concentration is less than the method quantitation limit of 0.1%. PLM coefficients of variance range from approximately 1.8 at the quantitation limit of 0.1% to 0.32 at high fiber concentrations.
- Samples are archived for three months following analysis and are then properly discarded.
- 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.
- This test report relates to the items tested.
- This report is not valid unless it bears the name of a NVLAP-approved signatory.
- Any reproduction of this document must be in full in order for the report to be valid.
- This report may not be used to claim product endorsement by NVLAP, any agency of the U.S. Government or any other laboratory accrediting agency.
- Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar nonfriable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as "non-asbestos-containing."
- Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA #100364) facility.
- If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.



**SPECIALTY GRANULES INC.**

A0H10348280

13424 Pennsylvania Ave, Suite 303 // Hagerstown, MD 21742 // Tel: 301-733-4000 // Fax: 301-733-4003

[www.specialtygranules.com](http://www.specialtygranules.com)

December 15, 2014

RJ Lee Group, Inc.  
350 Hochberg Road  
Monroeville, PA 15146  
Attn: Matthew Sanchez

Via: Federal Express: 7722-2977-3876

RE: Fiber - PLM and Crystalline Silica - XRD Analyses.

Dear Mr. Sanchez:

Enclosed are the following samples for the required analyses. All samples are crushed rock and classified as a volcanic rock (meta-basalt). Also enclosed are the MSDS sheets.

**Fiber and Crystalline Silica:**

For each sample listed (4 samples), complete the following analyses:

1. Polarized Light Microscopy (PLM): Bulk Analyses – 1,000 Point Count (Untreated) for regulated asbestiform fibers (EPA 600/R-93/116). If fibrous material is detected contact SGI and retain sample for additional TEM testing.
2. Total Crystalline Silica (Bulk Analysis) by quantitative XRD.
3. A 10 - day turn-around service is requested for both the PLM and XRD analyses.

One sample of rock granules (-8 mesh x 35 mesh). (200 grams each):

9700 - Granules

Two samples of rock fines (-35 mesh x 325 mesh). (15 - 200 grams each):

9702 - Fines

9703 - Fines

Rec'd 12-16-14 10:29AM  
Linda Margolis  
RJ Lee Group



**SPECIALTY GRANULES INC.**

A041034828-0

13424 Pennsylvania Ave, Suite 303 // Hagerstown, MD 21742 // Tel: 301-733-4000 // Fax: 301-733-4003

[www.specialtygranules.com](http://www.specialtygranules.com)

Twenty samples of finished product (-8 mesh x 35 mesh). (50 grams each):

See attached Table 1

Please address and send the lab results directly to:

Celeste Levine (Electronic Copy)  
GAF/ELK  
1361 Alps Road  
Wayne, NJ 07470  
973-628-3035  
[clevine@gaf.com](mailto:clevine@gaf.com)

with a copy sent to:

Ted Heath (Hard & Electronic Copy)  
Specialty Granules Inc.  
34 Charles St  
Hagerstown, MD 21740  
(301) 714-1332  
[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

Payment will be made through SGI Purchase Order CH-49410. Please copy Ted Heath and not Celeste Levine on the invoice.

Please call me with any questions.

Sincerely,

Ted Heath  
Geologist  
Specialty Granules Inc.  
[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

c.c.

G. Kamas – SGI

R. Collins – SGI

A. Shepeck – SGI

C. Levine – SGI



A041034828-0

**Table 1: PLM XRD Finished Product Testing**

Date: 12/8/14

Plant	SRM#	Color/ Type	RJ Lee Sample in g	Number of Samples
Charmian	9723	BackSurfacing	100	2
Charmian	9719	G-11 w/ oil L. Mill	100	2
Charmian	9720	G-11 w/ oil & siloxane L. Mill	100	2
Charmian	9721	G-11 w/ oil HLP	100	2
Charmian	9722	G-11 w/ oil & siloxane HLP	100	2
Charmian	9704	G - 115 oiled	100	2
Charmian	9706	G - 171 oiled	100	2
Charmian	9705	G - 201 oiled	100	2
Charmian	9707	G- 340 oiled	100	2
Charmian	9708	G - 341 oiled	100	2
Charmian	9709	G - 546 oiled	100	2
Charmian	9710	G - 552 oiled	100	2
Charmian	9711	G -555 oiled	100	2
Charmian	9712	G -556 oiled	100	2
Charmian	9713	G - 560 oiled	100	2
Charmian	9714	G -615 oiled	100	2
Charmian	9715	G - 720 oiled	100	2
Charmian	9716	G - 760 oiled	100	2
Charmian	9717	G - 801 oiled	100	2
Charmian	9718	G - 11D oiled	100	2

## Laboratory Report

GAF/ELK  
1361 Alps Road  
Wayne, NJ 07470  
United States  
Attention: Celeste Levine  
Telephone: 973-628-3035

Report Date 12/31/2014  
Sample Receipt Date 12/16/2014  
RJ Lee Group Job No. AOH1034828-0  
Authorization/P.O. No. CH49410  
Client Job No./Name

Analysis: Asbestos in Bulk Samples by Point Count

Method: EPA/600/R-93/116

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10305798.HPL	9700 - Granules	Yes	1	ND	<1 CE	100.00	Q, CA, AM, F, M	LKS-12/31/2014
Description: Gray powder. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10305799.HPL	9702 - Fines	Yes	1	ND	<1 CE	100.00	Q, CA, AM, F, M	LKS-12/31/2014
Description: Gray powder. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10305800.HPL	9703 - Fines	Yes	1	ND	<1 CE	100.00	Q, CA, AM, F, M	LKS-12/31/2014
Description: Gray powder. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10305801.HPL	9723	Yes	1	ND	<1 CE	100.00	Q, CA, AM, F, M	LKS-12/31/2014
Description: Gray powder. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								

**Client Job No./Name:**
**RJ Lee Group Job No: AOH1034828-0**

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10305802.HPL	9719	Yes	1	ND	<1 CE	100.00	CA, AM, F, M	LKS-12/31/2014
Description:		Gray powder. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10305803.HPL	9720	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-12/30/2014
Description:		Pale green rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10305804.HPL	9721	Yes	1	ND	<1 CE	100.00	Q, AM, F, M	LKS-12/31/2014
Description:		Gray powder. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10305805.HPL	9722	Yes	1	ND	<1 CE	100.00	Q, CA, AM, F, M	LKS-12/31/2014
Description:		Gray powder. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10305806.HPL	9704	Yes	1	ND	<1 CE	100.00	Q, CA, AM, F, M	LKS-12/31/2014
Description:		Gray powder. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10305807.HPL	9706	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-12/30/2014
Description:		Green rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								

Client Job No./Name:

RJ Lee Group Job No: AOH1034828-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10305808.HPL	9705	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-12/30/2014
Description:		Brown-gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10305809.HPL	9707	Yes	1	ND	<1 CE	100.00	Q, CA, AM, F, M	LKS-12/31/2014
Description:		Gray powder. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10305810.HPL	9708	Yes	1	ND	<1 CE	100.00	Q, CA, AM, F, M	LKS-12/31/2014
Description:		Gray powder. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10305811.HPL	9709	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-12/30/2014
Description:		Light gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10305812.HPL	9710	Yes	1	ND	<1 CE	100.00	Q, AM, F, M	LKS-12/31/2014
Description:		Gray powder. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10305813.HPL	9711	Yes	1	ND	<1 CE	100.00	Q, CA, AM, F, M	LKS-12/31/2014
Description:		Gray powder. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								

Client Job No./Name:

RJ Lee Group Job No: AOH1034828-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10305814.HPL	9712	Yes	1	ND		100.00	Q, CA, AM, F, MI, M	CH-12/30/2014
Description:		Gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss:		0.0%						
10305815.HPL	9713	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-12/30/2014
Description:		Pale gray-green rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss:		0.0%						
10305816.HPL	9714	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-12/30/2014
Description:		Gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss:		0.0%						
10305817.HPL	9715	Yes	1	ND	<1 CE	100.00	Q, CA, AM, F, M	LKS-12/31/2014
Description:		Gray powder. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss:		0.0%						
10305818.HPL	9716	Yes	1	ND	<1 CE	100.00	Q, CA, AM, F, M	LKS-12/31/2014
Description:		Gray powder. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss:		0.0%						
10305819.HPL	9717	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-12/30/2014
Description:		Gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss:		0.0%						

Client Job No./Name:

RJ Lee Group Job No: AOH1034828-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10305820.HPL	9718	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-12/30/2014
Description:	Gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.							
Weight Loss:	0.0%							

Client Job No./Name:

RJ Lee Group Job No: AOH1034828-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
-----------------------	-------------------------	-------------	-------------	-------------------------	---------------------------	-----------------------------	--------------------	----------------------------

Authorized Signature: 

Craig Huntington, Analyst

**ASBESTOS**

AM = Amosite  
AC = Actinolite  
AN = Anthophyllite  
CH = Chrysotile  
CR = Crocidolite  
TR = Tremolite

**NON-ASBESTOS**

CE = Cellulose  
MW = Mineral Wool  
FG = Fibrous Glass  
SF = Synthetic Fibers  
H = Hair  
W = Wollastonite  
OF = Other Fibers

**NON-FIBROUS MATERIALS**

AM = Amphibole  
B = Binder  
CA = Carbonates  
CL = Clay  
F = Feldspar  
G = Gypsum  
HY = Hydromagnesite  
M = Miscellaneous  
MI = Mica  
OP = Opaque  
OR = Organic  
P = Perlite  
Q = Quartz  
T = Tar  
V = Vermiculite

**DISCLAIMER NOTES**

- "ND" indicates no asbestos was detected; the method detection limit is 0.1%.
- "Trace" or "<1" indicates asbestos was identified in the sample, but the concentration is less than the method quantitation limit of 0.1%. PLM coefficients of variance range from approximately 1.8 at the quantitation limit of 0.1% to 0.32 at high fiber concentrations.
- Samples are archived for three months following analysis and are then properly discarded.
- 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.
- This test report relates to the items tested.
- This report is not valid unless it bears the name of a NVLAP-approved signatory.
- Any reproduction of this document must be in full in order for the report to be valid.
- This report may not be used to claim product endorsement by NVLAP, any agency of the U.S. Government or any other laboratory accrediting agency.
- Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar nonfriable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as "non-asbestos-containing."
- Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA #100364) facility.
- If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.



March 19, 2015

RJ Lee Group, Inc.  
350 Hochberg Road  
Monroeville, PA 15146  
Attn: Matthew Sanchez

Via: Federal Express: 7731-6748-9070

RE: Fiber - PLM and Crystalline Silica - XRD Analyses.

Dear Mr. Sanchez:

Enclosed are the following samples for the required analyses. All samples are crushed rock and classified as a volcanic rock (meta-basalt, meta-andesite, and rhyolite). Also enclosed are the MSDS sheets.

**Fiber and Crystalline Silica:**

For each sample listed (84 samples), complete the following analyses:

1. Polarized Light Microscopy (PLM): Bulk Analyses – 1,000 Point Count (Untreated) for regulated asbestiform fibers (EPA 600/R-93/116). If fibrous material is detected contact SGI and retain sample for additional TEM testing.
2. Total Crystalline Silica (Bulk Analysis) by quantitative XRD.
3. A 10 - day turn-around service is requested for both the PLM and XRD analyses.

Four samples of rock granules (-8 mesh x 35 mesh). (200 grams each):

9848 - Granules  
9499 - Granules  
9502 - Granules  
9496 - Granules

Six samples of rock fines (-35 mesh x 325 mesh). (200 grams each):

9843 - Fines  
9844 - Fines  
9498 - Fines

Rec'd 03-23-15 8:50AM  
Linda Margolis  
RJ Lee Group





9588 - Fines  
9495 - Fines  
9494 - Fines

Twenty samples of finished product (-8 mesh x 35 mesh). (50 grams each):

See attached Table 1.

Please address and send the lab results directly to:

Celeste Levine (Electronic Copy)  
GAF/ELK  
1361 Alps Road  
Wayne, NJ 07470  
973-628-3035  
[clevine@gaf.com](mailto:clevine@gaf.com)

with a copy sent to:

Ted Heath (Hard & Electronic Copy)  
Specialty Granules Inc.  
34 Charles St  
Hagerstown, MD 21740  
(301) 714-1332  
[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

Payment will be made through SGI Purchase Order CH50084. Please copy Ted Heath and not Celeste Levine on the invoice.

Please call me with any questions.

Sincerely,

Ted Heath  
Geologist  
Specialty Granules Inc.  
[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

c.c.

G. Kamas – SGI  
R. Collins – SGI  
A. Shepeck – SGI  
C. Levine – SGI

ADH1035873-0

**Table 1: Finished Products**

Charmian Q4 Samples			RJ Lee Sample in g	Number of Samples
Plant	SRM#	Color/ Type		
Charmian	9869	BackSurfacing	100	2
Charmian	9865	G-11 w/ oil L. Mill	100	2
Charmian	9866	G-11 w/ oil & siloxane L. Mill	100	2
Charmian	9867	G-11 w/ oil HLP	100	2
Charmian	9868	G-11 w/ oil & siloxane HLP	100	2
Charmian	9850	G - 115 oiled	100	2
Charmian	9851	G - 171 oiled	100	2
Charmian	9852	G - 201 oiled	100	2
Charmian	9853	G - 340 oiled	100	2
Charmian	9854	G - 341 oiled	100	2
Charmian	9855	G - 546 oiled	100	2
Charmian	9856	G - 552 oiled	100	2
Charmian	9857	G - 555 oiled	100	2
Charmian	9858	G - 556 oiled	100	2
Charmian	9859	G - 560 oiled	100	2
Charmian	9860	G - 615 oiled	100	2
Charmian	9861	G - 720 oiled	100	2
Charmian	9862	G - 760 oiled	100	2
Charmian	9863	G - 801 oiled	100	2
Charmian	9864	G - 11D oiled	100	2

## Laboratory Report

GAF/ELK  
 1361 Alps Road  
 Wayne, NJ 07470  
 United States  
 Attention: Celeste Levine  
 Telephone: 973-628-3035

Report Date 04/06/2015  
 Sample Receipt Date 03/23/2015  
 RJ Lee Group Job No. AOH1035873-0  
 Authorization/P.O. No. CH50084  
 Client Job No./Name

Analysis: Asbestos in Bulk Samples by Point Count  
 Method: EPA/600/R-93/116

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10320011.HPL	9848 - Granules	Yes	1	ND	<1 CE	100.00	AM, OP, M	AKB-04/06/2015
Description:	Green Crushed Rock No Asbestiforms Detected. Limit Of Detection = 0.1%. 1000 Points Counted.							
Weight Loss: 0.0%								
10320012.HPL	9499 - Granules	Yes	1	ND	<1 CE	100.00	M	AKB-04/06/2015
Description:	Green Crushed Rock No Asbestiforms Detected. Limit Of Detection = 0.1%. 1000 Points Counted.							
Weight Loss: 0.0%								

**Client Job No./Name:**
**RJ Lee Group Job No: AOH1035873-0**

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10320013.HPL	9502 - Granules	Yes	1	ND	<1 CE	100.00	M	AKB-04/06/2015
Description:	Beige Crushed Rock No Asbestiforms Detected. Limit Of Detection = 0.1%. 1000 Points Counted.							
Weight Loss:	0.0%							
10320014.HPL	9496 - Granules	Yes	1	ND	<1 CE	100.00	M	AKB-04/06/2015
Description:	Green Crushed Rock No Asbestiforms Detected. Limit Of Detection = 0.1%. 1000 Points Counted.							
Weight Loss:	0.0%							
10320015.HPL	9843 - Fines	Yes	1	ND	<1 CE <1 SF	100.00	AM, OP, M	AKB-04/06/2015
Description:	Green Crushed Rock No Asbestiforms Detected. Limit Of Detection = 0.1%. 1000 Points Counted.							
Weight Loss:	0.0%							
10320016.HPL	9844 - Fines	Yes	1	ND	<1 CE	100.00	AM, M	AKB-04/06/2015
Description:	Green Crushed Rock No Asbestiforms Detected. Limit Of Detection = 0.1%. 1000 Points Counted.							
Weight Loss:	0.0%							

Client Job No./Name:

RJ Lee Group Job No: AOH1035873-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10320017.HPL	9498 - Fines	Yes	1	ND	<1 CE	100.00	OP, M	AKB-04/06/2015
Description:	Green Crushed Rock No Asbestiforms Detected. Limit Of Detection = 0.1%. 1000 Points Counted.							
Weight Loss:	0.0%							
10320018.HPL	9588 - Fines	Yes	1	ND		100.00	Q, CA, AM, OP, M	CW-04/06/2015
Description:	Pale Pink Crushed Rock. 1000 Point Count. Limit of Detection = 0.1%. No Asbestiform Minerals Detected.							
Weight Loss:	0.0%							
10320019.HPL	9495 - Fines	Yes	1	ND		100.00	Q, CA, AM, OP, M	CW-04/06/2015
Description:	Light Gray Crushed Rock. 1000 Point Count. Limit of Detection = 0.1%. No Asbestiform Minerals Detected.							
Weight Loss:	0.0%							
10320020.HPL	9494 - Fines	Yes	1	ND		100.00	Q, CA, AM, OP, M	CW-04/06/2015
Description:	Pale Green Crushed Rock. 1000 Point Count. Limit of Detection = 0.1%. No Asbestiform Minerals Detected.							
Weight Loss:	0.0%							
10320021.HPL	9869	Yes	1	ND	<1 CE	100.00	Q, CA, AM, OP, M	LKS-04/06/2015
Description:	Gray powder. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.							
Weight Loss:	0.0%							
10320022.HPL	9865	Yes	1	ND		100.00	Q, CA, AM, OP, M	CW-04/06/2015
Description:	Pale Green Crushed Rock. 1000 Point Count. Limit of Detection = 0.1%. No Asbestiform Minerals Detected.							
Weight Loss:	0.0%							

Client Job No./Name:

RJ Lee Group Job No: AOH1035873-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10320023.HPL	9866	Yes	1	ND	<1 CE	100.00	Q, CA, AM, OP, M	LKS-04/06/2015
Description:		Gray powder. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10320024.HPL	9867	Yes	1	ND	<1 CE	100.00	Q, CA, AM, OP, M	LKS-04/06/2015
Description:		Gray powder. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10320025.HPL	9868	Yes	1	ND	<1 CE	100.00	Q, CA, AM, OP, M	LKS-04/06/2015
Description:		Gray powder. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10320026.HPL	9850	Yes	1	ND	<1 CE	100.00	Q, CA, AM, OP, M	LKS-04/06/2015
Description:		Gray powder. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10320027.HPL	9851	Yes	1	ND	<1 CE	100.00	Q, CA, AM, OP, M	LKS-04/06/2015
Description:		Gray powder. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10320028.HPL	9852	Yes	1	ND	<1 CE	100.00	Q, CA, AM, OP, M	LKS-04/06/2015
Description:		Gray powder. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10320029.HPL	9853	Yes	1	ND		100.00	Q, CA, AM, OP, M	CW-04/06/2015
Description:		Dark Gray Crushed Rock. 1000 Point Count. Limit of Detection = 0.1%. No Asbestiform Minerals Detected.						
Weight Loss: 0.0%								

Client Job No./Name:

RJ Lee Group Job No: AOH1035873-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10320030.HPL	9854	Yes	1	ND	<1 CE	100.00	Q, CA, AM, OP, M	LKS-04/06/2015
Description:		Gray powder. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10320031.HPL	9855	Yes	1	ND	<1 CE	100.00	Q, CA, AM, OP, M	LKS-04/06/2015
Description:		Gray powder. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10320032.HPL	9856	Yes	1	ND	<1 CE	100.00	Q, CA, AM, OP, M	LKS-04/06/2015
Description:		Gray powder. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10320033.HPL	9857	Yes	1	ND	<1 CE	100.00	Q, CA, AM, OP, M	LKS-04/06/2015
Description:		Gray powder. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10320034.HPL	9858	Yes	1	ND	<1 CE	100.00	Q, CA, AM, OP, M	LKS-04/06/2015
Description:		Gray powder. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10320035.HPL	9859	Yes	1	ND	<1 CE	100.00	Q, CA, AM, OP, M	LKS-04/06/2015
Description:		Gray powder. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10320036.HPL	9860	Yes	1	ND	<1 CE	100.00	Q, CA, AM, OP, M	LKS-04/06/2015
Description:		Gray powder. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								

**Client Job No./Name:**
**RJ Lee Group Job No: AOH1035873-0**

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10320037.HPL	9861	Yes	1	ND	<1 CE	100.00	Q, CA, AM, OP, M	LKS-04/06/2015
Description:		Gray powder. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10320038.HPL	9862	Yes	1	ND	<1 CE	100.00	Q, CA, AM, OP, M	LKS-04/06/2015
Description:		Gray powder. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10320039.HPL	9863	Yes	1	ND	<1 CE	100.00	Q, CA, AM, OP, M	LKS-04/06/2015
Description:		Gray powder. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10320040.HPL	9864	Yes	1	ND	<1 CE	100.00	Q, CA, AM, OP, M	LKS-04/06/2015
Description:		Gray powder. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								



Client Job No./Name:

RJ Lee Group Job No: AOH1035873-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
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Authorized Signature: \_\_\_\_\_

Logan K. Solotky

#### ASBESTOS

AM = Amosite  
AC = Actinolite  
AN = Anthophyllite  
CH = Chrysotile  
CR = Crocidolite  
TR = Tremolite

#### NON-ASBESTOS

CE = Cellulose  
MW = Mineral Wool  
FG = Fibrous Glass  
SF = Synthetic Fibers  
H = Hair  
W = Wollastonite  
OF = Other Fibers

#### NON-FIBROUS MATERIALS

AM = Amphibole	HY = Hydromagnesite	Q = Quartz
B = Binder	M = Miscellaneous	T = Tar
CA = Carbonates	MI = Mica	V = Vermiculite
CL = Clay	OP = Opaque	
F = Feldspar	OR = Organic	
G = Gypsum	P = Perlite	

#### DISCLAIMER NOTES

- "ND" indicates no asbestos was detected; the method detection limit is 0.1%.
- "Trace" or "<" indicates asbestos was identified in the sample, but the concentration is less than the method quantitation limit. PLM coefficients of variance range from approximately 1.8 at the quantitation limit of 0.1% to 0.32 at high fiber concentrations.
- Samples are archived for three months following analysis and are then properly discarded.
- 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.
- This test report relates to the items tested.
- This report is not valid unless it bears the name of a NVLAP-approved signatory.
- Any reproduction of this document must be in full in order for the report to be valid.
- This report may not be used to claim product endorsement by NVLAP, any agency of the U.S. Government or any other laboratory accrediting agency.
- Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar nonfriable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as "non-asbestos-containing."
- Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA #100364) facility.
- If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.



May 26, 2015

RJ Lee Group, Inc.  
350 Hochberg Road  
Monroeville, PA 15146  
Attn: Matthew Sanchez

Via: Federal Express: 7736-8088-1471

RE: Fiber - PLM and Crystalline Silica - XRD Analyses.

Dear Mr. Sanchez:

Enclosed are the following samples for the required analyses. All samples are crushed rock and classified as a volcanic rock (meta-basalt and meta-andesite). Also enclosed are the SDS sheets.

**Fiber and Crystalline Silica:**

For each sample listed (27 samples), complete the following analyses:

1. Polarized Light Microscopy (PLM): Bulk Analyses – 1,000 Point Count (Untreated) for regulated asbestiform fibers (EPA 600/R-93/116). If fibrous material is detected contact SGI and retain sample for additional TEM testing.
2. Total Crystalline Silica (Bulk Analysis) by quantitative XRD.
3. A 10 - day turn-around service is requested for both the PLM and XRD analyses.

One sample of rock granules (-8 mesh x 35 mesh). (200 grams each):

9930 - Granules

Two samples of rock fines (-35 mesh x 325 mesh). (200 grams each):

9833 - Fines

9935 - Fines

Twenty-four samples of finished product (-8 mesh x 35 mesh). (50 grams each):

See attached Table 1.

Revised COL Received  
05-28-15 3:48 PM  
Linda Maguire  
RJ Lee Group

\* Samples Rec'd 05-28-15 9:20 AM



**SPECIALTY GRANULES INC.**

A041036751-0

13424 Pennsylvania Ave, Suite 303 // Hagerstown, MD 21742 // Tel: 301-733-4000 // Fax: 301-733-4003

[www.specialtygranules.com](http://www.specialtygranules.com)

Please address and send the lab results directly to:

Celeste Levine (Electronic Copy)  
GAF/ELK  
1361 Alps Road  
Wayne, NJ 07470  
973-628-3035  
[clevine@gaf.com](mailto:clevine@gaf.com)

with a copy sent to:

Ted Heath (Hard & Electronic Copy)  
Specialty Granules Inc.  
34 Charles St  
Hagerstown, MD 21740  
(301) 714-1332  
[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

Payment will be made through SGI Purchase Order CH50654. Please copy Ted Heath and not Celeste Levine on the invoice.

Please call me with any questions.

Sincerely,

Ted Heath  
Geologist  
Specialty Granules Inc.  
[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

c.c.

G. Kamas – SGI

M. McClure – SGI

A. Shepeck – SGI

C. Levine – SGI

**Table 1: Finished Products**

SGI Q1 Samples			RJ Lee Sample in g	Number of Samples
Plant	SRM#	Color/ Type		
Charmian	9956	BackSurfacing	100	2
Charmian	9952	G-11 w/ oil L. Mill	100	2
Charmian	9953	G-11 w/ oil & siloxane L. Mill	100	2
Charmian	9954	G-11 w/ oil HLP	100	2
Charmian	9955	G-11 w/ oil & siloxane HLP	100	2
Charmian	9937	G - 115 oiled	100	2
Charmian	9938	G - 171 oiled	100	2
Charmian	9939	G - 201 oiled	100	2
Charmian	9940	G- 340 oiled	100	2
Charmian	9941	G - 341 oiled	100	2
Charmian	9942	G - 546 oiled	100	2
Charmian	9943	G - 552 oiled	100	2
Charmian	9944	G -555 oiled	100	2
Charmian	9945	G -556 oiled	100	2
Charmian	9946	G - 560 oiled	100	2
Charmian	9947	G -615 oiled	100	2
Charmian	9948	G - 720 oiled	100	2
Charmian	9949	G - 760 oiled	100	2
Charmian	9950	G - 801 oiled	100	2
Charmian	9951	G - 11D oiled	100	2

**Redacted - Does Not Relate to Charmian Facility**

## Laboratory Report

GAF/ELK  
1361 Alps Road  
Wayne, NJ 07470  
United States  
Attention: Celeste Levine  
Telephone: 973-628-3035

Report Date 06/16/2015  
Sample Receipt Date 05/29/2015  
RJ Lee Group Job No. AOH1036751-0  
Authorization/P.O. No. CH50654  
Client Job No./Name

Analysis: Asbestos in Bulk Samples by Point Count

Method: EPA/600/R-93/116

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10328390.HPL	9930 - Granules	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-06/11/2015
Description:		Gray rock granules. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10328391.HPL	9833 - Fines	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-06/11/2015
Description:		Pale green rock fines. 1000 point count. Detection limit =0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10328392.HPL	9935 - Fines	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-06/11/2015
Description:		Pale green rock fines. 1000 point count. Detection limit =0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								

Client Job No./Name:

RJ Lee Group Job No: AOH1036751-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10328393.HPL	9956	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-06/11/2015
Description:		Green-gray rock granules. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10328394.HPL	9952	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-06/11/2015
Description:		Dark gray rock granules. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10328395.HPL	9953	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-06/11/2015
Description:		Dark gray rock granules. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10328396.HPL	9954	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-06/12/2015
Description:		Pale green rock fines. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10328397.HPL	9955	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-06/12/2015
Description:		Pale green rock fines. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10328398.HPL	9937	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-06/12/2015
Description:		Pale green rock fines. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10328399.HPL	9938	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-06/12/2015
Description:		Pale green rock fines. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								

**Client Job No./Name:**
**RJ Lee Group Job No: AOH1036751-0**

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10328400.HPL	9939	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-06/12/2015
Description: Gray rock fines. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10328401.HPL	9940	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-06/12/2015
Description: Gray rock fines. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10328402.HPL	9941	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-06/12/2015
Description: Pale green rock fines. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10328403.HPL	9942	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-06/12/2015
Description: Gray rock fines. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10328404.HPL	9943	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-06/12/2015
Description: Gray rock fines. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10328405.HPL	9944	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-06/12/2015
Description: Gray rock fines. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								

Client Job No./Name:

RJ Lee Group Job No: AOH1036751-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10328406.HPL	9945	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-06/12/2015
Description: Gray rock fines. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10328407.HPL	9946	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-06/12/2015
Description: Gray rock fines. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10328408.HPL	9947	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-06/12/2015
Description: Gray rock fines. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10328409.HPL	9948	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-06/12/2015
Description: Gray rock fines. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10328410.HPL	9949	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-06/16/2015
Description: Gray rock fines. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10328411.HPL	9950	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-06/16/2015
Description: Gray rock fines. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								



Client Job No./Name:

RJ Lee Group Job No: AOH1036751-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10328412.HPL	9951	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-06/16/2015

Description: Gray rock fines. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.

Weight Loss: 0.0%

**Redacted - Does Not Relate to Charmian Facility**

Client Job No./Name:

RJ Lee Group Job No: AOH1036751-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
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Authorized Signature: 

Craig Huntington, Analyst

#### ASBESTOS

AM = Amosite  
AC = Actinolite  
AN = Anthophyllite  
CH = Chrysotile  
CR = Crocidolite  
TR = Tremolite

#### NON-ASBESTOS

CE = Cellulose  
MW = Mineral Wool  
FG = Fibrous Glass  
SF = Synthetic Fibers  
H = Hair  
W = Wollastonite  
OF = Other Fibers

#### NON-FIBROUS MATERIALS

AM = Amphibole  
B = Binder  
CA = Carbonates  
CL = Clay  
F = Feldspar  
G = Gypsum  
HY = Hydromagnesite  
M = Miscellaneous  
MI = Mica  
OP = Opaque  
OR = Organic  
P = Perlite  
Q = Quartz  
T = Tar  
V = Vermiculite

#### DISCLAIMER NOTES

- "ND" indicates no asbestos was detected; the method detection limit is 0.1%.
- "Trace" or "<" indicates asbestos was identified in the sample, but the concentration is less than the method quantitation limit. PLM coefficients of variance range from approximately 1.8 at the quantitation limit of 0.1% to 0.32 at high fiber concentrations.
- Samples are archived for three months following analysis and are then properly discarded.
- 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.
- This test report relates to the items tested.
- This report is not valid unless it bears the name of a NVLAP Lab Code 101208-0 approved signatory.
- Any reproduction of this document must be in full in order for the report to be valid.
- This report may not be used to claim product endorsement by NVLAP Lab Code 101208-0, any agency of the U.S. Government or any other laboratory accrediting agency.
- Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar nonfriable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as "non-asbestos-containing."
- Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA #100364) facility.
- If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.

**SPECIALTY GRANULES INC.**

13424 Pennsylvania Ave, Suite 303 // Hagerstown, MD 21742 // Tel: 301-733-4000 // Fax: 301-733-4003

[www.specialtygranules.com](http://www.specialtygranules.com)

A041038267-0

September 17, 2015

RJ Lee Group, Inc.  
350 Hochberg Road  
Monroeville, PA 15146  
Attn: Matthew Sanchez

Via: Federal Express: 7745-3029-4018

RE: Fiber - PLM and Crystalline Silica - XRD Analyses.

Dear Mr. Sanchez:

Enclosed are the following samples for the required analyses. All samples are crushed rock and classified as a volcanic rock (meta-basalt and meta-andesite). Also enclosed are the SDS sheets.

**Fiber and Crystalline Silica:**

For each sample listed (23 samples), complete the following analyses:

1. Polarized Light Microscopy (PLM): Bulk Analyses – 1,000 Point Count (Untreated) for regulated asbestiform fibers (EPA 600/R-93/116). If fibrous material is detected contact SGI and retain sample for additional TEM testing.
2. Total Crystalline Silica (Bulk Analysis) by quantitative XRD.
3. A 10 - day turn-around service is requested for both the PLM and XRD analyses.

One sample of rock granules (-8 mesh x 35 mesh). (200 grams each):

10025 - Granules

Two samples of rock fines (-35 mesh x 325 mesh). (200 grams each):

10029 - Fines

10030 - Fines

Twenty samples of finished product (-8 mesh x 35 mesh). (50 grams each):

See attached Table 1 (includes the rock fines and raw granule samples).

RECD 09-18-15 9:10 AM  
Imelda Manguerra  
RJ Lee Group



**SPECIALTY GRANULES INC.**

A0141038267-0

13424 Pennsylvania Ave, Suite 303 // Hagerstown, MD 21742 // Tel: 301-733-4000 // Fax: 301-733-4003

[www.specialtygranules.com](http://www.specialtygranules.com)

Please address and send the lab results directly to:

Celeste Levine (Electronic Copy)  
GAF/ELK  
1361 Alps Road  
Wayne, NJ 07470  
973-628-3035  
[clevine@gaf.com](mailto:clevine@gaf.com)

with a copy sent to:

Ted Heath (Hard & Electronic Copy)  
Specialty Granules Inc.  
34 Charles St  
Hagerstown, MD 21740  
(301) 714-1332  
[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

Payment will be made through SGI Purchase Order CH51603. Please copy Ted Heath and not Celeste Levine on the invoice.

Please call me with any questions.

Sincerely,

Ted Heath  
Geologist  
Specialty Granules Inc.  
[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

c.c.

G. Kamas – SGI  
M. McClure – SGI  
A. Shepeck – SGI  
C. Levine – SGI

A041038267-0

**Table 1: Raw Granule, Fines, and Finished Product Sample List**

Date: 9/16/15

Plant	SRM#	Color/ Type	RJ Lee Sample in	Number of
Charmian	10025	Raw Granules	200	2
Charmian	10029	Fines L. Mill	200	2
Charmian	10030	Fines HLP	200	2
Charmian	10054	BackSurfacing	100	2
Charmian	10050	G-11 w/ oil L. Mill	100	2
Charmian	10051	G-11 w/ oil & siloxane L. Mill	100	2
Charmian	10052	G-11 w/ oil HLP	100	2
Charmian	10053	G-11 w/ oil & siloxane HLP	100	2
Charmian	10035	G - 115 oiled	100	2
Charmian	10036	G - 171 oiled	100	2
Charmian	10037	G - 201 oiled	100	2
Charmian	10038	G- 340 oiled	100	2
Charmian	10039	G - 341 oiled	100	2
Charmian	10040	G - 546 oiled	100	2
Charmian	10041	G - 552 oiled	100	2
Charmian	10042	G -555 oiled	100	2
Charmian	10043	G -556 oiled	100	2
Charmian	10044	G - 560 oiled	100	2
Charmian	10045	G -615 oiled	100	2
Charmian	10046	G - 720 oiled	100	2
Charmian	10047	G - 760 oiled	100	2
Charmian	10048	G - 801 oiled	100	2
Charmian	10049	G - 11D oiled	100	2

## Laboratory Report

GAF/ELK  
1361 Alps Road  
Wayne, NJ 07470  
United States  
Attention: Celeste Levine  
Telephone: 973-628-3035

Report Date 09/30/2015  
Sample Receipt Date 09/18/2015  
RJ Lee Group Job No. AOH1038267-0  
Authorization/P.O. No. CH51603  
Client Job No./Name Charmian Plant

Analysis: Asbestos in Bulk Samples by Point Count

Method: EPA/600/R-93/116

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10342665.HPL	SRM# 10025	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-09/30/2015
Description:		Gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10342666.HPL	SRM# 10029	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-09/30/2015
Description:		Pale green rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10342667.HPL	SRM# 10030	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-09/30/2015
Description:		Pale green rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10342668.HPL	SRM# 10054	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-09/30/2015
Description:		Gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								

Client Job No./Name: Charmian Plant

RJ Lee Group Job No: AOH1038267-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10342669.HPL	SRM# 10050	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-09/30/2015
Description:		Gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10342670.HPL	SRM# 10051	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-09/30/2015
Description:		Gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10342671.HPL	SRM# 10052	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-09/30/2015
Description:		Gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10342672.HPL	SRM# 10053	Yes	1	ND		100.00	Q, CA, AM, OP, M	LKS-09/29/2015
Description:		Gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10342673.HPL	SRM# 10035	Yes	1	ND		100.00	Q, CA, AM, OP, MI, M	LKS-09/29/2015
Description:		Gray rock dust. 1000 point count. Detection limit 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10342674.HPL	SRM# 10036	Yes	1	ND		100.00	Q, CA, AM, OP, MI, M	LKS-09/29/2015
Description:		Gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10342675.HPL	SRM# 10037	Yes	1	ND		100.00	Q, CA, AM, OP, MI, M	LKS-09/29/2015
Description:		Gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								

Client Job No./Name: Charmian Plant

RJ Lee Group Job No: AOH1038267-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10342676.HPL	SRM# 10038	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-09/30/2015
Description:		Gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10342677.HPL	SRM# 10039	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-09/30/2015
Description:		Gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10342678.HPL	SRM# 10040	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-09/30/2015
Description:		Gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10342679.HPL	SRM# 10041	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-09/30/2015
Description:		Gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10342680.HPL	SRM# 10042	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-09/30/2015
Description:		Gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10342681.HPL	SRM# 10043	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-09/30/2015
Description:		Gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10342682.HPL	SRM# 10044	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-09/30/2015
Description:		Gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								



Client Job No./Name: Charmian Plant

RJ Lee Group Job No: AOH1038267-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10342683.HPL	SRM# 10045	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-09/30/2015
Description:		Gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10342684.HPL	SRM# 10046	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-09/30/2015
Description:		Gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10342685.HPL	SRM# 10047	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-09/30/2015
Description:		Gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10342686.HPL	SRM# 10048	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-09/30/2015
Description:		Gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10342687.HPL	SRM# 10049	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-09/30/2015
Description:		Gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								

Client Job No./Name: Charmian Plant

RJ Lee Group Job No: AOH1038267-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
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Authorized Signature:



Craig Huntington, Analyst

**ASBESTOS**

AM = Amosite  
 AC = Actinolite  
 AN = Anthophyllite  
 CH = Chrysotile  
 CR = Crocidolite  
 TR = Tremolite

**NON-ASBESTOS**

CE = Cellulose  
 MW = Mineral Wool  
 FG = Fibrous Glass  
 SF = Synthetic Fibers  
 H = Hair  
 W = Wollastonite  
 OF = Other Fibers

**NON-FIBROUS MATERIALS**

AM = Amphibole  
 B = Binder  
 CA = Carbonates  
 CL = Clay  
 F = Feldspar  
 G = Gypsum  
 HY = Hydromagnesite  
 M = Miscellaneous  
 MI = Mica  
 OP = Opaque  
 OR = Organic  
 P = Perlite  
 Q = Quartz  
 T = Tar  
 V = Vermiculite

**DISCLAIMER NOTES**

- "ND" indicates no asbestos was detected; the method detection limit is 0.1%.
- "Trace" or "<" indicates asbestos was identified in the sample, but the concentration is less than the method quantitation limit. PLM coefficients of variance range from approximately 1.8 at the quantitation limit of 0.1% to 0.32 at high fiber concentrations.
- Samples are archived for three months following analysis and are then properly discarded.
- 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.
- This test report relates to the items tested.
- This report is not valid unless it bears the name of a NVLAP Lab Code 101208-0 approved signatory.
- Any reproduction of this document must be in full in order for the report to be valid.
- This report may not be used to claim product endorsement by NVLAP Lab Code 101208-0, any agency of the U.S. Government or any other laboratory accrediting agency.
- Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar nonfriable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as "non-asbestos-containing."
- Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA #100364) facility.
- If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.



November 19, 2015

RJ Lee Group, Inc.  
350 Hochberg Road  
Monroeville, PA 15146  
Attn: Matthew Sanchez

Via: Federal Express: 7750-1593-5926

RE: Fiber - PLM and Crystalline Silica - XRD Analyses.

Dear Mr. Sanchez:

Enclosed are the following samples for the required analyses. All samples are crushed rock and classified as a volcanic rock (meta-basalt and meta-andesite). Also enclosed are the SDS sheets.

**Fiber and Crystalline Silica:**

For each sample listed (23 samples), complete the following analyses:

1. Polarized Light Microscopy (PLM): Bulk Analyses – 1,000 Point Count (Untreated) for regulated asbestiform fibers (EPA 600/R-93/116). If fibrous material is detected contact SGI and retain sample for additional TEM testing.
2. Total Crystalline Silica (Bulk Analysis) by quantitative XRD.
3. A 10 - day turn-around service is requested for both the PLM and XRD analyses.

One sample of rock granules (-8 mesh x 35 mesh). (200 grams each):

10098 - Granules

Two samples of rock fines (-35 mesh x 325 mesh). (200 grams each):

10096 - Fines

10097 - Fines

Twenty samples of finished product (-8 mesh x 35 mesh). (50 grams each):

See attached Table 1 (includes the rock fines and raw granule samples).

RCVD 11-23-15 8:55AM  
Ymela Manguis  
RJ Lee Group



**SPECIALTY GRANULES INC.**

*A041039138-0*

13424 Pennsylvania Ave, Suite 303 // Hagerstown, MD 21742 // Tel: 301-733-4000 // Fax: 301-733-4003

[www.specialtygranules.com](http://www.specialtygranules.com)

Please address and send the lab results directly to:

Celeste Levine (Electronic Copy)  
GAF/ELK  
1361 Alps Road  
Wayne, NJ 07470  
973-628-3035  
[clevine@gaf.com](mailto:clevine@gaf.com)

with a copy sent to:

Ted Heath (Hard & Electronic Copy)  
Specialty Granules Inc.  
34 Charles St  
Hagerstown, MD 21740  
(301) 714-1332  
[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

Payment will be made through SGI Purchase Order CH52146. Please copy Ted Heath and not Celeste Levine on the invoice.

Please call me with any questions.

Sincerely,

Ted Heath  
Geologist  
Specialty Granules Inc.  
[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

c.c.

G. Kamas – SGI  
M. McClure – SGI  
A. Shepeck – SGI  
C. Levine – SGI

A044039138-0

**Table 1: Raw Granules, Rock Fines, and Finished Product Sample List**

Date: 11/18/15

**Bucket Inventory For RJ Lee**

			RJ Lee	Number
Plant	SRM#	Color/ Type	Sample in	of
Charmian	10098	Raw Granules	200	2
Charmian	10096	Fines L. Mill	200	2
Charmian	10097	Fines HLP	200	2
Charmian	10124	BackSurfacing	100	2
Charmian	10120	G-11 w/ oil L. Mill	100	2
Charmian	10121	G-11 w/ oil & siloxane L. Mill	100	2
Charmian	10122	G-11 w/ oil HLP	100	2
Charmian	10123	G-11 w/ oil & siloxane HLP	100	2
Charmian	10106	G - 115 oiled	100	2
Charmian	10131	G - 171 oiled	100	2
Charmian	10107	G - 201 oiled	100	2
Charmian	10108	G- 340 oiled	100	2
Charmian	10109	G - 341 oiled	100	2
Charmian	10110	G - 546 oiled	100	2
Charmian	10111	G - 552 oiled	100	2
Charmian	10112	G -555 oiled	100	2
Charmian	10113	G -556 oiled	100	2
Charmian	10114	G - 560 oiled	100	2
Charmian	10115	G -615 oiled	100	2
Charmian	10116	G - 720 oiled	100	2
Charmian	10117	G - 760 oiled	100	2
Charmian	10118	G - 801 oiled	100	2
Charmian	10119	G - 11D oiled	100	2

## Laboratory Report

GAF/ELK  
1361 Alps Road  
Wayne, NJ 07470  
United States  
Attention: Celeste Levine  
Telephone: 973-628-3035

Report Date 12/08/2015  
Sample Receipt Date 11/23/2015  
RJ Lee Group Job No. AOH1039138-0  
Authorization/P.O. No. CH52146  
Client Job No./Name

Analysis: Asbestos in Bulk Samples by Point Count

Method: EPA/600/R-93/116

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10350263.HPL	SMR# 10098	Yes	1	ND		100.00	Q, CA, AM, F, OR, OP, MI, M	CH-12/02/2015
Description: Green rock granules. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10350264.HPL	SMR# 10096	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-12/02/2015
Description: Pale green rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10350265.HPL	SMR# 10097	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-12/02/2015
Description: Pale green rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								

**Client Job No./Name:**
**RJ Lee Group Job No: AOH1039138-0**

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10350266.HPL	SMR# 10124	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-12/02/2015
Description:		Dark green/gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10350267.HPL	SMR# 10120	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-12/02/2015
Description:		Dark green/gray granules. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10350268.HPL	SMR# 10121	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-12/02/2015
Description:		Dark gray rock granules. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10350269.HPL	SMR# 10122	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-12/02/2015
Description:		Dark gray granules. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10350270.HPL	SMR# 10123	Yes	1	ND		100.00	Q, CA, AM, OP, M	LKS-12/07/2015
Description:		Green rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10350271.HPL	SMR# 10106	Yes	1	ND		100.00	Q, CA, AM, OP, M	LKS-12/08/2015
Description:		Green rock dust. 1000 point count. 0.1% Detection limit. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10350272.HPL	SMR# 10131	Yes	1	ND		100.00	Q, CA, AM, OP, M	LKS-12/07/2015
Description:		Green rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detection limit.						
Weight Loss: 0.0%								

Client Job No./Name:

RJ Lee Group Job No: AOH1039138-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10350273.HPL	SMR# 10107	Yes	1	ND		100.00	Q, CA, AM, OP, M	LKS-12/07/2015
Description:		Gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10350274.HPL	SMR# 10108	Yes	1	ND		100.00	Q, CA, AM, OP, M	LKS-12/07/2015
Description:		Gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10350275.HPL	SMR# 10109	Yes	1	ND		100.00	Q, CA, AM, OP, M	LKS-12/07/2015
Description:		Gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10350276.HPL	SMR# 10110	Yes	1	ND		100.00	Q, CA, AM, OP, M	LKS-12/07/2015
Description:		Gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10350277.HPL	SMR# 10111	Yes	1	ND		100.00	Q, CA, AM, OP, M	LKS-12/07/2015
Description:		Gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10350278.HPL	SMR# 10112	Yes	1	ND		100.00	Q, CA, AM, OP, M	LKS-12/07/2015
Description:		Gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10350279.HPL	SMR# 10113	Yes	1	ND		100.00	Q, CA, AM, OP, M	LKS-12/07/2015
Description:		Gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								



Client Job No./Name:

RJ Lee Group Job No: AOH1039138-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10350280.HPL	SMR# 10114	Yes	1	ND		100.00	Q, CA, AM, OP, M	LKS-12/07/2015
Description:		Gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestos from minerals detected.						
Weight Loss: 0.0%								
10350281.HPL	SMR# 10115	Yes	1	ND		100.00	Q, CA, AM, OP, M	LKS-12/07/2015
Description:		Gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestos from minerals detected.						
Weight Loss: 0.0%								
10350282.HPL	SMR# 10116	Yes	1	ND		100.00	Q, CA, AM, OP, M	LKS-12/08/2015
Description:		Gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestos from minerals detected.						
Weight Loss: 0.0%								
10350283.HPL	SMR# 10117	Yes	1	ND		100.00	Q, AM, OP, M	LKS-12/07/2015
Description:		Gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestos from minerals detected.						
Weight Loss: 0.0%								
10350284.HPL	SMR# 10118	Yes	1	ND		100.00	Q, CA, AM, OP, M	LKS-12/08/2015
Description:		Green rock dust. 1000 point count. Detection limit = 0.1%. No asbestos from minerals detected.						
Weight Loss: 0.0%								
10350285.HPL	SMR# 10119	Yes	1	ND		100.00	Q, CA, AM, OP, M	LKS-12/08/2015
Description:		Gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestos from minerals detected.						
Weight Loss: 0.0%								

Client Job No./Name:

RJ Lee Group Job No: AOH1039138-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
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Authorized Signature: \_\_\_\_\_

Logan K. Solotky

#### ASBESTOS

AM = Amosite  
AC = Actinolite  
AN = Anthophyllite  
CH = Chrysotile  
CR = Crocidolite  
TR = Tremolite

#### NON-ASBESTOS

CE = Cellulose  
MW = Mineral Wool  
FG = Fibrous Glass  
SF = Synthetic Fibers  
H = Hair  
W = Wollastonite  
OF = Other Fibers

#### NON-FIBROUS MATERIALS

AM = Amphibole  
B = Binder  
CA = Carbonates  
CL = Clay  
F = Feldspar  
G = Gypsum  
HY = Hydromagnesite  
M = Miscellaneous  
MI = Mica  
OP = Opaque  
OR = Organic  
P = Perlite  
Q = Quartz  
T = Tar  
V = Vermiculite

#### DISCLAIMER NOTES

- "ND" indicates no asbestos was detected; the method detection limit is 0.1%.
- "Trace" or "<" indicates asbestos was identified in the sample, but the concentration is less than the method quantitation limit. PLM coefficients of variance range from approximately 1.8 at the quantitation limit of 0.1% to 0.32 at high fiber concentrations.
- Samples are archived for three months following analysis and are then properly discarded.
- 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.
- This test report relates to the items tested.
- This report is not valid unless it bears the name of a NVLAP Lab Code 101208-0 approved signatory.
- Any reproduction of this document must be in full in order for the report to be valid.
- This report may not be used to claim product endorsement by NVLAP Lab Code 101208-0, any agency of the U.S. Government or any other laboratory accrediting agency.
- Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar nonfriable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as "non-asbestos-containing."
- Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA #100364) facility.
- If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.



March 17, 2016

RJ Lee Group, Inc.  
350 Hochberg Road  
Monroeville, PA 15146  
Attn: Matthew Sanchez

Via: Federal Express: 7758-9755-0250

RE: Fiber - PLM and Crystalline Silica - XRD Analyses.

Dear Mr. Sanchez:

Enclosed are the following samples for the required analyses. All samples are crushed rock and classified as a volcanic rock (meta-basalt, meta-andesite, and rhyolite). Also enclosed are the SDS sheets.

**Fiber and Crystalline Silica:**

For each sample listed (60 samples), complete the following analyses:

1. Polarized Light Microscopy (PLM): Bulk Analyses – 1,000 Point Count (Untreated) for regulated asbestiform fibers (EPA 600/R-93/116). If fibrous material is detected contact SGI and retain sample for additional TEM testing.
2. Total Crystalline Silica (Bulk Analysis) by quantitative XRD.
3. A 10 - day turn-around service is requested for both the PLM and XRD analyses.

Four samples of rock granules (-8 mesh x 35 mesh). (200 grams each):

See attached Table 1.

Six samples of rock fines (-35 mesh x 325 mesh). (100 - 200 grams each):

See attached Table 1.

Twenty samples of finished product (-8 mesh x 35 mesh). (100 grams each):

See attached Table 1.

Rev'd 03-21-16 10:23 AM  
Jmela Mauguis  
RJ Lee Group



**SPECIALTY GRANULES LLC.**

A0H1040460-0

13424 Pennsylvania Ave, Suite 303 // Hagerstown, MD 21742 // Tel: 301-733-4000 // Fax: 301-733-4003

[www.specialtygranules.com](http://www.specialtygranules.com)

Please address and send the lab results directly to:

Celeste Levine (Electronic Copy)  
GAF/ELK  
1361 Alps Road  
Wayne, NJ 07470  
973-628-3035  
[clevine@gaf.com](mailto:clevine@gaf.com)

with a copy sent to:

Ted Heath (Hard & Electronic Copy)  
Specialty Granules LLC  
34 Charles St  
Hagerstown, MD 21740  
(301) 714-1332  
[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

Payment will be made through SGI Purchase Order CH53103. Please copy Ted Heath and not Celeste Levine on the invoice.

Please call me with any questions.

Sincerely,

Ted Heath  
Geologist  
Specialty Granules LLC  
[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

c.c.  
G. Kamas – SGI  
M. McClure – SGI  
A. Shepeck – SGI  
C. Levine – SGI

ADH 1040460-0

Table 1: Sample Inventory for RJ Lee Testing

Q4 Samples			RJ Lee Sample in g	Number of Samples
Plant	SRM#	Color/ Type		
Charmian	10168	Raw Granules	200	2
Charmian	10166	Fines L. Mill	100	2
Charmian	10167	Fines HLP	100	2
Charmian	10197	BackSurfacing	100	2
Charmian	10193	G-11 w/ oil L. Mill	100	2
Charmian	10194	G-11 w/ oil & siloxane L. Mill	100	2
Charmian	10195	G-11 w/ oil HLP	100	2
Charmian	10196	G-11 w/ oil & siloxane HLP	100	2
Charmian	10178	G - 115 oiled	100	2
Charmian	10179	G - 171 oiled	100	2
Charmian	10180	G - 201 oiled	100	2
Charmian	10181	G- 340 oiled	100	2
Charmian	10182	G - 341 oiled	100	2
Charmian	10183	G - 546 oiled	100	2
Charmian	10184	G - 552 oiled	100	2
Charmian	10185	G -555 oiled	100	2
Charmian	10186	G -556 oiled	100	2
Charmian	10187	G - 560 oiled	100	2
Charmian	10188	G -615 oiled	100	2
Charmian	10189	G - 720 oiled	100	2
Charmian	10190	G - 760 oiled	100	2
Charmian	10191	G - 801 oiled	100	2
Charmian	10192	G - 11D oiled	100	2

Redacted - Does Not Relate to Charmian Facility

	Raw Granule
	Rock Fines
	Finished Products

## Laboratory Report

GAF/ELK  
1361 Alps Road  
Wayne, NJ 07470  
United States  
Attention: Celeste Levine  
Telephone: 973-628-3035

Report Date 04/04/2016  
Sample Receipt Date 03/22/2016  
RJ Lee Group Job No. AOH1040460-0  
Authorization/P.O. No. CH53103  
Client Job No./Name

Analysis: Asbestos in Bulk Samples by Point Count

Method: EPA/600/R-93/116

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10361578.HPL	SRM# 10168	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-03/24/2016
Description: Gray rock dust 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10361579.HPL	SRM# 10166	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-03/24/2016
Description: Gray rock dust 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10361580.HPL	SRM# 10167	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-03/24/2016
Description: Gray rock dust 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10361581.HPL	SRM# 10197	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-03/24/2016
Description: Gray rock dust 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								

Client Job No./Name:

RJ Lee Group Job No: AOH1040460-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10361582.HPL	SRM# 10193	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-03/24/2016
Description:		Gray rock dust 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10361583.HPL	SRM# 10194	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-03/24/2016
Description:		Gray rock dust 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10361584.HPL	SRM# 10195	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-03/24/2016
Description:		Gray rock dust 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10361585.HPL	SRM# 10196	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-03/24/2016
Description:		Gray rock dust 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10361586.HPL	SRM# 10178	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-03/28/2016
Description:		Gray rock dust 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10361587.HPL	SRM# 10179	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-03/28/2016
Description:		Gray rock dust 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10361588.HPL	SRM# 10180	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-03/28/2016
Description:		Gray rock dust 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								

Client Job No./Name:

RJ Lee Group Job No: AOH1040460-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10361589.HPL	SRM# 10181	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-03/28/2016
Description:		Gray rock dust 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10361590.HPL	SRM# 10182	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-03/31/2016
Description:		Gray rock dust 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10361591.HPL	SRM# 10183	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-03/31/2016
Description:		Gray rock dust 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10361592.HPL	SRM# 10184	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-03/31/2016
Description:		Gray rock dust 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10361593.HPL	SRM# 10185	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-03/31/2016
Description:		Gray rock dust 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10361594.HPL	SRM# 10186	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-03/31/2016
Description:		Gray rock dust 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10361595.HPL	SRM# 10187	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-03/31/2016
Description:		Gray rock dust 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								



**Client Job No./Name:**
**RJ Lee Group Job No:** AOH1040460-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10361596.HPL	SRM# 10188	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-03/31/2016
Description:		Gray rock dust 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10361597.HPL	SRM# 10189	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	CH-03/31/2016
Description:		Gray rock dust 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10361598.HPL	SRM# 10190	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	LKS-04/01/2016
Description:		Gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10361599.HPL	SRM# 10191	Yes	1	ND		100.00	Q, CA, AM, OP, MI, M	LKS-04/04/2016
Description:		Gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								
10361600.HPL	SRM# 10192	Yes	1	ND		100.00	Q, CA, AM, OP, MI, M	LKS-04/04/2016
Description:		Gray rock dust. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.						
Weight Loss: 0.0%								

# Redacted - Does Not Relate to Charmian Facility

Client Job No./Name:

RJ Lee Group Job No: AOH1040460-0

RJLG Sample  
Number

Client Sample  
Number

Homogeneous

# of Layers

Asbestos  
Detected(%)

Non-Asbestos  
Fibers(%)

Non-Fibrous  
Materials(%)

Matrix  
Material

Analyst - Analysis  
Date

**Redacted - Does Not Relate to Charmian Facility**

Client Job No./Name:

RJ Lee Group Job No: AOH1040460-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
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Authorized Signature: \_\_\_\_\_

Logan K. Solotky

#### ASBESTOS

AM = Amosite  
AC = Actinolite  
AN = Anthophyllite  
CH = Chrysotile  
CR = Crocidolite  
TR = Tremolite

#### NON-ASBESTOS

CE = Cellulose  
MW = Mineral Wool  
FG = Fibrous Glass  
SF = Synthetic Fibers  
H = Hair  
W = Wollastonite  
OF = Other Fibers

#### NON-FIBROUS MATERIALS

AM = Amphibole  
B = Binder  
CA = Carbonates  
CL = Clay  
F = Feldspar  
G = Gypsum  
HY = Hydromagnesite  
M = Miscellaneous  
MI = Mica  
OP = Opaque  
OR = Organic  
P = Perlite  
Q = Quartz  
T = Tar  
V = Vermiculite

#### DISCLAIMER NOTES

- "ND" indicates no asbestos was detected; the method detection limit is 0.1%.
- "Trace" or "<" indicates asbestos was identified in the sample, but the concentration is less than the method quantitation limit. PLM coefficients of variance range from approximately 1.8 at the quantitation limit of 0.1% to 0.32 at high fiber concentrations.
- Samples are archived for three months following analysis and are then properly discarded.
- 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.
- This test report relates to the items tested.
- This report is not valid unless it bears the name of a NVLAP Lab Code 101208-0 approved signatory.
- Any reproduction of this document must be in full in order for the report to be valid.
- This report may not be used to claim product endorsement by NVLAP Lab Code 101208-0, any agency of the U.S. Government or any other laboratory accrediting agency.
- Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar nonfriable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as "non-asbestos-containing."
- Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA #100364) facility.
- If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.



June 24, 2016

RJ Lee Group, Inc.  
350 Hochberg Road  
Monroeville, PA 15146  
Attn: Matthew Sanchez

Via: Federal Express: 7765-9872-5054

RE: Fiber - PLM and Crystalline Silica - XRD Analyses.

Dear Mr. Sanchez:

Enclosed are the following samples for the required analyses. All samples are crushed rock and classified as a volcanic rock (meta-basalt). Also enclosed are the SDS sheets.

**Fiber and Crystalline Silica:**

For each sample listed (46 samples), complete the following analyses:

1. Polarized Light Microscopy (PLM): Bulk Analyses – 1,000 Point Count (Untreated) for regulated asbestiform fibers (EPA 600/R-93/116). If fibrous material is detected contact SGI and retain sample for additional TEM testing.
2. Total Crystalline Silica (Bulk Analysis) by quantitative XRD.
3. A 10 - day turn-around service is requested for both the PLM and XRD analyses.

One samples of rock granules (-8 mesh x 35 mesh). (200 grams each):

See attached Table 1.

Two samples of rock fines (-35 mesh x 325 mesh). (100 - 200 grams each):

See attached Table 1.

Twenty samples of finished product (-8 mesh x 35 mesh). (100 grams each):

See attached Table 1.

*RECD 06-27-16 8:45AM  
Linda Manguis  
RJ Lee Group*



**SPECIALTY GRANULES LLC.**

*A0410416970*

13424 Pennsylvania Ave, Suite 303 // Hagerstown, MD 21742 // Tel: 301-733-4000 // Fax: 301-733-4003

[www.specialtygranules.com](http://www.specialtygranules.com)

Please address and send the lab results directly to:

Celeste Levine (Electronic Copy)  
GAF/ELK  
1361 Alps Road  
Wayne, NJ 07470  
973-628-3035  
[clevine@gaf.com](mailto:clevine@gaf.com)

with a copy sent to:

Ted Heath (Hard & Electronic Copy)  
Specialty Granules LLC  
34 Charles St  
Hagerstown, MD 21740  
(301) 714-1332  
[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

Payment will be made through SGI Purchase Order CH53896. Please copy Ted Heath and not Celeste Levine on the invoice.

Please call me with any questions.

Sincerely,

Ted Heath  
Geologist  
Specialty Granules LLC  
[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

c.c.  
G. Kamas – SGI  
M. McClure – SGI  
A. Shepeck – SGI  
C. Levine – SGI

ADH 1041697-0

Table 1: Sample Inventory for RJ Lee Testing

Q4 Samples			RJ Lee Sample in g	Number of Samples
Plant	SRM#	Color/ Type		
Charmian	10237	Raw Granules	200	2
Charmian	10232	Fines L. Mill	200	2
Charmian	10234	Fines HLP	200	2
Charmian	10261	Back Surfacing	100	2
Charmian	10257	G-11 w/ oil L. Mill	100	2
Charmian	10258	G-11 w/ oil & siloxane L. Mill	100	2
Charmian	10259	G-11 w/ oil HLP	100	2
Charmian	10260	G-11 w/ oil & siloxane HLP	100	2
Charmian	10242	G - 115 oiled	100	2
Charmian	10243	G - 171 oiled	100	2
Charmian	10244	G - 201 oiled	100	2
Charmian	10245	G- 340 oiled	100	2
Charmian	10246	G - 341 oiled	100	2
Charmian	10247	G - 546 oiled	100	2
Charmian	10248	G - 552 oiled	100	2
Charmian	10249	G -555 oiled	100	2
Charmian	10250	G -556 oiled	100	2
Charmian	10251	G - 560 oiled	100	2
Charmian	10252	G -615 oiled	100	2
Charmian	10253	G - 720 oiled	100	2
Charmian	10254	G - 760 oiled	100	2
Charmian	10255	G - 801 oiled	100	2
Charmian	10256	G - 11D oiled	100	2
Total Samples				46

	Raw Granule
	Rock Fines
	Finished Products

## Laboratory Report

GAF/ELK  
1361 Alps Road  
Wayne, NJ 07470  
United States  
Attention: Celeste Levine  
Telephone: 973-628-3035

Report Date 07/14/2016  
Sample Receipt Date 06/27/2016  
RJ Lee Group Job No. AOH1041697-0  
Authorization/P.O. No. CH53896  
Client Job No./Name

Analysis: Asbestos in Bulk Samples by Point Count

Method: EPA/600/R-93/116

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10371727.HPL	SRM# 10237	Yes	1	ND	<1 FG	100.00	AM, M	AKB-07/11/2016
Description:	Green Material No Asbestiform Minerals Detected. Limit Of Detection = 0.1%. 1000 Points Counted.							
Weight Loss: 0.0%								
10371728.HPL	SRM# 10232	Yes	1	ND	<1 CE	100.00	AM, M	AKB-07/12/2016
Description:	Green Material No Asbestiform Minerals Detected. Limit Of Detection = 0.1%. 1000 Points Counted.							
Weight Loss: 0.0%								

Client Job No./Name:

RJ Lee Group Job No: AOH1041697-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10371729.HPL	SRM# 10234	Yes	1	ND	<1 CE	100.00	AM, OP, M	AKB-07/13/2016
Description: Green Material No Asbestiform Minerals Detected. Limit Of Detection = 0.1%. 1000 Points Counted.								
Weight Loss: 0.0%								
10371730.HPL	SRM# 10261	Yes	1	ND	<1 CE	100.00	AM, OP, M	AKB-07/13/2016
Description: Green Material No Asbestiform Minerals Detected. Limit Of Detection = 0.1%. 1000 Points Counted.								
Weight Loss: 0.0%								
10371731.HPL	SRM# 10257	Yes	1	ND	<1 CE	100.00	AM, OP, M	AKB-07/13/2016
Description: Green Material No Asbestiform Minerals Detected. Limit Of Detection = 0.1%. 1000 Points Counted.								
Weight Loss: 0.0%								
10371732.HPL	SRM# 10258	Yes	1	ND		100.00	Q, AM, OP, M	JS-07/14/2016
Description: Gray Powder 1000 Points Counted for a Detection Limit of 0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								
10371733.HPL	SRM# 10259	Yes	1	ND		100.00	Q, F, OP, MI, M	EB-07/14/2016
Description: Gray Sediment 1000 Points Counted. Detection Limit of 0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								



Client Job No./Name:

RJ Lee Group Job No: AOH1041697-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10371734.HPL	SRM# 10260	Yes	1	ND		100.00	Q, F, MI, M	EB-07/14/2016
Description:	Gray Sediment 1000 Points Counted. Detection Limit of 0.1%. No Asbestiform Minerals Detected.							
Weight Loss:	0.0%							
10371735.HPL	SRM# 10242	Yes	1	ND		100.00	Q, AM, OP, M	JS-07/14/2016
Description:	Gray Powder 1000 Points Counted for a Detection Limit of 0.1%. No Asbestiform Minerals Detected.							
Weight Loss:	0.0%							
10371736.HPL	SRM# 10243	Yes	1	ND		100.00	Q, F, OP, MI, M	EB-07/14/2016
Description:	Green Sediment 1000 Points Counted. Detection Limit of 0.1%. No Asbestiform Minerals Detected.							
Weight Loss:	0.0%							
10371737.HPL	SRM# 10244	Yes	1	ND		100.00	Q, AM, OP, M	JS-07/14/2016
Description:	Gray Powder 1000 Points Counted for a Detection Limit of 0.1%. No Asbestiform Minerals Detected.							
Weight Loss:	0.0%							
10371738.HPL	SRM# 10245	Yes	1	ND		100.00	Q, OP, MI, M	EB-07/14/2016
Description:	Gray Sediment 1000 Points Counted. Detection Limit of 0.1%. No Asbestiform Minerals Detected.							
Weight Loss:	0.0%							
10371739.HPL	SRM# 10246	Yes	1	ND		100.00	Q, AM, OP, M	JS-07/14/2016
Description:	Gray Powder 1000 Points Counted for a Detection Limit of 0.1%. No Asbestiform Minerals Detected.							
Weight Loss:	0.0%							

Client Job No./Name:

RJ Lee Group Job No: AOH1041697-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10371740.HPL	SRM# 10247	Yes	1	ND		100.00	Q, CA, AM, OP, M	JM-07/12/2016
Description:	Gray Dust 1000 points counted. Detection limit of 0.1%. No asbestiform minerals detected.							
Weight Loss:	0.0%							
10371741.HPL	SRM# 10248	Yes	1	ND		100.00	Q, AM, OP, M	JM-07/12/2016
Description:	Gray Dust 1000 points counted. Detection limit of 0.1%. No asbestiform minerals detected.							
Weight Loss:	0.0%							
10371742.HPL	SRM# 10249	Yes	1	ND		100.00	Q, AM, OP, M	JS-07/14/2016
Description:	Gray Powder 1000 Points Counted for a Detection Limit of 0.1%. No Asbestiform Minerals Detected.							
Weight Loss:	0.0%							
10371743.HPL	SRM# 10250	Yes	1	ND		100.00	Q, F, OP, MI, M	EB-07/14/2016
Description:	Tan Sediment 1000 Points Counted. Detection Limit of 0.1%. No Asbestiform Minerals Detected.							
Weight Loss:	0.0%							
10371744.HPL	SRM# 10251	Yes	1	ND		100.00	Q, CA, OP, M	JM-07/12/2016
Description:	Gray Dust 1000 points counted. Detection limit of 0.1%. No asbestiform minerals detected.							
Weight Loss:	0.0%							
10371745.HPL	SRM# 10252	Yes	1	ND		100.00	Q, F, OP, MI, M	EB-07/14/2016
Description:	Gray Sediment 1000 Points Counted. Detection Limit of 0.1%. No Asbestiform Minerals Detected.							
Weight Loss:	0.0%							

Client Job No./Name:

RJ Lee Group Job No: AOH1041697-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10371746.HPL	SRM# 10253	Yes	1	ND		100.00	Q, AM, OP, M	JS-07/14/2016
Description: Gray Powder 1000 Points Counted for a Detection Limit of 0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								
10371747.HPL	SRM# 10254	Yes	1	ND		100.00	Q, CA, F, M	EB-07/14/2016
Description: Gray Crushed Sediment 1000 Points Counted. Detection Limit of 0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								
10371748.HPL	SRM# 10255	Yes	1	ND		100.00	Q, CA, OP, M	EB-07/14/2016
Description: Gray Crushed Sediment 1000 Points Counted. Detection Limit of 0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								
10371749.HPL	SRM# 10256	Yes	1	ND		100.00	Q, CA, F, OP, M	EB-07/14/2016
Description: Gray Sediment 1000 Points Counted. Detection Limit of 0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								

Client Job No./Name:

RJ Lee Group Job No: AOH1041697-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
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Authorized Signature: \_\_\_\_\_

Elizabeth Brown

#### ASBESTOS

AM = Amosite  
AC = Actinolite  
AN = Anthophyllite  
CH = Chrysotile  
CR = Crocidolite  
TR = Tremolite

#### NON-ASBESTOS

CE = Cellulose  
MW = Mineral Wool  
FG = Fibrous Glass  
SF = Synthetic Fibers  
H = Hair  
W = Wollastonite  
OF = Other Fibers

#### NON-FIBROUS MATERIALS

AM = Amphibole  
B = Binder  
CA = Carbonates  
CL = Clay  
F = Feldspar  
G = Gypsum  
HY = Hydromagnesite  
M = Miscellaneous  
MI = Mica  
OP = Opaque  
OR = Organic  
P = Perlite  
Q = Quartz  
T = Tar  
V = Vermiculite

#### DISCLAIMER NOTES

- "ND" indicates no asbestos was detected; the method detection limit is 0.1%.
- "Trace" or "<" indicates asbestos was identified in the sample, but the concentration is less than the method quantitation limit. PLM coefficients of variance range from approximately 1.8 at the quantitation limit of 0.1% to 0.32 at high fiber concentrations.
- Samples are archived for three months following analysis and are then properly discarded.
- 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.
- This test report relates to the items tested.
- This report is not valid unless it bears the name of a NVLAP Lab Code 101208-0 approved signatory.
- Any reproduction of this document must be in full in order for the report to be valid.
- This report may not be used to claim product endorsement by NVLAP Lab Code 101208-0, any agency of the U.S. Government or any other laboratory accrediting agency.
- Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar nonfriable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as "non-asbestos-containing."
- Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA #100364) facility.
- If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratorys results are limited to the reported values.



October 24, 2016

RJ Lee Group, Inc.  
350 Hochberg Road  
Monroeville, PA 15146  
Attn: Matthew Sanchez

Via: Federal Express: 7775-4877-2842

RE: Fiber - PLM and Crystalline Silica - XRD Analyses.

Dear Mr. Sanchez:

Enclosed are the following samples for the required analyses. All samples are crushed rock and classified as a volcanic rock (meta-basalt). Also enclosed are the SDS sheets.

**Fiber and Crystalline Silica:**

For each sample listed (46 samples), complete the following analyses:

1. Polarized Light Microscopy (PLM): Bulk Analyses – 1,000 Point Count (Untreated) for regulated asbestiform fibers (EPA 600/R-93/116). If fibrous material is detected contact SGI and retain sample for additional TEM testing.
2. Total Crystalline Silica (Bulk Analysis) by quantitative XRD.
3. A 10 - day turn-around service is requested for both the PLM and XRD analyses.

One samples of rock granules (-8 mesh x 35 mesh). (200 grams each):

See attached Table 1.

Two samples of rock fines (-35 mesh x 325 mesh). (100 - 200 grams each):

See attached Table 1.

Twenty samples of finished product (-8 mesh x 35 mesh). (100 grams each):

See attached Table 1.



Please address and send the lab results directly to:

Celeste Levine (Electronic Copy)  
GAF/ELK  
1361 Alps Road  
Wayne, NJ 07470  
973-628-3035  
[clevine@gaf.com](mailto:clevine@gaf.com)

with a copy sent to:

Ted Heath (Hard & Electronic Copy)  
Specialty Granules LLC  
34 Charles St  
Hagerstown, MD 21740  
(301) 714-1332  
[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

Payment will be made through SGI Purchase Order CH55043. Please copy Ted Heath and not Celeste Levine on the invoice.

Please call me with any questions.

Sincerely,

Ted Heath  
Geologist  
Specialty Granules LLC  
[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

C.C.  
G. Kamas – SGI  
M. McClure – SGI  
A. Shepeck – SGI  
C. Levine – SGI

A0611043140-0

Table 1: Sample Inventory for RJ Lee Testing

Q2 Samples			RJ Lee Sample in g	Number of Samples
Plant	SRM#	Color/ Type		
Charmian	10404	Raw Granules	200	2
Charmian	10398	Fines L. Mill	200	2
Charmian	10397	Fines HLP	200	2
Charmian	10425	Back Surfacing	100	2
Charmian	10421	G-11 w/ oil L. Mill	100	2
Charmian	10422	G-11 w/ oil & siloxane L. Mill	100	2
Charmian	10423	G-11 w/ oil HLP	100	2
Charmian	10424	G-11 w/ oil & siloxane HLP	100	2
Charmian	10405	G - 115 oiled	100	2
Charmian	10406	G - 171 oiled	100	2
Charmian	10407	G - 201 oiled	100	2
Charmian	10408	G - 340 oiled	100	2
Charmian	10409	G - 341 oiled	100	2
Charmian	10410	G - 546 oiled	100	2
Charmian	10411	G - 552 oiled	100	2
Charmian	10412	G - 555 oiled	100	2
Charmian	10413	G - 556 oiled	100	2
Charmian	10415	G - 560 oiled	100	2
Charmian	10416	G - 615 oiled	100	2
Charmian	10417	G - 720 oiled	100	2
Charmian	10418	G - 760 oiled	100	2
Charmian	10419	G - 801 oiled	100	2
Charmian	10420	G - 11D oiled	100	2
Total Samples				46

	Raw Granule
	Rock Fines
	Finished Products

Rev'd 10-27-16 9:11 AM

Linda Manguerra  
RJ Lee Group

## Laboratory Report

GAF/ELK  
1361 Alps Road  
Wayne, NJ 07470  
United States  
Attention: Celeste Levine  
Telephone: 973-628-3035

Report Date 11/09/2016  
Sample Receipt Date 10/27/2016  
RJ Lee Group Job No. AOH1043140-0  
Authorization/P.O. No. CH55043  
Client Job No./Name

Analysis: Asbestos in Bulk Samples by Point Count

Method: EPA/600/R-93/116

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10382000.HPL	SRM# 10404	Yes	1	ND	<1 CE <1 FG	100.00	AM, M	AKB-11/04/2016
Description:	Green Material No Asbestiform Minerals Detected. Limit Of Detection = 0.1%. 1000 Points Counted.							
Weight Loss: 0.0%								
10382001.HPL	SRM# 10398	Yes	1	ND	<1 CE <1 FG	100.00	AM, M	AKB-11/04/2016
Description:	Green Material No Asbestiform Minerals Detected. Limit Of Detection = 0.1%. 1000 Points Counted.							
Weight Loss: 0.0%								



Client Job No./Name:

RJ Lee Group Job No: AOH1043140-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10382002.HPL	SRM# 10397	Yes	1	ND	<1 CE	100.00	AM, M	AKB-11/04/2016
Description: Green Material No Asbestiform Minerals Detected. Limit Of Detection = 0.1%. 1000 Points Counted.								
Weight Loss: 0.0%								
10382003.HPL	SRM# 10425	Yes	1	ND		100.00	Q, CA, AM, OP, M	JM-11/07/2016
Description: Green Powder 1000 points counted. Detection limit of 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10382004.HPL	SRM# 10421	Yes	1	ND		100.00	Q, CA, AM, OP, M	JM-11/07/2016
Description: Green Powder 1000 points counted. Detection limit of 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10382005.HPL	SRM# 10422	Yes	1	<0.1 AC		100.00	Q, CA, AM, OP, M	JM-11/07/2016
Description: Green Powder 1000 points counted. Detection limit of 0.1%. Actinolite asbestos present below the detection limit.								
Weight Loss: 0.0%								
10382006.HPL	SRM# 10423	Yes	1	ND		100.00	Q, CA, AM, OP, M	JM-11/07/2016
Description: Green Powder 1000 points counted. Detection limit of 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								

Client Job No./Name:

RJ Lee Group Job No: AOH1043140-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10382007.HPL	SRM# 10424	Yes	1	ND	<1 CE	100.00	AM, OP, M	AKB-11/07/2016
Description:	Green Material No Asbestiform Minerals Detected. Limit Of Detection = 0.1%. 1000 Points Counted.							
Weight Loss:	0.0%							
10382008.HPL	SRM# 10405	Yes	1	ND	<1 CE <1 FG	100.00	AM, M	AKB-11/07/2016
Description:	Green Material No Asbestiform Minerals Detected. Limit Of Detection = 0.1%. 1000 Points Counted.							
Weight Loss:	0.0%							
10382009.HPL	SRM# 10406	Yes	1	ND	<1 CE <1 FG	100.00	AM, OP, M	AKB-11/07/2016
Description:	Green Material No Asbestiform Minerals Detected. Limit Of Detection = 0.1%. 1000 Points Counted.							
Weight Loss:	0.0%							
10382010.HPL	SRM# 10407	Yes	1	ND		100.00	Q, CA, AM, OP, M	JM-11/07/2016
Description:	Brown Powder 1000 points counted. Detection limit of 0.1%. No asbestiform minerals detected.							
Weight Loss:	0.0%							
10382011.HPL	SRM# 10408	Yes	1	ND		100.00	Q, CA, AM, OP, M	JM-11/09/2016
Description:	Gray Powder 1000 points counted. Detection limit of 0.1%. No asbestiform minerals detected.							
Weight Loss:	0.0%							

Client Job No./Name:

RJ Lee Group Job No: AOH1043140-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10382012.HPL	SRM# 10409	Yes	1	ND		100.00	CA, OP, MI, M	EB-11/08/2016
Description:	Gray Powder 1000 Point Count. 0.1% Detection Limit. No Asbestiform Minerals Detected.							
Weight Loss:	0.0%							
10382013.HPL	SRM# 10410	Yes	1	ND		100.00	CA, OP, MI, M	EB-11/08/2016
Description:	Gray Powder 1000 Point Count. Detection Limit of 0.1%. No Asbestiform Minerals Detected.							
Weight Loss:	0.0%							
10382014.HPL	SRM# 10411	Yes	1	ND		100.00	CA, OP, MI, M	EB-11/08/2016
Description:	Gray Powder 1000 Point Count. Detection Limit of 0.1%. No Asbestiform Minerals Detected.							
Weight Loss:	0.0%							
10382015.HPL	SRM# 10412	Yes	1	ND	<1 CE	100.00	AM, M	AKB-11/08/2016
Description:	Green Material No Asbestiform Minerals Detected. Limit Of Detection = 0.1%. 1000 Points Counted.							
Weight Loss:	0.0%							
10382016.HPL	SRM# 10413	Yes	1	ND		100.00	CA, OP, MI, M	EB-11/08/2016
Description:	Gray Powder 1000 Point Count. Detection Limit of 0.1%. No Asbestiform Minerals Detected.							
Weight Loss:	0.0%							

**Client Job No./Name:**
**RJ Lee Group Job No: AOH1043140-0**

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10382017.HPL	SRM# 10415	Yes	1	ND	<1 CE <1 FG	100.00	AM, OP, M	AKB-11/08/2016
Description: Green Material No Asbestiform Minerals Detected. Limit Of Detection = 0.1%. 1000 Points Counted.								
Weight Loss: 0.0%								
10382018.HPL	SRM# 10416	Yes	1	ND	<1 CE <1 FG	100.00	AM, OP, M	AKB-11/09/2016
Description: Green Material No Asbestiform Minerals Detected. Limit Of Detection = 0.1%. 1000 Points Counted.								
Weight Loss: 0.0%								
10382019.HPL	SRM# 10417	Yes	1	ND	<1 CE	100.00	AM, OP, M	AKB-11/09/2016
Description: Green Material No Asbestiform Minerals Detected. Limit Of Detection = 0.1%. 1000 Points Counted.								
Weight Loss: 0.0%								
10382020.HPL	SRM# 10418	Yes	1	ND		100.00	CA, OP, MI, M	EB-11/09/2016
Description: Gray Powder 1000 Point Count. Detection Limit of 0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								
10382021.HPL	SRM# 10419	Yes	1	ND		100.00	CA, OP, MI, M	EB-11/07/2016
Description: Gray Powder 1000 Point Count. Detection Limit of 0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								

Client Job No./Name:

RJ Lee Group Job No: AOH1043140-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10382022.HPL	SRM# 10420	Yes	1	ND		100.00	CA, OP, MI, M	EB-11/07/2016
Description:	Gray Powder 1000 Point Count. Detection Limit of 0.1%. No Asbestiform Minerals Detected.							
Weight Loss:	0.0%							

Client Job No./Name:

RJ Lee Group Job No: AOH1043140-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
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Authorized Signature: \_\_\_\_\_

Elizabeth Brown

#### ASBESTOS

AM = Amosite  
AC = Actinolite  
AN = Anthophyllite  
CH = Chrysotile  
CR = Crocidolite  
TR = Tremolite

#### NON-ASBESTOS

CE = Cellulose  
MW = Mineral Wool  
FG = Fibrous Glass  
SF = Synthetic Fibers  
H = Hair  
W = Wollastonite  
OF = Other Fibers

#### NON-FIBROUS MATERIALS

AM = Amphibole  
B = Binder  
CA = Carbonates  
CL = Clay  
F = Feldspar  
G = Gypsum  
HY = Hydromagnesite  
M = Miscellaneous  
MI = Mica  
OP = Opaque  
OR = Organic  
P = Perlite  
Q = Quartz  
T = Tar  
V = Vermiculite

#### DISCLAIMER NOTES

- "ND" indicates no asbestos was detected; the method detection limit is 0.1%.
- "Trace" or "<" indicates asbestos was identified in the sample, but the concentration is less than the method quantitation limit. PLM coefficients of variance range from approximately 1.8 at the quantitation limit of 0.1% to 0.32 at high fiber concentrations.
- Samples are archived for three months following analysis and are then properly discarded.
- 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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- Any reproduction of this document must be in full in order for the report to be valid.
- This report may not be used to claim product endorsement by NVLAP Lab Code 101208-0, any agency of the U.S. Government or any other laboratory accrediting agency.
- Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar nonfriable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as "non-asbestos-containing."
- Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA #100364) facility.
- If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.

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SPECIALTY GRANULES LLC.

13424 Pennsylvania Ave, Suite 303 // Hagerstown, MD 21742 // Tel: 301-733-4000 // Fax: 301-733-4003

www.specialtygranules.com

A0H1043140-8

A0H1043140-2

October 24, 2016

RJ Lee Group, Inc.  
350 Hochberg Road  
Monroeville, PA 15146  
Attn: Matthew Sanchez

Via: Federal Express: 7775-4877-2842

RE: Fiber - PLM and Crystalline Silica - XRD Analyses.

Dear Mr. Sanchez:

Enclosed are the following samples for the required analyses. All samples are crushed rock and classified as a volcanic rock (meta-basalt). Also enclosed are the SDS sheets.

**Fiber and Crystalline Silica:**

For each sample listed (46 samples), complete the following analyses:

1. Polarized Light Microscopy (PLM): Bulk Analyses – 1,000 Point Count (Untreated) for regulated asbestiform fibers (EPA 600/R-93/116). If fibrous material is detected contact SGI and retain sample for additional TEM testing.
2. Total Crystalline Silica (Bulk Analysis) by quantitative XRD.
3. A 10 - day turn-around service is requested for both the PLM and XRD analyses.

One samples of rock granules (-8 mesh x 35 mesh). (200 grams each):

See attached Table 1.

Two samples of rock fines (-35 mesh x 325 mesh). (100 - 200 grams each):

See attached Table 1.

Twenty samples of finished product (-8 mesh x 35 mesh). (100 grams each):

See attached Table 1.

COPY



SPECIALTY GRANULES LLC.

A041043140-0

A041043140-2

13424 Pennsylvania Ave, Suite 303 // Hagerstown, MD 21742 // Tel: 301-733-4000 // Fax: 301-733-4003

[www.specialtygranules.com](http://www.specialtygranules.com)

Please address and send the lab results directly to:

Celeste Levine (Electronic Copy)  
GAF/ELK  
1361 Alps Road  
Wayne, NJ 07470  
973-628-3035  
[clevine@gaf.com](mailto:clevine@gaf.com)

with a copy sent to:

Ted Heath (Hard & Electronic Copy)  
Specialty Granules LLC  
34 Charles St  
Hagerstown, MD 21740  
(301) 714-1332  
[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

Payment will be made through SGI Purchase Order CH55043. Please copy Ted Heath and not Celeste Levine on the invoice.

Please call me with any questions.

Sincerely,

Ted Heath  
Geologist  
Specialty Granules LLC  
[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

C.C.  
G. Kamas – SGI  
M. McClure – SGI  
A. Shepeck – SGI  
C. Levine – SGI



# COPY

A0H1043140-0

A0H1043140-2

Table 1: Sample Inventory for RJ Lee Testing

Q2 Samples			RJ Lee Sample in g	Number of Samples
Plant	SRM#	Color/ Type		
Charmian	10404	Raw Granules	200	2
Charmian	10398	Fines L. Mill	200	2
Charmian	10397	Fines HLP	200	2
Charmian	10425	BackSurfacing	100	2
Charmian	10421	G-11 w/ oil L. Mill	100	2
Charmian	10422	G-11 w/ oil & siloxane L. Mill	100	2
Charmian	10423	G-11 w/ oil HLP	100	2
Charmian	10424	G-11 w/ oil & siloxane HLP	100	2
Charmian	10405	G - 115 oiled	100	2
Charmian	10406	G - 171 oiled	100	2
Charmian	10407	G - 201 oiled	100	2
Charmian	10408	G- 340 oiled	100	2
Charmian	10409	G - 341 oiled	100	2
Charmian	10410	G - 546 oiled	100	2
Charmian	10411	G - 552 oiled	100	2
Charmian	10412	G -555 oiled	100	2
Charmian	10413	G -556 oiled	100	2
Charmian	10415	G - 560 oiled	100	2
Charmian	10416	G -615 oiled	100	2
Charmian	10417	G - 720 oiled	100	2
Charmian	10418	G - 760 oiled	100	2
Charmian	10419	G - 801 oiled	100	2
Charmian	10420	G - 11D oiled	100	2
Total Samples				46

	Raw Granule
	Rock Fines
	Finished Products

Rev'd 10-27-16 9:18AM

Linda Manguerra  
RJ Lee Group

## Final Laboratory Report

### TEM Bulk Protocol

Attention: Celeste Levine  
 Specialty Granules Inc  
 1361 Alps Road  
 Wayne, NJ 07470  
 US

Report Date: 12/13/2016  
 Sample Receipt Date: 11/11/2016  
 RJ Lee Group Job No.: AOH1043140-2  
 Authorization/P.O. No.: CH55043  
 Samples Received: 1  
 Client Job No.:

Method: ASTM D-5756 Standard Test Method, Modified

**TABLE 1 -- Weight Percent of Asbestos, Cleavage Fragment Amphibole and Non-Asbestos**

						-----Weight Percent----- Total Structures Analytical Sensitivity			
		<u>Total Structures</u>							
Client Sample Number	RJLG Sample Number	Chry	Amph	Cleavage	Non Asbestos	Chry	Amph Asb	Amph Cleavage Fragment	Non Asbestos
SRM# 10422	10382005	0	0	7	0	<u>&lt;3.3E-6</u> 3.3E-6	<u>&lt;4.1E-6</u> 4.1E-6	<u>8.1E-1</u> 2.6E-6	<u>&lt;4.1E-7</u> 4.1E-7

#### NOTES

- "<" indicates results less than analytical sensitivity. "----" indicates that sample was not analyzed.
- Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA #100364, NVLAP #101208-0, NY ELAP #10884) facility.
- If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.
- Density of amphibole:  $3.2 \times 10^{-3}$  ng/ $\mu\text{m}^3$ , density of chrysotile:  $2.55 \times 10^{-3}$  ng/ $\mu\text{m}^3$ , density of non-asbestos:  $3.00 \times 10^{-3}$  ng/ $\mu\text{m}^3$ .
- Abbreviations: N/A-Not Applicable, Chry-Chrysotile Asbestos, Amph-Amphibole Asbestos, Asb-Asbestos Amphibole, Cleavage-Cleavage Amphibole.
- Samples will be held for 90 days and then disposed of per Federal regulations.
- 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

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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 ninety (90) days before discarding. A shipping and handling fee will be assessed for the return of any sample.

TABLE 2 -- Weight Percent of Asbestos, Cleavage Fragment Amphibole and Non-Asbestos ≥5µm

		-----Structures ≥5 µm-----				-----Weight Percent----- Structures ≥5 µm Analytical Sensitivity			
						Amphibole Cleavage Fragment			
Client Sample Number	RJLG Sample Number	Chry	Amph	Cleavage	Non-Asbestos	Chry	Asb	Cleavage Fragment	Non-Asbestos
SRM# 10422	10382005	0	0	4	0	<u>&lt;3.3E-5</u> 3.3E-5	<u>&lt;4.1E-5</u> 4.1E-5	<u>8.1E-1</u> 2.6E-5	<u>&lt;4.1E-6</u> 4.1E-6

NOTES

1. "<" indicates results less than analytical sensitivity. "----" indicates that sample was not analyzed.

2. Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA #100364, NVLAP #101208-0, NY ELAP #10884) facility.

3. If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.

4. Density of amphibole: 3.2 \* 10<sup>-3</sup> ng/µm<sup>3</sup>, density of chrysotile: 2.55 \* 10<sup>-3</sup> ng/µm<sup>3</sup>, density of non-asbestos: 3.00 \* 10<sup>-3</sup> ng/µm<sup>3</sup>.

5. Abbreviations: N/A-Not Applicable, Chry-Chrysotile Asbestos, Amph-Amphibole Asbestos, Asb-Asbestos Amphibole, Cleavage-Cleavage Amphibole.

6. Samples will be held for 90 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.

RJ Lee Group Job No: AOH1043140-2

Client Job No/Name:

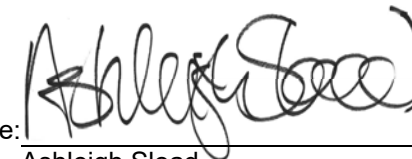
## Final Laboratory Report (cont'd)

Client: Specialty Granules Inc

Report Date: 12/13/2016

Client Sample Number	RJLG Sample Number	Material Used (gm)	Area Analyzed Total (mm <sup>2</sup> )	Area Analyzed ≥5µm (mm <sup>2</sup> )	Effective Filter Area (mm <sup>2</sup> )	Dilution Factor
SRM# 10422	10382005	0.0003	0.31142	0.31142	1220	1.0000

Authorized Signature:



Ashleigh Sload

### NOTES

1. "<" indicates results less than analytical sensitivity. "---" indicates that sample was not analyzed.
2. Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA #100364, NVLAP #101208-0, NY ELAP #10884) facility.
3. If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.
4. Density of amphibole:  $3.2 \times 10^{-3}$  ng/µm<sup>3</sup>, density of chrysotile:  $2.55 \times 10^{-3}$  ng/µm<sup>3</sup>, density of non-asbestos:  $3.00 \times 10^{-3}$  ng/µm<sup>3</sup>.
5. Abbreviations: N/A-Not Applicable, Chry-Chrysotile Asbestos, Amph-Amphibole Asbestos, Asb-Asbestos Amphibole, Cleavage-Cleavage Amphibole.
6. Samples will be held for 90 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

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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 ninety (90) days before discarding. A shipping and handling fee will be assessed for the return of any sample.

RJL: AOH1043140-2	10382005.HTA1	Microscope tem2000fx2	Grid Openings	10
SRM# 10422	Specialty Granules I	Magnification 21 KX	Asbestos	0.0
Wt: 0.0003 gm	Grid: 0.0089 mm <sup>2</sup>	Acc. Voltage 120 KV	Asbestos >= 5µm	0.0
Dil: 1.0	Filter Size: 47 mm	Operator: Jon Swope	Nonasbestos	4.0
HQ42048		Cv = 0	Nonasbestos >= 5µm	1.0
			% Wt of largest asbestos structure	%

Field	Fiber	Length	Width	FiberType	Morph	EDX	File #	Photo	SAED	AmplID	C/A
1				NSD							
2				NSD							
3	1	2.4	0.2	Amphibole		MgSiCaFe			X	Acti	Cle
3	2	3.1	0.25	Amphibole		MgSiCaFe			X	Acti	Cle
4				NSD							
5				NSD							
6	1	1.6	0.25	Amphibole		MgSiCaFe12198D	Image1	Diff1		Acti	Cle
7				NSD							
8				NSD							
9	1	13.8	0.99	Amphibole		MgSiCaFe			X	Acti	Cle
10				NSD							

10% Particulate

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

Initial Review: 12/9/2016 11:52:48 AM approve by Jon Swope

Final Review: 12/13/16 7:59 AM approve by Ashleigh Sload

RJL: AOH1043140-2	10382005.HTA1	Microscope tem2000fx2	Grid Openings	25
SRM# 10422	Specialty Granules I	Magnification 10 KX	Asbestos	0.0
Wt: 0.0003 gm	Grid: 0.0089 mm <sup>2</sup>	Acc. Voltage 120 KV	Nonasbestos	3.0
Dil: 1.0	Filter Size: 47 mm	Operator: Jon Swope	% Wt of largest asbestos structure	%
HQ42048		Cv = 0		

Field	Fiber	Length	Width	FiberType	Morph	EDX	File #	Photo	SAED	AmplID	C/A
1				NSD							
2				NSD							
3	1	12.6	1.35	Amphibole		MgSiCaFeAl	12197D	Image1	Diff1	Acti	Cle
4	1	7.8	1.2	Amphibole		MgSiCaFeAl			X	Acti	Cle
5				NSD							
6				NSD							
7				NSD							
8	1	13.9	1.8	Amphibole		MgSiCaFeAl			X	Acti	Cle
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							

**10% Particulate**

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

Initial Review: 12/9/2016 11:26:36 AM approve by Jon Swope

Final Review: 12/13/16 7:59 AM approve by Ashleigh Sload



January 4, 2017

RJ Lee Group, Inc.  
350 Hochberg Road  
Monroeville, PA 15146  
Attn: Matthew Sanchez

Via: Federal Express: 7780-9199-5142

RE: Fiber - PLM and Crystalline Silica - XRD Analyses.

Dear Mr. Sanchez:

Enclosed are the following samples for the required analyses. All samples are crushed rock and classified as a volcanic rock (meta-basalt). Also enclosed are the SDS sheets.

**Fiber and Crystalline Silica:**

For each sample listed (46 samples), complete the following analyses:

1. Polarized Light Microscopy (PLM): Bulk Analyses – 1,000 Point Count (Untreated) for regulated asbestiform fibers (EPA 600/R-93/116). If fibrous material is detected contact SGI and retain sample for additional TEM testing.
2. Total Crystalline Silica (Bulk Analysis) by quantitative XRD.
3. A 10 - day turn-around service is requested for both the PLM and XRD analyses.

One samples of rock granules (-8 mesh x 35 mesh). (200 grams each):

See attached Table 1.

Two samples of rock fines (-35 mesh x 325 mesh). (100 - 200 grams each):

See attached Table 1.

Twenty samples of finished product (-8 mesh x 35 mesh). (100 grams each):

See attached Table 1.

Rev'd 01-05-17 9:27AM  
Linda Mangus  
RJ Lee Group



**SPECIALTY GRANULES LLC.**

*A041043887-0*

13424 Pennsylvania Ave, Suite 303 // Hagerstown, MD 21742 // Tel: 301-733-4000 // Fax: 301-733-4003

[www.specialtygranules.com](http://www.specialtygranules.com)

Please address and send the lab results directly to:

Celeste Levine (Electronic Copy)  
GAF/ELK  
1361 Alps Road  
Wayne, NJ 07470  
973-628-3035  
[clevine@gaf.com](mailto:clevine@gaf.com)

with a copy sent to:

Ted Heath (Hard & Electronic Copy)  
Specialty Granules LLC  
34 Charles St  
Hagerstown, MD 21740  
(301) 714-1332  
[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

Payment will be made through SGI Purchase Order CH55648. Please copy Ted Heath and not Celeste Levine on the invoice.

Please call me with any questions.

Sincerely,

Ted Heath  
Geologist  
Specialty Granules LLC  
[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

c.c.

G. Kamas – SGI  
M. McClure – SGI  
A. Shepeck – SGI  
C. Levine – SGI



A041043887-0

Table 1: Sample Inventory for RJ Lee Testing

Q3 Samples			RJ Lee Sample in g	Number of Samples
Plant	SRM#	Color/ Type		
Charmian	10522	Raw Granules	200	2
Charmian	10525	Fines L. Mill	200	2
Charmian	10526	Fines HLP	200	2
Charmian	10546	BackSurfacing	100	2
Charmian	10542	G-11 w/ oil L. Mill	100	2
Charmian	10543	G-11 w/ oil & siloxane L. Mill	100	2
Charmian	10544	G-11 w/ oil HLP	100	2
Charmian	10545	G-11 w/ oil & siloxane HLP	100	2
Charmian	10527	G - 115 oiled	100	2
Charmian	10528	G - 171 oiled	100	2
Charmian	10529	G - 201 oiled	100	2
Charmian	10530	G- 340 oiled	100	2
Charmian	10531	G - 341 oiled	100	2
Charmian	10532	G - 546 oiled	100	2
Charmian	10533	G - 552 oiled	100	2
Charmian	10534	G -555 oiled	100	2
Charmian	10535	G -556 oiled	100	2
Charmian	10536	G - 560 oiled	100	2
Charmian	10537	G -615 oiled	100	2
Charmian	10538	G - 720 oiled	100	2
Charmian	10539	G - 760 oiled	100	2
Charmian	10540	G - 801 oiled	100	2
Charmian	10541	G - 11D oiled	100	2
Total Samples				46

	Raw Granule
	Rock Fines
	Finished Products

## Laboratory Report

GAF/ELK  
1361 Alps Road  
Wayne, NJ 07470  
United States  
Attention: Celeste Levine  
Telephone: 973-628-3035

Report Date 01/19/2017  
Sample Receipt Date 01/05/2017  
RJ Lee Group Job No. AOH1043887-0  
Authorization/P.O. No. CH55648  
Client Job No./Name

Analysis: Asbestos in Bulk Samples by Point Count

Method: EPA/600/R-93/116

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10389966.HPL	SRM# 10522	Yes	1	ND		100.00	Q, OP, MI, M	EB-01/16/2017
Description: Green Powder 1000 Point Count. Detection Limit of 0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								
10389967.HPL	SRM# 10525	Yes	1	ND	<1 CE	100.00	Q, AM, OP, MI, M	BW-01/16/2017
Description: Green Powder 1,000 Points Counted Limit of Detection 0.1% No Asbestiform Minerals Detected								
Weight Loss: 0.0%								
10389968.HPL	SRM# 10526	Yes	1	ND	<1 CE	100.00	Q, AM, OP, M	BW-01/16/2017
Description: Green Powder 1,000 Points Counted Limit of Detection 0.1% No Asbestiform Minerals Detected								
Weight Loss: 0.0%								

Client Job No./Name:

RJ Lee Group Job No: AOH1043887-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10389969.HPL	SRM# 10546	Yes	1	ND	<1 CE	100.00	Q, AM, OP, MI, M	BW-01/16/2017
Description:	Green Powder 1,000 Points Counted Limit of Detection 0.1% No Asbestiform Minerals Detected							
Weight Loss:	0.0%							
10389970.HPL	SRM# 10542	Yes	1	ND	<1 CE	100.00	Q, AM, OP, MI, M	BW-01/19/2017
Description:	Green Powder 1,000 Points Counted Limit of Detection 0.1% No Asbestiform Minerals Detected							
Weight Loss:	0.0%							
10389971.HPL	SRM# 10543	Yes	1	ND	<1 CE	100.00	Q, AM, OP, M	BW-01/16/2017
Description:	Green Powder 1,000 Points Counted Limit of Detection 0.1% No Asbestiform Minerals Detected							
Weight Loss:	0.0%							
10389972.HPL	SRM# 10544	Yes	1	ND	<1 CE	100.00	AM, M	AKB-01/13/2017
Description:	Green Crushed Rock No Asbestiform Minerals Detected. Limit Of Detection = 0.1%. 1000 Points Counted.							
Weight Loss:	0.0%							
10389973.HPL	SRM# 10545	Yes	1	ND		100.00	Q, CA, AM, OP, M	BW-01/13/2017
Description:	Green Powder 1,000 Points Counted Limit of Detection 0.1% No Asbestiform Minerals Detected							
Weight Loss:	0.0%							

**Client Job No./Name:**
**RJ Lee Group Job No: AOH1043887-0**

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10389974.HPL	SRM# 10527	Yes	1	ND	<1 CE <1 FG	100.00	AM, M	AKB-01/17/2017
Description: Green Crushed Rock No Asbestiform Minerals Detected. Limit Of Detection = 0.1%. 1000 Points Counted.								
Weight Loss: 0.0%								
10389975.HPL	SRM# 10528	Yes	1	ND		100.00	Q, OP, MI, M	EB-01/16/2017
Description: Green Powder 1000 Point Count. Detection Limit of 0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								
10389976.HPL	SRM# 10529	Yes	1	ND	<1 CE	100.00	Q, AM, OP, MI, M	BW-01/16/2017
Description: Tan Powder 1,000 Points Counted Limit of Detection 0.1% No Asbestiform Minerals Detected								
Weight Loss: 0.0%								
10389977.HPL	SRM# 10530	Yes	1	ND		100.00	Q, OP, MI, M	EB-01/13/2017
Description: Gray Powder 1000 Point Count. Detection Limit of 0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								
10389978.HPL	SRM# 10531	Yes	1	ND		100.00	Q, OP, M	EB-01/13/2017
Description: Gray Powder 1000 Point Count. Detection Limit of 0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								

Client Job No./Name:

RJ Lee Group Job No: AOH1043887-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10389979.HPL	SRM# 10532	Yes	1	ND		100.00	Q, AM, OP, MI, M	BW-01/16/2017
Description:	Tan Powder 1,000 Points Counted Limit of Detection 0.1% No Asbestiform Minerals Detected							
Weight Loss:	0.0%							
10389980.HPL	SRM# 10533	Yes	1	ND		100.00	Q, CA, AM, OP, M	JM-01/17/2017
Description:	Gray Powder 1000 points counted. Detection limit of 0.1%. No asbestiform minerals detected.							
Weight Loss:	0.0%							
10389981.HPL	SRM# 10534	Yes	1	ND		100.00	Q, CA, AM, OP, MI, M	EB-01/12/2017
Description:	Gray Powder 1000 Point Count. Detection Limit of 0.1%. No Asbestiform Minerals Detected.							
Weight Loss:	0.0%							
10389982.HPL	SRM# 10535	Yes	1	ND		100.00	Q, AM, OP, MI, M	EB-01/13/2017
Description:	Gray Powder 1000 Point Count. Detection Limit of 0.1%. No Asbestiform Minerals Detected.							
Weight Loss:	0.0%							
10389983.HPL	SRM# 10536	Yes	1	ND		100.00	Q, OP, MI, M	EB-01/17/2017
Description:	Gray Powder 1000 Point Count. Detection Limit of 0.1%. No Asbestiform Minerals Detected.							
Weight Loss:	0.0%							
10389984.HPL	SRM# 10537	Yes	1	ND		100.00	Q, CA, AM, OP, M	JM-01/17/2017
Description:	Green Powder 1000 points counted. Detection limit of 0.1%. No asbestiform minerals detected.							
Weight Loss:	0.0%							

Client Job No./Name:


RJ Lee Group Job No: AOH1043887-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10389985.HPL	SRM# 10538	Yes	1	ND	<1 CE <1 FG	100.00	AM, M	AKB-01/17/2017
Description:	Green Crushed Rock No Asbestiform Minerals Detected. Limit Of Detection = 0.1%. 1000 Points Counted.							
Weight Loss:	0.0%							
10389986.HPL	SRM# 10539	Yes	1	ND		100.00	Q, CA, AM, OP, M	JM-01/17/2017
Description:	Green Powder 1000 points counted. Detection limit of 0.1%. No asbestiform minerals detected.							
Weight Loss:	0.0%							
10389987.HPL	SRM# 10540	Yes	1	ND	<1 CE	100.00	AM, M	AKB-01/13/2017
Description:	Green Crushed Rock No Asbestiform Minerals Detected. Limit Of Detection =0.1%. 1000 Points Counted.							
Weight Loss:	0.0%							
10389988.HPL	SRM# 10541	Yes	1	ND		100.00	Q, AM, OP, MI, M	EB-01/12/2017
Description:	Gray Powder 1000 Point Count. Detection Limit of 0.1% No Asbestiform Minerals Detected.							
Weight Loss:	0.0%							

Client Job No./Name:

RJ Lee Group Job No: AOH1043887-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
-----------------------	-------------------------	-------------	-------------	-------------------------	---------------------------	-----------------------------	--------------------	----------------------------

Authorized Signature: 

Elizabeth Brown

#### ASBESTOS

AM = Amosite  
AC = Actinolite  
AN = Anthophyllite  
CH = Chrysotile  
CR = Crocidolite  
TR = Tremolite

#### NON-ASBESTOS

CE = Cellulose  
MW = Mineral Wool  
FG = Fibrous Glass  
SF = Synthetic Fibers  
H = Hair  
W = Wollastonite  
OF = Other Fibers

#### NON-FIBROUS MATERIALS

AM = Amphibole  
B = Binder  
CA = Carbonates  
CL = Clay  
F = Feldspar  
G = Gypsum  
HY = Hydromagnesite  
M = Miscellaneous  
MI = Mica  
OP = Opaque  
OR = Organic  
P = Perlite  
Q = Quartz  
T = Tar  
V = Vermiculite

#### DISCLAIMER NOTES

- "ND" indicates no asbestos was detected; the method detection limit is 0.1%.
- "Trace" or "<" indicates asbestos was identified in the sample, but the concentration is less than the method quantitation limit. PLM coefficients of variance range from approximately 1.8 at the quantitation limit of 0.1% to 0.32 at high fiber concentrations.
- Samples are archived for three months following analysis and are then properly discarded.
- 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.
- This test report relates to the items tested.
- This report is not valid unless it bears the name of a NVLAP Lab Code 101208-0 approved signatory.
- Any reproduction of this document must be in full in order for the report to be valid.
- This report may not be used to claim product endorsement by NVLAP Lab Code 101208-0, any agency of the U.S. Government or any other laboratory accrediting agency.
- Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar nonfriable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as "non-asbestos-containing."
- Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA #100364, NY ELAP #10884) facility.
- If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.



January 13, 2017

RJ Lee Group, Inc.  
350 Hochberg Road  
Monroeville, PA 15146  
Attn: Matthew Sanchez

Via: Federal Express: 7781-6776-9560

RE: SGI Rhyolite Testing

Dear Mr. Sanchez:

Enclosed are the following samples for the required analyses. All samples are crushed rock and classified as a volcanic rock (Rhyolite). Also enclosed are the SDS sheets.

**Requested Testing:**

For each sample listed (7 samples), complete the following analyses:

1. Polarized Light Microscopy (PLM): Bulk Analyses – 1,000 Point Count (Untreated) for regulated asbestiform fibers (EPA 600/R-93/116). If fibrous material is detected contact SGI and retain sample for additional TEM testing.
2. Total Crystalline Silica (Bulk Analysis) by quantitative XRD.
3. XRF – Bulk Composition (Major/Minor/LOI).
4. XRD – Major/Minor Mineral Identification.
5. A 10 - day turn-around service is requested for the analyses.

Seven samples of rock granules (-8 mesh x Pan). (500 grams each):

See attached Table 1.

Please address and send the lab results directly to:

Celeste Levine (Electronic Copy)  
GAF/ELK  
1361 Alps Road  
Wayne, NJ 07470

with a copy sent to:

Ted Heath (Hard & Electronic Copy)  
Specialty Granules LLC  
34 Charles St.  
Hagerstown, MD 21740





## SPECIALTY GRANULES LLC.

13424 Pennsylvania Ave, Suite 303 // Hagerstown, MD 21742 // Tel: 301-733-4000 // Fax: 301-733-4003

[www.specialtygranules.com](http://www.specialtygranules.com)

973-628-3035  
[clevine@gaf.com](mailto:clevine@gaf.com)

(301) 714-1332  
[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

Payment will be made through SGI Purchase Order CH55773. Please copy Ted Heath and not Celeste Levine on the invoice.

Please call me (240.625.2203) with any questions.

Sincerely,

Ted Heath  
Project Manager  
Specialty Granules LLC  
[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

C.C.  
G. Kamas – SGI  
M. McClure – SGI  
A. Shepeck – SGI  
C. Levine – SGI

**Table 1: Sample Inventory for RJ Lee Testing**

Samples Description			RJ Lee Sample in g	Number of Samples
Plant	SRM#	Color/ Type		
Charmian	9599	Granules	500	1
Charmian	9600	Granules	500	1
Charmian	9611	Granules	500	1
Charmian	9612	Granules	500	1
Charmian	9613	Granules	500	1
Charmian	9677	Granules	500	1
Charmian	9678	Granules	500	1
			Total Samples	7

 Granules

## Laboratory Report

GAF/ELK  
1361 Alps Road  
Wayne, NJ 07470  
United States  
Attention: Celeste Levine  
Telephone: 973-628-3035

Report Date 01/30/2017  
Sample Receipt Date 01/16/2017  
RJ Lee Group Job No. AOH1043982-0  
Authorization/P.O. No. CH55773  
Client Job No./Name SGI Rhyolite Testing

Analysis: Asbestos in Bulk Samples by Point Count

Method: EPA/600/R-93/116

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10391800.HPL	SRM# 9599	Yes	1	ND	<1 CE	100.00	M	AKB-01/27/2017
Description:	Light Violet Material No Asbestiform Minerals Detected. Limit Of Detection = 0.1%. 1000 Points Counted.							
Weight Loss:	0.0%							
10391801.HPL	SRM# 9600	Yes	1	ND		100.00	Q, CA, OP, M	JM-01/30/2017
Description:	Gray Powder 1000 points counted. Detection limit of 0.1%. No asbestiform minerals detected.							
Weight Loss:	0.0%							
10391802.HPL	SRM# 9611	Yes	1	ND		100.00	Q, CA, OP, M	JM-01/30/2017
Description:	Gray Powder 1000 points counted. Detection limit of 0.1%. No asbestiform minerals detected.							
Weight Loss:	0.0%							

**Client Job No./Name: SGI Rhyolite Testing**
**RJ Lee Group Job No: AOH1043982-0**

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10391803.HPL	SRM# 9612	Yes	1	ND		100.00	Q, OP, MI, M	EB-01/30/2017
Description: Tan Powder 1000 Point Count. Detection Limit of 0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								
10391804.HPL	SRM# 9613	Yes	1	ND		100.00	Q, OP, MI, M	EB-01/30/2017
Description: Tan Powder 1000 Point Count. Detection Limit of 0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								
10391805.HPL	SRM# 9677	Yes	1	ND	<1 CE	100.00	Q, OP, MI, M	BW-01/30/2017
Description: Tan Powder 1,000 Points Counted Limit of Detection 0.1% No Asbestiform Minerals Detected								
Weight Loss: 0.0%								
10391806.HPL	SRM# 9678	Yes	1	ND		100.00	Q, OP, MI, M	EB-01/30/2017
Description: Gray Powder 1000 Point Count. Detection Limit of 0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								

Client Job No./Name: SGI Rhyolite Testing

RJ Lee Group Job No: AOH1043982-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
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Authorized Signature:



Elizabeth Brown

**ASBESTOS**

AM = Amosite  
 AC = Actinolite  
 AN = Anthophyllite  
 CH = Chrysotile  
 CR = Crocidolite  
 TR = Tremolite

**NON-ASBESTOS**

CE = Cellulose  
 MW = Mineral Wool  
 FG = Fibrous Glass  
 SF = Synthetic Fibers  
 H = Hair  
 W = Wollastonite  
 OF = Other Fibers

**NON-FIBROUS MATERIALS**

AM = Amphibole  
 B = Binder  
 CA = Carbonates  
 CL = Clay  
 F = Feldspar  
 G = Gypsum  
 HY = Hydromagnesite  
 M = Miscellaneous  
 MI = Mica  
 OP = Opaque  
 OR = Organic  
 P = Perlite  
 Q = Quartz  
 T = Tar  
 V = Vermiculite

**DISCLAIMER NOTES**

- "ND" indicates no asbestos was detected; the method detection limit is 0.1%.
- "Trace" or "<" indicates asbestos was identified in the sample, but the concentration is less than the method quantitation limit. PLM coefficients of variance range from approximately 1.8 at the quantitation limit of 0.1% to 0.32 at high fiber concentrations.
- Samples are archived for three months following analysis and are then properly discarded.
- 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.
- This test report relates to the items tested.
- This report is not valid unless it bears the name of a NVLAP Lab Code 101208-0 approved signatory.
- Any reproduction of this document must be in full in order for the report to be valid.
- This report may not be used to claim product endorsement by NVLAP Lab Code 101208-0, any agency of the U.S. Government or any other laboratory accrediting agency.
- Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar nonfriable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as "non-asbestos-containing."
- Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA #100364, NY ELAP #10884) facility.
- If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.

**SPECIALTY GRANULES LLC.**

A041044399-0

13424 Pennsylvania Ave, Suite 303 // Hagerstown, MD 21742 // Tel: 301-733-4000 // Fax: 301-733-4003

[www.specialtygranules.com](http://www.specialtygranules.com)

February 17, 2017

RJ Lee Group, Inc.  
350 Hochberg Road  
Monroeville, PA 15146  
Attn: Matthew Sanchez

Via: Federal Express: 7784-5779-4168

RE: SGI Rhyolite Testing

Dear Mr. Sanchez:

Enclosed are the following samples for the required analyses. All samples are crushed rock and classified as a metamorphic rock (Phyllite). Also enclosed are the SDS sheets.

**Requested Testing:**

For each sample listed (1 sample), complete the following analyses:

1. Polarized Light Microscopy (PLM): Bulk Analyses – 1,000 Point Count (Untreated) for regulated asbestiform fibers (EPA 600/R-93/116). If fibrous material is detected contact SGI and retain sample for additional TEM testing.
2. Total Crystalline Silica (Bulk Analysis) by quantitative XRD.
3. XRF – Bulk Composition (Major/Minor/LOI).
4. XRD – Major/Minor Mineral Identification.
5. A 10 - day turn-around service is requested for the analyses.

One sample of rock granules (-8 mesh x Pan). (500 grams each):

SRM # 10731.

Please address and send the lab results directly to:

Celeste Levine (Electronic Copy)  
GAF/ELK  
1361 Alps Road  
Wayne, NJ 07470

with a copy sent to:

Ted Heath (Hard & Electronic Copy)  
Specialty Granules LLC  
34 Charles St.  
Hagerstown, MD 21740

Rec'd 02-23-17 9:15AM  
Linda Mangus  
RJ Lee Group



**SPECIALTY GRANULES LLC.**

*A0141044399-0*

13424 Pennsylvania Ave, Suite 303 // Hagerstown, MD 21742 // Tel: 301-733-4000 // Fax: 301-733-4003

[www.specialtygranules.com](http://www.specialtygranules.com)

(973) 628-3035  
[clevine@gaf.com](mailto:clevine@gaf.com)

(301) 714-1332  
[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

Payment will be made through SGI Purchase Order CH56100. Please copy Ted Heath and not Celeste Levine on the invoice.

Please call me (240.625.2203) with any questions.

Sincerely,

Ted Heath  
Project Manager  
Specialty Granules LLC  
[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

c.c.  
G. Kamas – SGI  
M. McClure – SGI  
A. Shepeck – SGI  
C. Levine – SGI

## Laboratory Report

GAF/ELK  
1361 Alps Road  
Wayne, NJ 07470  
United States  
Attention: Celeste Levine  
Telephone: 973-628-3035

Report Date 03/09/2017  
Sample Receipt Date 02/23/2017  
RJ Lee Group Job No. AOH1044399-0  
Authorization/P.O. No. CH56100  
Client Job No./Name SGI Rhyolite Testing

Analysis: Asbestos in Bulk Samples by Point Count

Method: EPA/600/R-93/116

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10400179.HPL	SRM# 10731	Yes	1	ND		100.00	CA, OP, MI, M	EB-03/09/2017
Description:	Gray Powder 1000 Point Count. Detection Limit of 0.1%. No Asbestiform Minerals Detected.							
Weight Loss:	0.0%							



Client Job No./Name: SGI Rhyolite Testing

RJ Lee Group Job No: AOH1044399-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
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Authorized Signature:



Elizabeth Brown

**ASBESTOS**

AM = Amosite  
 AC = Actinolite  
 AN = Anthophyllite  
 CH = Chrysotile  
 CR = Crocidolite  
 TR = Tremolite

**NON-ASBESTOS**

CE = Cellulose  
 MW = Mineral Wool  
 FG = Fibrous Glass  
 SF = Synthetic Fibers  
 H = Hair  
 W = Wollastonite  
 OF = Other Fibers

**NON-FIBROUS MATERIALS**

AM = Amphibole  
 B = Binder  
 CA = Carbonates  
 CL = Clay  
 F = Feldspar  
 G = Gypsum  
 HY = Hydromagnesite  
 M = Miscellaneous  
 MI = Mica  
 OP = Opaque  
 OR = Organic  
 P = Perlite  
 Q = Quartz  
 T = Tar  
 V = Vermiculite

**DISCLAIMER NOTES**

- "ND" indicates no asbestos was detected; the method detection limit is 0.1%.
- "Trace" or "<" indicates asbestos was identified in the sample, but the concentration is less than the method quantitation limit. PLM coefficients of variance range from approximately 1.8 at the quantitation limit of 0.1% to 0.32 at high fiber concentrations.
- Samples are archived for three months following analysis and are then properly discarded.
- 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.
- This test report relates to the items tested.
- This report is not valid unless it bears the name of a NVLAP Lab Code 101208-0 approved signatory.
- Any reproduction of this document must be in full in order for the report to be valid.
- This report may not be used to claim product endorsement by NVLAP Lab Code 101208-0, any agency of the U.S. Government or any other laboratory accrediting agency.
- Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar nonfriable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as "non-asbestos-containing."
- Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA #100364, NY ELAP #10884) facility.
- If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.



March 27, 2017

RJ Lee Group, Inc.  
350 Hochberg Road  
Monroeville, PA 15146  
Attn: Matthew Sanchez

Via: Federal Express: 7787-4520-2672

RE: Fiber - PLM and Crystalline Silica - XRD Analyses.

Dear Mr. Sanchez:

Enclosed are the following samples for the required analyses. All samples are crushed rock and classified as a volcanic rock (meta-basalt, meta-andesite, and rhyolite). Also enclosed are the SDS sheets.

**Fiber and Crystalline Silica:**

For each sample listed (58 samples), complete the following analyses:

1. Polarized Light Microscopy (PLM): Bulk Analyses – 1,000 Point Count (Untreated) for regulated asbestiform fibers (EPA 600/R-93/116). If fibrous material is detected contact SGI and retain sample for additional TEM testing.
2. Total Crystalline Silica (Bulk Analysis) by quantitative XRD.
3. A 10 - day turn-around service is requested for both the PLM and XRD analyses.

Four samples of rock granules (-8 mesh x 35 mesh). (200 grams each):

See attached Table 1.

Six samples of rock fines (-35 mesh x 325 mesh). (100 - 200 grams each):

See attached Table 1.

Twenty samples of finished product (-8 mesh x 35 mesh). (100 grams each):

See attached Table 1.

RCUD 03-28-17 9:21 AM  
Linda Manger  
RJ Lee Group



**SPECIALTY GRANULES LLC.**

*A0H1044811-0*

13424 Pennsylvania Ave, Suite 303 // Hagerstown, MD 21742 // Tel: 301-733-4000 // Fax: 301-733-4003

[www.specialtygranules.com](http://www.specialtygranules.com)

Please address and send the lab results directly to:

Celeste Levine (Electronic Copy)  
GAF/ELK  
1361 Alps Road  
Wayne, NJ 07470  
973-628-3035  
[clevine@gaf.com](mailto:clevine@gaf.com)

with a copy sent to:

Ted Heath (Hard & Electronic Copy)  
Specialty Granules LLC  
34 Charles St  
Hagerstown, MD 21740  
(301) 714-1332  
[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

Payment will be made through SGI Purchase Order CH56491. Please copy Ted Heath and not Celeste Levine on the invoice.

Please call me with any questions.

Sincerely,

Ted Heath  
Project Manager  
Specialty Granules LLC  
[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

c.c.

G. Kamas – SGI  
M. McClure – SGI  
A. Shepeck – SGI  
C. Levine – SGI

A06H044811-0

Table 1: Sample Inventory for RJ Lee Testing

Charmian Q4 Samples			RJ Lee Sample in g	Number of Samples
Plant	SRM#	Color/ Type		
Charmian	10703	Raw Granules	200	2
Charmian	10707	Fines L. Mill	200	2
Charmian	10708	Fines HLP	200	2
Charmian	10669	BackSurfacing	100	2
Charmian	10666	G-11 w/ oil L. Mill	100	2
Charmian	10667	G-11 w/ oil HLP	100	2
Charmian	10668	G-11 w/ oil & siloxane HLP	100	2
Charmian	10651	G - 115 oiled	100	2
Charmian	10652	G - 171 oiled	100	2
Charmian	10653	G - 201 oiled	100	2
Charmian	10654	G- 340 oiled	100	2
Charmian	10655	G - 341 oiled	100	2
Charmian	10656	G - 546 oiled	100	2
Charmian	10657	G - 552 oiled	100	2
Charmian	10658	G -555 oiled	100	2
Charmian	10659	G -556 oiled	100	2
Charmian	10660	G - 560 oiled	100	2
Charmian	10661	G -615 oiled	100	2
Charmian	10662	G - 720 oiled	100	2
Charmian	10663	G - 760 oiled	100	2
Charmian	10664	G - 801 oiled	100	2
Charmian	10665	G - 11D oiled	100	2

Redacted - Does Not Relate to Charmian Facility

	Raw Granule
	Rock Fines
	Finished Products

## Laboratory Report

GAF/ELK  
1361 Alps Road  
Wayne, NJ 07470  
United States  
Attention: Celeste Levine  
Telephone: 973-628-3035

Report Date 04/11/2017  
Sample Receipt Date 03/28/2017  
RJ Lee Group Job No. AOH1044811-0  
Authorization/P.O. No. CH56491  
Client Job No./Name Charmian Q4

Analysis: Asbestos in Bulk Samples by Point Count

Method: EPA/600/R-93/116

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10404705.HPL	SRM# 10703	Yes	1	ND		100.00	CA, OP, M	EB-04/10/2017
Description: Green Powder		1000 Point Count. Detection Limit of 0.1%. No Asbestiform Minerals Detected.						
Weight Loss: 0.0%								
10404706.HPL	SRM# 10707	Yes	1	ND		100.00	CA, AM, OP, M	EB-04/10/2017
Description: Green Powder		1000 Point Count. Detection Limit of 0.1%. No Asbestiform Minerals Detected.						
Weight Loss: 0.0%								
10404707.HPL	SRM# 10708	Yes	1	ND		100.00	Q, CA, AM, OP, M	EB-04/10/2017
Description: Green Powder		1000 Point Count. Detection Limit of 0.1%. No Asbestiform Minerals Detected.						
Weight Loss: 0.0%								

Client Job No./Name: Charmian Q4

RJ Lee Group Job No: AOH1044811-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10404708.HPL	SRM# 10669	Yes	1	ND		100.00	Q, CA, AM, OP, M	EB-04/10/2017
Description: Gray Powder 1000 Point Count. Detection Limit of 0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								
10404709.HPL	SRM# 10666	Yes	1	ND		100.00	Q, CA, AM, OP, M	EB-04/10/2017
Description: Gray Powder 1000 Point Count. Detection Limit of 0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								
10404710.HPL	SRM# 10667	Yes	1	ND		100.00	Q, CA, AM, OP, M	JM-04/10/2017
Description: Green Powder 1000 points counted. Detection limit of 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10404711.HPL	SRM# 10668	Yes	1	ND		100.00	CA, AM, OP, M	JM-04/10/2017
Description: Green Powder 1000 points counted. Detection limit of 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10404712.HPL	SRM# 10651	Yes	1	ND		100.00	Q, CA, AM, OP, M	JM-04/10/2017
Description: Green Powder 1000 points counted. Detection limit of 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10404713.HPL	SRM# 10652	Yes	1	ND		100.00	Q, CA, AM, OP, M	JM-04/10/2017
Description: Green Powder 1000 points counted. Detection limit of 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								

Client Job No./Name: Charmian Q4

RJ Lee Group Job No: AOH1044811-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10404714.HPL	SRM# 10653	Yes	1	ND		100.00	Q, CA, AM, OP, M	JM-04/10/2017
Description:	Tan Powder 1000 points counted. Detection limit of 0.1%. No asbestiform minerals detected.							
Weight Loss:	0.0%							
10404715.HPL	SRM# 10654	Yes	1	ND		100.00	Q, CA, AM, OP, M	EB-04/10/2017
Description:	Dark Gray Powder 1000 Point Count. Detection Limit of 0.1%. No Asbestiform Minerals Detected.							
Weight Loss:	0.0%							
10404716.HPL	SRM# 10655	Yes	1	ND		100.00	Q, CA, AM, OP, M	JM-04/10/2017
Description:	Gray Powder 1000 points counted. Detection limit of 0.1%. No asbestiform minerals detected.							
Weight Loss:	0.0%							
10404717.HPL	SRM# 10656	Yes	1	ND		100.00	Q, CA, AM, OP, M	JM-04/10/2017
Description:	Tan Powder 1000 points counted. Detection limit of 0.1%. No asbestiform minerals detected.							
Weight Loss:	0.0%							
10404718.HPL	SRM# 10657	Yes	1	ND		100.00	Q, CA, AM, OP, M	JM-04/10/2017
Description:	Gray Powder 1000 points counted. Detection limit of 0.1%. No asbestiform minerals detected.							
Weight Loss:	0.0%							
10404719.HPL	SRM# 10658	Yes	1	ND		100.00	Q, CA, M	WT-04/11/2017
Description:	Gray Powder. 1000 Point Counted. Detection Limit=0.1%. No Asbestiform Minerals Detected.							
Weight Loss:	0.0%							

Client Job No./Name: Charmian Q4

RJ Lee Group Job No: AOH1044811-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10404720.HPL	SRM# 10659	Yes	1	ND		100.00	Q, CA, AM, OP, M	EB-04/10/2017
Description: Light Brown Powder 1000 Point Count. Detection Limit of 0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								
10404721.HPL	SRM# 10660	Yes	1	ND		100.00	Q, AM, OP, M	WT-04/11/2017
Description: Gray Powder. 1000 Point Counted. Detection Limit=0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								
10404722.HPL	SRM# 10661	Yes	1	ND		100.00	Q, CA, AM, OP, M	JM-04/10/2017
Description: Green Powder 1000 points counted. Detection limit of 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10404723.HPL	SRM# 10662	Yes	1	ND		100.00	Q, CA, AM, OP, M	EB-04/11/2017
Description: Light Gray Powder 1000 Point Count. Detection Limit of 0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								
10404724.HPL	SRM# 10663	Yes	1	ND		100.00	Q, AM, OP, M	WT-04/11/2017
Description: Gray Powder. 1000 Point Counted. Detection Limit=0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								
10404725.HPL	SRM# 10664	Yes	1	ND		100.00	OP, M	JS-04/10/2017
Description: Gray Powder 1000 Points Counted. Detection Limit of 0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								



Client Job No./Name: Charmian Q4

RJ Lee Group Job No: AOH1044811-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10404726.HPL	SRM# 10665	Yes	1	ND	<1 CE	100.00	AM, M	AKB-04/10/2017

Description: Gray Granular Material  
No Asbestiform Minerals Detected.  
Limit Of Detection = 0.1%.  
1000 Points Counted.

Weight Loss: 0.0%

**Redacted - Does Not Relate to Charmian Facility**

Client Job No./Name: Charmian Q4

RJ Lee Group Job No: AOH1044811-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
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Redacted - Does Not Relate to Charmian Facility

Client Job No./Name: Charmian Q4

RJ Lee Group Job No: AOH1044811-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
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Authorized Signature:



Wei Tseng

**ASBESTOS**

AM = Amosite  
 AC = Actinolite  
 AN = Anthophyllite  
 CH = Chrysotile  
 CR = Crocidolite  
 TR = Tremolite

**NON-ASBESTOS**

CE = Cellulose  
 MW = Mineral Wool  
 FG = Fibrous Glass  
 SF = Synthetic Fibers  
 H = Hair  
 W = Wollastonite  
 OF = Other Fibers

**NON-FIBROUS MATERIALS**

AM = Amphibole  
 B = Binder  
 CA = Carbonates  
 CL = Clay  
 F = Feldspar  
 G = Gypsum  
 HY = Hydromagnesite  
 M = Miscellaneous  
 MI = Mica  
 OP = Opaque  
 OR = Organic  
 P = Perlite  
 Q = Quartz  
 T = Tar  
 V = Vermiculite

**DISCLAIMER NOTES**

- "ND" indicates no asbestos was detected; the method detection limit is 0.1%.
- "Trace" or "<" indicates asbestos was identified in the sample, but the concentration is less than the method quantitation limit. PLM coefficients of variance range from approximately 1.8 at the quantitation limit of 0.1% to 0.32 at high fiber concentrations.
- Samples are archived for three months following analysis and are then properly discarded.
- 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.
- This test report relates to the items tested.
- This report is not valid unless it bears the name of a NVLAP Lab Code 101208-0 approved signatory.
- Any reproduction of this document must be in full in order for the report to be valid.
- This report may not be used to claim product endorsement by NVLAP Lab Code 101208-0, any agency of the U.S. Government or any other laboratory accrediting agency.
- Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar nonfriable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as "non-asbestos-containing."
- Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA #100364, NY ELAP #10884) facility.
- If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.



## SPECIALTY GRANULES LLC.

13424 Pennsylvania Ave, Suite 303 // Hagerstown, MD 21742 // Tel: 301-733-4000 // Fax: 301-733-4003

[www.specialtygranules.com](http://www.specialtygranules.com)

A041045063-0

April 17, 2017

RJ Lee Group, Inc.  
350 Hochberg Road  
Monroeville, PA 15146  
Attn: Matthew Sanchez

Via: Federal Express: 7789-2174-7853

RE: Fiber - PLM and Crystalline Silica - XRD Analyses.

Dear Mr. Sanchez:

Enclosed are the following samples for the required analyses. All samples are crushed rock and classified as a volcanic rock (meta-basalt, meta-andesite, and rhyolite). Also enclosed are the SDS sheets.

### Fiber and Crystalline Silica:

For each sample listed (104 samples), complete the following analyses:

1. Polarized Light Microscopy (PLM): Bulk Analyses – 1,000 Point Count (Untreated) for regulated asbestiform fibers (EPA 600/R-93/116). If fibrous material is detected contact SGI and retain sample for additional TEM testing.
2. Total Crystalline Silica (Bulk Analysis) by quantitative XRD.
3. A 10 - day turn-around service is requested for both the PLM and XRD analyses.

52 samples of rock granules (-8 mesh x 35 mesh) (200 grams each):

See attached Table 1.

Please address and send the lab results directly to:

Celeste Levine (Electronic Copy)  
GAF/ELK  
1361 Alps Road  
Wayne, NJ 07470  
973-628-3035  
[clevine@gaf.com](mailto:clevine@gaf.com)

with a copy sent to:

Ted Heath (Hard & Electronic Copy)  
Specialty Granules LLC  
34 Charles St  
Hagerstown, MD 21740  
(301) 714-1332  
[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

M. Carse

04-19-17

09:15



**SPECIALTY GRANULES LLC.**

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*A0H1045063-0*

Payment will be made through SGI Purchase Order CH56698. Please copy Ted Heath and not Celeste Levine on the invoice.

Please call me with any questions.

Sincerely,

Ted Heath  
Project Manager  
Specialty Granules LLC  
[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

c.c.

G. Kamas – SGI

M. McClure – SGI

A. Shepeck – SGI

C. Levine – SGI

*M. Carse 04-19-17 09:15*

A041045063-0

Table 1: Sample Inventory for RJ Lee Testing

Charmian WF Core Samples			RJ Lee	Number of
Plant	SRM#	Color/ Type	Sample in g	Samples
Charmian	9662	Raw Granules	200	2
Charmian	9664	Raw Granules	200	2
Charmian	9651	Raw Granules	200	2
Charmian	9652	Raw Granules	200	2
Charmian	9653	Raw Granules	200	2
Charmian	9675	Raw Granules	200	2
Charmian	9676	Raw Granules	200	2
Charmian	9645	Raw Granules	200	2
Charmian	9646	Raw Granules	200	2
Charmian	9647	Raw Granules	200	2
Charmian	9648	Raw Granules	200	2
Charmian	9649	Raw Granules	200	2
Charmian	9650	Raw Granules	200	2
Charmian	9656	Raw Granules	200	2
Charmian	9669	Raw Granules	200	2
Charmian	9670	Raw Granules	200	2
Charmian	9671	Raw Granules	200	2
Charmian	9672	Raw Granules	200	2
Charmian	9603	Raw Granules	200	2
Charmian	9604	Raw Granules	200	2
Charmian	9605	Raw Granules	200	2
Charmian	9606	Raw Granules	200	2
Charmian	9625	Raw Granules	200	2
Charmian	9626	Raw Granules	200	2
Charmian	9627	Raw Granules	200	2
Charmian	9628	Raw Granules	200	2
Charmian	9629	Raw Granules	200	2
Charmian	9630	Raw Granules	200	2
Charmian	9632	Raw Granules	200	2
Charmian	9633	Raw Granules	200	2
Charmian	9616	Raw Granules	200	2
Charmian	9617	Raw Granules	200	2
Charmian	9680	Raw Granules	200	2
Charmian	9681	Raw Granules	200	2
Charmian	9597	Raw Granules	200	2
Charmian	9598	Raw Granules	200	2
Charmian	9666	Raw Granules	200	2
Charmian	9667	Raw Granules	200	2
Charmian	9668	Raw Granules	200	2
Charmian	9594	Raw Granules	200	2
Charmian	9595	Raw Granules	200	2
Charmian	9636	Raw Granules	200	2
Charmian	9637	Raw Granules	200	2
Charmian	9609	Raw Granules	200	2
Charmian	9610	Raw Granules	200	2
Charmian	9639	Raw Granules	200	2
Charmian	9640	Raw Granules	200	2
Charmian	9641	Raw Granules	200	2
Charmian	9642	Raw Granules	200	2
Charmian	9619	Raw Granules	200	2
Charmian	9620	Raw Granules	200	2
Charmian	9621	Raw Granules	200	2

M. Caroe 04-19-17 09:15

## Laboratory Report

GAF/ELK  
 1361 Alps Road  
 Wayne, NJ 07470  
 United States  
 Attention: Celeste Levine  
 Telephone: 973-628-3035

Report Date 05/03/2017  
 Sample Receipt Date 04/19/2017  
 RJ Lee Group Job No. AOH1045063-0  
 Authorization/P.O. No. CH56698  
 Client Job No./Name Charmian

Analysis: Asbestos in Bulk Samples by Point Count  
 Method: EPA/600/R-93/116

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10406160.HPL	SRM# 9662	Yes	1	ND		100.00	Q, OP, M	WT-05/02/2017
Description: Gray Powder. 1000 Points Counted. Detection Limit=0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								
10406161.HPL	SRM# 9664	Yes	1	ND		100.00	Q, OP, M	WT-05/01/2017
Description: Green Powder. 1000 Points Counted. Detection Limit=0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								
10406162.HPL	SRM# 9651	Yes	1	ND		100.00	Q, OP, M	WT-05/01/2017
Description: Green Powder. 1000 Points Counted. Detection Limit=0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								

Client Job No./Name: Charmian

RJ Lee Group Job No: AOH1045063-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10406163.HPL	SRM# 9652	Yes	1	ND		100.00	OP, M	EB-04/28/2017
Description: Gray Powder 1000 Point Count. Detection Limit of 0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								
10406164.HPL	SRM# 9653	Yes	1	ND		100.00	OP, M	EB-04/28/2017
Description: Green Powder 1000 Point Count. Detection Limit of 0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								
10406165.HPL	SRM# 9675	Yes	1	ND		100.00	Q, OP, M	WT-05/01/2017
Description: Gray Powder. 1000 Points Counted. Detection Limit=0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								
10406166.HPL	SRM# 9676	Yes	1	ND		100.00	Q, OP, M	WT-05/02/2017
Description: Green Powder. 1000 Points Counted. Detection Limit=0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								
10406167.HPL	SRM# 9645	Yes	1	ND		100.00	Q, CA, OP, M	WT-05/01/2017
Description: Green Powder. 1000 Points Counted. Detection Limit=0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								
10406168.HPL	SRM# 9646	Yes	1	ND		100.00	Q, OP, M	WT-05/01/2017
Description: Green Powder. 1000 Points Counted. Detection Limit=0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								



Client Job No./Name: Charmian

RJ Lee Group Job No: AOH1045063-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10406169.HPL	SRM# 9647	Yes	1	ND		100.00	Q, OP, M	WT-05/01/2017
Description:	Green Powder. 1000 Points Counted. Detection Limit=0.1%. No Asbestiform Minerals Detected.							
Weight Loss:	0.0%							
10406170.HPL	SRM# 9648	Yes	1	ND		100.00	Q, CA, OP, M	JM-05/01/2017
Description:	Green Powder 1000 points counted. Detection limit of 0.1%. No asbestiform minerals detected.							
Weight Loss:	0.0%							
10406171.HPL	SRM# 9649	Yes	1	ND		100.00		JM-05/01/2017
Description:	Green Powder 1000 points counted. Detection limit of 0.1%. No asbestiform minerals detected.							
Weight Loss:	0.0%							
10406172.HPL	SRM# 9650	Yes	1	ND	<1 CE	100.00	CA, OP, M	BW-05/03/2017
Description:	Gray Powder 1000 Points Counted Limit of Detection 0.1% No Asbestiform Minerals Detected							
Weight Loss:	0.0%							
10406173.HPL	SRM# 9656	Yes	1	ND	<1 CE	100.00	Q, OP, M	BW-05/01/2017
Description:	Gray Powder 1000 Points Counted Limit of Detection 0.1% No Asbestiform Minerals Detected							
Weight Loss:	0.0%							

Client Job No./Name: Charmian

RJ Lee Group Job No: AOH1045063-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos F bers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10406174.HPL	SRM# 9669	Yes	1	ND	<1 CE	100.00	Q, OP, M	BW-05/01/2017
Description:	Gray Powder 1000 Points Counted Limit of Detection 0.1% No Asbestiform Minerals Detected							
Weight Loss: 0.0%								
10406175.HPL	SRM# 9670	Yes	1	ND		100.00	Q, OP, M	JM-05/01/2017
Description:	Green Powder 1000 points counted. Detection limit of 0.1%. No asbestiform minerals detected.							
Weight Loss: 0.0%								
10406176.HPL	SRM# 9671	Yes	1	ND		100.00	Q, OP, M	JM-05/01/2017
Description:	Green Powder 1000 points counted. Detection limit of 0.1%. No asbestiform minerals detected.							
Weight Loss: 0.0%								
10406177.HPL	SRM# 9672	Yes	1	ND		100.00	Q, CA, OP, M	JM-05/01/2017
Description:	Green Powder 1000 points counted. Detection limit of 0.1%. No asbestiform minerals detected.							
Weight Loss: 0.0%								
10406178.HPL	SRM# 9603	Yes	1	ND	<1 CE	100.00	CA, OP, M	BW-05/01/2017
Description:	Gray Powder 1000 Points Counted Limit of Detection 0.1% No Asbestiform Minerals Detected							
Weight Loss: 0.0%								

Client Job No./Name: Charmian

RJ Lee Group Job No: AOH1045063-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10406179.HPL	SRM# 9604	Yes	1	ND		100.00	Q, CA, OP, M	JS-05/02/2017
Description: Gray Powder 1000 Points Counted. Detection Limit of 0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								
10406180.HPL	SRM# 9605	Yes	1	ND		100.00	Q, CA, OP, M	JM-05/01/2017
Description: Green Powder 1000 points counted. Detection limit of 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10406181.HPL	SRM# 9606	Yes	1	ND		100.00	Q, OP, M	WT-05/02/2017
Description: Green Powder. 1000 Points Counted. Detection Limit=0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								
10406182.HPL	SRM# 9625	Yes	1	ND		100.00	OP, MI, M	EB-05/01/2017
Description: Gray Powder 1000 Point Count. Detection Limit of 0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								
10406183.HPL	SRM# 9626	Yes	1	ND		100.00	OP, MI, M	EB-05/01/2017
Description: Gray Powder 1000 Point Count. Detection Limit of 0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								
10406184.HPL	SRM# 9627	Yes	1	ND		100.00	OP, MI, M	EB-05/01/2017
Description: Gray Powder 1000 Point Count. Detection Limit of 0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								

Client Job No./Name: Charmian

RJ Lee Group Job No: AOH1045063-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10406185.HPL	SRM# 9628	Yes	1	ND		100.00	Q, CA, OP, M	JM-05/01/2017
Description: Green Powder 1000 points counted. Detection limit of 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10406186.HPL	SRM# 9629	Yes	1	ND	<1 CE	100.00	Q, OP, M	BW-05/02/2017
Description: Gray Powder 100 Points Counted Limit of Detection 0.1% No Asbestiform Minerals Detected								
Weight Loss: 0.0%								
10406187.HPL	SRM# 9630	Yes	1	ND	<1 CE	100.00	Q, OP, M	BW-05/02/2017
Description: Green Powder 1000 Points Counted Limit of Detection 0.1% No Asbestiform Minerals Detected								
Weight Loss: 0.0%								
10406188.HPL	SRM# 9632	Yes	1	ND	<1 CE	100.00	Q, OP, M	BW-05/02/2017
Description: Gray Powder 1000 Points Counted Limit of Detection 0.1% No Asbestiform Minerals Detected								
Weight Loss: 0.0%								
10406189.HPL	SRM# 9633	Yes	1	ND		100.00	OP, MI, M	EB-05/02/2017
Description: Gray Powder 1000 Point Count. Detection Limit of 0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								

Client Job No./Name: Charmian

RJ Lee Group Job No: AOH1045063-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10406190.HPL	SRM# 9616	Yes	1	ND		100.00	Q, OP, M	WT-05/02/2017
Description:	Gray Powder. 1000 Points Counted. Detection Limit=0.1%. No Asbestiform Minerals Detected.							
Weight Loss:	0.0%							
10406191.HPL	SRM# 9617	Yes	1	ND		100.00	Q, OP, M	WT-05/02/2017
Description:	Gray Powder. 1000 Points Counted. Detection Limit=0.1%. No Asbestiform Minerals Detected.							
Weight Loss:	0.0%							
10406192.HPL	SRM# 9680	Yes	1	ND		100.00	Q, OP, M	WT-05/02/2017
Description:	Gray Powder. 1000 Points Counted. Detection Limit=0.1%. No Asbestiform Minerals Detected.							
Weight Loss:	0.0%							
10406193.HPL	SRM# 9681	Yes	1	ND		100.00	Q, OP, M	BW-05/02/2017
Description:	Gray Powder 1000 Points Counted Limit of Detection 0.1% No Asbestiform Minerals Detected							
Weight Loss:	0.0%							
10406194.HPL	SRM# 9597	Yes	1	ND	<1 CE	100.00	Q, CA, OP, M	JS-05/02/2017
Description:	Gray Powder 1000 Points Counted. Detection Limit of 0.1%. No Asbestiform Minerals Detected.							
Weight Loss:	0.0%							

Client Job No./Name: Charmian

RJ Lee Group Job No: AOH1045063-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10406195.HPL	SRM# 9598	Yes	1	ND	<1 CE	100.00	Q, OP, M	BW-05/03/2017
Description:	Green Powder 1000 Points Counted Limit of Detection 0.1% No Asbestiform Minerals Detected							
Weight Loss:	0.0%							
10406196.HPL	SRM# 9666	Yes	1	ND	<1 CE	100.00	Q, OP, M	BW-05/02/2017
Description:	Green Powder 1000 Points Counted Limit of Detection 0.1% No Asbestiform Minerals Detected							
Weight Loss:	0.0%							
10406197.HPL	SRM# 9667	Yes	1	ND		100.00	Q, OP, M	BW-05/02/2017
Description:	Gray Powder 1000 Points Counted Limit of Detection 0.1% No Asbestiform Minerals Detected							
Weight Loss:	0.0%							
10406198.HPL	SRM# 9668	Yes	1	ND		100.00	Q, CA, OP, M	JS-05/02/2017
Description:	Gray Powder 1000 Points Counted. Detection Limit of 0.1%. No Asbestiform Minerals Detected.							
Weight Loss:	0.0%							
10406199.HPL	SRM# 9594	Yes	1	ND		100.00	OP, MI, M	EB-05/02/2017
Description:	Gray Powder 1000 Point Count. Detection Limit of 0.1%. No Asbestiform Minerals Detected.							
Weight Loss:	0.0%							

Client Job No./Name: Charmian

RJ Lee Group Job No: AOH1045063-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10406200.HPL	SRM# 9595	Yes	1	ND		100.00	Q, CA, OP, M	JS-05/02/2017
Description: Gray Powder 1000 Points Counted. Detection Limit of 0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								
10406201.HPL	SRM# 9636	Yes	1	ND		100.00	Q, CA, OP, M	JS-05/02/2017
Description: Gray Powder 1000 Points Counted. Detection Limit of 0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								
10406202.HPL	SRM# 9637	Yes	1	ND		100.00	Q, OP, M	WT-05/02/2017
Description: Gray Powder. 1000 Points Counted. Detection Limit=0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								
10406203.HPL	SRM# 9609	Yes	1	ND		100.00	Q, CA, OP, M	WT-05/02/2017
Description: Green Powder. 1000 Points Counted. Detection Limit=0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								
10406204.HPL	SRM# 9610	Yes	1	ND		100.00	Q, OP, M	WT-05/02/2017
Description: Gray Powder. 1000 Points Counted. Detection Limit=0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								
10406205.HPL	SRM# 9639	Yes	1	ND		100.00	Q, CA, OP, M	WT-05/02/2017
Description: Green Powder. 1000 Points Counted. Detection Limit=0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								

Client Job No./Name: Charmian

RJ Lee Group Job No: AOH1045063-0


RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10406206.HPL	SRM# 9640	Yes	1	ND		100.00	Q, CA, OP, M	WT-05/02/2017
Description: Green Powder. 1000 Points Counted. Detection Limit=0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								
10406207.HPL	SRM# 9641	Yes	1	ND		100.00	Q, OP, M	WT-05/02/2017
Description: Green Powder. 1000 Points Counted. Detection Limit=0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								
10406208.HPL	SRM# 9642	Yes	1	ND		100.00	Q, CA, OP, M	JS-05/02/2017
Description: Gray Powder 1000 Points Counted. Detection Limit of 0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								
10406209.HPL	SRM# 9619	Yes	1	ND		100.00	Q, CA, OP, M	JS-05/02/2017
Description: Gray Powder 1000 Points Counted. Detection Limit of 0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								
10406210.HPL	SRM# 9620	Yes	1	ND	<1 CE	100.00	Q, CA, OP, M	JS-05/02/2017
Description: Gray Powder 1000 Points Counted. Detection Limit of 0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								
10406211.HPL	SRM# 9621	Yes	1	ND		100.00	OP, MI, M	EB-05/01/2017
Description: Gray Powder 1000 Point Count. Detection Limit of 0.1%. No Asbestiform Minerals Detected.								
Weight Loss: 0.0%								



Client Job No./Name: Charmian

RJ Lee Group Job No: AOH1045063-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
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Authorized Signature: 

Elizabeth Brown

#### ASBESTOS

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AC = Actinolite  
AN = Anthophyllite  
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CR = Crocidolite  
TR = Tremolite

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- "Trace" or "<" indicates asbestos was identified in the sample, but the concentration is less than the method quantitation limit. PLM coefficients of variance range from approximately 1.8 at the quantitation limit of 0.1% to 0.32 at high fiber concentrations.
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- This report may not be used to claim product endorsement by NVLAP Lab Code 101208-0, any agency of the U.S. Government or any other laboratory accrediting agency.
- Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar nonfriable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as "non-asbestos-containing."
- Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA #100364, NY ELAP #10884) facility.
- If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.



October 06, 2017

RJ Lee Group, Inc.  
350 Hochberg Road  
Monroeville, PA 15146  
Attn: Matthew Sanchez

Via: Federal Express: 7704-2916-3621 and 7704-2916-3518

RE: Fiber - PLM and Crystalline Silica - XRD Analyses.

Dear Mr. Sanchez:

Enclosed are the following samples for the required analyses. All samples are crushed rock and classified as a volcanic rock (meta-basalt). Also enclosed are the SDS sheets.

**Fiber and Crystalline Silica:**

For each sample listed (84 total samples), complete the following analyses:

1. Polarized Light Microscopy (PLM): Bulk Analyses – 1,000 Point Count (Untreated) for regulated asbestiform fibers (EPA 600/R-93/116). If fibrous material is detected contact SGI and retain sample for additional TEM testing.
2. Total Crystalline Silica (Bulk Analysis) by quantitative XRD.
3. A 10 - day turn-around service is requested for both the PLM and XRD analyses.

Four samples of rock granules (-8 mesh x 35 mesh). (200 grams each):

See attached Table 1.

Six samples of rock fines (-35 mesh x 325 mesh). (100 - 200 grams each):

See attached Table 1.

Twenty samples of finished product (-8 mesh x 35 mesh). (100 grams each):

See attached Table 1.

**SPECIALTY GRANULES LLC.**

A041047161-0

13424 Pennsylvania Ave, Suite 303 // Hagerstown, MD 21742 // Tel: 301-733-4000 // Fax: 301-733-4003

[www.specialtygranules.com](http://www.specialtygranules.com)Please address and send the lab results directly to:

Celeste Levine (Electronic Copy)  
GAF/ELK  
1361 Alps Road  
Wayne, NJ 07470  
973-628-3035  
[clevine@gaf.com](mailto:clevine@gaf.com)

with a copy sent to:

Ted Heath (Hard & Electronic Copy)  
Specialty Granules LLC  
34 Charles St  
Hagerstown, MD 21740  
(301) 714-1332  
[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

Payment will be made through SGI Purchase Order CH58268. Please copy Ted Heath and not Celeste Levine on the invoice.

Please call me with any questions.

Sincerely,

Ted Heath  
Project Manager  
Specialty Granules LLC  
[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

c.c.

G. Kamas – SGI  
M. McClure – SGI  
A. Shepeck – SGI  
C. Levine – SGI

Table 1: Sample Inventory for RJ Lee Testing

A0410471610

Charmian Q1 Samples			RJ Lee Sample in g	Number of Samples
Plant	SRM#	Color/ Type		
Charmian	10933	Raw Granules	200	2
Charmian	10931	Fines L. Mill	200	2
Charmian	10935	Fines HLP	200	2
Charmian	10869	BackSurfacing	100	2
Charmian	10870	G-11 w/ oil HLP	100	2
Charmian	10871	G-11 w/ oil & siloxane HLP	100	2
Charmian	10855	G - 115 oiled	100	2
Charmian	10856	G - 171 oiled	100	2
Charmian	10857	G - 201 oiled	100	2
Charmian	10858	G- 340 oiled	100	2
Charmian	10859	G - 341 oiled	100	2
Charmian	10860	G - 546 oiled	100	2
Charmian	10861	G - 552 oiled	100	2
Charmian	10862	G -555 oiled	100	2
Charmian	10863	G -556 oiled	100	2
Charmian	10864	G - 560 oiled	100	2
Charmian	10865	G -615 oiled	100	2
Charmian	10866	G - 720 oiled	100	2
Charmian	10867	G - 760 oiled	100	2
Charmian	10868	G - 801 oiled	100	2
Charmian	10854	G - 11D oiled	100	2

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	Raw Granule
	Rock Fines
	Finished Products

Charmian Q2 Samples			RJ Lee Sample in	Number of Samples
Plant	SRM#	Color/ Type		
Charmian	10934	Raw Granules	200	2
Charmian	10932	Fines L. Mill	200	2
Charmian	10936	Fines HLP	200	2
Charmian	10901	BackSurfacing	100	2
Charmian	10899	G-11 w/ oil HLP	100	2
Charmian	10900	G-11 w/ oil & siloxane HLP	100	2
Charmian	10903	G - 115 oiled	100	2
Charmian	10904	G - 171 oiled	100	2
Charmian	10905	G - 201 oiled	100	2
Charmian	10906	G- 340 oiled	100	2
Charmian	10907	G - 341 oiled	100	2
Charmian	10908	G - 546 oiled	100	2
Charmian	10909	G - 552 oiled	100	2
Charmian	10910	G -555 oiled	100	2
Charmian	10911	G -556 oiled	100	2
Charmian	10912	G - 560 oiled	100	2
Charmian	10913	G -615 oiled	100	2
Charmian	10914	G - 720 oiled	100	2
Charmian	10915	G - 760 oiled	100	2
Charmian	10916	G - 801 oiled	100	2
Charmian	10902	G - 11D oiled	100	2

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RCWD 10-11-17 9:00 AM  
 Linda Maugus  
 RJ Lee Group

## Laboratory Report

GAF/ELK  
1361 Alps Road  
Wayne, NJ 07470  
United States  
Attention: Celeste Levine  
Telephone: 973-628-3035

Report Date 10/25/2017  
Sample Receipt Date 10/11/2017  
RJ Lee Group Job No. AOH1047161-0  
Authorization/P.O. No. CH58268  
Client Job No./Name

Analysis: Asbestos in Bulk Samples by Point Count

Method: EPA/600/R-93/116

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10417362.HPL	10933	Yes	1	ND		100.00	Q, CA, OP, M	WT-10/23/2017
Description:	Green Powder. 1000 Points Counted. Detection Limit=0.1%.							
Weight Loss:	0.0%							
10417363.HPL	10931	Yes	1	ND		100.00	Q, CA, OP, M	WT-10/23/2017
Description:	Green Powder. 1000 Points Counted. Detection Limit=0.1%.							
Weight Loss:	0.0%							
10417364.HPL	10935	Yes	1	ND		100.00	Q, CA, OP, M	WT-10/23/2017
Description:	Green Powder. 1000 Points Counted. Detection Limit=0.1%.							
Weight Loss:	0.0%							

Client Job No./Name:

RJ Lee Group Job No: AOH1047161-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10417365.HPL	10869	Yes	1	ND		100.00	Q, CA, OP, M	WT-10/23/2017
Description:	Green Powder. 1000 Points Counted. Detection Limit=0.1%.							
Weight Loss:	0.0%							
10417366.HPL	10870	Yes	1	ND		100.00	Q, CA, OP, M	WT-10/23/2017
Description:	Green Powder. 1000 Points Counted. Detection Limit=0.1%.							
Weight Loss:	0.0%							
10417367.HPL	10871	Yes	1	ND		100.00	Q, OP, M	WT-10/23/2017
Description:	Green Powder. 1000 Points Counted. Detection Limit=0.1%.							
Weight Loss:	0.0%							
10417368.HPL	10855	Yes	1	ND		100.00	Q, OP, M	WT-10/22/2017
Description:	Green Powder. 1000 Points Counted. Detection Limit=0.1%.							
Weight Loss:	0.0%							
10417369.HPL	10856	Yes	1	ND		100.00	Q, OP, M	WT-10/22/2017
Description:	Green Powder. 1000 Points Counted. Detection Limit=0.1%.							
Weight Loss:	0.0%							
10417370.HPL	10857	Yes	1	ND		100.00	Q, OP, M	WT-10/22/2017
Description:	Gray Powder. 1000 Points Counted. Detection Limit=0.1%.							
Weight Loss:	0.0%							

Client Job No./Name:

RJ Lee Group Job No: AOH1047161-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10417371.HPL	10858	Yes	1	ND		100.00	Q, OP, M	WT-10/22/2017
Description:	Green Powder. 1000 Points Counted. Detection Limit=0.1%.							
Weight Loss:	0.0%							
10417372.HPL	10859	Yes	1	ND		100.00	Q, CA, AM, OP, MI, M	EB-10/20/2017
Description:	Gray Powder 1000 Point Count. Detection Limit of 0.1%.							
Weight Loss:	0.0%							
10417373.HPL	10860	Yes	1	ND		100.00	Q, CA, OP, M	EB-10/23/2017
Description:	Gray Powder 1000 Point Count. Detection Limit of 0.1%.							
Weight Loss:	0.0%							
10417374.HPL	10861	Yes	1	ND		100.00	Q, OP, M	WT-10/22/2017
Description:	Green Powder. 1000 Points Counted. Detection Limit=0.1%.							
Weight Loss:	0.0%							
10417375.HPL	10862	Yes	1	ND		100.00	Q, OP, M	WT-10/22/2017
Description:	Green Powder. 1000 Points Counted. Detection Limit=0.1%.							
Weight Loss:	0.0%							
10417376.HPL	10863	Yes	1	ND		100.00	Q, OP, M	WT-10/22/2017
Description:	Green Powder. 1000 Points Counted. Detection Limit=0.1%.							
Weight Loss:	0.0%							



Client Job No./Name:

RJ Lee Group Job No: AOH1047161-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10417377.HPL	10864	Yes	1	ND		100.00	Q, OP, M	WT-10/19/2017
Description: Gray Powder. 1000 Points Counted. Detection Limit=0.1%.								
Weight Loss: 0.0%								
10417378.HPL	10865	Yes	1	ND		100.00	Q, CA, AM, OP, MI, M	EB-10/19/2017
Description: Gray Powder 1000 Point Count. Detection Limit of 0.1%.								
Weight Loss: 0.0%								
10417379.HPL	10866	Yes	1	ND		100.00	Q, CA, OP, M	EB-10/20/2017
Description: Gray Powder 1000 Point Count. Detection Limit of 0.1%.								
Weight Loss: 0.0%								
10417380.HPL	10867	Yes	1	ND		100.00	Q, OP, M	WT-10/22/2017
Description: Green Powder. 1000 Points Counted. Detection Limit=0.1%.								
Weight Loss: 0.0%								
10417381.HPL	10868	Yes	1	ND		100.00	Q, OP, M	WT-10/22/2017
Description: Green Powder. 1000 Points Counted. Detection Limit=0.1%.								
Weight Loss: 0.0%								
10417382.HPL	10854	Yes	1	ND		100.00	Q, CA, AM, OP, M	EB-10/19/2017
Description: Gray Powder 1000 Point Count. Detection Limit of 0.1%.								
Weight Loss: 0.0%								



Client Job No./Name:

RJ Lee Group Job No: AOH1047161-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10417383.HPL	10934	Yes	1	ND		100.00	Q, CA, AM, OP, M	EB-10/19/2017
Description:	Green Powder 1000 Point Count. Detection Limit of 0.1%.							
Weight Loss:	0.0%							
10417384.HPL	10932	Yes	1	ND		100.00	Q, CA, AM, OP, M	EB-10/19/2017
Description:	Green Powder 1000 Point Count. Detection Limit of 0.1%.							
Weight Loss:	0.0%							
10417385.HPL	10936	Yes	1	ND		100.00	Q, CA, AM, OP, M	EB-10/19/2017
Description:	Green Powder 1000 Point Count. Detection Limit of 0.1%.							
Weight Loss:	0.0%							
10417386.HPL	10901	Yes	1	ND		100.00	Q, CA, AM, OP, M	EB-10/19/2017
Description:	Green Powder 1000 Point Count. Detection Limit of 0.1%.							
Weight Loss:	0.0%							
10417387.HPL	10899	Yes	1	ND		100.00	Q, CA, OP, MI, M	EB-10/23/2017
Description:	Gray Powder 1000 Point Count. Detection Limit of 0.1%.							
Weight Loss:	0.0%							
10417388.HPL	10900	Yes	1	ND		100.00	Q, CA, OP, M	WT-10/23/2017
Description:	Green Powder. 1000 Points Counted. Detection Limit=0.1%.							
Weight Loss:	0.0%							

Client Job No./Name:

RJ Lee Group Job No: AOH1047161-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10417389.HPL	10903	Yes	1	ND		100.00	Q, CA, OP, M	WT-10/23/2017
Description:	Green Powder. 1000 Points Counted. Detection Limit=0.1%.							
Weight Loss:	0.0%							
10417390.HPL	10904	Yes	1	ND		100.00	Q, CA, OP, M	WT-10/23/2017
Description:	Green Powder. 1000 Points Counted. Detection Limit=0.1%.							
Weight Loss:	0.0%							
10417391.HPL	10905	Yes	1	ND		100.00	Q, CA, OP, M	WT-10/23/2017
Description:	Gray Powder. 1000 Points Counted. Detection Limit=0.1%.							
Weight Loss:	0.0%							
10417392.HPL	10906	Yes	1	ND		100.00	Q, CA, OP, MI, M	EB-10/23/2017
Description:	Gray Powder 1000 Point Count. Detection Limit of 0.1%.							
Weight Loss:	0.0%							
10417393.HPL	10907	Yes	1	ND		100.00	Q, CA, OP, M	WT-10/24/2017
Description:	Green Powder. 1000 Points Counted. Detection Limit=0.1%.							
Weight Loss:	0.0%							
10417394.HPL	10908	Yes	1	ND		100.00	Q, CA, OP, M	WT-10/24/2017
Description:	Gray Powder. 1000 Points Counted. Detection Limit=0.1%.							
Weight Loss:	0.0%							

Client Job No./Name:

RJ Lee Group Job No: AOH1047161-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10417395.HPL	10909	Yes	1	ND		100.00	Q, CA, OP, MI, M	EB-10/23/2017
Description: Gray Powder 1000 Point Count. Detection Limit of 0.1%.								
Weight Loss: 0.0%								
10417396.HPL	10910	Yes	1	ND		100.00	Q, CA, OP, MI, M	BW-10/23/2017
Description: Green Powder 1000 Points Counted Limit of Detection 0.1%								
Weight Loss: 0.0%								
10417397.HPL	10911	Yes	1	ND		100.00	Q, CA, OP, MI, M	EB-10/23/2017
Description: Gray Powder 1000 Point Count. Detection Limit of 0.1%.								
Weight Loss: 0.0%								
10417398.HPL	10912	Yes	1	ND		100.00	Q, CA, OP, MI, M	EB-10/23/2017
Description: Gray Powder 1000 Point Count. Detection Limit of 0.1%.								
Weight Loss: 0.0%								
10417399.HPL	10913	Yes	1	ND		100.00	Q, CA, OP, MI, M	EB-10/23/2017
Description: Gray Powder 1000 Point Count. Detection Limit of 0.1%.								
Weight Loss: 0.0%								
10417400.HPL	10914	Yes	1	ND		100.00	Q, CA, OP, MI, M	EB-10/23/2017
Description: Gray Powder 1000 Point Count. Detection Limit of 0.1%.								
Weight Loss: 0.0%								

Client Job No./Name:

RJ Lee Group Job No: AOH1047161-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10417401.HPL	10915	Yes	1	ND		100.00	Q, CA, OP, MI, M	EB-10/25/2017
Description:	Gray Powder 1000 Point Count. Detection Limit of 0.1%.							
Weight Loss:	0.0%							
10417402.HPL	10916	Yes	1	ND		100.00	Q, CA, OP, MI, M	EB-10/23/2017
Description:	Gray Powder 1000 Point Count. Detection Limit of 0.1%.							
Weight Loss:	0.0%							
10417403.HPL	10902	Yes	1	ND		100.00	Q, CA, OP, MI, M	EB-10/23/2017
Description:	Gray Powder 1000 Point Count. Detection Limit of 0.1%.							
Weight Loss:	0.0%							

Client Job No./Name:

RJ Lee Group Job No: AOH1047161-0

RJLG Sample Number	Client Sample Number	# of Layers Homogeneous	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
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Authorized Signature:



Elizabeth Brown

**ASBESTOS**

AM = Amosite  
 AC = Actinolite  
 AN = Anthophyllite  
 CH = Chrysotile  
 CR = Crocidolite  
 TR = Tremolite

**NON-ASBESTOS**

CE = Cellulose  
 MW = Mineral Wool  
 FG = Fibrous Glass  
 SF = Synthetic Fibers  
 H = Hair  
 W = Wollastonite  
 OF = Other Fibers

**NON-FIBROUS MATERIALS**

AM = Amphibole  
 B = Binder  
 CA = Carbonates  
 CL = Clay  
 F = Feldspar  
 G = Gypsum  
 HY = Hydromagnesite  
 M = Miscellaneous  
 MI = Mica  
 OP = Opaque  
 OR = Organic  
 P = Perlite  
 Q = Quartz  
 T = Tar  
 V = Vermiculite

**DISCLAIMER NOTES**

- "ND" indicates no asbestos was detected; the method detection limit is 0.1%.
- "Trace" or "<" indicates asbestos was identified in the sample, but the concentration is less than the method quantitation limit. PLM coefficients of variance range from approximately 1.8 at the quantitation limit of 0.1% to 0.32 at high fiber concentrations.
- Samples are archived for three months following analysis and are then properly discarded.
- 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.
- This test report relates to the items tested.
- This report is not valid unless it bears the name of a NVLAP Lab Code 101208-0 approved signatory.
- Any reproduction of this document must be in full in order for the report to be valid.
- This report may not be used to claim product endorsement by NVLAP Lab Code 101208-0, any agency of the U.S. Government or any other laboratory accrediting agency.
- Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar nonfriable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as "non-asbestos-containing."
- Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA #100364, NY ELAP #10884) facility.
- If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.
- $\frac{(((100-A)/B)*C*100)+0.99}{100}$  = Asbestos Detected (%), where A=weight loss, B=total # of points counted, and C=total # of asbestos fibers counted.



December 8, 2017

RJ Lee Group, Inc.  
350 Hochberg Road  
Monroeville, PA 15146  
Attn: Matthew Sanchez

Via: Federal Express: 7709 4479 6174

RE: Fiber - PLM and Crystalline Silica - XRD Analyses.

Dear Mr. Sanchez:

Enclosed are the following samples for the required analyses. All samples are crushed rock and classified as a volcanic rock (meta-basalt). Also enclosed are the SDS sheets.

**Fiber and Crystalline Silica:**

For each sample listed (42 total samples), complete the following analyses:

1. Polarized Light Microscopy (PLM): Bulk Analyses – 1,000 Point Count (Untreated) for regulated asbestiform fibers (EPA 600/R-93/116). If fibrous material is detected contact SGI and retain sample for additional TEM testing.
2. Total Crystalline Silica (Bulk Analysis) by quantitative XRD.
3. A 10 - day turn-around service is requested for both the PLM and XRD analyses.

Four samples of rock granules (-8 mesh x 35 mesh). (200 grams each):

See attached Table 1.

Six samples of rock fines (-35 mesh x 325 mesh). (100 - 200 grams each):

See attached Table 1.

Twenty samples of finished product (-8 mesh x 35 mesh). (100 grams each):

See attached Table 1.



**SPECIALTY GRANULES LLC.**

AOH1047929-0

13424 Pennsylvania Ave, Suite 303 // Hagerstown, MD 21742 // Tel: 301-733-4000 // Fax: 301-733-4003

[www.specialtygranules.com](http://www.specialtygranules.com)

Please address and send the lab results directly to:

Celeste Levine (Electronic Copy)  
GAF/ELK  
1361 Alps Road  
Wayne, NJ 07470  
973-628-3035  
[clevine@gaf.com](mailto:clevine@gaf.com)

with a copy sent to:

Ted Heath (Hard & Electronic Copy)  
Specialty Granules LLC  
34 Charles St  
Hagerstown, MD 21740  
(301) 714-1332  
[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

Payment will be made through SGI Purchase Order CH58958. Please copy Ted Heath and not Celeste Levine on the invoice.

Please call me with any questions.

Sincerely,

Ted Heath  
Project Manager  
Specialty Granules LLC  
[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

c.c.

G. Kamas – SGI  
M. McClure – SGI  
A. Shepeck – SGI  
C. Levine – SGI

Table 1: Sample Inventory for RJ Lee Testing

A041047929-0

Charmian Q3 Samples			RJ Lee Sample in g	Number of Samples
Plant	SRM#	Color/ Type		
Charmian	10962	Raw Granules	200	2
Charmian	10972	Fines L. Mill	200	2
Charmian	10970	Fines HLP	200	2
Charmian	10973	BackSurfacing	100	2
Charmian	10974	G-11 w/ oil HLP	100	2
Charmian	10975	G-11 w/ oil & siloxane HLP	100	2
Charmian	10976	G - 115 oiled	100	2
Charmian	10977	G - 171 oiled	100	2
Charmian	10978	G - 201 oiled	100	2
Charmian	10979	G- 340 oiled	100	2
Charmian	10996	G - 341 oiled	100	2
Charmian	10980	G - 546 oiled	100	2
Charmian	10981	G - 552 oiled	100	2
Charmian	10982	G -555 oiled	100	2
Charmian	10983	G -556 oiled	100	2
Charmian	10984	G - 560 oiled	100	2
Charmian	10985	G -615 oiled	100	2
Charmian	10986	G - 720 oiled	100	2
Charmian	10987	G - 760 oiled	100	2
Charmian	10988	G - 801 oiled	100	2
Charmian	10989	G - 11D oiled	100	2

42

	Raw Granule
	Rock Fines
	Finished Products

Rev'd 12-12-17 10:45 AM

Linda Marguis  
RJ Lee Group



## Laboratory Report

GAF/ELK  
1361 Alps Road  
Wayne, NJ 07470  
United States  
Attention: Celeste Levine  
Telephone: 973-628-3035

Report Date 12/29/2017  
Sample Receipt Date 12/12/2017  
RJ Lee Group Job No. AOH1047929-0  
Authorization/P.O. No. CH58958  
Client Job No./Name Crushed Rock

Analysis: Asbestos in Bulk Samples by Point Count

Method: EPA/600/R-93/116

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10421262.HPL	SRM# 10962	Yes	1	ND	<1 CE	100.00	M	AKB-12/28/2017
Description: Green Crushed Rock Limit Of Detection = 0.1%. 1000 points Counted.								
Weight Loss: 0.0%								
10421263.HPL	SRM# 10972	Yes	1	ND	<1 CE	100.00	AM, M	AKB-12/28/2017
Description: Green Crushed Rock Limit Of Detection = 0.1%. 1000 points Counted.								
Weight Loss: 0.0%								
10421264.HPL	SRM# 10970	Yes	1	ND		100.00	Q, CA, OP, M	EB-12/28/2017
Description: Green Powder 1000 Point Count. Detection Limit of 0.1%.								
Weight Loss: 0.0%								

Client Job No./Name: Crushed Rock

RJ Lee Group Job No: AOH1047929-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10421265.HPL	SRM# 10973	Yes	1	ND		100.00	Q, CA, OP, M	EB-12/28/2017
Description: Green Powder 1000 Point Count. Detection Limit of 0.1%.								
Weight Loss: 0.0%								
10421266.HPL	SRM# 10974	Yes	1	ND		100.00	Q, CA, OP, M	EB-12/28/2017
Description: Gray Powder 1000 Point Count. Detection Limit of 0.1%.								
Weight Loss: 0.0%								
10421267.HPL	SRM# 10975	Yes	1	ND		100.00	Q, CA, OP, M	WT-12/28/2017
Description: Green Powder. 1000 Points Counted. Detection Limit=0.1%.								
Weight Loss: 0.0%								
10421268.HPL	SRM# 10976	Yes	1	ND		100.00	Q, CA, OP, M	WT-12/28/2017
Description: Green Powder. 1000 Points Counted. Detection Limit=0.1%.								
Weight Loss: 0.0%								
10421269.HPL	SRM# 10977	Yes	1	ND		100.00	Q, CA, OP, M	WT-12/28/2017
Description: Green Powder. 1000 Points Counted. Detection Limit=0.1%.								
Weight Loss: 0.0%								
10421270.HPL	SRM# 10978	Yes	1	ND		100.00	Q, CA, OP, M	EB-12/28/2017
Description: Brown Powder 1000 Point Count. Detection Limit of 0.1%.								
Weight Loss: 0.0%								

Client Job No./Name: Crushed Rock

RJ Lee Group Job No: AOH1047929-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10421271.HPL	SRM# 10979	Yes	1	ND		100.00	Q, CA, OP, M	EB-12/28/2017
Description: Gray Powder 1000 Point Count. Detection Limit of 0.1%.								
Weight Loss: 0.0%								
10421272.HPL	SRM# 10996	Yes	1	ND		100.00	Q, CA, OP, M	EB-12/28/2017
Description: Gray Powder 1000 Point Count. Detection Limit of 0.1%.								
Weight Loss: 0.0%								
10421273.HPL	SRM# 10980	Yes	1	ND		100.00	Q, CA, OP, M	WT-12/28/2017
Description: Gray Powder. 1000 Points Counted. Detection Limit=0.1%.								
Weight Loss: 0.0%								
10421274.HPL	SRM# 10981	Yes	1	ND		100.00	Q, CA, OP, M	WT-12/28/2017
Description: Gray Powder. 1000 Points Counted. Detection Limit=0.1%.								
Weight Loss: 0.0%								
10421275.HPL	SRM# 10982	Yes	1	ND		100.00	Q, CA, OP, M	EB-12/28/2017
Description: Gray Powder 1000 Point Count. Detection Limit of 0.1%.								
Weight Loss: 0.0%								
10421276.HPL	SRM# 10983	Yes	1	ND		100.00	Q, CA, OP, M	EB-12/28/2017
Description: Gray Powder 1000 Point Count. Detection Limit of 0.1%.								
Weight Loss: 0.0%								

Client Job No./Name: Crushed Rock

RJ Lee Group Job No: AOH1047929-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10421277.HPL	SRM# 10984	Yes	1	ND		100.00	Q, CA, OP, M	EB-12/28/2017
Description: Gray Powder 1000 Point Count. Detection Limit of 0.1%.								
Weight Loss: 0.0%								
10421278.HPL	SRM# 10985	Yes	1	ND		100.00	Q, CA, OP, M	EB-12/28/2017
Description: Gray Powder 1000 Point Count. Detection Limit of 0.1%.								
Weight Loss: 0.0%								
10421279.HPL	SRM# 10986	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	LKS-12/28/2017
Description: Gray crushed rock. 1000 point count. Detection limit = 0.1%. No asbestiform minerals detected.								
Weight Loss: 0.0%								
10421280.HPL	SRM# 10987	Yes	1	ND		100.00	Q, CA, OP, M	EB-12/28/2017
Description: Gray Powder 1000 Point Count. Detection Limit of 0.1%.								
Weight Loss: 0.0%								
10421281.HPL	SRM# 10988	Yes	1	ND		100.00	Q, CA, OP, M	EB-12/28/2017
Description: Gray Powder 1000 Point Count. Detection Limit of 0.1%.								
Weight Loss: 0.0%								
10421282.HPL	SRM# 10989	Yes	1	ND		100.00	Q, CA, OP, M	EB-12/28/2017
Description: Gray Powder 1000 Point Count. Detection Limit of 0.1%.								
Weight Loss: 0.0%								

Client Job No./Name: Crushed Rock

RJ Lee Group Job No: AOH1047929-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
-----------------------	-------------------------	-------------	-------------	-------------------------	---------------------------	-----------------------------	--------------------	----------------------------



Authorized Signature:

Elizabeth Brown

**ASBESTOS**

AM = Amosite  
 AC = Actinolite  
 AN = Anthophyllite  
 CH = Chrysotile  
 CR = Crocidolite  
 TR = Tremolite

**NON-ASBESTOS**

CE = Cellulose  
 MW = Mineral Wool  
 FG = Fibrous Glass  
 SF = Synthetic Fibers  
 H = Hair  
 W = Wollastonite  
 OF = Other Fibers

**NON-FIBROUS MATERIALS**

AM = Amphibole  
 B = Binder  
 CA = Carbonates  
 CL = Clay  
 F = Feldspar  
 G = Gypsum  
 HY = Hydromagnesite  
 M = Miscellaneous  
 MI = Mica  
 OP = Opaque  
 OR = Organic  
 P = Perlite  
 Q = Quartz  
 T = Tar  
 V = Vermiculite

**DISCLAIMER NOTES**

- "ND" indicates no asbestos was detected; the method detection limit is 0.1%.
- "Trace" or "<" indicates asbestos was identified in the sample, but the concentration is less than the method quantitation limit. PLM coefficients of variance range from approximately 1.8 at the quantitation limit of 0.1% to 0.32 at high fiber concentrations.
- Samples are archived for three months following analysis and are then properly discarded.
- 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.
- This test report relates to the items tested.
- This report is not valid unless it bears the name of a NVLAP Lab Code 101208-0 approved signatory.
- Any reproduction of this document must be in full in order for the report to be valid.
- This report may not be used to claim product endorsement by NVLAP Lab Code 101208-0, any agency of the U.S. Government or any other laboratory accrediting agency.
- Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar nonfriable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as "non-asbestos-containing."
- Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA #100364, NY ELAP #10884) facility.
- If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.
- $\frac{(((100-A)/B)*C*100)+0.99}{100}$  = Asbestos Detected (%), where A=weight loss, B=total # of points counted, and C=total # of asbestos fibers counted.



April 12, 2018

RJ Lee Group, Inc.  
350 Hochberg Road  
Monroeville, PA 15146  
Attn: Matthew Sanchez

Via: Federal Express: 7719-7840-8532

RE: Fiber - PLM and Crystalline Silica - XRD Analyses.

Dear Mr. Sanchez:

Enclosed are the following samples for the required analyses. All samples are crushed rock and classified as a volcanic rock (meta-basalt). Also enclosed are the SDS sheets.

**Fiber and Crystalline Silica:**

For each sample listed (56 total samples), complete the following analyses:

1. Polarized Light Microscopy (PLM): Bulk Analyses – 1,000 Point Count (Untreated) for regulated asbestiform fibers (EPA 600/R-93/116). If fibrous material is detected contact SGI and retain sample for additional TEM testing.
2. Total Crystalline Silica (Bulk Analysis) by quantitative XRD.
3. A 10 - day turn-around service is requested for both the PLM and XRD analyses.

Four samples of rock granules (-8 mesh x 35 mesh). (200 grams each):

See attached Table 1.

Six samples of rock fines (-35 mesh x 325 mesh). (100 - 200 grams each):

See attached Table 1.

Twenty samples of finished product (-8 mesh x 35 mesh). (100 grams each):

See attached Table 1.

*RCVD 04-16-18 8:55AM  
Linda Magnus  
RJ Lee Group*



**SPECIALTY GRANULES LLC.**

*A041049252-0*

13424 Pennsylvania Ave, Suite 303 // Hagerstown, MD 21742 // Tel: 301-733-4000 // Fax: 301-733-4003

[www.specialtygranules.com](http://www.specialtygranules.com)

Please address and send the lab results directly to:

Celeste Levine (Electronic Copy)  
GAF/ELK  
1361 Alps Road  
Wayne, NJ 07470  
973-628-3035  
[clevine@gaf.com](mailto:clevine@gaf.com)

with a copy sent to:

Ted Heath (Hard & Electronic Copy)  
Specialty Granules LLC  
13424 Pennsylvania Ave., Suite 303  
Hagerstown, MD 21742  
(301) 714-1332  
[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

Payment will be made through SGI Purchase Order CH59988. Please copy Ted Heath and not Celeste Levine on the invoice.

Please call me with any questions.

Sincerely,

Ted Heath  
Project Manager  
Specialty Granules LLC  
[ted.heath@specialtygranules.com](mailto:ted.heath@specialtygranules.com)

c.c.

G. Kamas – SGI  
K. Moore – SGI  
A. Shepeck – SGI  
C. Levine – SGI

A0H1049252-0 - up Date Table 1

2017 CHR 4th Qrt Sample MIS-11 Inventory

RCVD 04-17-18

SLM

Table 1: Sample Inventory for RJ Lee Testing

Charmian Q4 Samples			RJ Lee Sample in g	Number of Samples
Plant	SRM#	Color/ Type		
Charmian	11031	Raw Granules	200	2
Charmian	11024	Fines L. Mill	200	2
Charmian	11029	Fines HLP	200	2
Charmian	11022	BackSurfacing	100	2
Charmian	11021	G-11 w/ oil HLP	100	2
Charmian	11020	G-11 w/ oil & siloxane HLP	100	2
Charmian	11019	G - 115 oiled	100	2
Charmian	11018	G - 171 oiled	100	2
Charmian	11017	G - 201 oiled	100	2
Charmian	11016	G - 340 oiled	100	2
Charmian	11015	G - 341 oiled	100	2
Charmian	11014	G - 546 oiled	100	2
Charmian	11013	G - 552 oiled	100	2
Charmian	11012	G -555 oiled	100	2
Charmian	11011	G -556 oiled	100	2
Charmian	11010	G - 560 oiled	100	2
Charmian	11009	G -615 oiled	100	2
Charmian	11008	G - 720 oiled	100	2
Charmian	11007	G - 760 oiled	100	2
Charmian	11006	G - 801 oiled	100	2
Charmian	11005	G - 11D oiled	100	2

Redacted - Does Not Relate to Charmian Facility

	Raw Granule
	Rock Fines
	Finished Products



## Laboratory Report

GAF/ELK  
 1361 Alps Road  
 Wayne, NJ 07470  
 United States  
 Attention: Celeste Levine  
 Telephone: 973-628-3035

Report Date 04/30/2018  
 Sample Receipt Date 04/16/2018  
 RJ Lee Group Job No. AOH1049252-0  
 Authorization/P.O. No. CH59988  
 Client Job No./Name 2017 4th Quarter

Analysis: Asbestos in Bulk Samples by Point Count  
 Method: EPA/600/R-93/116

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10434419.HPL	SRM# 11031	Yes	1	ND		100.00	Q, CA, AM, OP, M	BW-04/25/2018
Description: Gray Powder								
1000 Points Counted Limit of Detection 0.1%								
Weight Loss: 0.0%								
10434420.HPL	SRM# 11024	Yes	1	ND		100.00	Q, CA, AM, M	BW-04/25/2018
Description: Gray Powder								
1000 Points Counted Limit of Detection 0.1%								
Weight Loss: 0.0%								
10434421.HPL	SRM# 11029	Yes	1	ND		100.00	Q, CA, AM, OP, M	WT-04/26/2018
Description: Gray Powder.								
1000 Points Counted. Detection Limit=0.1%.								
Weight Loss: 0.0%								

Client Job No./Name: 2017 4th Quarter

RJ Lee Group Job No: AOH1049252-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10434422.HPL	SRM# 11022	Yes	1	ND		100.00	Q, CA, OP, M	WT-04/26/2018
Description:	Green Powder. 1000 Points Counted. Detection Limit=0.1%.							
Weight Loss:	0.0%							
10434423.HPL	SRM# 11021	Yes	1	ND		100.00	Q, CA, OP, M	WT-04/26/2018
Description:	Green Powder. 1000 Points Counted. Detection Limit=0.1%.							
Weight Loss:	0.0%							
10434424.HPL	SRM# 11020	Yes	1	ND		100.00	Q, CA, OP, M	WT-04/26/2018
Description:	Green Powder. 1000 Points Counted. Detection Limit=0.1%.							
Weight Loss:	0.0%							
10434425.HPL	SRM# 11019	Yes	1	ND		100.00	Q, CA, OP, M	WT-04/26/2018
Description:	Green Powder. 1000 Points Counted. Detection Limit=0.1%.							
Weight Loss:	0.0%							
10434426.HPL	SRM# 11018	Yes	1	ND		100.00	Q, CA, OP, M	EB-04/26/2018
Description:	Green Powder 1000 Point Count. Detection Limit of 0.1%.							
Weight Loss:	0.0%							
10434427.HPL	SRM# 11017	Yes	1	ND		100.00	Q, CA, OP, M	EB-04/26/2018
Description:	Brown Powder 1000 Point Count. Detection Limit of 0.1%.							
Weight Loss:	0.0%							

Client Job No./Name: 2017 4th Quarter

RJ Lee Group Job No: AOH1049252-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10434428.HPL	SRM# 11016	Yes	1	ND		100.00	Q, CA, OP, M	EB-04/26/2018
Description: Gray Powder 1000 Point Count. Detection Limit of 0.1%.								
Weight Loss: 0.0%								
10434429.HPL	SRM# 11015	Yes	1	ND		100.00	Q, CA, OP, M	EB-04/27/2018
Description: Gray Powder 1000 Point Count. Detection Limit of 0.1%.								
Weight Loss: 0.0%								
10434430.HPL	SRM# 11014	Yes	1	ND		100.00	Q, CA, OP, M	EB-04/27/2018
Description: Gray Powder 1000 Point Count. Detection Limit of 0.1%.								
Weight Loss: 0.0%								
10434431.HPL	SRM# 11013	Yes	1	ND		100.00	Q, CA, OP, M	WT-04/26/2018
Description: Gray Powder. 1000 Points Counted. Detection Limit=0.1%.								
Weight Loss: 0.0%								
10434432.HPL	SRM# 11012	Yes	1	ND		100.00	Q, CA, OP, M	WT-04/26/2018
Description: Gray Powder. 1000 Points Counted. Detection Limit=0.1%.								
Weight Loss: 0.0%								
10434433.HPL	SRM# 11011	Yes	1	ND		100.00	Q, CA, OP, M	WT-04/26/2018
Description: Gray Powder. 1000 Points Counted. Detection Limit=0.1%.								
Weight Loss: 0.0%								

Client Job No./Name: 2017 4th Quarter

RJ Lee Group Job No: AOH1049252-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10434434.HPL	SRM# 11010	Yes	1	<0.1 TR		100.00	OP, M	AKB-04/30/2018
Description:	Gray Powder Tremolite Asbestos Was Seen But Not Counted. Limit Of Detection = 0.1%. 1000 Points Counted.							
Weight Loss:	0.0%							
10434435.HPL	SRM# 11009	Yes	1	ND		100.00	Q, CA, OP, M	WT-04/30/2018
Description:	Green Powder. 1000 Points Counted. Detection Limit=0.1%.							
Weight Loss:	0.0%							
10434436.HPL	SRM# 11008	Yes	1	ND		100.00	Q, CA, OP, M	WT-04/30/2018
Description:	Green Powder. 1000 Points Counted. Detection Limit=0.1%.							
Weight Loss:	0.0%							
10434437.HPL	SRM# 11007	Yes	1	ND		100.00	Q, CA, OP, M	EB-04/27/2018
Description:	Gray Powder 1000 Point Count. Detection Limit of 0.1%.							
Weight Loss:	0.0%							
10434438.HPL	SRM# 11006	Yes	1	ND		100.00	Q, CA, OP, M	EB-04/27/2018
Description:	Gray Powder 1000 Point Count. Detection Limit of 0.1%.							
Weight Loss:	0.0%							

Client Job No./Name: 2017 4th Quarter

RJ Lee Group Job No: AOH1049252-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10434439.HPL	SRM# 11005	Yes	1	ND		100.00	Q, CA, OP, M	WT-04/30/2018

Description: Gray Powder.  
1000 Points Counted. Detection Limit=0.1%.

Weight Loss: 0.0%

**Redacted - Does Not Relate to Charmian Facility**

Client Job No./Name: 2017 4th Quarter

RJ Lee Group Job No: AOH1049252-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
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Redacted - Does Not Relate to Charmian Facility

Client Job No./Name: 2017 4th Quarter

RJ Lee Group Job No: AOH1049252-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
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Authorized Signature: \_\_\_\_\_

Elizabeth Brown, Microscopist

#### ASBESTOS

AM = Amosite  
AC = Actinolite  
AN = Anthophyllite  
CH = Chrysotile  
CR = Crocidolite  
TR = Tremolite

#### NON-ASBESTOS

CE = Cellulose  
MW = Mineral Wool  
FG = Fibrous Glass  
SF = Synthetic Fibers  
H = Hair  
W = Wollastonite  
OF = Other Fibers

#### NON-FIBROUS MATERIALS

AM = Amphibole  
B = Binder  
CA = Carbonates  
CL = Clay  
F = Feldspar  
G = Gypsum  
HY = Hydromagnesite  
M = Miscellaneous  
MI = Mica  
OP = Opaque  
OR = Organic  
P = Perlite  
Q = Quartz  
T = Tar  
V = Vermiculite

#### DISCLAIMER NOTES

- "ND" indicates no asbestos was detected; the method detection limit is 0.1%.
- "Trace" or "<" indicates asbestos was identified in the sample, but the concentration is less than the method quantitation limit. PLM coefficients of variance range from approximately 1.8 at the quantitation limit of 0.1% to 0.32 at high fiber concentrations.
- Samples are archived for three months following analysis and are then properly discarded.
- 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.
- This test report relates to the items tested.
- This report is not valid unless it bears the name of a NVLAP Lab Code 101208-0 approved signatory.
- Any reproduction of this document must be in full in order for the report to be valid.
- This report may not be used to claim product endorsement by NVLAP Lab Code 101208-0, any agency of the U.S. Government or any other laboratory accrediting agency.
- Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar nonfriable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as "non-asbestos-containing."
- Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA #100364, NY ELAP #10884) facility.
- If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.
- $((100-A)/B)*C$  = Asbestos Detected (%), where A=weight loss, B=total # of points counted, and C=total # of asbestos fibers counted.

COPY



SPECIALTY GRANULES LLC.

APH1049252-0

APH1049252-2

13424 Pennsylvania Ave, Suite 303 // Hagerstown, MD 21742 // Tel: 301-733-4000 // Fax: 301-733-4003

www.specialtygranules.com

April 12, 2018

RJ Lee Group, Inc.  
350 Hochberg Road  
Monroeville, PA 15146  
Attn: Matthew Sanchez

Via: Federal Express: 7719-7840-8532

RE: Fiber - PLM and Crystalline Silica - XRD Analyses.

Dear Mr. Sanchez:

Enclosed are the following samples for the required analyses. All samples are crushed rock and classified as a volcanic rock (meta-basalt). Also enclosed are the SDS sheets.

**Fiber and Crystalline Silica:**

For each sample listed (56 total samples), complete the following analyses:

1. Polarized Light Microscopy (PLM): Bulk Analyses – 1,000 Point Count (Untreated) for regulated asbestiform fibers (EPA 600/R-93/116). If fibrous material is detected contact SGI and retain sample for additional TEM testing.
2. Total Crystalline Silica (Bulk Analysis) by quantitative XRD.
3. A 10 - day turn-around service is requested for both the PLM and XRD analyses.

Four samples of rock granules (-8 mesh x 35 mesh). (200 grams each):

See attached Table 1.

Six samples of rock fines (-35 mesh x 325 mesh). (100 - 200 grams each):

See attached Table 1.

Twenty samples of finished product (-8 mesh x 35 mesh). (100 grams each):

See attached Table 1.

RCVD 04-16-18 8:55AM  
Yvonne Marquez  
RJ Lee Group



# COPY



**SPECIALTY GRANULES LLC.**

13424 Pennsylvania Ave, Suite 303 // Hagerstown, MD 21742 // Tel: 301-733-4000 // Fax: 301-733-4003

[www.specialtygranules.com](http://www.specialtygranules.com)

A041049252-0

A041049252-2

Please address and send the lab results directly to:

Celeste Levine (Electronic Copy)  
GAF/ELK  
1361 Alps Road  
Wayne, NJ 07470  
973-628-3035  
[clevine@gaf.com](mailto:clevine@gaf.com)

with a copy sent to:

Ted Heath (Hard & Electronic Copy)  
Specialty Granules LLC  
13424 Pennsylvania Ave., Suite 303  
Hagerstown, MD 21742  
(301) 714-1332  
[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

Payment will be made through SGI Purchase Order CH59988. Please copy Ted Heath and not Celeste Levine on the invoice.

Please call me with any questions.

Sincerely,

Ted Heath  
Project Manager  
Specialty Granules LLC  
[ted.heath@specialtygranules.com](mailto:ted.heath@specialtygranules.com)

c.c.

G. Kamas – SGI  
K. Moore – SGI  
A. Shepeck – SGI  
C. Levine – SGI

COPY

A041049252-2

A041049252-0 - up Date Table 1

2017 CHR 4th Qrt Sample MIS-11 Inventory

RCUR 04-17-18

JLM

Table 1: Sample Inventory for RJ Lee Testing

Charmian Q4 Samples			RJ Lee Sample in g	Number of Samples
Plant	SRM#	Color/ Type		
Charmian	11031	Raw Granules	200	2
Charmian	11024	Fines L. Mill	200	2
Charmian	11029	Fines HLP	200	2
Charmian	11022	Back Surfacing	100	2
Charmian	11021	G-11 w/ oil HLP	100	2
Charmian	11020	G-11 w/ oil & siloxane HLP	100	2
Charmian	11019	G - 115 oiled	100	2
Charmian	11018	G - 171 oiled	100	2
Charmian	11017	G - 201 oiled	100	2
Charmian	11016	G - 340 oiled	100	2
Charmian	11015	G - 341 oiled	100	2
Charmian	11014	G - 546 oiled	100	2
Charmian	11013	G - 552 oiled	100	2
Charmian	11012	G - 555 oiled	100	2
Charmian	11011	G - 556 oiled	100	2
Charmian	11010	G - 560 oiled	100	2
Charmian	11009	G - 615 oiled	100	2
Charmian	11008	G - 720 oiled	100	2
Charmian	11007	G - 760 oiled	100	2
Charmian	11006	G - 801 oiled	100	2
Charmian	11005	G - 11D oiled	100	2

Redacted - Does Not Relate to Charmian Facility

	Raw Granule
	Rock Fines
	Finished Products

## Final Laboratory Report

### TEM Bulk Protocol

Attention: Celeste Levine  
GAF/ELK  
1361 Alps Road  
Wayne, NJ 07470  
US

Report Date: 06/04/2018  
Sample Receipt Date: 05/08/2018  
RJ Lee Group Job No.: AOH1049252-2  
Authorization/P.O. No.:  
Samples Received: 1  
Client Job No.: 2017 4th Quarter

Method: ASTM D-5756 Standard Test Method, Modified

**TABLE 1 -- Weight Percent of Asbestos, Cleavage Fragment Amphibole and Non-Asbestos**

						-----Weight Percent----- Total Structures Analytical Sensitivity			
Client Sample Number	RJLG Sample Number	Total Structures				Chry	Amph Asb	Amph Cleavage Fragment	Non Asbestos
SRM# 11010	10434434	Chry	Amph	Cleavage	Non Asbestos	< 3.4E-6 3.4E-6	< 4.3E-6 4.3E-6	1.3E-1 2.7E-6	< 2.1E-6 2.1E-6
		0	0	4	0				

#### NOTES

- "<" indicates results less than analytical sensitivity. "----" indicates that sample was not analyzed.
- Sample(s) for this project were analyzed at our: Monroeville, PA (A HA #100364, NVLAP #101208-0, NY ELAP #10884) facility.
- If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.
- Density of amphibole:  $3.2 \times 10^{-3}$  ng/  $\mu$  m<sup>3</sup>, density of chrysotile:  $2.55 \times 10^{-3}$  ng/  $\mu$  m<sup>3</sup>, density of non-asbestos:  $3.00 \times 10^{-3}$  ng/  $\mu$  m<sup>3</sup>.
- Abbreviations: N/A-Not Applicable, Chry-Chrysotile Asbestos, Amph-Amphibole Asbestos, Asb-Asbestos Amphibole, Cleavage-Cleavage Amphibole.
- Samples will be held for 90 days and then disposed of per Federal regulations.
- 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

This report may not be used to claim product endorsement by NVLAP, NY ELAP, AIHA, 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 a RJ Lee Group approved signatory.

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# RJ Lee Group, Inc.

RJ Lee Group Job No: AOH1049252-2  
Client Job No/Name: 2017 4th Quarter

## Final Laboratory Report (cont'd)

Client: GAF/ELK  
Report Date: 06/04/2018

**TABLE 2 -- Weight Percent of Asbestos, Cleavage Fragment Amphibole and Non-Asbestos 5 µm**

		-----Structures 5 µm-----				-----Weight Percent----- Structures 5 µm Analytical Sensitivity Amphibole			
Client Sample Number	RJLG Sample Number	Chry	Amph	Cleavage	Non-Asbestos	Chry	Asb	Cleavage Fragment	Non-Asbestos
SRM# 11010	10434434	0	0	2	0	<u>&lt; 3.4E-5</u> 3.4E-5	<u>&lt; 4.3E-5</u> 4.3E-5	<u>1.3E-1</u> 2.7E-5	<u>&lt; 2.1E-5</u> 2.1E-5

### NOTES

1. "<" indicates results less than analytical sensitivity. "----" indicates that sample was not analyzed.
2. Sample(s) for this project were analyzed at our: Monroeville, PA (A HA #100364, NVLAP #101208-0, NY ELAP #10884) facility.
3. If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.
4. Density of amphibole:  $3.2 \times 10^{-3}$  ng/µm<sup>3</sup>, density of chrysotile:  $2.55 \times 10^{-3}$  ng/µm<sup>3</sup>, density of non-asbestos:  $3.00 \times 10^{-3}$  ng/µm<sup>3</sup>.
5. Abbreviations: N/A-Not Applicable, Chry-Chrysotile Asbestos, Amph-Amphibole Asbestos, Asb-Asbestos Amphibole, Cleavage-Cleavage Amphibole.
6. Samples will be held for 90 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.

RJ Lee Group Job No: AOH1049252-2  
Client Job No/Name: 2017 4th Quarter

## Final Laboratory Report (cont'd)

Client: GAF/ELF  
Report Date: 06/04/2018

Client Sample Number	RJLG Sample Number	Material Used (gm)	Area Analyzed Total (mm <sup>2</sup> )	Area Analyzed 5 $\mu$ m (mm <sup>2</sup> )	Effective Filter Area (mm <sup>2</sup> )	Dilution Factor
SRM# 11010	10434434	0.0003	0.30007	0.30007	1220	1.0000

Authorized Signature:



Ashleigh Sload, Analyst

### NOTES

1. "<" indicates results less than analytical sensitivity. "---" indicates that sample was not analyzed.
2. Sample(s) for this project were analyzed at our: Monroeville, PA (A HA #100364, NVLAP #101208-0, NY ELAP #10884) facility.
3. If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.
4. Density of amphibole:  $3.2 \times 10^{-3}$  ng/  $\mu$  m<sup>3</sup>, density of chrysotile:  $2.55 \times 10^{-3}$  ng/  $\mu$  m<sup>3</sup>, density of non-asbestos:  $3.00 \times 10^{-3}$  ng/  $\mu$  m<sup>3</sup>.
5. Abbreviations: N/A-Not Applicable, Chry-Chrysotile Asbestos, Amph-Amphibole Asbestos, Asb-Asbestos Amphibole, Cleavage-Cleavage Amphibole.
6. Samples will be held for 90 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

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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 ninety (90) days before discarding. A shipping and handling fee will be assessed for the return of any sample.

RJL: AOH1049252-2	10434434.HTA1	Microscope tem2000fx2	Grid Openings	10
SRM# 11010	Specialty Granules I	Magnification 21 KX	Asbestos	0.0
Wt: 0.0003 gm	Grid: 0.0086 mm <sup>2</sup>	Acc. Voltage 120 KV	Asbestos >= 5µm	0.0
Dil: 1.0	Filter Size: 47 mm	Operator: Jon Swope	Nonasbestos	2.0
HQ43305		Cv = 0	Nonasbestos >= 5µm	0.0
			% Wt of largest asbestos structure	%

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	1	1.98	0.3	Amphibole		MgSiCaFe15001D	Image1	Diff1	Acti	Cle	
9	2	1.9	0.35	Amphibole		MgSiCaFe		X	Acti	Cle	
10				NSD							

**10% Particulate**

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

Initial Review: 6/1/2018 1:10:06 PM approve by Jon Swope

Final Review: 6/4/18 8:46 AM approve by Ashleigh Sload

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

Date Analyzed: 6/1/2018

RJL: AOH1049252-2	10434434.HTA1	Microscope tem2000fx2	Grid Openings	25
SRM# 11010	Specialty Granules I	Magnification 10 KX	Asbestos	0.0
Wt: 0.0003 gm	Grid: 0.0086 mm <sup>2</sup>	Acc. Voltage 120 KV	Nonasbestos	2.0
Dil: 1.0	Filter Size: 47 mm	Operator: Jon Swope	% Wt of largest asbestos structure	%
HQ43305		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	1	7.2	0.7	Amphibole		MgSiCaFe15002D	Image1	Diff1	Acti	Cle	
18				NSD							
19				NSD							
20				NSD							
21				NSD							
22				NSD							
23				NSD							
24				NSD							
25	1	11.4	1.9	Amphibole		MgSiCaFe		X	Acti	Cle	

10% Particulate

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

Initial Review: 6/1/2018 11:09:46 AM approve by Jon Swope

Final Review: 6/4/18 8:46 AM approve by Ashleigh Sload



August 7, 2018

RJ Lee Group, Inc.  
350 Hochberg Road  
Monroeville, PA 15146  
Attn: Matthew Sanchez

Via: Federal Express: 7729 1831 6399

RE: Fiber - PLM and Crystalline Silica - XRD Analyses.

Dear Mr. Sanchez:

Enclosed are the following samples for the required analyses. All samples are crushed rock and classified as a volcanic rock (meta-basalt). Also enclosed are the SDS sheets.

**Fiber and Crystalline Silica:**

For each sample listed (44 total samples), complete the following analyses:

1. Polarized Light Microscopy (PLM): Bulk Analyses – 1,000 Point Count (Untreated) for regulated asbestiform fibers (EPA 600/R-93/116). If fibrous material is detected contact SGI and retain sample for additional TEM testing.
2. Total Crystalline Silica (Bulk Analysis) by quantitative XRD.
3. A 10 - day turn-around service is requested for both the PLM and XRD analyses.

Four samples of rock granules (-8 mesh x 35 mesh). (200 grams each):

See attached Table 1.

Six samples of rock fines (-35 mesh x 325 mesh). (100 - 200 grams each):

See attached Table 1.

Twenty samples of finished product (-8 mesh x 35 mesh). (100 grams each):

See attached Table 1.





**SPECIALTY GRANULES LLC.**

AOH1050789-0

13424 Pennsylvania Ave, Suite 303 // Hagerstown, MD 21742 // Tel: 301-733-4000 // Fax: 301-733-4003

[www.specialtygranules.com](http://www.specialtygranules.com)

Please address and send the lab results directly to:

with a copy sent to:

Celeste Levine (Electronic Copy)  
GAF/ELK  
1361 Alps Road  
Wayne, NJ 07470  
973-628-3035  
[clevine@gaf.com](mailto:clevine@gaf.com)

Ted Heath (Hard & Electronic Copy)  
Specialty Granules LLC  
13424 Pennsylvania Ave., Suite 303  
Hagerstown, MD 21742  
(301) 714-1332  
[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

Payment will be made through SGI Purchase Order CH61057. Please copy Ted Heath and not Celeste Levine on the invoice.

Please call me with any questions.

Sincerely,

Ted Heath  
Project Manager  
Specialty Granules LLC  
[ted.heath@specialtygranules.com](mailto:ted.heath@specialtygranules.com)

c.c.

G. Kamas – SGI

K. Moore – SGI

A. Shepeck – SGI

C. Levine – SGI

A0H1050789-0

Table 1: Sample Inventory for RJ Lee Testing

Charmian Q1 Samples			RJ Lee Sample in g	Number of Samples
Plant	SRM#	Color/ Type		
Charmian	11,134	Raw Granules	200	2
Charmian	11,139	Fines L. Mill	100	2
Charmian	11,138	Fines HLP	100	2
Charmian	11,140	BackSurfacing	100	2
Charmian	11,131	G-11 w/ oil HLP	100	2
Charmian	11,132	G-11 w/ oil & siloxane HLP	100	2
Charmian	11,116	G - 115 oiled	100	2
Charmian	11,117	G - 171 oiled	100	2
Charmian	11,118	G - 201 oiled	100	2
Charmian	11,119	G - 340 oiled	100	2
Charmian	11,120	G - 341 oiled	100	2
Charmian	11,121	G - 546 oiled	100	2
Charmian	11,122	G - 552 oiled	100	2
Charmian	11,123	G -555 oiled	100	2
Charmian	11,124	G -556 oiled	100	2
Charmian	11,125	G - 560 oiled	100	2
Charmian	11,126	G -615 oiled	100	2
Charmian	11,127	G - 720 oiled	100	2
Charmian	11,128	G - 760 oiled	100	2
Charmian	11,129	G - 801 oiled	100	2
Charmian	11,130	G - 11D oiled	100	2
Charmian	11,133	BackSurfacing w/oil & siloxane	100	2

44

	Raw Granule
	Rock Fines
	Finished Products

RCVD 08-10-18 8:48AM

Ymola Margus  
RJ Lee Group

## Laboratory Report

GAF/ELK  
1361 Alps Road  
Wayne, NJ 07470  
United States  
Attention: Celeste Levine  
Telephone: 973-628-3035

Report Date 08/24/2018  
Sample Receipt Date 08/10/2018  
RJ Lee Group Job No. AOH1050789-0  
Authorization/P.O. No. CH61057  
Client Job No./Name

Analysis: Asbestos in Bulk Samples by Point Count

Method: EPA/600/R-93/116

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10446808.HPL	SRM# 11,134	Yes	1	ND		100.00	Q, CA, OP, M	WT-08/23/2018
Description: Green Crushed Rock. 1000 Points Counted. Detection Limit=0.1%.								
Weight Loss: 0.0%								
10446809.HPL	SRM# 11,139	Yes	1	ND		100.00	Q, CA, OP, M	WT-08/23/2018
Description: Green Crushed Rock. 1000 Points Counted. Detection Limit=0.1%.								
Weight Loss: 0.0%								
10446810.HPL	SRM# 11,138	Yes	1	ND		100.00	Q, CA, OP, M	BW-08/23/2018
Description: Green Crushed Rock 1000 Points Counted Limit of Detection 0.1%								
Weight Loss: 0.0%								

Client Job No./Name:

RJ Lee Group Job No: AOH1050789-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10446811.HPL	SRM# 11,140	Yes	1	ND		100.00	Q, CA, OP, M	BW-08/23/2018
Description:	Green Crushed Rock 1000 Points Counted Limit of Detection 0.1%							
Weight Loss:	0.0%							
10446812.HPL	SRM# 11,131	Yes	1	ND		100.00	Q, CA, OP, M	WT-08/24/2018
Description:	Green Crushed Rock. 1000 Points Counted. Detection Limit=0.1%.							
Weight Loss:	0.0%							
10446813.HPL	SRM# 11,132	Yes	1	ND		100.00	Q, CA, AM, OP, M	EB-08/24/2018
Description:	Green Powder 1000 Point Count. Detection Limit of 0.1%.							
Weight Loss:	0.0%							
10446814.HPL	SRM# 11,116	Yes	1	ND		100.00	Q, CA, AM, OP, M	EB-08/24/2018
Description:	Green Powder 1000 Point Count. Detection Limit of 0.1%.							
Weight Loss:	0.0%							
10446815.HPL	SRM# 11,117	Yes	1	ND		100.00	Q, CA, AM, OP, M	EB-08/24/2018
Description:	Green Powder 1000 Point Count. Detection Limit of 0.1%.							
Weight Loss:	0.0%							
10446816.HPL	SRM# 11,118	Yes	1	ND		100.00	Q, CA, OP, M	WT-08/24/2018
Description:	Beige Crushed Rock. 1000 Points Counted. Detection Limit=0.1%.							
Weight Loss:	0.0%							

Client Job No./Name:

RJ Lee Group Job No: AOH1050789-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10446817.HPL	SRM# 11,119	Yes	1	ND		100.00	Q, CA, OP, M	WT-08/24/2018
Description:	Gray Crushed Rock. 1000 Points Counted. Detection Limit=0.1%.							
Weight Loss:	0.0%							
10446818.HPL	SRM# 11,120	Yes	1	ND		100.00	Q, CA, AM, OP, M	EB-08/24/2018
Description:	Green Powder 1000 Point Count. Detection Limit of 0.1%.							
Weight Loss:	0.0%							
10446819.HPL	SRM# 11,121	Yes	1	ND		100.00	Q, CA, AM, OP, M	EB-08/24/2018
Description:	Gray Powder 1000 Point Count. Detection Limit of 0.1%.							
Weight Loss:	0.0%							
10446820.HPL	SRM# 11,122	Yes	1	ND		100.00	Q, CA, AM, OP, M	EB-08/24/2018
Description:	Gray Powder 1000 Point Count. Detection Limit of 0.1%.							
Weight Loss:	0.0%							
10446821.HPL	SRM# 11,123	Yes	1	ND		100.00	Q, CA, OP, M	WT-08/24/2018
Description:	Gray Crushed Rock. 1000 Points Counted. Detection Limit=0.1%.							
Weight Loss:	0.0%							
10446822.HPL	SRM# 11,124	Yes	1	ND		100.00	Q, CA, OP, M	WT-08/24/2018
Description:	Beige Crushed Rock. 1000 Points Counted. Detection Limit=0.1%.							
Weight Loss:	0.0%							

Client Job No./Name:

RJ Lee Group Job No: AOH1050789-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10446823.HPL	SRM# 11,125	Yes	1	ND		100.00	Q, CA, OP, M	WT-08/24/2018
Description:	Green Crushed Rock. 1000 Points Counted. Detection Limit=0.1%.							
Weight Loss:	0.0%							
10446824.HPL	SRM# 11,126	Yes	1	ND		100.00	Q, CA, OP, M	WT-08/24/2018
Description:	Green Crushed Rock. 1000 Points Counted. Detection Limit=0.1%.							
Weight Loss:	0.0%							
10446825.HPL	SRM# 11,127	Yes	1	ND		100.00	Q, CA, OP, M	WT-08/24/2018
Description:	Green Crushed Rock. 1000 Points Counted. Detection Limit=0.1%.							
Weight Loss:	0.0%							
10446826.HPL	SRM# 11,128	Yes	1	ND		100.00	Q, CA, OP, M	WT-08/24/2018
Description:	Green Crushed Rock. 1000 Points Counted. Detection Limit=0.1%.							
Weight Loss:	0.0%							
10446827.HPL	SRM# 11,129	Yes	1	ND		100.00	Q, CA, OP, M	WT-08/24/2018
Description:	Gray Crushed Rock. 1000 Points Counted. Detection Limit=0.1%.							
Weight Loss:	0.0%							
10446828.HPL	SRM# 11,130	Yes	1	ND		100.00	Q, CA, OP, M	WT-08/24/2018
Description:	Gray Crushed Rock. 1000 Points Counted. Detection Limit=0.1%.							
Weight Loss:	0.0%							

Client Job No./Name:

RJ Lee Group Job No: AOH1050789-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10446829.HPL	SRM# 11,133	Yes	1	ND		100.00	Q, CA, OP, M	WT-08/24/2018
Description:	Gray Crushed Rock. 1000 Points Counted. Detection Limit=0.1%.							
Weight Loss:	0.0%							

Client Job No./Name:

RJ Lee Group Job No: AOH1050789-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
-----------------------	-------------------------	-------------	-------------	-------------------------	---------------------------	-----------------------------	--------------------	----------------------------

Authorized Signature:



Wei Tseng, Microscopist

**ASBESTOS**

AM = Amosite  
 AC = Actinolite  
 AN = Anthophyllite  
 CH = Chrysotile  
 CR = Crocidolite  
 TR = Tremolite

**NON-ASBESTOS**

CE = Cellulose  
 MW = Mineral Wool  
 FG = Fibrous Glass  
 SF = Synthetic Fibers  
 H = Hair  
 W = Wollastonite  
 OF = Other Fibers

**NON-FIBROUS MATERIALS**

AM = Amphibole  
 B = Binder  
 CA = Carbonates  
 CL = Clay  
 F = Feldspar  
 G = Gypsum  
 HY = Hydromagnesite  
 M = Miscellaneous  
 MI = Mica  
 OP = Opaque  
 OR = Organic  
 P = Perlite  
 Q = Quartz  
 T = Tar  
 V = Vermiculite

**DISCLAIMER NOTES**

- "ND" indicates no asbestos was detected; the method detection limit is 0.1%.
- "Trace" or "<" indicates asbestos was identified in the sample, but the concentration is less than the method quantitation limit. PLM coefficients of variance range from approximately 1.8 at the quantitation limit of 0.1% to 0.32 at high fiber concentrations.
- Samples are archived for three months following analysis and are then properly discarded.
- 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.
- This test report relates to the items tested.
- This report is not valid unless it bears the name of a NVLAP Lab Code 101208-0 approved signatory.
- Any reproduction of this document must be in full in order for the report to be valid.
- This report may not be used to claim product endorsement by NVLAP Lab Code 101208-0, any agency of the U.S. Government or any other laboratory accrediting agency.
- Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar nonfriable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as "non-asbestos-containing."
- Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA #100364, NY ELAP #10884) facility.
- If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.
- $((100-A)/B)*C$  = Asbestos Detected (%), where A=weight loss, B=total # of points counted, and C=total # of asbestos fibers counted.





**SPECIALTY GRANULES LLC.**

13424 Pennsylvania Ave, Suite 303 // Hagerstown, MD 21742 // Tel: 301-733-4000 // Fax: 301-733-4003

[www.specialtygranules.com](http://www.specialtygranules.com)

A0H 1050830-0  
A0H 1050830-1

August 7, 2018

RJ Lee Group, Inc.  
350 Hochberg Road  
Monroeville, PA 15146  
Attn: Matthew Sanchez

Via: Federal Express: 7729 1876 8375

RE: Fiber - PLM and Crystalline Silica - XRD Analyses.

Dear Mr. Sanchez:

Enclosed are the following samples for the required analyses. All samples are crushed rock and classified as a volcanic rock (meta-basalt). Also enclosed are the SDS sheets.

**Fiber and Crystalline Silica:**

For each sample listed (44 total samples), complete the following analyses:

1. Polarized Light Microscopy (PLM): Bulk Analyses – 1,000 Point Count (Untreated) for regulated asbestiform fibers (EPA 600/R-93/116). If fibrous material is detected contact SGI and retain sample for additional TEM testing.
2. Total Crystalline Silica (Bulk Analysis) by quantitative XRD.
3. A 10 - day turn-around service is requested for both the PLM and XRD analyses.

Four samples of rock granules (-8 mesh x 35 mesh). (200 grams each):

See attached Table 1.

Six samples of rock fines (-35 mesh x 325 mesh). (100 - 200 grams each):

See attached Table 1.

Twenty samples of finished product (-8 mesh x 35 mesh). (100 grams each):

See attached Table 1.

rec. 08/14/2018 Lisa Hall 8:50AM



**SPECIALTY GRANULES LLC.**

13424 Pennsylvania Ave, Suite 303 // Hagerstown, MD 21742 // Tel: 301-733-4000 // Fax: 301-733-4003

[www.specialtygranules.com](http://www.specialtygranules.com)

A0H1050830-0  
A0H1050830-1

Please address and send the lab results directly to:

Celeste Levine (Electronic Copy)  
GAF/ELK  
1361 Alps Road  
Wayne, NJ 07470  
973-628-3035  
[clevine@gaf.com](mailto:clevine@gaf.com)

with a copy sent to:

Ted Heath (Hard & Electronic Copy)  
Specialty Granules LLC  
13424 Pennsylvania Ave., Suite 303  
Hagerstown, MD 21742  
(301) 714-1332  
[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

Payment will be made through SGI Purchase Order CH61058. Please copy Ted Heath and not Celeste Levine on the invoice.

Please call me with any questions.

Sincerely,

Ted Heath  
Project Manager  
Specialty Granules LLC  
[ted.heath@specialtygranules.com](mailto:ted.heath@specialtygranules.com)

c.c.

G. Kamas – SGI

K. Moore – SGI

A. Shepeck – SGI

C. Levine – SGI

rec. 08/14/2018 Lisa Hall 8:50 AM

Table 1: Sample Inventory for RJ Lee Testing

Charmian Q2 Samples			RJ Lee Sample in g	Number of Samples
Plant	SRM#	Color/ Type		
Charmian	11,240	Raw Granules	200	2
Charmian	11,238	Fines L. Mill	100	2
Charmian	11,239	Fines HLP	100	2
Charmian	11,241	BackSurfacing	100	2
Charmian	11,213	G-11 w/ oil HLP	100	2
Charmian	11,214	G-11 w/ oil & siloxane HLP	100	2
Charmian	11,215	G - 115 oiled	100	2
Charmian	11,216	G - 171 oiled	100	2
Charmian	11,217	G - 201 oiled	100	2
Charmian	11,218	G- 340 oiled	100	2
Charmian	11,219	G - 341 oiled	100	2
Charmian	11,220	G - 546 oiled	100	2
Charmian	11,221	G - 552 oiled	100	2
Charmian	11,222	G -555 oiled	100	2
Charmian	11,223	G -556 oiled	100	2
Charmian	11,224	G - 560 oiled	100	2
Charmian	11,225	G -615 oiled	100	2
Charmian	11,226	G - 720 oiled	100	2
Charmian	11,227	G - 760 oiled	100	2
Charmian	11,228	G - 801 oiled	100	2
Charmian	11,229	G - 11D oiled	100	2
Charmian	11,230	BackSurfacing w/oil & siloxane	100	2

44

	Raw Granule
	Rock Fines
	Finished Products

rec. 08/14/2018 Lisa Hall 8:50 AM

## Laboratory Report

GAF/ELK  
1361 Alps Road  
Wayne, NJ 07470  
United States  
Attention: Celeste Levine  
Telephone: 973-628-3035

Report Date 08/28/2018  
Sample Receipt Date 08/14/2018  
RJ Lee Group Job No. AOH1050830-0  
Authorization/P.O. No. CH61058  
Client Job No./Name

Analysis: Asbestos in Bulk Samples by Point Count

Method: EPA/600/R-93/116

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10447342.HPL	SRM#11,240	Yes	1	ND		100.00	Q, CA, OP, M	WT-08/26/2018
Description: Green Crushed Rock. 1000 Points Counted. Detection Limit=0.1%.								
Weight Loss: 0.0%								
10447343.HPL	SRM#11,238	Yes	1	ND		100.00	Q, CA, OP, M	WT-08/26/2018
Description: Green Crushed Rock. 1000 Points Counted. Detection Limit=0.1%.								
Weight Loss: 0.0%								
10447344.HPL	SRM#11,239	Yes	1	ND		100.00	Q, CA, OP, M	WT-08/26/2018
Description: Green Crushed Rock. 1000 Points Counted. Detection Limit=0.1%.								
Weight Loss: 0.0%								

Client Job No./Name:

RJ Lee Group Job No: AOH1050830-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10447345.HPL	SRM#11,241	Yes	1	ND		100.00	Q, CA, OP, M	WT-08/26/2018
Description: Green Crushed Rock. 1000 Points Counted. Detection Limit=0.1%.								
Weight Loss: 0.0%								
10447346.HPL	SRM#11,213	Yes	1	ND		100.00	Q, CA, OP, M	BW-08/27/2018
Description: Green Crushed Rock 1000 Points Counted Limit of Detection 0.1%								
Weight Loss: 0.0%								
10447347.HPL	SRM#11,214	Yes	1	ND		100.00	Q, CA, OP, M	BW-08/27/2018
Description: Green Crushed Rock 1000 Points Counted Limit of Detection 0.1%								
Weight Loss: 0.0%								
10447348.HPL	SRM#11,215	Yes	1	ND		100.00	Q, CA, OP, M	BW-08/27/2018
Description: Green Crushed Rock 1000 Points Counted Limit of Detection 0.1%								
Weight Loss: 0.0%								
10447349.HPL	SRM#11,216	Yes	1	ND		100.00	Q, CA, OP, M	BW-08/28/2018
Description: Green Crushed Rock 1000 Points Counted Limit of Detection 0.1%								
Weight Loss: 0.0%								
10447350.HPL	SRM#11,217	Yes	1	ND		100.00	Q, CA, OP, M	BW-08/27/2018
Description: Tan Crushed Rock 1000 Points Counted Limit of Detection 0.1%								
Weight Loss: 0.0%								

Client Job No./Name:

RJ Lee Group Job No: AOH1050830-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10447351.HPL	SRM#11,218	Yes	1	ND		100.00	Q, CA, OP, M	BW-08/27/2018
Description: Green Crushed Rock 1000 Points Counted Limit of Detection 0.1%								
Weight Loss: 0.0%								
10447352.HPL	SRM#11,219	Yes	1	ND		100.00	Q, CA, OP, M	BW-08/27/2018
Description: Green Crushed Rock 1000 Points Crushed Limit of Detection 0.1%								
Weight Loss: 0.0%								
10447353.HPL	SRM#11,220	Yes	1	ND		100.00	Q, CA, OP, M	WT-08/28/2018
Description: Gray Crushed Rock. 1000 Points Counted. Detection Limit=0.1%.								
Weight Loss: 0.0%								
10447354.HPL	SRM#11,221	Yes	1	ND		100.00	Q, CA, OP, M	WT-08/28/2018
Description: Gray Crushed Rock. 1000 Points Counted. Detection Limit=0.1%.								
Weight Loss: 0.0%								
10447355.HPL	SRM#11,222	Yes	1	ND		100.00	Q, CA, OP, M	WT-08/28/2018
Description: Gray Crushed Rock. 1000 Points Counted. Detection Limit=0.1%.								
Weight Loss: 0.0%								
10447356.HPL	SRM#11,223	Yes	1	ND		100.00	Q, CA, OP, M	WT-08/28/2018
Description: Gray Crushed Rock. 1000 Points Counted. Detection Limit=0.1%.								
Weight Loss: 0.0%								

Client Job No./Name:

RJ Lee Group Job No: AOH1050830-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10447357.HPL	SRM#11,224	Yes	1	ND		100.00	Q, CA, OP, M	WT-08/28/2018
Description: Green Crushed Rock. 1000 Points Counted. Detection Limit=0.1%.								
Weight Loss: 0.0%								
10447358.HPL	SRM#11,225	Yes	1	ND		100.00	Q, CA, OP, M	WT-08/28/2018
Description: Green Crushed Rock. 1000 Points Counted. Detection Limit=0.1%.								
Weight Loss: 0.0%								
10447359.HPL	SRM#11,226	Yes	1	ND		100.00	Q, CA, OP, M	WT-08/28/2018
Description: Green Crushed Rock. 1000 Points Counted. Detection Limit=0.1%.								
Weight Loss: 0.0%								
10447360.HPL	SRM#11,227	Yes	1	ND		100.00	Q, CA, OP, M	BW-08/28/2018
Description: Green Crushed Rock 1000 Points Counted Limit of Detection 0.1%								
Weight Loss: 0.0%								
10447361.HPL	SRM#11,228	Yes	1	ND		100.00	Q, CA, OP, M	BW-08/28/2018
Description: Green Crushed Rock 1000 Points Counted Limit of Detection 0.1%								
Weight Loss: 0.0%								
10447362.HPL	SRM#11,229	Yes	1	ND		100.00	Q, CA, OP, M	BW-08/28/2018
Description: Green Crushed Rock 1000 Points Counted Limit of Detection 0.1%								
Weight Loss: 0.0%								

Client Job No./Name:

RJ Lee Group Job No: AOH1050830-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10447363.HPL	SRM#11,230	Yes	1	ND		100.00	Q, CA, OP, M	BW-08/28/2018
Description:	Green Crushed Rock 1000 Points Counted Limit of Detection 0.1%							
Weight Loss:	0.0%							



Client Job No./Name:

RJ Lee Group Job No: AOH1050830-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
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*Barbara Jo Woodside*

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

Barbara Woodside, Microscopist

#### ASBESTOS

AM = Amosite  
AC = Actinolite  
AN = Anthophyllite  
CH = Chrysotile  
CR = Crocidolite  
TR = Tremolite

#### NON-ASBESTOS

CE = Cellulose  
MW = Mineral Wool  
FG = Fibrous Glass  
SF = Synthetic Fibers  
H = Hair  
W = Wollastonite  
OF = Other Fibers

#### NON-FIBROUS MATERIALS

AM = Amphibole  
B = Binder  
CA = Carbonates  
CL = Clay  
F = Feldspar  
G = Gypsum  
HY = Hydromagnesite  
M = Miscellaneous  
MI = Mica  
OP = Opaque  
OR = Organic  
P = Perlite  
Q = Quartz  
T = Tar  
V = Vermiculite

#### DISCLAIMER NOTES

- "ND" indicates no asbestos was detected; the method detection limit is 0.1%.
- "Trace" or "<" indicates asbestos was identified in the sample, but the concentration is less than the method quantitation limit. PLM coefficients of variance range from approximately 1.8 at the quantitation limit of 0.1% to 0.32 at high fiber concentrations.
- Samples are archived for three months following analysis and are then properly discarded.
- 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.
- This test report relates to the items tested.
- This report is not valid unless it bears the name of a NVLAP Lab Code 101208-0 approved signatory.
- Any reproduction of this document must be in full in order for the report to be valid.
- This report may not be used to claim product endorsement by NVLAP Lab Code 101208-0, any agency of the U.S. Government or any other laboratory accrediting agency.
- Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar nonfriable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as "non-asbestos-containing."
- Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA #100364, NY ELAP #10884) facility.
- If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.
- $((100-A)/B)*C$  = Asbestos Detected (%), where A=weight loss, B=total # of points counted, and C=total # of asbestos fibers counted.

**SPECIALTY GRANULES LLC.**

13424 Pennsylvania Ave, Suite 303 // Hagerstown, MD 21742 // Tel: 301-733-4000 // Fax: 301-733-4003

[www.specialtygranules.com](http://www.specialtygranules.com)

AOH10524430

December 28, 2018

RJ Lee Group, Inc.  
350 Hochberg Road  
Monroeville, PA 15146  
Attn: Matthew Sanchez

Via: Federal Express: 7740-8413-0640

RE: Fiber - PLM and Crystalline Silica - XRD Analyses.

Dear Mr. Sanchez:

Enclosed are the following samples for the required analyses. All samples are crushed rock and classified as a volcanic rock (meta-basalt). Also enclosed are the SDS sheets.

**Fiber and Crystalline Silica:**

For each sample listed (44 total samples), complete the following analyses:

1. Polarized Light Microscopy (PLM): Bulk Analyses – 1,000 Point Count (Untreated) for regulated asbestiform fibers (EPA 600/R-93/116). If fibrous material is detected contact SGI and retain sample for additional TEM testing.
2. Total Crystalline Silica (Bulk Analysis) by quantitative XRD.
3. A 10 - day turn-around service is requested for both the PLM and XRD analyses.

Four samples of rock granules (-8 mesh x 35 mesh). (200 grams each):

See attached Table 1.

Six samples of rock fines (-35 mesh x 325 mesh). (100 - 200 grams each):

See attached Table 1.

Twenty samples of finished product (-8 mesh x 35 mesh). (100 grams each):

See attached Table 1.



# SPECIALTY GRANULES LLC.

13424 Pennsylvania Ave, Suite 303 // Hagerstown, MD 21742 // Tel: 301-733-4000 // Fax: 301-733-4003

[www.specialtygranules.com](http://www.specialtygranules.com)

A041052443-0

Please address and send the lab results directly to:

Celeste Levine (Electronic Copy)  
Standard Industries  
1361 Alps Road  
Wayne, NJ 07470  
973-628-3035  
[celeste.levine@standardindustries.com](mailto:celeste.levine@standardindustries.com)

with a copy sent to:

Ted Heath (Hard & Electronic Copy)  
Specialty Granules LLC  
13424 Pennsylvania Ave., Suite 303  
Hagerstown, MD 21742  
(301) 714-1332  
[theath@specialtygranules.com](mailto:theath@specialtygranules.com)

Payment will be made through SGI Purchase Order CH62417. Please copy Ted Heath and not Celeste Levine on the invoice.

Please call me with any questions.

Sincerely,

Ted Heath  
Project Manager  
Specialty Granules LLC  
[ted.heath@specialtygranules.com](mailto:ted.heath@specialtygranules.com)

c.c.

G. Kamas – SGI  
K. Moore – SGI  
A. Shepeck – SGI  
C. Levine – SGI

RCVD 01-02-19 8:20AM

Linda Krueger  
RJ Lee Group



A0H 10524430

2018 CHR 3rd Qrt Sample MIS-11 Inventory

Table 1: Sample Inventory for RJ Lee Testing

Charmian Q3 Samples			RJ Lee Sample in g	Number of Samples
Plant	SRM#	Color/ Type		
Charmian	11,351	Raw Granules	200	2
Charmian	11,358	Fines L. Mill	100	2
Charmian	11,356	Fines HLP	100	2
Charmian	11,359	BackSurfacing	100	2
Charmian	11,314	G-11 w/ oil HLP	100	2
Charmian	11,313	G-11 w/ oil & siloxane HLP	100	2
Charmian	11,317	G - 115 oiled	100	2
Charmian	11,318	G - 171 oiled	100	2
Charmian	11,319	G - 201 oiled	100	2
Charmian	11,320	G - 340 oiled	100	2
Charmian	11,321	G - 341 oiled	100	2
Charmian	11,322	G - 546 oiled	100	2
Charmian	11,323	G - 552 oiled	100	2
Charmian	11,324	G - 555 oiled	100	2
Charmian	11,325	G - 556 oiled	100	2
Charmian	11,326	G - 560 oiled	100	2
Charmian	11,327	G - 615 oiled	100	2
Charmian	11,328	G - 720 oiled	100	2
Charmian	11,329	G - 760 oiled	100	2
Charmian	11,330	G - 801 oiled	100	2
Charmian	11,316	G - 11D oiled	100	2
Charmian	11315	BackSurfacing w/oil & siloxane	100	2

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	Raw Granule
	Rock Fines
	Finished Products

Rev'd 01-02-19 8:20AM

Jinda Naguib  
RJ Lee Group

## Laboratory Report

Standard Industries  
1361 Alps Road  
Wayne, NJ 07470  
United States  
Attention: Celeste Levine  
Telephone: 973-628-3035

Report Date 01/15/2019  
Sample Receipt Date 01/02/2019  
RJ Lee Group Job No. AOH1052443-0  
Authorization/P.O. No. CH62417  
Client Job No./Name Charmian Q3 Samples

Analysis: Asbestos in Bulk Samples by Point Count

Method: EPA/600/R-93/116

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10459617.HPL	SRM# 11,351	Yes	1	ND	<1 CE 4.00 W	96.00	OP, M	AKB-01/08/2019
Description: Green Crushed Rock Limit Of Detection = 0.1%. 1000 Points Counted.								
Weight Loss: 0.0%								
10459618.HPL	SRM# 11,358	Yes	1	ND	<1 CE 4.00 W	96.00	OP, M	AKB-01/08/2019
Description: Green Crushed Rock Limit Of Detection = 0.1%. 1000 Points Counted.								
Weight Loss: 0.0%								
10459619.HPL	SRM# 11,356	Yes	1	ND	5.00 W	95.00	Q, CA, OP, M	WT-01/08/2019
Description: Green Crushed Rock. 1000 Points Counted. Detection Limit=0.1%.								
Weight Loss: 0.0%								

Client Job No./Name: Charmian Q3 Samples

RJ Lee Group Job No: AOH1052443-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10459620.HPL	SRM# 11,359	Yes	1	ND	7.00 W	93.00	CA, OP, M	BW-01/08/2019
Description:	Green Crushed Rock 1000 Points Counted Limit of Detection 0.1%							
Weight Loss:	0.0%							
10459621.HPL	SRM# 11,314	Yes	1	ND		100.00	Q, CA, OP, M	WT-01/08/2019
Description:	Green Crushed Rock. 1000 Points Counted. Detection Limit=0.1%.							
Weight Loss:	0.0%							
10459622.HPL	SRM# 11,313	Yes	1	ND	<1 CE 3.00 W	97.00	OP, M	AKB-01/08/2019
Description:	Green Crushed Rock Limit Of Detection = 0.1%. 1000 Points Counted.							
Weight Loss:	0.0%							
10459623.HPL	SRM# 11,317	Yes	1	ND	<1 CE <1 FG	100.00	OP, M	AKB-01/08/2019
Description:	Green Crushed Rock Limit Of Detection = 0.1%. 1000 Points Counted.							
Weight Loss:	0.0%							
10459624.HPL	SRM# 11,318	Yes	1	ND	<1 CE	100.00	M	AKB-01/09/2019
Description:	Green Crushed Rock Limit Of Detection = 0.1%. 1000 Points Counted.							
Weight Loss:	0.0%							

Client Job No./Name: Charmian Q3 Samples

RJ Lee Group Job No: AOH1052443-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10459625.HPL	SRM# 11,319	Yes	1	ND		100.00	Q, CA, OP, M	WT-01/09/2019
Description: Beige Crushed Rock. 1000 Points Counted. Detection Limit=0.1%.								
Weight Loss: 0.0%								
10459626.HPL	SRM# 11,320	Yes	1	ND		100.00	Q, CA, OP, M	WT-01/09/2019
Description: Green Crushed Rock. 1000 Points Counted. Detection Limit=0.1%.								
Weight Loss: 0.0%								
10459627.HPL	SRM# 11,321	Yes	1	ND		100.00	Q, CA, OP, M	WT-01/09/2019
Description: Green Crushed Rock. 1000 Points Counted. Detection Limit=0.1%.								
Weight Loss: 0.0%								
10459628.HPL	SRM# 11,322	Yes	1	ND		100.00	Q, CA, OP, M	WT-01/09/2019
Description: Beige Crushed Rock. 1000 Points Counted. Detection Limit=0.1%.								
Weight Loss: 0.0%								
10459629.HPL	SRM# 11,323	Yes	1	ND		100.00	Q, CA, OP, M	WT-01/09/2019
Description: Gray Crushed Rock. 1000 Points Counted. Detection Limit=0.1%.								
Weight Loss: 0.0%								
10459630.HPL	SRM# 11,324	Yes	1	ND		100.00	Q, CA, OP, M	WT-01/09/2019
Description: Green Crushed Rock. 1000 Points Counted. Detection Limit=0.1%.								
Weight Loss: 0.0%								

Client Job No./Name: Charmian Q3 Samples

RJ Lee Group Job No: AOH1052443-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10459631.HPL	SRM# 11,325	Yes	1	ND		100.00	Q, CA, OP, M	WT-01/09/2019
Description: Beige Crushed Rock. 1000 Points Counted. Detection Limit=0.1%.								
Weight Loss: 0.0%								
10459632.HPL	SRM# 11,326	Yes	1	ND		100.00	Q, CA, OP, M	WT-01/09/2019
Description: Green Crushed Rock. 1000 Points Counted. Detection Limit=0.1%.								
Weight Loss: 0.0%								
10459633.HPL	SRM# 11,327	Yes	1	ND		100.00	Q, CA, OP, M	WT-01/09/2019
Description: Green Crushed Rock. 1000 Points Counted. Detection Limit=0.1%.								
Weight Loss: 0.0%								
10459634.HPL	SRM# 11,328	Yes	1	ND		100.00	Q, CA, OP, M	WT-01/09/2019
Description: Green Crushed Rock. 1000 Points Counted. Detection Limit=0.1%.								
Weight Loss: 0.0%								
10459635.HPL	SRM# 11,329	Yes	1	ND	<1 CE	100.00	OP, M	AKB-01/09/2019
Description: Green Crushed Rock Limit Of Detection = 0.1%. 1000 Points Counted.								
Weight Loss: 0.0%								



Client Job No./Name: Charmian Q3 Samples

RJ Lee Group Job No: AOH1052443-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10459636.HPL	SRM# 11,330	Yes	1	ND	<1 CE	100.00	OP, M	AKB-01/09/2019
Description:	Green Crushed Rock Limit Of Detection = 0.1%. 1000 Points Counted.							
Weight Loss: 0.0%								
10459637.HPL	SRM# 11,316	Yes	1	ND	<1 CE	100.00	OP, M	AKB-01/09/2019
Description:	Green Crushed Rock Limit Of Detection = 0.1%. 1000 Points Counted.							
Weight Loss: 0.0%								
10459638.HPL	SRM# 11,315	Yes	1	ND		100.00	Q, CA, OP, M	WT-01/10/2019
Description:	Green Crushed Rock. 1000 Points Counted. Detection Limit=0.1%.							
Weight Loss: 0.0%								

Client Job No./Name: Charmian Q3 Samples

RJ Lee Group Job No: AOH1052443-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
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Authorized Signature:



Wei Tseng, Microscopist

**ASBESTOS**

AM = Amosite  
 AC = Actinolite  
 AN = Anthophyllite  
 CH = Chrysotile  
 CR = Crocidolite  
 TR = Tremolite

**NON-ASBESTOS**

CE = Cellulose  
 MW = Mineral Wool  
 FG = Fibrous Glass  
 SF = Synthetic Fibers  
 H = Hair  
 W = Wollastonite  
 OF = Other Fibers

**NON-FIBROUS MATERIALS**

AM = Amphibole  
 B = Binder  
 CA = Carbonates  
 CL = Clay  
 F = Feldspar  
 G = Gypsum  
 HY = Hydromagnesite  
 M = Miscellaneous  
 MI = Mica  
 OP = Opaque  
 OR = Organic  
 P = Perlite  
 Q = Quartz  
 T = Tar  
 V = Vermiculite

**DISCLAIMER NOTES**

- "ND" indicates no asbestos was detected; the method detection limit is 0.1%.
- "Trace" or "<" indicates asbestos was identified in the sample, but the concentration is less than the method quantitation limit. PLM coefficients of variance range from approximately 1.8 at the quantitation limit of 0.1% to 0.32 at high fiber concentrations.
- Samples are archived for three months following analysis and are then properly discarded.
- 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.
- This test report relates to the items tested.
- This report is not valid unless it bears the name of a NVLAP Lab Code 101208-0 approved signatory.
- Any reproduction of this document must be in full in order for the report to be valid.
- This report may not be used to claim product endorsement by NVLAP Lab Code 101208-0, any agency of the U.S. Government or any other laboratory accrediting agency.
- Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar nonfriable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as "non-asbestos-containing."
- Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA #100364, NY ELAP #10884) facility.
- If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.
- $((100-A)/B)*C$  = Asbestos Detected (%), where A=weight loss, B=total # of points counted, and C=total # of asbestos fibers counted.



March 27, 2019

RJ Lee Group, Inc.  
350 Hochberg Road  
Monroeville, PA 15146  
Attn: Matthew Sanchez

Via: Federal Express: 7748-1990-2384

RE: Fiber - PLM and Crystalline Silica - XRD Analyses.

Dear Mr. Sanchez:

Enclosed are the following samples for the required analyses. All samples are crushed rock and classified as a volcanic rock (greenstone, Andesite, and Rhyolite). Also enclosed are the SDS sheets.

**Fiber and Crystalline Silica:**

For each sample listed (58 samples), complete the following analyses:

1. Polarized Light Microscopy (PLM): Bulk Analyses – 1,000 Point Count (Untreated) for regulated asbestiform fibers (EPA 600/R-93/116). If fibrous material is detected contact SGI and retain sample for additional TEM testing.
2. Total Crystalline Silica (Bulk Analysis) by quantitative XRD.
3. A 10 - day turn-around service is requested for both the PLM and XRD analyses.

Four samples of rock granules (-8 mesh x 35 mesh). (200 grams each):

See attached Table 1.

Six samples of rock fines (-35 mesh x 325 mesh). (100 - 200 grams each):

See attached Table 1.

Twenty samples of finished product (-8 mesh x 35 mesh). (100 grams each):

See attached Table 1.



Please address and send the lab results directly to:

Celeste Levine (Electronic Copy)  
Standard Industries  
1361 Alps Road  
Wayne, NJ 07470  
(973) 628-3035  
[celeste.levine@standardindustries.com](mailto:celeste.levine@standardindustries.com)

with a copy sent to:

Ted Heath (Hard & Electronic Copy)  
Specialty Granules LLC  
13424 Pennsylvania Ave  
Hagerstown, MD 21742  
(301) 714-1332  
[ted.heath@specialtygranules.com](mailto:ted.heath@specialtygranules.com)

Payment will be made through SGI Purchase Order CH63204. Please copy Ted Heath and not Celeste Levine on the invoice.

Please call me with any questions.

Sincerely,

Ted Heath  
Project Manager  
Specialty Granules LLC  
[ted.heath@specialtygranules.com](mailto:ted.heath@specialtygranules.com)

c.c.

K. Moore – SGI  
M. McClure – SGI  
A. Shepeck – SGI  
C. Levine – SGI

A0H10534040

Table 1: Sample Inventory for RJ Lee Testing

Charmian Q4 Samples			RJ Lee Sample in g	Number of Samples
Plant	SRM#	Color/ Type		
Charmian	11581	Raw Granules	200	2
Charmian	11420	Fines L. Mill	100	2
Charmian	11580	Fines HLP	100	2
Charmian	11448	BackSurfacing	100	2
Charmian	11443	G-11 w/ oil HLP	100	2
Charmian	11442	G-11 w/ oil & siloxane HLP	100	2
Charmian	11431	G - 115 oiled	100	2
Charmian	11434	G - 171 oiled	100	2
Charmian	11436	G - 201 oiled	100	2
Charmian	11433	G- 340 oiled	100	2
Charmian	11429	G - 341 oiled	100	2
Charmian	11427	G - 546 oiled	100	2
Charmian	11432	G - 552 oiled	100	2
Charmian	11430	G -555 oiled	100	2
Charmian	11428	G -556 oiled	100	2
Charmian	11435	G - 560 oiled	100	2
Charmian	11441	G -615 oiled	100	2
Charmian	11438	G - 720 oiled	100	2
Charmian	11440	G - 760 oiled	100	2
Charmian	11437	G - 801 oiled	100	2
Charmian	11439	G - 11D oiled	100	2
Charmian	11444	Backsurfacing w/oil & siloxane	100	2

Redacted - Does Not Relate to Charmian Facility

	Raw Granule
	Rock Fines
	Finished Products

Rev'd 04-02-19 8:49AM

Imola Margus  
RJ Lee Group

## Laboratory Report

Standard Industries  
1361 Alps Road  
Wayne, NJ 07470  
United States  
Attention: Celeste Levine  
Telephone: 973-628-3035

Report Date 04/18/2019  
Sample Receipt Date 04/02/2019  
RJ Lee Group Job No. AOH1053404-0  
Authorization/P.O. No. CH63204  
Client Job No./Name Charmian Q4 Samples

Analysis: Asbestos in Bulk Samples by Point Count

Method: EPA/600/R-93/116

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10473727.HPL	SRM# 11581	Yes	1	ND		100.00	Q, CA, OP, M	JS-04/16/2019
Description: Gray Crushed Rock 1000 Point Count. Detection Limit of 0.1%								
Weight Loss: 0.0%								
10473728.HPL	SRM# 11420	Yes	1	ND		100.00	Q, CA, AM, OP, MI, M	EB-04/16/2019
Description: Gray Powder 1000 point count. Detection limit of 0.1%.								
Weight Loss: 0.0%								
10473729.HPL	SRM# 11580	Yes	1	ND		100.00	Q, CA, AM, OP, MI, M	EB-04/16/2019
Description: Gray Powder 1000 point count. Detection limit of 0.1%.								
Weight Loss: 0.0%								

Client Job No./Name: Charmian Q4 Samples

RJ Lee Group Job No: AOH1053404-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10473730.HPL	SRM# 11448	Yes	1	ND		100.00	Q, CA, AM, OP, MI, M	EB-04/16/2019
Description:	Gray Powder 1000 point count. Detection limit of 0.1%.							
Weight Loss:	0.0%							
10473731.HPL	SRM# 11443	Yes	1	ND		100.00	Q, CA, AM, OP, MI, M	EB-04/16/2019
Description:	Gray Powder 1000 point count. Detection limit of 0.1%.							
Weight Loss:	0.0%							
10473732.HPL	SRM# 11442	Yes	1	ND	<1 CE	100.00	OP, M	AKB-04/16/2019
Description:	Gray Material Limit Of Detection = 0.1%. 1000 Points Counted.							
Weight Loss:	0.0%							
10473733.HPL	SRM# 11431	Yes	1	ND		100.00	Q, CA, OP, M	JS-04/16/2019
Description:	Gray Crushed Rock 1000 Point Count. Detection Limit of 0.1%							
Weight Loss:	0.0%							
10473734.HPL	SRM# 11434	Yes	1	ND	<1 CE	100.00	OP, M	AKB-04/16/2019
Description:	Green Material Limit Of Detection = 0.1%. 1000 Points Counted.							
Weight Loss:	0.0%							

Client Job No./Name: Charmian Q4 Samples

RJ Lee Group Job No: AOH1053404-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10473735.HPL	SRM# 11436	Yes	1	ND		100.00	OP, M	AKB-04/16/2019
Description:	Dark Beige Material Limit Of Detection = 0.1%. 1000 Points Counted.							
Weight Loss:	0.0%							
10473736.HPL	SRM# 11433	Yes	1	ND	<1 CE	100.00	OP, M	AKB-04/17/2019
Description:	Gray Material Limit Of Detection = 0.1%. 1000 Points Counted.							
Weight Loss:	0.0%							
10473737.HPL	SRM# 11429	Yes	1	ND	<1 CE	100.00	OP, M	AKB-04/17/2019
Description:	Gray Material Limit Of Detection = 0.1%. 1000 Points Counted.							
Weight Loss:	0.0%							
10473738.HPL	SRM# 11427	Yes	1	ND		100.00	OP, M	AKB-04/17/2019
Description:	Beige Material Limit Of Detection = 0.1%. 1000 Points Counted.							
Weight Loss:	0.0%							
10473739.HPL	SRM# 11432	Yes	1	ND	<1 CE	100.00	OP, M	AKB-04/17/2019
Description:	Gray Material Limit Of Detection = 0.1%. 1000 Points Counted.							
Weight Loss:	0.0%							



Client Job No./Name: Charmian Q4 Samples

RJ Lee Group Job No: AOH1053404-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10473740.HPL	SRM# 11430	Yes	1	ND	<1 CE	100.00	OP, M	AKB-04/17/2019
Description: Gray Material Limit Of Detection = 0.1%. 1000 Points Counted.								
Weight Loss: 0.0%								
10473741.HPL	SRM# 11428	Yes	1	ND	<1 CE	100.00	OP, M	AKB-04/17/2019
Description: Gray Material Limit Of Detection = 0.1%. 1000 Points Counted.								
Weight Loss: 0.0%								
10473742.HPL	SRM# 11435	Yes	1	ND	<1 CE <1 FG	100.00	OP, M	AKB-04/18/2019
Description: Gray Material Limit Of Detection = 0.1%. 1000 Points Counted.								
Weight Loss: 0.0%								
10473743.HPL	SRM# 11441	Yes	1	ND	<1 CE	100.00	OP, M	AKB-04/18/2019
Description: Gray Material Limit Of Detection = 0.1%. 1000 Points Counted.								
Weight Loss: 0.0%								
10473744.HPL	SRM# 11438	Yes	1	ND	<1 CE	100.00	OP, M	AKB-04/18/2019
Description: Gray Material Limit Of Detection = 0.1%. 1000 Points Counted.								
Weight Loss: 0.0%								

**Client Job No./Name: Charmian Q4 Samples**
**RJ Lee Group Job No: AOH1053404-0**

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10473745.HPL	SRM# 11440	Yes	1	ND	<1 CE	100.00	OP, M	AKB-04/18/2019
Description: Gray Material Limit Of Detection = 0.1%. 1000 Points Counted.								
Weight Loss: 0.0%								
10473746.HPL	SRM# 11437	Yes	1	ND		100.00	Q, CA, OP, M	WT-04/17/2019
Description: Green Crushed Rock. 1000 Point Count. Detection Limit=0.1%.								
Weight Loss: 0.0%								
10473747.HPL	SRM# 11439	Yes	1	ND		100.00	Q, CA, OP, M	WT-04/17/2019
Description: Gray Crushed Rock. 1000 Point Count. Detection Limit=0.1%.								
Weight Loss: 0.0%								
10473748.HPL	SRM# 11444	Yes	1	ND		100.00	Q, CA, OP, M	WT-04/17/2019
Description: Green Crushed Rock. 1000 Point Count. Detection Limit=0.1%.								
Weight Loss: 0.0%								

# Redacted - Does Not Relate to Charmian Facility

Client Job No./Name: Charmian Q4 Samples

RJ Lee Group Job No: AOH1053404-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
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Redacted - Does Not Relate to Charmian Facility

Client Job No./Name: Charmian Q4 Samples

RJ Lee Group Job No: AOH1053404-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
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Authorized Signature: \_\_\_\_\_



Wei Tseng, Microscopist

#### ASBESTOS

AM = Amosite  
AC = Actinolite  
AN = Anthophyllite  
CH = Chrysotile  
CR = Crocidolite  
TR = Tremolite

#### NON-ASBESTOS

CE = Cellulose  
MW = Mineral Wool  
FG = Fibrous Glass  
SF = Synthetic Fibers  
H = Hair  
W = Wollastonite  
OF = Other Fibers

#### NON-FIBROUS MATERIALS

AM = Amphibole  
B = Binder  
CA = Carbonates  
CL = Clay  
F = Feldspar  
G = Gypsum  
HY = Hydromagnesite  
M = Miscellaneous  
MI = Mica  
OP = Opaque  
OR = Organic  
P = Perlite  
Q = Quartz  
T = Tar  
V = Vermiculite

#### DISCLAIMER NOTES

- "ND" indicates no asbestos was detected; the method detection limit is 0.1%.
- "Trace" or "<" indicates asbestos was identified in the sample, but the concentration is less than the method quantitation limit. PLM coefficients of variance range from approximately 1.8 at the quantitation limit of 0.25% to 0.32 at high fiber concentrations.
- Samples are archived for three months following analysis and are then properly discarded.
- 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.
- This test report relates to the items tested.
- This report is not valid unless it bears the name of a NVLAP Lab Code 101208-0 approved signatory.
- Any reproduction of this document must be in full in order for the report to be valid.
- This report may not be used to claim product endorsement by NVLAP Lab Code 101208-0, any agency of the U.S. Government or any other laboratory accrediting agency.
- Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar nonfriable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as "non-asbestos-containing."
- Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA #100364, NY ELAP #10884) facility.
- If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.
- $((100-A)/B)*C$  = Asbestos Detected (%), where A=weight loss, B=total # of points counted, and C=total # of asbestos fibers counted.



June 6, 2019

RJ Lee Group, Inc.  
350 Hochberg Road  
Monroeville, PA 15146  
Attn: Matthew Sanchez

Via: Federal Express: 775461415714

RE: Fiber - PLM and Crystalline Silica - XRD Analyses.

Dear Mr. Sanchez:

Enclosed are the following samples for the required analyses. All samples are crushed rock and classified as a volcanic rock (meta-basalt). Also enclosed are the SDS sheets.

**Fiber and Crystalline Silica:**

For each sample listed (44 total samples), complete the following analyses:

1. Polarized Light Microscopy (PLM): Bulk Analyses – 1,000 Point Count (Untreated) for regulated asbestiform fibers (EPA 600/R-93/116). If fibrous material is detected contact SGI and retain sample for additional TEM testing.
2. Total Crystalline Silica (Bulk Analysis) by quantitative XRD.
3. A 10 - day turn-around service is requested for both the PLM and XRD analyses.

Four samples of rock granules (-8 mesh x 35 mesh). (200 grams each):

See attached Table 1.

Six samples of rock fines (-35 mesh x 325 mesh). (100 - 200 grams each):

See attached Table 1.

Twenty samples of finished product (-8 mesh x 35 mesh). (100 grams each):

See attached Table 1.

RCVS 06-17-19 8:20AM  
Ginda Maypus  
RJ Lee Group



**SPECIALTY GRANULES LLC.**

*A0H10542950*

13424 Pennsylvania Ave, Suite 303 // Hagerstown, MD 21742 // Tel: 301-733-4000 // Fax: 301-733-4003

[www.specialtygranules.com](http://www.specialtygranules.com)

Please address and send the lab results directly to:

Celeste Levine (Electronic Copy)  
Standard Industries  
1361 Alps Road  
Wayne, NJ 07470  
973-628-3035  
[celeste.levine@standardindustries.com](mailto:celeste.levine@standardindustries.com)

with a copy sent to:

Ted Heath (Hard & Electronic Copy)  
Specialty Granules LLC  
13424 Pennsylvania Ave., Suite 303  
Hagerstown, MD 21742  
(301) 714-1332  
[ted.heath@specialtygranules.com](mailto:ted.heath@specialtygranules.com)

Payment will be made through SGI Purchase Order CH63873. Please copy Ted Heath and not Celeste Levine on the invoice.

Please call me with any questions.

Sincerely,

Ted Heath  
Project Manager  
Specialty Granules LLC  
[ted.heath@specialtygranules.com](mailto:ted.heath@specialtygranules.com)

c.c.

K. Moore – SGI  
B. Smith- SGI  
A. Shepeck – SGI  
C. Levine – SGI  
R. Peruso- SGI

A0410542950

Table 1: Sample Inventory for RJ Lee Testing

Charmian Q3 Samples			RJ Lee Sample in g	Number of Samples
Plant	SRM#	Color/ Type		
Charmian	11,684	Raw Granules	200	2
Charmian	11,685	Fines L. Mill	100	2
Charmian	11,686	Fines HLP	100	2
Charmian	11,687	BackSurfacing	100	2
Charmian	11,595	G-11 w/ oil HLP	100	2
Charmian	11,596	G-11 w/ oil & siloxane HLP	100	2
Charmian	11,597	G - 115 oiled	100	2
Charmian	11,598	G - 171 oiled	100	2
Charmian	11,599	G - 201 oiled	100	2
Charmian	11,600	G- 340 oiled	100	2
Charmian	11,601	G - 341 oiled	100	2
Charmian	11,602	G - 546 oiled	100	2
Charmian	11,603	G - 552 oiled	100	2
Charmian	11,604	G -555 oiled	100	2
Charmian	11,605	G -556 oiled	100	2
Charmian	11,606	G - 560 oiled	100	2
Charmian	11,607	G -615 oiled	100	2
Charmian	11,608	G - 720 oiled	100	2
Charmian	11,609	G - 760 oiled	100	2
Charmian	11,610	G - 801 oiled	100	2
Charmian	11,611	G - 11D oiled	100	2
Charmian	11612	BackSurfacing w/oil & siloxane	100	2

44

	Raw Granule
	Rock Fines
	Finished Products

## Laboratory Report

Standard Industries  
 1361 Alps Road  
 Wayne, NJ 07470  
 United States  
 Attention: Celeste Levine  
 Telephone: 973-628-3035

Report Date 07/02/2019  
 Sample Receipt Date 06/17/2019  
 RJ Lee Group Job No. AOH1054295-0  
 Authorization/P.O. No. CH63873  
 Client Job No./Name Charmian Q3 Samples

Analysis: Asbestos in Bulk Samples by Point Count  
 Method: EPA/600/R-93/116

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10480083.HPL	SRM# 11,684	Yes	1	ND	2.00 CE	98.00	Q, CA, OP, M	DF-06/28/2019
Description: Green Powder 1000 Point Count. Detection Limit=0.1%								
Weight Loss: 0.0%								
10480084.HPL	SRM# 11,685	Yes	1	ND		100.00	Q, CA, AM, OP, MI, M	EB-07/02/2019
Description: Green Powder 1000 Point Count. Detection Limit of 0.1%, Analyzed by Donald Fike on 07/01/19.								
Weight Loss: 0.0%								
10480085.HPL	SRM# 11,686	Yes	1	ND		100.00	Q, CA, AM, OP, M	EB-07/02/2019
Description: Green Powder 1000 Point Count. Detection Limit of 0.1%, Analyzed by Donald Fike on 07/01/19.								
Weight Loss: 0.0%								



Client Job No./Name: Charmian Q3 Samples

RJ Lee Group Job No: AOH1054295-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10480086.HPL	SRM# 11,687	Yes	1	ND	<1 OF	100.00	Q, CA, AM, OP, M	WT-07/02/2019
Description:	Green Crushed Rock. 1000 Point Count. Detection Limit=0.1%.							
Weight Loss:	0.0%							
10480087.HPL	SRM# 11,595	Yes	1	ND	2.00 CE	98.00	CA, OP, M	DF-07/01/2019
Description:	Green Powder 1000 Point Count. Detection Limit=0.1%							
Weight Loss:	0.0%							
10480088.HPL	SRM# 11,596	Yes	1	ND		100.00	Q, CA, AM, OP, M	EB-07/02/2019
Description:	Green Powder 1000 Point Count. Detection Limit of 0.1%, Analyzed by Donald Fike on 07/01/19.							
Weight Loss:	0.0%							
10480089.HPL	SRM# 11,597	Yes	1	ND		100.00	Q, CA, AM, OP, M	EB-07/02/2019
Description:	Green Powder 1000 Point Count. Detection Limit of 0.1%, Analyzed by Donald Fike on 07/01/19.							
Weight Loss:	0.0%							
10480090.HPL	SRM# 11,598	Yes	1	ND	<1 CE	100.00	Q, CA, OP, M	DF-06/28/2019
Description:	Green Powder 1000 Point Count. Detection Limit=0.1%							
Weight Loss:	0.0%							

Client Job No./Name: Charmian Q3 Samples

RJ Lee Group Job No: AOH1054295-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10480091.HPL	SRM# 11,599	Yes	1	ND		100.00	Q, CA, OP, M	DF-07/01/2019
Description:	Brown Powder 1000 Point Count. Detection Limit=0.1%							
Weight Loss:	0.0%							
10480092.HPL	SRM# 11,600	Yes	1	ND		100.00	Q, CA, AM, OP, M	EB-07/02/2019
Description:	Gray Powder 1000 Point Count. Detection Limit of 0.1%, Analyzed by Donald Fike on 07/01/19.							
Weight Loss:	0.0%							
10480093.HPL	SRM# 11,601	Yes	1	ND	<1 OF	100.00	CA, AM, OP, M	WT-07/02/2019
Description:	Green Crushed Rock. 1000 Point Count. Detection Limit=0.1%.							
Weight Loss:	0.0%							
10480094.HPL	SRM# 11,602	Yes	1	ND		100.00	CA, OP, M	DF-07/01/2019
Description:	Tan Powder 1000 Point Count. Detection Limit=0.1%							
Weight Loss:	0.0%							
10480095.HPL	SRM# 11,603	Yes	1	ND		100.00	CA, OP, M	DF-07/01/2019
Description:	Gray Powder 1000 Point Count. Detection Limit=0.1%							
Weight Loss:	0.0%							
10480096.HPL	SRM# 11,604	Yes	1	ND		100.00	CA, OP, MI, M	DF-07/01/2019
Description:	Gray Powder 1000 Point Count. Detection Limit=0.1%							
Weight Loss:	0.0%							

Client Job No./Name: Charmian Q3 Samples

RJ Lee Group Job No: AOH1054295-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10480097.HPL	SRM# 11,605	Yes	1	ND		100.00	CA, OP, M	DF-06/28/2019
Description:	Tan Powder 1000 Point Count. Detection Limit=0.1%							
Weight Loss:	0.0%							
10480098.HPL	SRM# 11,606	Yes	1	ND	<1 OF	100.00	CA, AM, OP, M	WT-07/02/2019
Description:	Green Crushed Rock. 1000 Point Count. Detection Limit=0.1%.							
Weight Loss:	0.0%							
10480099.HPL	SRM# 11,607	Yes	1	ND		100.00	CA, OP, M	DF-07/01/2019
Description:	Gray Powder 1000 Point Count. Detection Limit=0.1%							
Weight Loss:	0.0%							
10480100.HPL	SRM# 11,608	Yes	1	ND	<1 CE	100.00	CA, OP, MI, M	DF-07/01/2019
Description:	Gray Powder 1000 Point Count. Detection Limit=0.1%							
Weight Loss:	0.0%							
10480101.HPL	SRM# 11,609	Yes	1	ND		100.00	CA, OP, M	DF-07/01/2019
Description:	Gray Powder 1000 Point Count. Detection Limit=0.1%							
Weight Loss:	0.0%							
10480102.HPL	SRM# 11,610	Yes	1	ND	<1 OF	100.00	Q, CA, OP, M	WT-07/02/2019
Description:	Green Crushed Rock. 1000 Point Count. Detection Limit=0.1%.							
Weight Loss:	0.0%							

Client Job No./Name: Charmian Q3 Samples

RJ Lee Group Job No: AOH1054295-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10480103.HPL	SRM# 11,611	Yes	1	ND		100.00	CA, OP, M	DF-07/01/2019
Description: Gray Powder 1000 Point Count. Detection Limit=0.1%								
Weight Loss: 0.0%								
10480104.HPL	SRM# 11,612	Yes	1	ND		100.00	CA, OP, M	DF-07/01/2019
Description: Green Powder 1000 Point Count. Detection Limit=0.1%								
Weight Loss: 0.0%								

Client Job No./Name: Charmian Q3 Samples

RJ Lee Group Job No: AOH1054295-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
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Authorized Signature: \_\_\_\_\_



Donald Fike

#### ASBESTOS

AM = Amosite  
AC = Actinolite  
AN = Anthophyllite  
CH = Chrysotile  
CR = Crocidolite  
TR = Tremolite

#### NON-ASBESTOS

CE = Cellulose  
MW = Mineral Wool  
FG = Fibrous Glass  
SF = Synthetic Fibers  
H = Hair  
W = Wollastonite  
OF = Other Fibers

#### NON-FIBROUS MATERIALS

AM = Amphibole  
B = Binder  
CA = Carbonates  
CL = Clay  
F = Feldspar  
G = Gypsum  
HY = Hydromagnesite  
M = Miscellaneous  
MI = Mica  
OP = Opaque  
OR = Organic  
P = Perlite  
Q = Quartz  
T = Tar  
V = Vermiculite

#### DISCLAIMER NOTES

- "ND" indicates no asbestos was detected; the method detection limit is 0.1%.
- "Trace" or "<" indicates asbestos was identified in the sample, but the concentration is less than the method quantitation limit. PLM coefficients of variance range from approximately 1.8 at the quantitation limit of 0.25% to 0.32 at high fiber concentrations.
- Samples are archived for three months following analysis and are then properly discarded.
- 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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- Any reproduction of this document must be in full in order for the report to be valid.
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- Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar nonfriable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as "non-asbestos-containing."
- Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA #100364, NY ELAP #10884) facility.
- If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.
- $((100-A)/B)*C$  = Asbestos Detected (%), where A=weight loss, B=total # of points counted, and C=total # of asbestos fibers counted.



September 27, 2019

RJ Lee Group, Inc.  
350 Hochberg Road  
Monroeville, PA 15146  
Attn: Matthew Sanchez

Via: Federal Express: 776355216047

RE: Fiber - PLM and Crystalline Silica - XRD Analyses.

Dear Mr. Sanchez:

Enclosed are the following samples for the required analyses. All samples are crushed rock and classified as a volcanic rock (meta-basalt). Also enclosed are the SDS sheets.

**Fiber and Crystalline Silica:**

For each sample listed (44 total samples), complete the following analyses:

1. Polarized Light Microscopy (PLM): Bulk Analyses – 1,000 Point Count (Untreated) for regulated asbestiform fibers (EPA 600/R-93/116). If fibrous material is detected contact SGI and retain sample for additional TEM testing.
2. Total Crystalline Silica (Bulk Analysis) by quantitative XRD.
3. A 10 - day turn-around service is requested for both the PLM and XRD analyses.

One sample of rock granules (-8 mesh x 35 mesh). (200 grams each):

See attached Table 1.

Two samples of rock fines (-35 mesh x 325 mesh). (100 - 200 grams each):

See attached Table 1.

Nineteen samples of finished product (-8 mesh x 35 mesh). (100 grams each):

See attached Table 1.

REC'D 10-01-19 8:45AM  
Imela Mangus  
RJ Lee Group



## SPECIALTY GRANULES LLC.

ADH105599-0

13424 Pennsylvania Ave, Suite 303 // Hagerstown, MD 21742 // Tel: 301-733-4000 // Fax: 301-733-4003

[www.specialtygranules.com](http://www.specialtygranules.com)

Please address and send the lab results directly to:

with a copy sent to:

Celeste Levine (Electronic Copy)

Standard Industries

1361 Alps Road

Wayne, NJ 07470

973-628-3035

[celeste.levine@standardindustries.com](mailto:celeste.levine@standardindustries.com)

Ted Heath (Hard & Electronic Copy)

Specialty Granules LLC

13424 Pennsylvania Ave., Suite 303

Hagerstown, MD 21742

(301) 714-1332

[ted.heath@specialtygranules.com](mailto:ted.heath@specialtygranules.com)

Payment will be made through SGI Purchase Order CH64764. Please copy Ted Heath and not Celeste Levine on the invoice.

Please call me with any questions.

Sincerely,

Rebecca Peruso

Geologist, Jr.

Specialty Granules LLC

[rebecca.peruso@specialtygranules.com](mailto:rebecca.peruso@specialtygranules.com)

c.c.

K. Moore – SGI

B. Smith- SGI

A. Shepeck – SGI

C. Levine – SGI

T. Heath- SGI



A041055599-0

## 2019 2nd QRT. MIS-11 Inventories in Bucket

Samples Sent to RJ Lee

Samples awaiting shipment

### Bucket Inventory For RJ Lee

			RJ Lee	Number
Plant	SRM#	Color/ Type	Sample in g	of
Charmian	11,757	Raw Granules	200	2
Charmian	11,758	Fines L. Mill	100	2
Charmian	11,759	Fines HLP	100	2
Charmian	11,760	BackSurfacing	100	2
Charmian	11,735	G-11 w/ oil HLP	100	2
Charmian	11,736	G-11 w/ oil & siloxane HLP	100	2
Charmian	11,737	G - 115 oiled	100	2
Charmian	11,738	G - 171 oiled	100	2
Charmian	11,739	G - 201 oiled	100	2
Charmian	1,740	G- 340 oiled	100	2
Charmian	11,741	G - 341 oiled	100	2
Charmian	11,742	G - 546 oiled	100	2
Charmian	11,743	G - 552 oiled	100	2
Charmian	11,744	G -555 oiled	100	2
Charmian	11,745	G -556 oiled	100	2
Charmian	11,746	G - 560 oiled	100	2
Charmian	11,747	G -615 oiled	100	2
Charmian	11,748	G - 720 oiled	100	2
Charmian	11,749	G - 760 oiled	100	2
Charmian	11,750	G - 801 oiled	100	2
Charmian	11,751	G - 11D oiled	100	2
Charmian	11,752	BackSurfacing w/oil & siloxane	100	2

\* Sample bag was marked 11740



## Laboratory Report

Standard Industries  
 1361 Alps Road  
 Wayne, NJ 07470  
 United States  
 Attention: Celeste Levine  
 Telephone: 973-628-3035

Report Date 10/15/2019  
 Sample Receipt Date 10/01/2019  
 RJ Lee Group Job No. AOH1055599-0  
 Authorization/P.O. No. CH64764  
 Client Job No./Name Charmian 2019 2nd QTR

Analysis: Asbestos in Bulk Samples by Point Count  
 Method: EPA/600/R-93/116

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10488591.HPL	SRM# 11757	Yes	1	ND	<0.1 CE 6.00 W	94.00	Q, CA, AM, OP, M	WT-10/10/2019
Description: Green Crushed Rock. 1000 Point Count. Detection Limit=0.1%.								
Weight Loss: 0.0%								
10488592.HPL	SRM# 11758	Yes	1	1.30 TR		98.70	Q, CA, AM, OP, MI, M	AC-10/10/2019
Description: Green Powder 1000 Point Count. Detection Limit of 0.1%								
Weight Loss: 0.0%								
10488593.HPL	SRM# 11759	Yes	1	ND	3.00 W	97.00	Q, CA, AM, OP, M	DF-10/15/2019
Description: Green Crushed Rock 1000 Point Count. Detection Limit of 0.1%								
Weight Loss: 0.0%								

Client Job No./Name: Charmian 2019 2nd QTR

RJ Lee Group Job No: AOH1055599-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10488594.HPL	SRM# 11760	Yes	1	ND	2.00 CE 5.00 W	93.00	Q, CA, AM, OP, M	DF-10/10/2019
Description:	Gray Crushed Rock 1000 Point Count. Detection Limit=0.1%							
Weight Loss:	0.0%							
10488595.HPL	SRM# 11735	Yes	1	ND		100.00	Q, CA, AM, OP, MI, M	AC-10/07/2019
Description:	Grey Powder 1000 Point Count. Detection Limit of 0.1%							
Weight Loss:	0.0%							
10488596.HPL	SRM# 11736	Yes	1	ND		100.00	Q, CA, AM, OP, M	AC-10/04/2019
Description:	Grey Powder 1000 Point Count. Detection Limit of 0.1%							
Weight Loss:	0.0%							
10488597.HPL	SRM# 11737	Yes	1	<0.1 TR	<0.1 CE 5.00 W	95.00	Q, CA, AM, OP, M	WT-10/10/2019
Description:	Green Crushed Rock. 1000 Point Count. Detection Limit=0.1%.							
Weight Loss:	0.0%							
10488598.HPL	SRM# 11738	Yes	1	1.10 TR	5.00 W	93.90	Q, CA, AM, OP, M	AC-10/10/2019
Description:	Green Powder 1000 Point Count. Detection Limit of 0.1%							
Weight Loss:	0.0%							
10488599.HPL	SRM# 11739	Yes	1	ND		100.00	Q, CA, AM, OP, MI, M	AC-10/07/2019
Description:	Grey Powder 1000 Point Count. Detection Limit of 0.1%							
Weight Loss:	0.0%							

Client Job No./Name: Charmian 2019 2nd QTR

RJ Lee Group Job No: AOH1055599-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10488600.HPL	SRM# 11740	Yes	1	ND		100.00	Q, CA, AM, OP, MI, M	AC-10/09/2019
Description: Grey Powder 1000 Point Count. Detection Limit of 0.1%								
Weight Loss: 0.0%								
10488601.HPL	SRM# 11741	Yes	1	ND	<0.1 CE 3.00 W	97.00	Q, CA, AM, OP, MI, M	WT-10/13/2019
Description: Green Crushed Rock. 1000 Point Count. Detection Limit=0.1%.								
Weight Loss: 0.0%								
10488602.HPL	SRM# 11742	Yes	1	ND		100.00	Q, CA, AM, OP, MI, M	AC-10/09/2019
Description: Grey Powder 1000 Point Count. Detection Limit of 0.1%								
Weight Loss: 0.0%								
10488603.HPL	SRM# 11743	Yes	1	ND		100.00	Q, CA, AM, OP, MI, M	AC-10/04/2019
Description: Grey Powder 1000 Point Count. Detection Limit of 0.1%								
Weight Loss: 0.0%								
10488604.HPL	SRM# 11744	Yes	1	ND		100.00	Q, CA, AM, OP, MI, M	AC-10/04/2019
Description: Grey Powder 1000 Point Count. Detection Limit of 0.1%								
Weight Loss: 0.0%								
10488605.HPL	SRM# 11745	Yes	1	ND	<0.1 CE 3.00 W	97.00	Q, CA, AM, OP, MI, M	WT-10/13/2019
Description: Beige Crushed Rock. 1000 Point Count. Detection Limit=0.1%.								
Weight Loss: 0.0%								

Client Job No./Name: Charmian 2019 2nd QTR

RJ Lee Group Job No: AOH1055599-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10488606.HPL	SRM# 11746	Yes	1	ND	1.00 CE	99.00	Q, CA, AM, OP, M	AC-10/07/2019
Description: Grey Powder 1000 Point Count. Detection Limit of 0.1%								
Weight Loss: 0.0%								
10488607.HPL	SRM# 11747	Yes	1	ND		100.00	Q, CA, AM, OP, M	AC-10/09/2019
Description: Grey Powder 1000 Point Count. Detection Limit of 0.1%								
Weight Loss: 0.0%								
10488608.HPL	SRM# 11748	Yes	1	ND		100.00	Q, CA, AM, OP, MI, M	AC-10/07/2019
Description: Grey Powder 1000 Point Count. Detection Limit of 0.1%								
Weight Loss: 0.0%								
10488609.HPL	SRM# 11749	Yes	1	0.70 TR		99.30	Q, CA, AM, OP, MI, M	AC-10/15/2019
Description: Grey Powder 1000 Point Count. Detection Limit of 0.1%								
Weight Loss: 0.0%								
10488610.HPL	SRM# 11750	Yes	1	ND		100.00	Q, CA, AM, OP, MI, M	AC-10/04/2019
Description: Grey Powder 1000 Point Count. Detection Limit of 0.1%								
Weight Loss: 0.0%								
10488611.HPL	SRM# 11751	Yes	1	ND		100.00	Q, CA, OP, MI, M	AC-10/10/2019
Description: Grey Powder 1000 Point Count. Detection Limit of 0.1%								
Weight Loss: 0.0%								

Client Job No./Name: Charmian 2019 2nd QTR

RJ Lee Group Job No: AOH1055599-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10488612.HPL	SRM# 11752	Yes	1	0.10 TR	<0.1 CE 5.00 W	94.90	Q, CA, AM, OP, M	WT-10/10/2019
Description:	Green Crushed Rock. 1000 Point Count. Detection Limit=0.1%.							
Weight Loss:	0.0%							

Client Job No./Name: Charmian 2019 2nd QTR

RJ Lee Group Job No: AOH1055599-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
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Authorized Signature: \_\_\_\_\_



Wei Tseng, Microscopist

#### ASBESTOS

AM = Amosite  
AC = Actinolite  
AN = Anthophyllite  
CH = Chrysotile  
CR = Crocidolite  
TR = Tremolite

#### NON-ASBESTOS

CE = Cellulose  
MW = Mineral Wool  
FG = Fibrous Glass  
SF = Synthetic Fibers  
H = Hair  
W = Wollastonite  
OF = Other Fibers

#### NON-FIBROUS MATERIALS

AM = Amphibole  
B = Binder  
CA = Carbonates  
CL = Clay  
F = Feldspar  
G = Gypsum  
HY = Hydromagnesite  
M = Miscellaneous  
MI = Mica  
OP = Opaque  
OR = Organic  
P = Perlite  
Q = Quartz  
T = Tar  
V = Vermiculite

#### DISCLAIMER NOTES

- "ND" indicates no asbestos was detected; the method detection limit is 0.1%.
- "Trace" or "<" indicates asbestos was identified in the sample, but the concentration is less than the method quantitation limit. PLM coefficients of variance range from approximately 1.8 at the quantitation limit of 0.25% to 0.32 at high fiber concentrations.
- Samples are archived for three months following analysis and are then properly discarded.
- 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.
- This test report relates to the items tested.
- This report is not valid unless it bears the name of a NVLAP Lab Code 101208-0 approved signatory.
- Any reproduction of this document must be in full in order for the report to be valid.
- This report may not be used to claim product endorsement by NVLAP Lab Code 101208-0, any agency of the U.S. Government or any other laboratory accrediting agency.
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- Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA #100364, NY ELAP #10884) facility.
- If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.
- $((100-A)/B)*C$  = Asbestos Detected (%), where A=weight loss, B=total # of points counted, and C=total # of asbestos fibers counted.

## Laboratory Report

Revised

Standard Industries  
 1361 Alps Road  
 Wayne, NJ 07470  
 United States  
 Attention: Celeste Levine  
 Telephone: 973-628-3035

Report Date 10/28/2019  
 Sample Receipt Date 10/01/2019  
 RJ Lee Group Job No. AOH1055599-0  
 Authorization/P.O. No. CH64764  
 Client Job No./Name Charmian 2019 2nd QTR

Analysis: Asbestos in Bulk Samples by Point Count

Method: EPA/600/R-93/116

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10488591.HPL	SRM# 11757	Yes	1	ND	<0.1 CE	100.00	Q, CA, AM, OP, M	DF-10/24/2019
Description: Green Crushed Rock. 1000 Point Count. Detection Limit=0.1%.								
Weight Loss: 0.0%								
10488592.HPL	SRM# 11758	Yes	1	1.30 TR		98.70	Q, CA, AM, OP, MI, M	AC-10/10/2019
Description: Green Powder 1000 Point Count. Detection Limit of 0.1%								
Weight Loss: 0.0%								
10488593.HPL	SRM# 11759	Yes	1	ND		100.00	Q, CA, AM, OP, M	DF-10/24/2019
Description: Green Crushed Rock 1000 Point Count. Detection Limit of 0.1%								
Weight Loss: 0.0%								

Client Job No./Name: Charmian 2019 2nd QTR

RJ Lee Group Job No: AOH1055599-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10488594.HPL	SRM# 11760	Yes	1	ND	2.00 CE	98.00	Q, CA, AM, OP, M	DF-10/24/2019
Description:	Gray Crushed Rock 1000 Point Count. Detection Limit=0.1%							
Weight Loss:	0.0%							
10488595.HPL	SRM# 11735	Yes	1	ND		100.00	Q, CA, AM, OP, MI, M	AC-10/07/2019
Description:	Grey Powder 1000 Point Count. Detection Limit of 0.1%							
Weight Loss:	0.0%							
10488596.HPL	SRM# 11736	Yes	1	ND		100.00	Q, CA, AM, OP, M	AC-10/04/2019
Description:	Grey Powder 1000 Point Count. Detection Limit of 0.1%							
Weight Loss:	0.0%							
10488597.HPL	SRM# 11737	Yes	1	<0.1 TR	<0.1 CE	100.00	Q, CA, AM, OP, M	DF-10/24/2019
Description:	Green Crushed Rock. 1000 Point Count. Detection Limit=0.1%.							
Weight Loss:	0.0%							
10488598.HPL	SRM# 11738	Yes	1	1.10 TR		98.90	Q, CA, AM, OP, M	AC-10/25/2019
Description:	Green Powder 1000 Point Count. Detection Limit of 0.1%							
Weight Loss:	0.0%							
10488599.HPL	SRM# 11739	Yes	1	ND		100.00	Q, CA, AM, OP, MI, M	AC-10/07/2019
Description:	Grey Powder 1000 Point Count. Detection Limit of 0.1%							
Weight Loss:	0.0%							



Client Job No./Name: Charmian 2019 2nd QTR

RJ Lee Group Job No: AOH1055599-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10488600.HPL	SRM# 11740	Yes	1	ND		100.00	Q, CA, AM, OP, MI, M	AC-10/09/2019
Description:	Grey Powder 1000 Point Count. Detection Limit of 0.1%							
Weight Loss:	0.0%							
10488601.HPL	SRM# 11741	Yes	1	ND	<0.1 CE	100.00	Q, CA, AM, OP, M	DF-10/24/2019
Description:	Green Crushed Rock. 1000 Point Count. Detection Limit=0.1%.							
Weight Loss:	0.0%							
10488602.HPL	SRM# 11742	Yes	1	ND		100.00	Q, CA, AM, OP, MI, M	AC-10/09/2019
Description:	Grey Powder 1000 Point Count. Detection Limit of 0.1%							
Weight Loss:	0.0%							
10488603.HPL	SRM# 11743	Yes	1	ND		100.00	Q, CA, AM, OP, MI, M	AC-10/04/2019
Description:	Grey Powder 1000 Point Count. Detection Limit of 0.1%							
Weight Loss:	0.0%							
10488604.HPL	SRM# 11744	Yes	1	ND		100.00	Q, CA, AM, OP, M	AC-10/04/2019
Description:	Grey Powder 1000 Point Count. Detection Limit of 0.1%							
Weight Loss:	0.0%							
10488605.HPL	SRM# 11745	Yes	1	ND	<0.1 CE	100.00	Q, CA, AM, OP, M	DF-10/24/2019
Description:	Beige Crushed Rock. 1000 Point Count. Detection Limit=0.1%.							
Weight Loss:	0.0%							

Client Job No./Name: Charmian 2019 2nd QTR

RJ Lee Group Job No: AOH1055599-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10488606.HPL	SRM# 11746	Yes	1	ND	1.00 CE	99.00	Q, CA, AM, OP, M	AC-10/07/2019
Description: Grey Powder 1000 Point Count. Detection Limit of 0.1%								
Weight Loss: 0.0%								
10488607.HPL	SRM# 11747	Yes	1	ND		100.00	Q, CA, AM, OP, M	AC-10/09/2019
Description: Grey Powder 1000 Point Count. Detection Limit of 0.1%								
Weight Loss: 0.0%								
10488608.HPL	SRM# 11748	Yes	1	ND		100.00	Q, CA, AM, OP, MI, M	AC-10/07/2019
Description: Grey Powder 1000 Point Count. Detection Limit of 0.1%								
Weight Loss: 0.0%								
10488609.HPL	SRM# 11749	Yes	1	0.70 TR		99.30	Q, CA, AM, OP, MI, M	AC-10/15/2019
Description: Grey Powder 1000 Point Count. Detection Limit of 0.1%								
Weight Loss: 0.0%								
10488610.HPL	SRM# 11750	Yes	1	ND		100.00	Q, CA, AM, OP, MI, M	AC-10/04/2019
Description: Grey Powder 1000 Point Count. Detection Limit of 0.1%								
Weight Loss: 0.0%								
10488611.HPL	SRM# 11751	Yes	1	ND		100.00	Q, CA, OP, MI, M	AC-10/10/2019
Description: Grey Powder 1000 Point Count. Detection Limit of 0.1%								
Weight Loss: 0.0%								

Client Job No./Name: Charmian 2019 2nd QTR

RJ Lee Group Job No: AOH1055599-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10488612.HPL	SRM# 11752	Yes	1	0.10 TR	<0.1 CE	99.90	Q, CA, AM, OP, M	WT-10/28/2019
Description: Green Crushed Rock. 1000 Point Count. Detection Limit=0.1%.								
Weight Loss: 0.0%								

Client Job No./Name: Charmian 2019 2nd QTR

RJ Lee Group Job No: AOH1055599-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
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Authorized Signature: \_\_\_\_\_



Wei Tseng, Microscopist

#### ASBESTOS

AM = Amosite  
AC = Actinolite  
AN = Anthophyllite  
CH = Chrysotile  
CR = Crocidolite  
TR = Tremolite

#### NON-ASBESTOS

CE = Cellulose  
MW = Mineral Wool  
FG = Fibrous Glass  
SF = Synthetic Fibers  
H = Hair  
W = Wollastonite  
OF = Other Fibers

#### NON-FIBROUS MATERIALS

AM = Amphibole  
B = Binder  
CA = Carbonates  
CL = Clay  
F = Feldspar  
G = Gypsum  
HY = Hydromagnesite  
M = Miscellaneous  
MI = Mica  
OP = Opaque  
OR = Organic  
P = Perlite  
Q = Quartz  
T = Tar  
V = Vermiculite

#### DISCLAIMER NOTES

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- "Trace" or "<" indicates asbestos was identified in the sample, but the concentration is less than the method quantitation limit. PLM coefficients of variance range from approximately 1.8 at the quantitation limit of 0.25% to 0.32 at high fiber concentrations.
- Samples are archived for three months following analysis and are then properly discarded.
- 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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- Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA #100364, NY ELAP #10884) facility.
- If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.
- $((100-A)/B)*C$  = Asbestos Detected (%), where A=weight loss, B=total # of points counted, and C=total # of asbestos fibers counted.

November 12, 2019

Celeste Levine  
Standard Industries  
1361 Alps Road  
Wayne, NJ 07470

Re: Charmian 2019 2<sup>nd</sup> QTR / PO CH64764  
RJ Lee Group Project Number: AOH1055599

Dear Ms. Levine,

RJ Lee Group (RJLG) received forty (40) samples on October 1, 2019 for polarized light microscopy (PLM) by EPA/600/R-93/116. The initial report was sent on October 15, 2019 and a revised report was issued on October 28, 2019. The purpose of this report is to provide additional images and data to illustrate the asbestiform particles observed during the original analysis reported on October 28, 2019.

Concerns were raised by SGI about the finding of asbestiform amphibole in five (5) samples listed in Table 1. The amount of asbestiform amphibole observed in these samples range from <0.1% to 1.3% asbestiform amphibole by PLM. These five samples were re-examined by PLM and photomicrographs of representative fibers were obtained (Figures 1-6). Additionally, these same samples were analyzed by transmission electron microscopy using a modified ASTM 5756 protocol; these results are also present in Table 1. The amount of asbestiform amphibole by TEM ranges from 10–870 ppm.

Each of these samples exhibit a range of compositions by TEM and PLM. In PLM, this is indicated but the range of pleochroism from clear to light green illustrated in plane light photomicrographs in Figures 1-6. The range of refractive indices for  $n_v = 1.633$ -1.634, which according to Nesse (2004) is between  $n_v = 1.628$ -1.642. By TEM, there is clear variability of iron (Fe) by energy dispersive spectroscopy (EDS) which is illustrated in Appendix A. This indicates the composition of the amphibole particles observed ranges from tremolitic to actinolitic.

A range of morphologies was also observed by both PLM and TEM. Elongated non-asbestiform particles were observed by TEM which were identified as cleavage fragments even though these would meet the counting criteria for ASTM 5756. Particles with high aspect ratio, curvature, or bundle effects were identified as asbestiform by PLM and TEM. The morphologies of the observed particles are not consistent with an asbestos population, but individual particles are consistent with an asbestiform morphology.

RJ Lee Group is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP, #101208-00) for asbestos fiber analysis. This report may not be used to claim product endorsement by

NVLAP or any agency of the US government. This report relates only to the samples tested and may be reproduced in full.

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 the results are used or interpreted. Unless notified to return the samples covered in this report, RJ Lee Group will store them for a period of ninety (90) days before discarding.

Should you have any questions regarding this information, please do not hesitate to contact us.

Sincerely,

A handwritten signature in black ink, appearing to read 'Monica McGrath-Koerner', with a stylized, cursive script.

Monica McGrath-Koerner  
Scientist II  
[mmcgrath-koerner@rjleegroup.com](mailto:mmcgrath-koerner@rjleegroup.com)  
724-387-1959

Attachments:

Appendix A – TEM images, EDS, SAED  
Appendix B – TEM report and benchsheets  
Appendix C - PLM Report and benchsheets  
COC

**Table 1.** Specialty Granules and assigned RJLG sample numbers with corresponding asbestos and non-asbestos amphibole findings by sample for both PLM (%) and TEM (ppm). PLM detected non-asbestiform in all five samples, but it was not quantified.

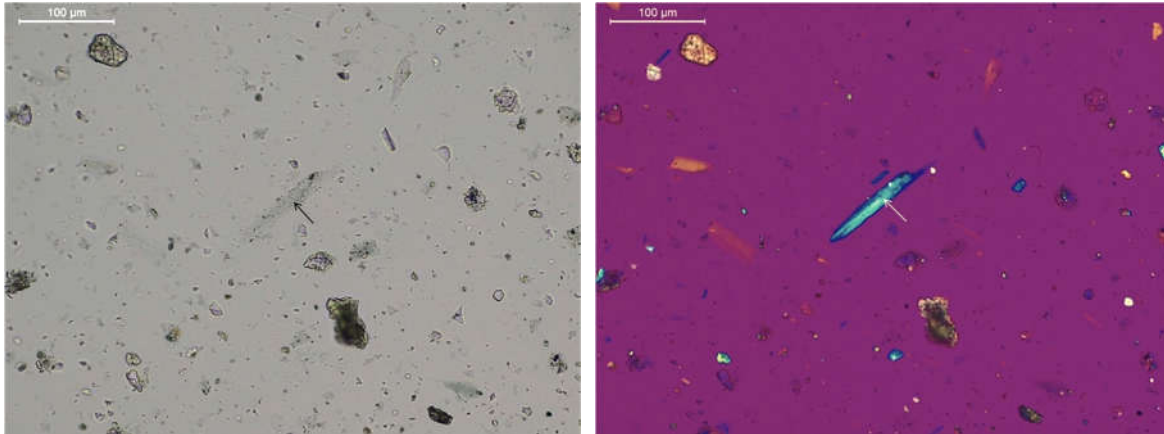
Specialty Granules Sample #	RJLG Sample #	Chrysotile		Asbestiform Amphibole (type)		Non-Asbestiform Amphibole (type)
		PLM (%)	TEM (ppm)	PLM (%)	TEM (ppm)	TEM (ppm)
10488592	SRM# 11758	ND	ND	1.30 (Tr)	30 (Ac)	10,000 (Ac)
10488597	SRM# 11737	ND	ND	<0.1 (Tr)	ND	440 (Ac/Tr)
10488598	SRM# 11738	ND	ND	1.10 (Tr)	10 (Ac)	5100 (Ac)
10488609	SRM# 11749	ND	ND	0.70 (Tr)	870 (Ac)	890 (Ac)
10488612	SRM# 11752	ND	ND	0.10 (Tr)	100 (Ac)	110,000 (Ac)

ND – none detected

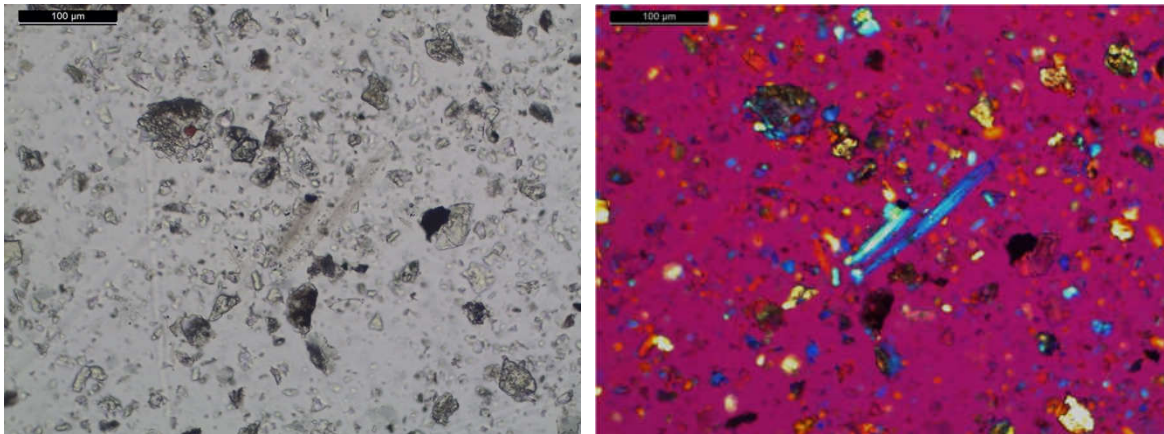
Tr – tremolite

Ac – actinolite

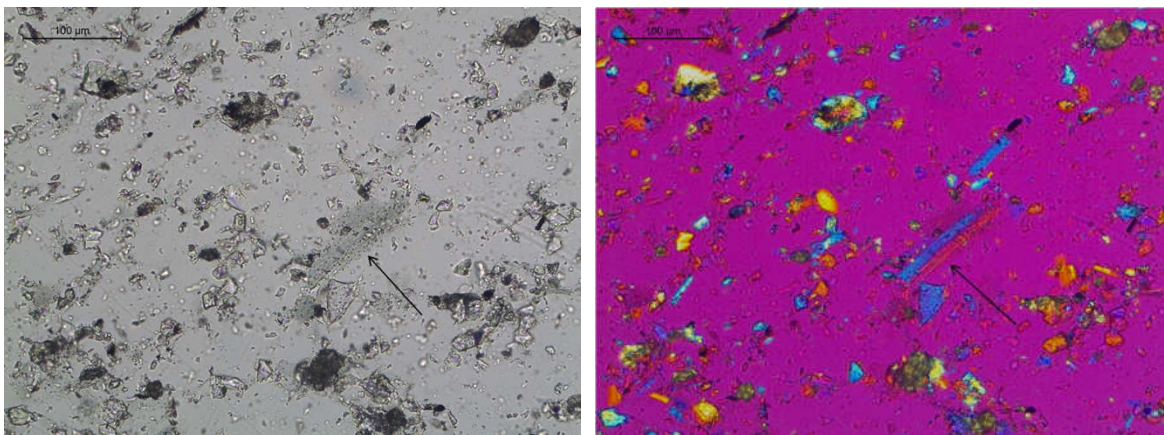




**Figure 1:** Photomicrographs of fibrous tremolitic amphibole observed in sample # 10488592 in plane and crossed polarized light in refractive index liquid.

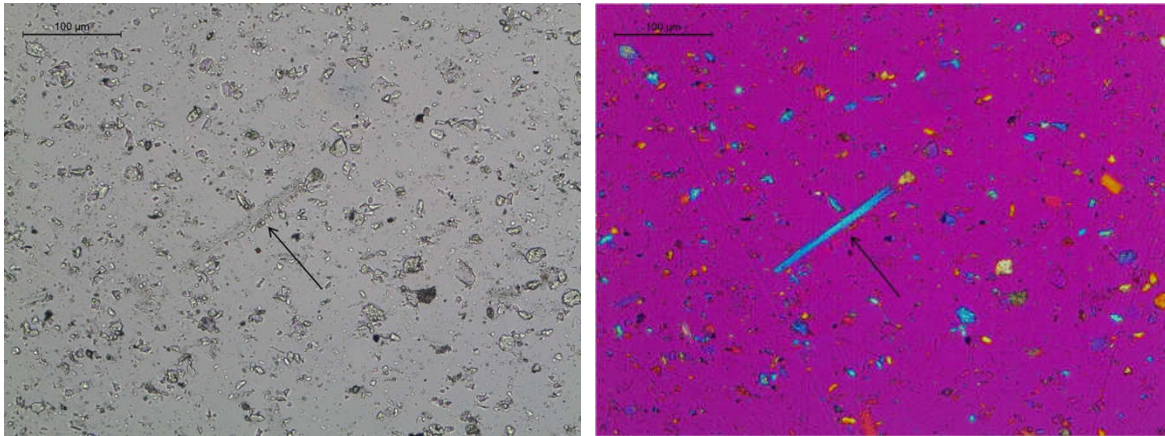


**Figure 2:** Photomicrographs of fibrous tremolitic amphibole observed in sample # 10488597 in plane and crossed polarized light in refractive index liquid.

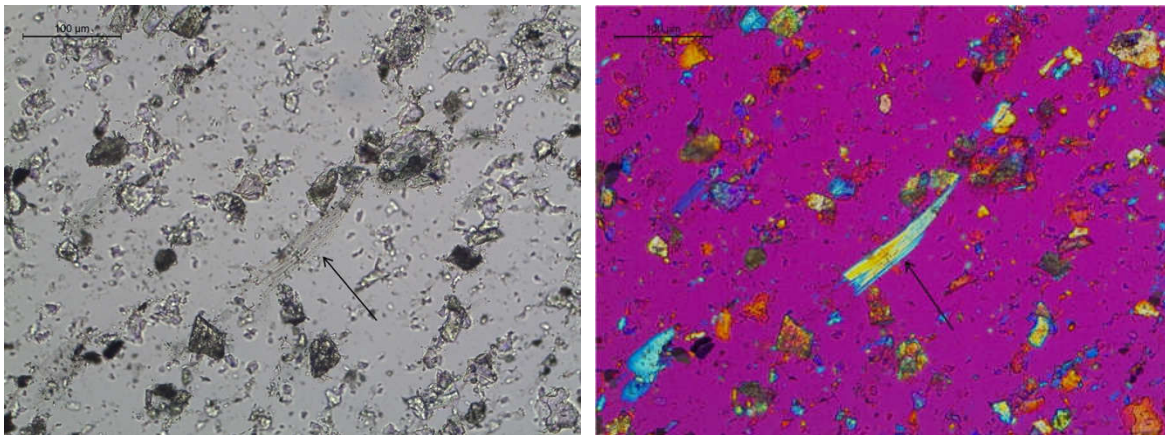


**Figure 3:** Photomicrographs of fibrous tremolitic amphibole observed in sample # 10488597 in plane and crossed polarized light in refractive index liquid.

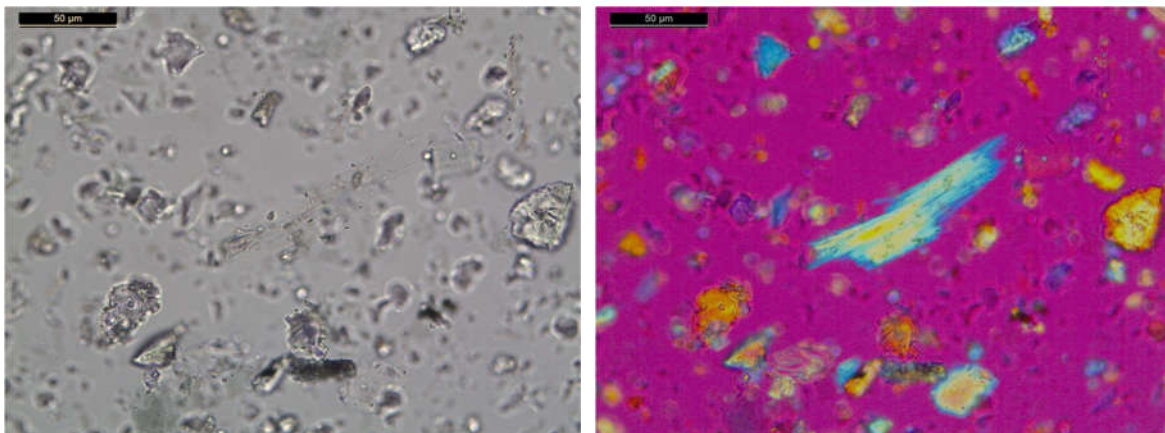




**Figure 4:** Photomicrographs of fibrous tremolitic amphibole observed in sample # 10488598 in plane and crossed polarized light in refractive index liquid.

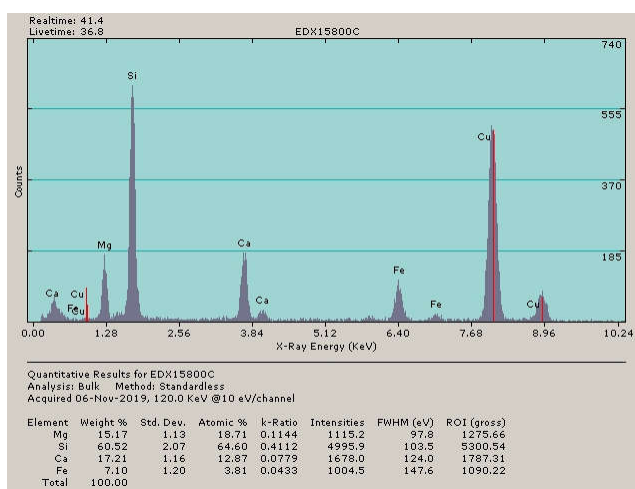
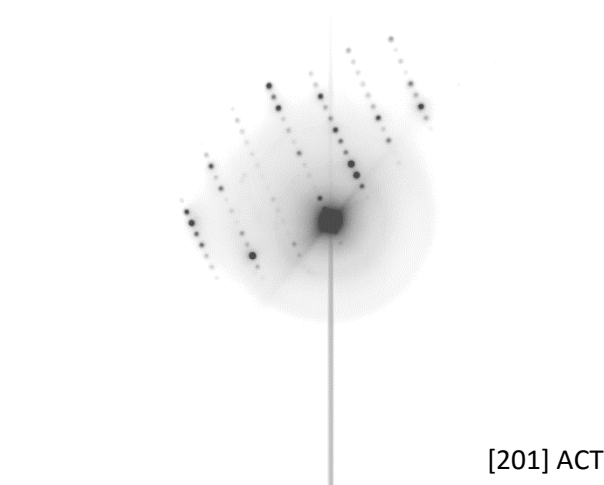
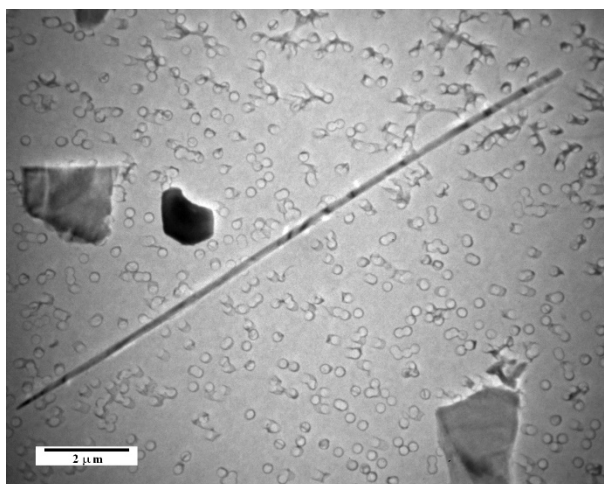


**Figure 5:** Photomicrographs of fibrous tremolitic amphibole observed in sample # 10488609 in plane and crossed polarized light in refractive index liquid.

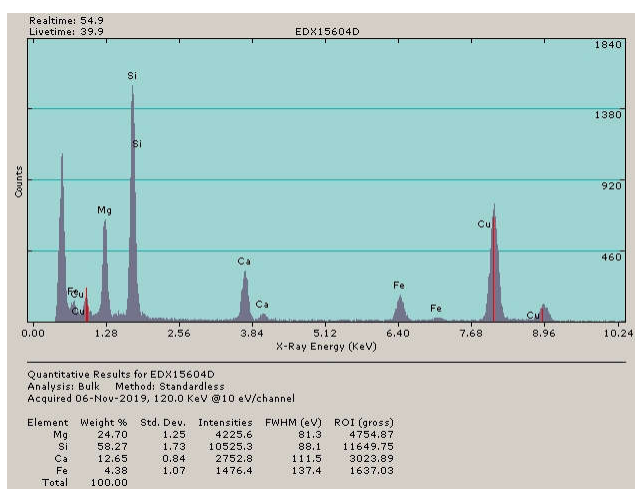
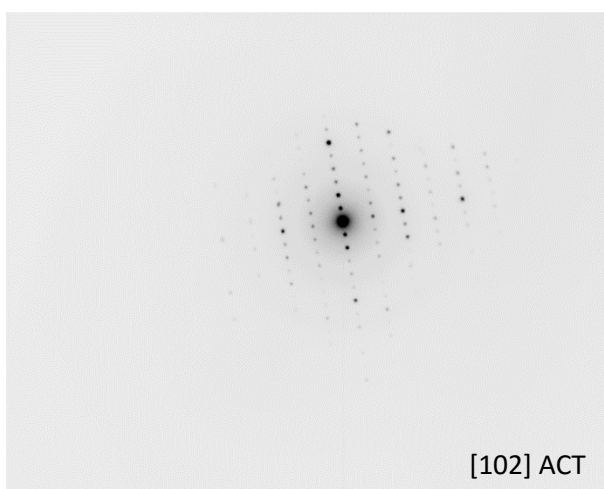
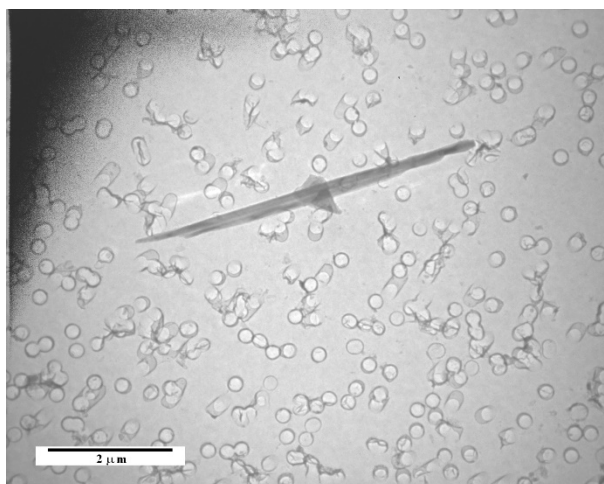


**Figure 6:** Photomicrograph of fibrous tremolitic amphibole observed in sample # 10488609 in plane and crossed polarized light in refractive index liquid.

**Appendix A**  
**TEM Images, SAED, and EDS**

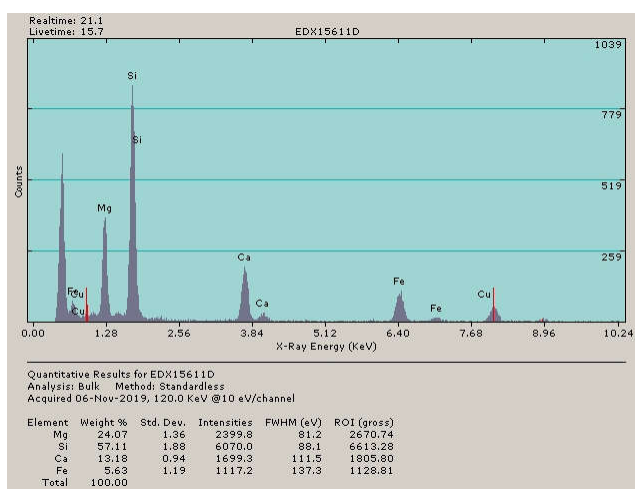
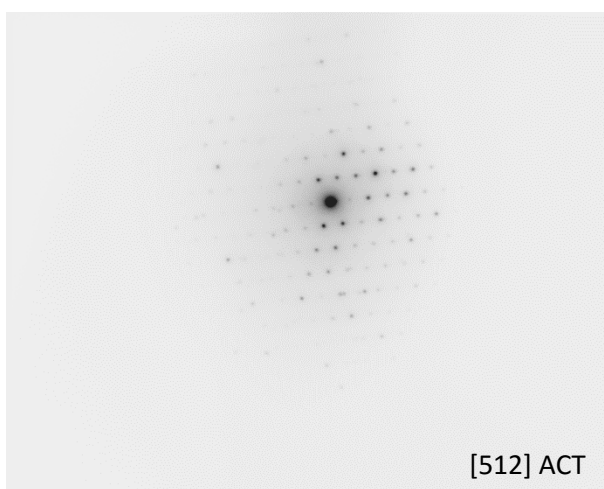
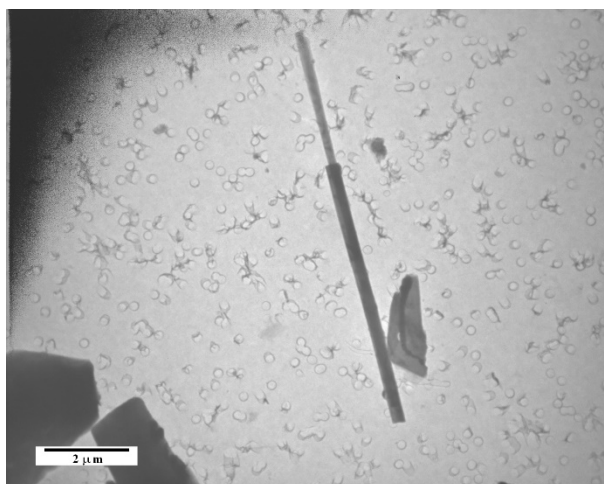


**Figure 1.** Electron micrograph (top), selected area diffraction pattern (middle) and energy dispersive spectrum (bottom) from actinolite asbestos observed in sample SRM# 11758/10488592 Hi-Mag (6-3).

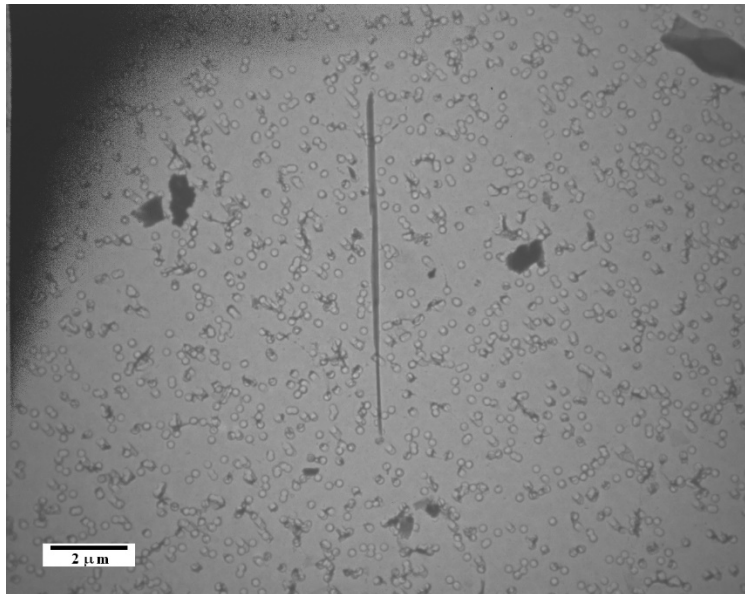


**Figure 2.** Electron micrograph (top), selected area diffraction pattern (middle) and energy dispersive spectrum (bottom) from actinolite asbestos observed in sample SRM# 11738/10488598 Lo-Mag (16-2).

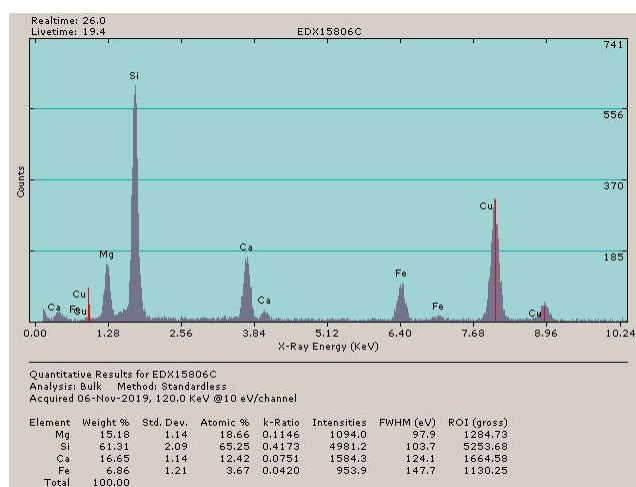
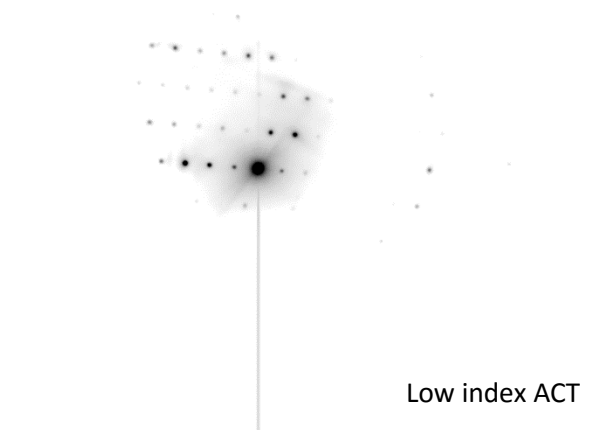
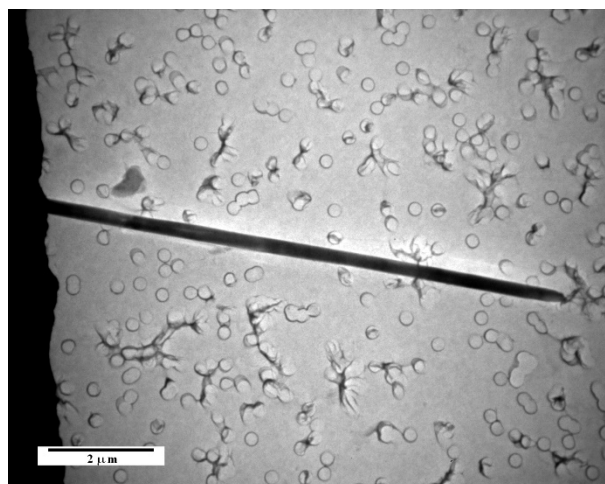




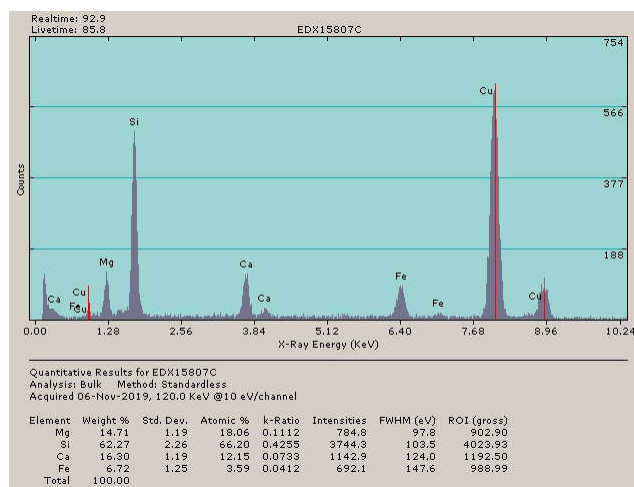
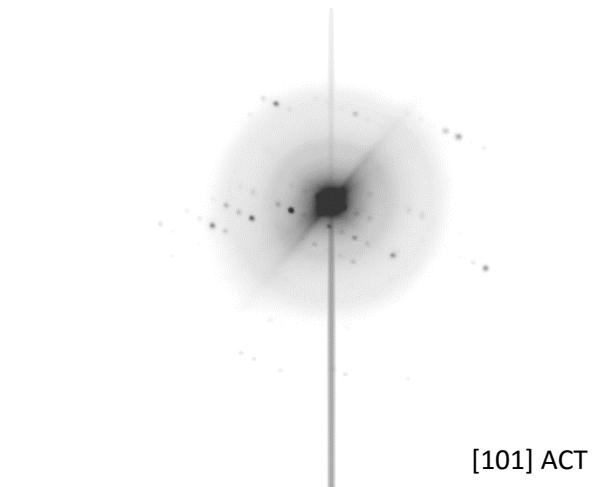
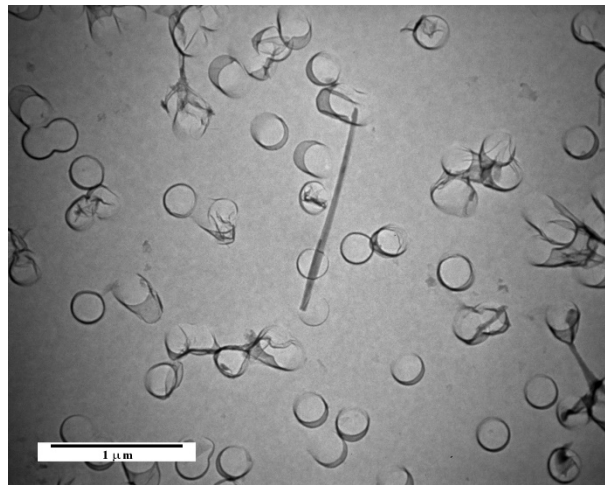
**Figure 3.** Electron micrograph (top), selected area diffraction pattern (middle) and energy dispersive x-ray spectrum (bottom) from actinolite asbestos observed in sample SRM# 11749/10488609 Hi-Mag (1-1).



**Figure 4.** Electron micrograph from actinolite asbestos observed in sample SRM# 11749/10488609 Hi-Mag (3-1).

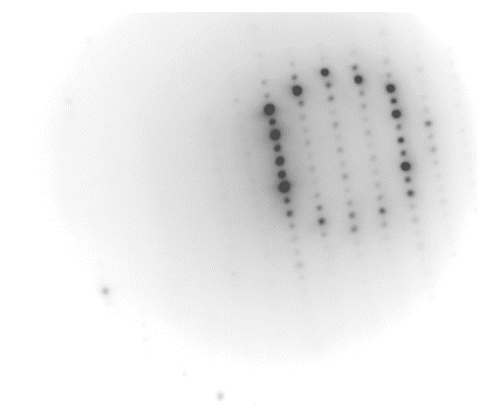
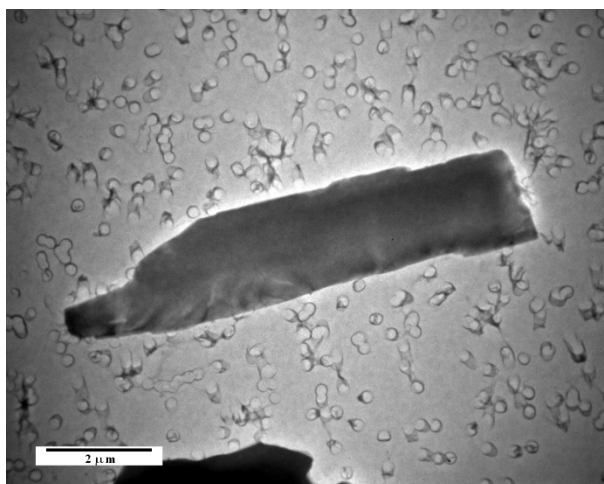


**Figure 5.** Electron micrograph (top), selected area diffraction pattern (middle) and energy dispersive spectrum (bottom) from actinolite asbestos observed in sample SRM# 11752/10488612 Hi-Mag (5-2).

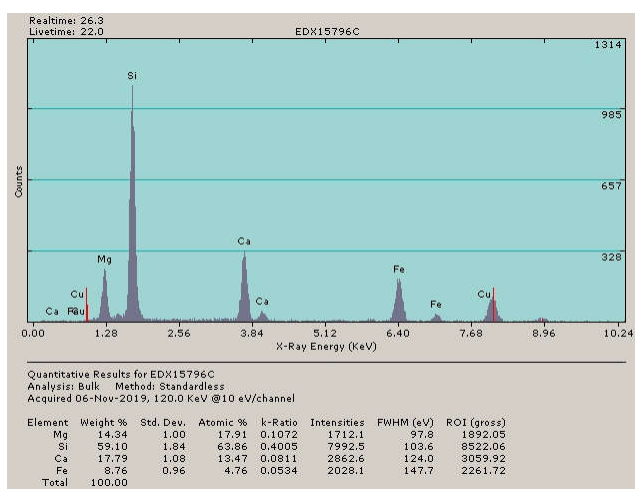


**Figure 6.** Electron micrograph (top), selected area diffraction pattern (middle) and energy dispersive spectrum (bottom) from actinolite asbestos observed in sample SRM# 11752/10488612 Hi-Mag (8-3).

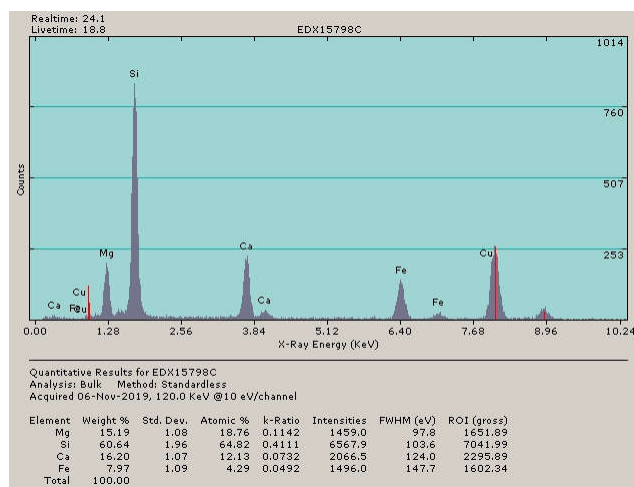
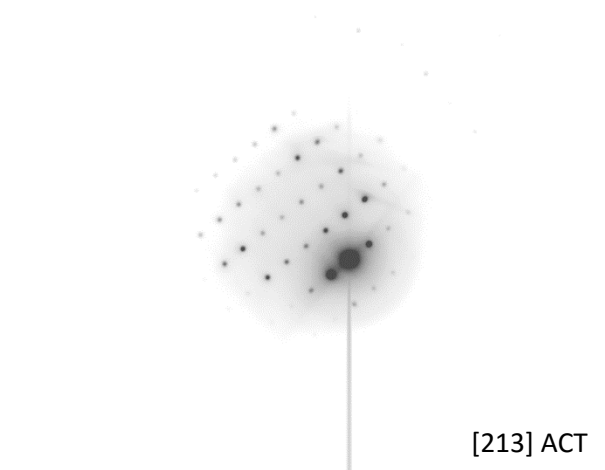
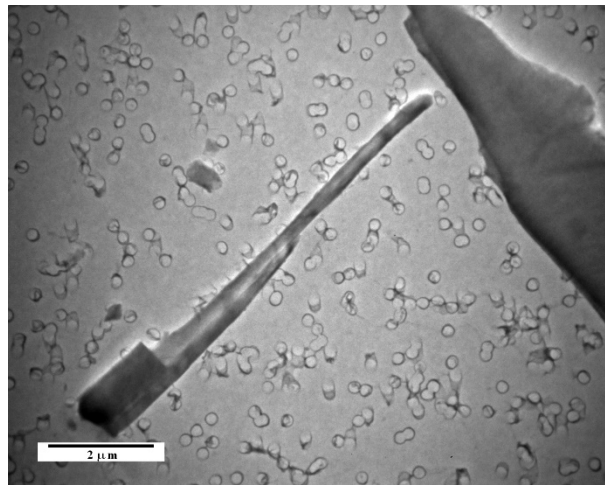




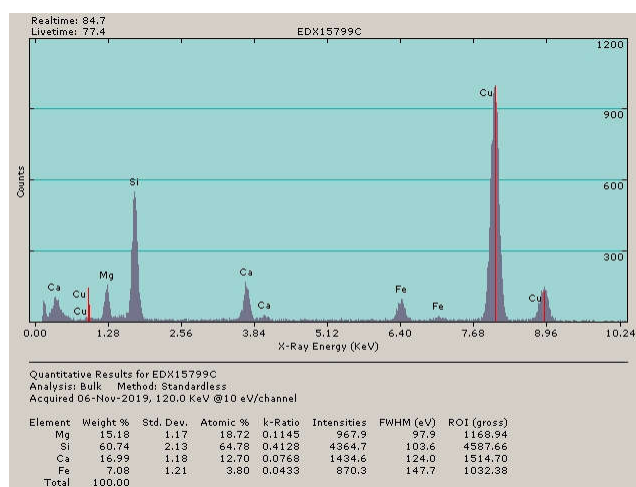
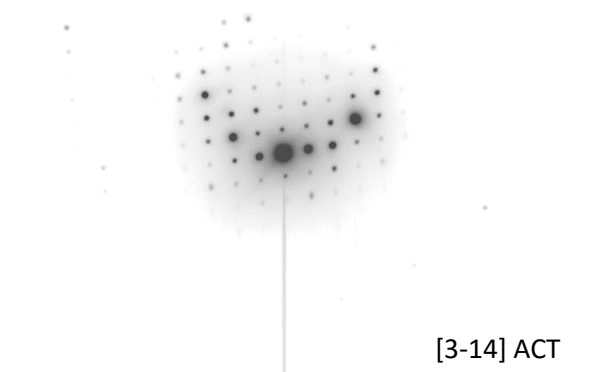
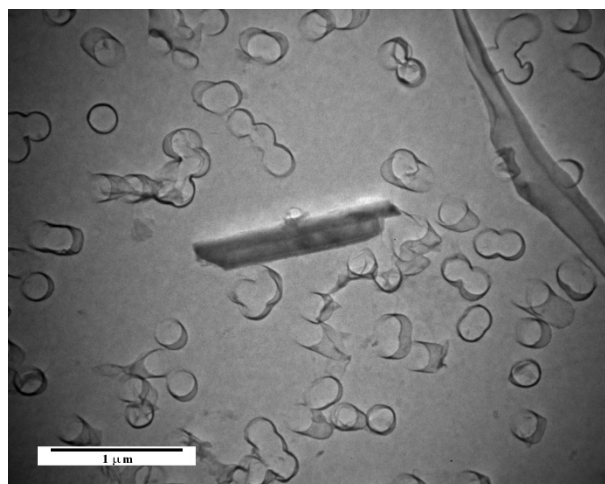
[102] ACT



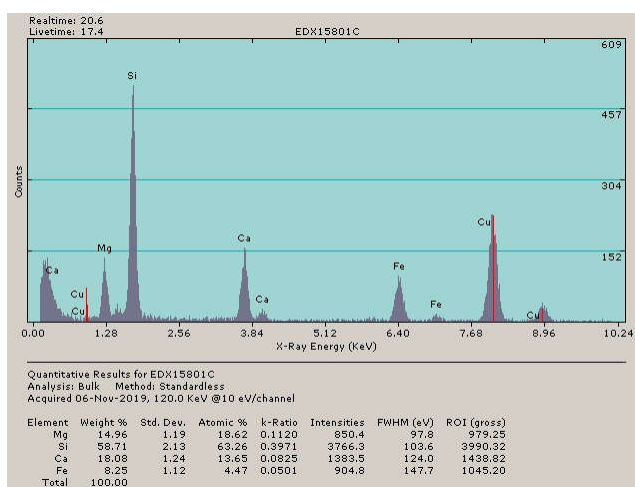
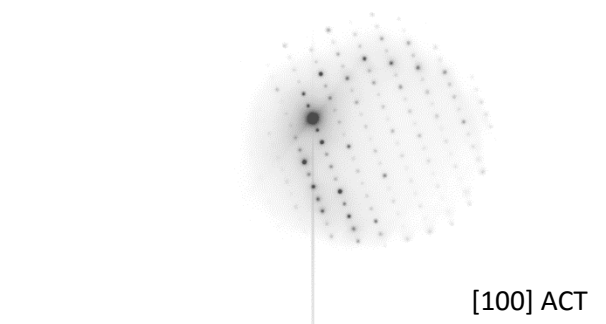
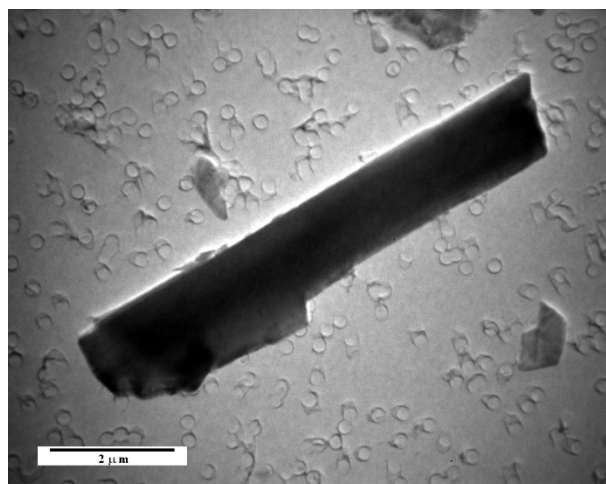
**Figure 7.** Electron micrograph (top), selected area diffraction pattern (middle) and energy dispersive spectrum (bottom) from actinolite cleavage observed in sample SRM# 11758/10488592 Hi-Mag (1-1).



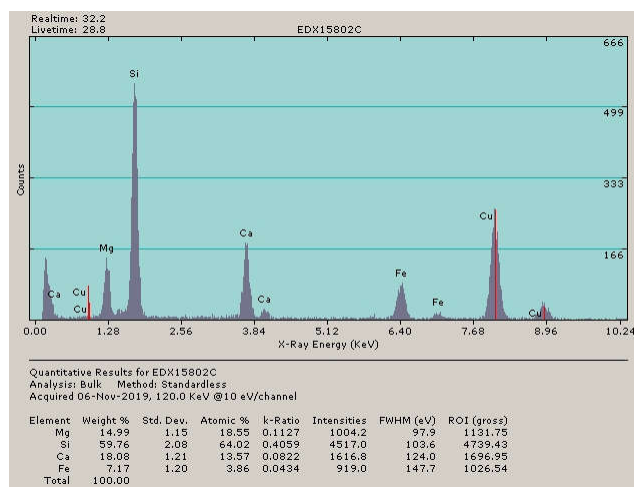
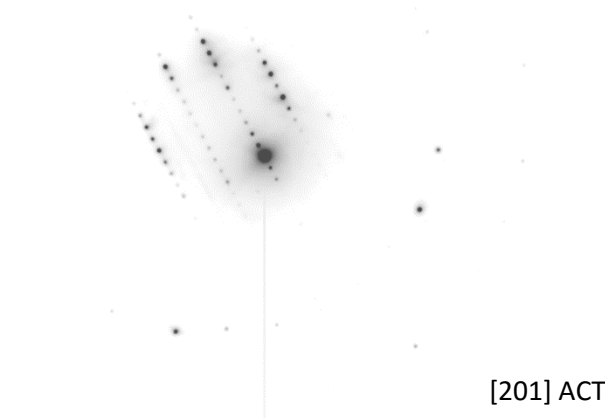
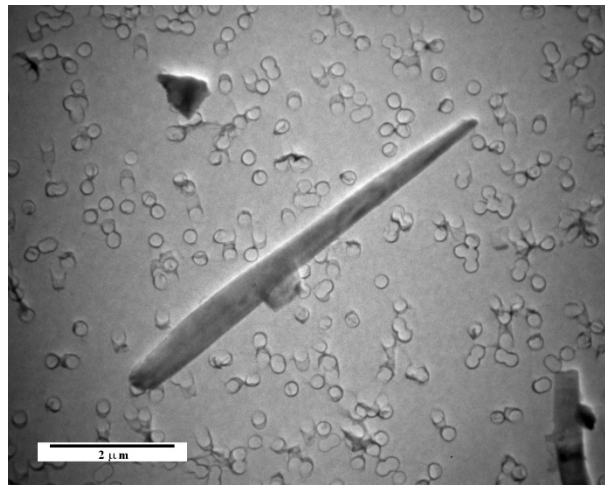
**Figure 8.** Electron micrograph (top), selected area diffraction pattern (middle) and energy dispersive spectrum (bottom) from actinolite cleavage observed in sample SRM# 11758/10488592 Hi-Mag (3-3).



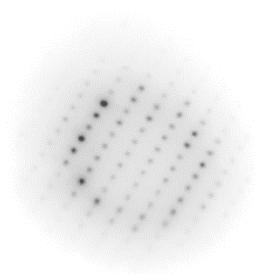
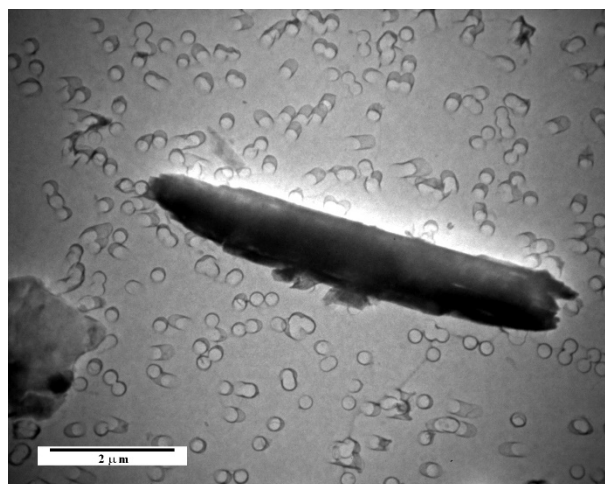
**Figure 9.** Electron micrograph (top), selected area diffraction pattern (middle) and energy dispersive spectrum (bottom) from actinolite cleavage observed in sample SRM# 11758/10488592 Hi-Mag (6-2).



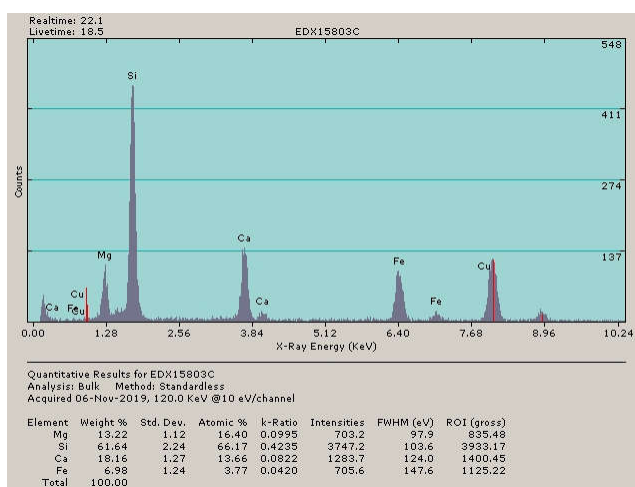
**Figure 10.** Electron micrograph (top), selected area diffraction pattern (middle) and energy dispersive spectrum (bottom) from actinolite cleavage observed in sample SRM# 11758/10488592 Lo-Mag (1-1).



**Figure 11.** Electron micrograph (top), selected area diffraction pattern (middle) and energy dispersive spectrum (bottom) from actinolite cleavage observed in sample SRM# 11758/10488592 Lo-Mag (9-2).

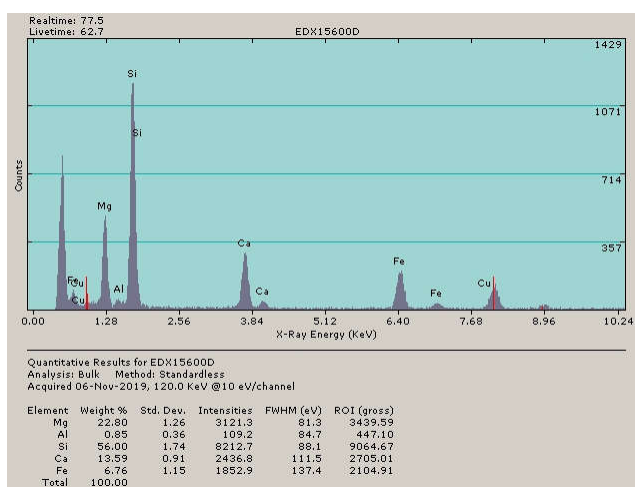
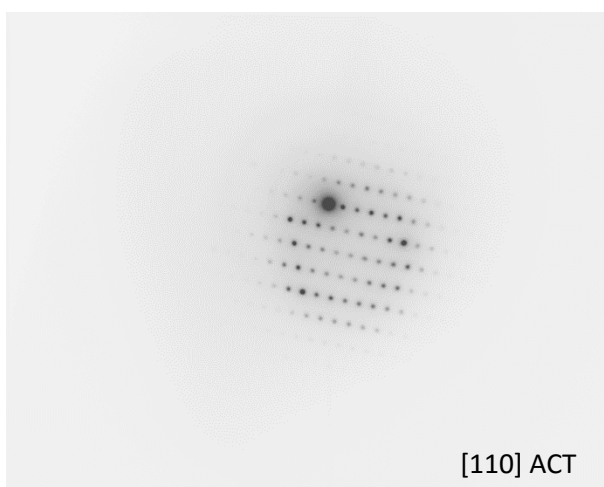
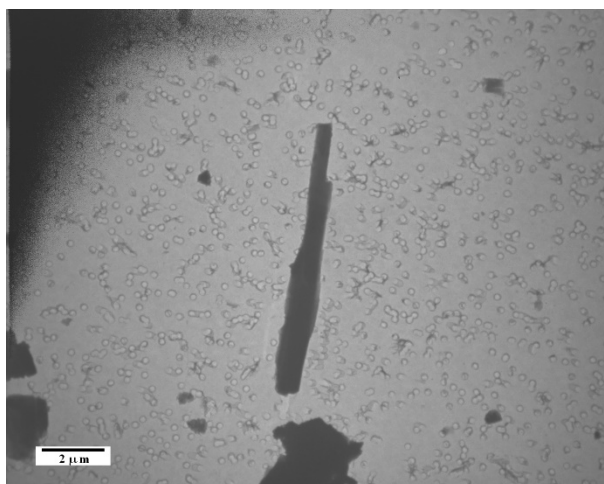


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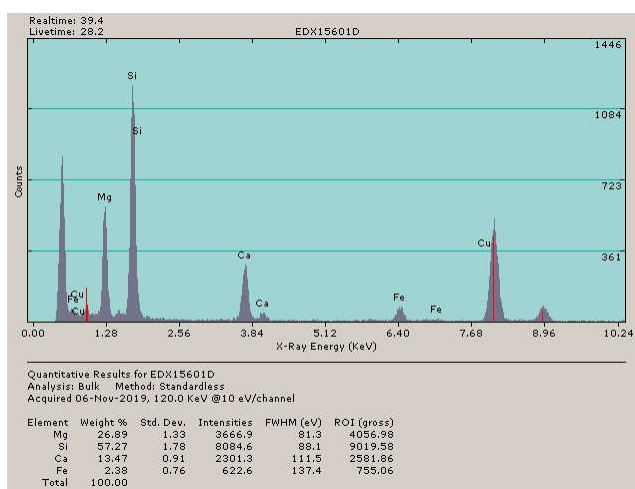
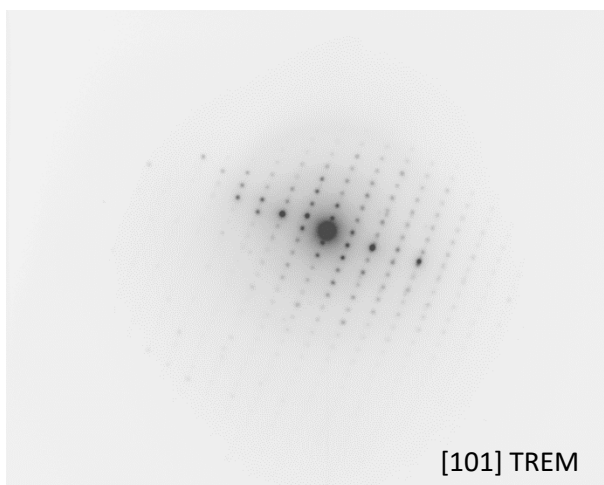
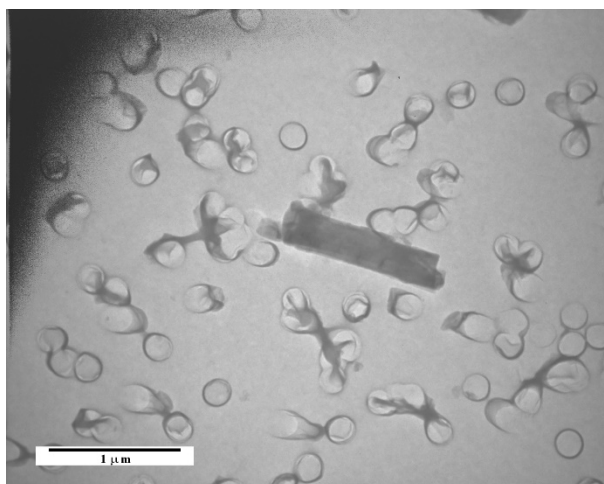


**Figure 12.** Electron micrograph (top), selected area diffraction pattern (middle) and energy dispersive spectrum (bottom) from actinolite cleavage observed in sample SRM# 11758/10488592 Lo-Mag (19-1).



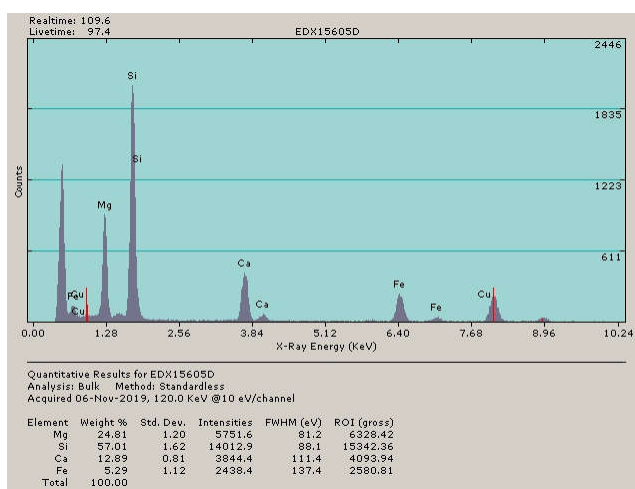
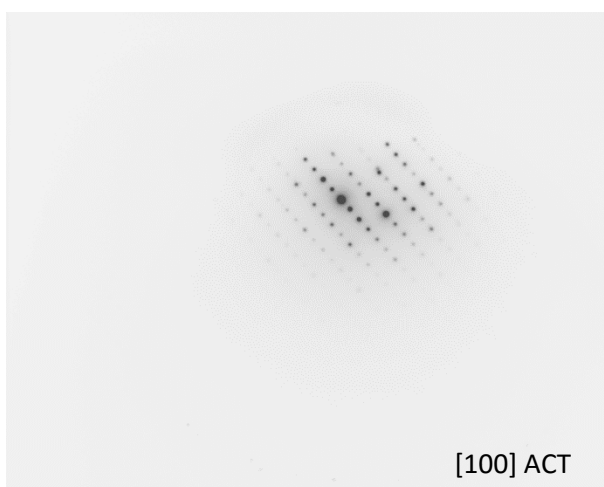
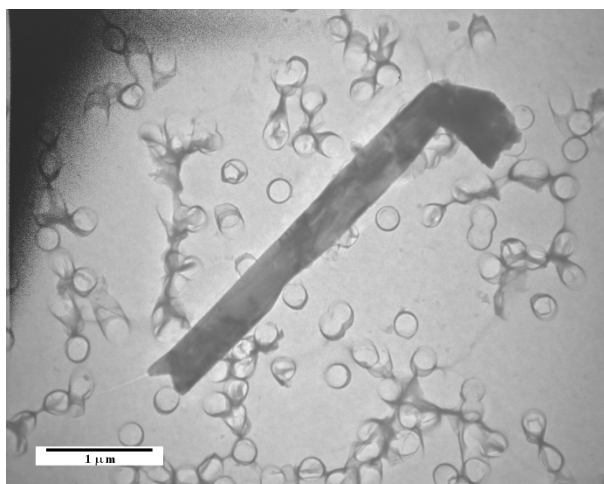


**Figure 13.** Electron micrograph (top), selected area diffraction patterns (middle) and energy dispersive spectrum (bottom) from actinolite cleavage observed in sample SRM# 11737/10488597 Hi-Mag (4-1).

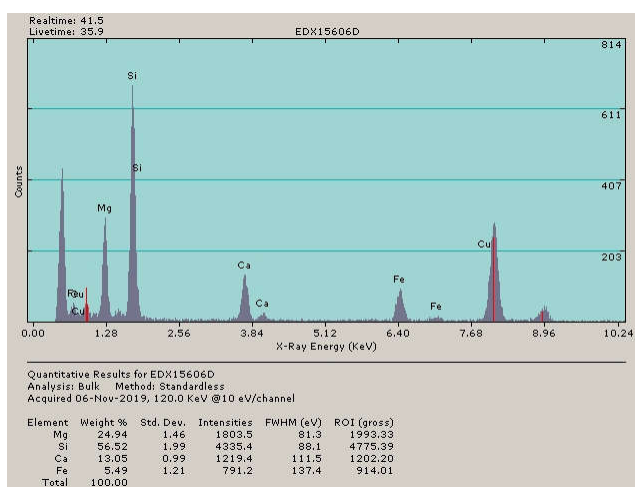
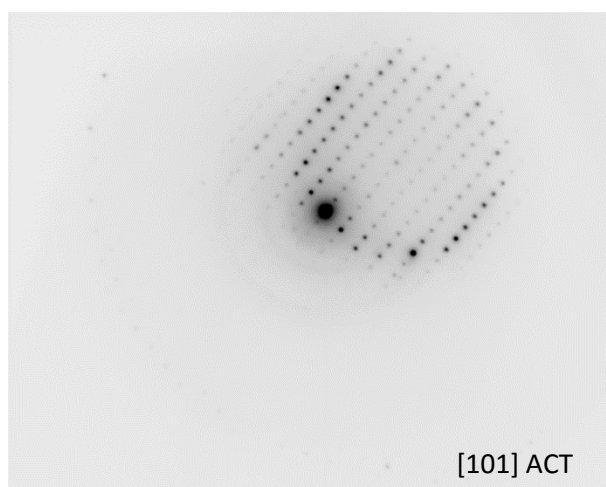
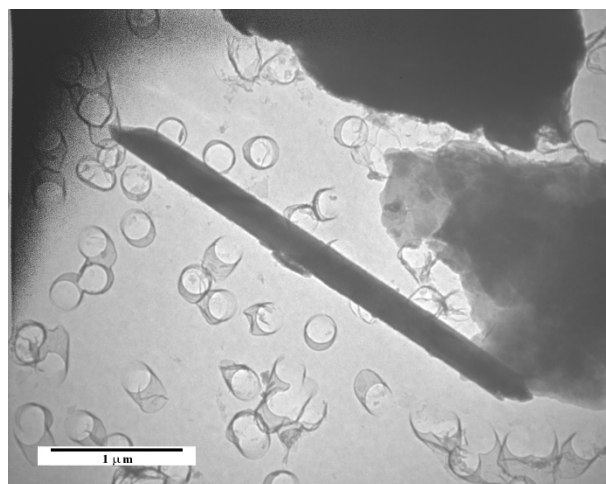


**Figure 14.** Electron micrograph (top), selected area diffraction patterns (middle) and energy dispersive spectrum (bottom) from tremolite cleavage observed in sample SRM# 11737/10488597 Hi-Mag (7-1).

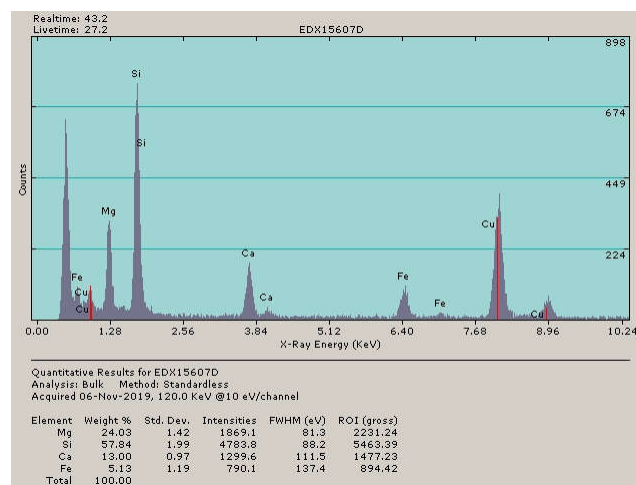
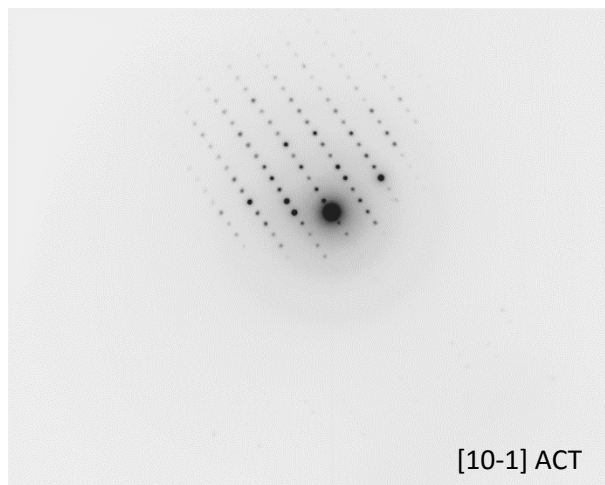
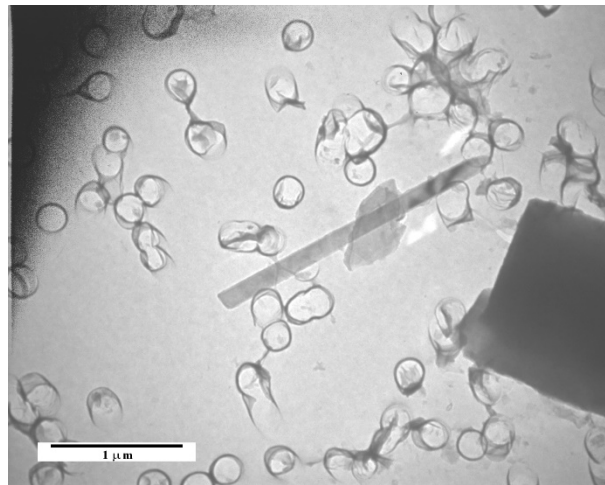




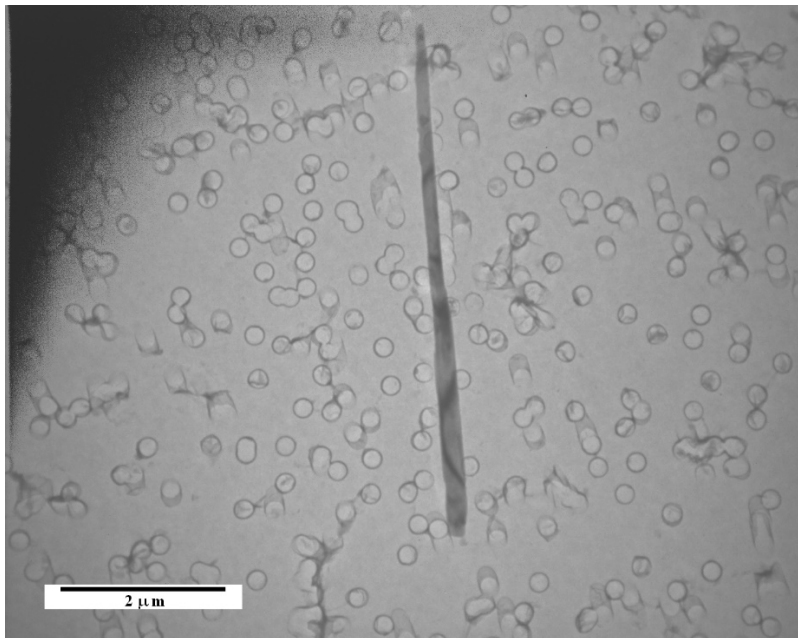
**Figure 15.** Electron micrograph (top), selected area diffraction patterns (middle) and energy dispersive spectrum (bottom) from actinolite cleavage observed in sample SRM# 11738/10488598 Hi-Mag (1-1).



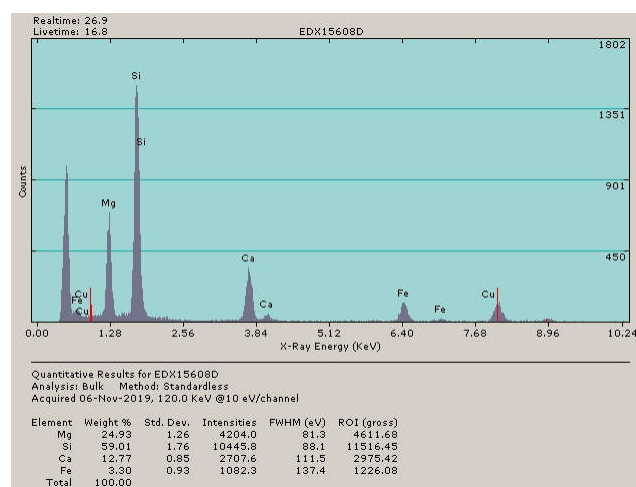
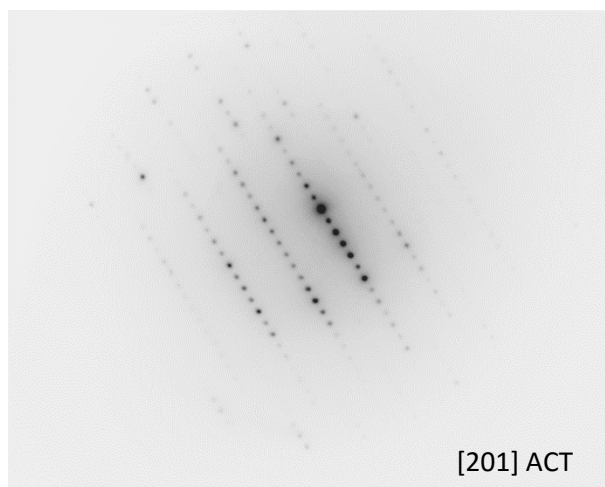
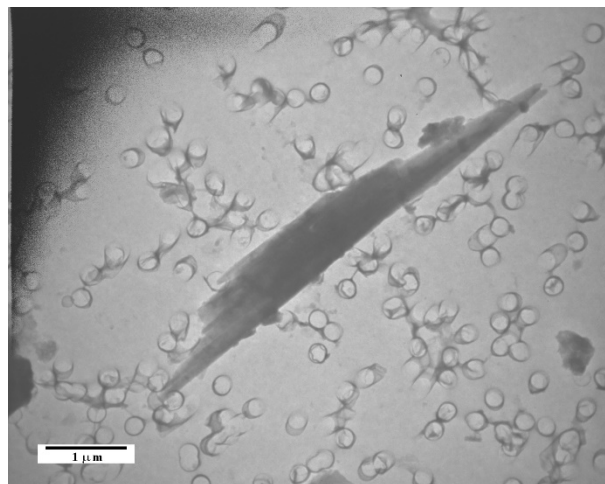
**Figure 16.** Electron micrograph (top), selected area diffraction patterns (middle) and energy dispersive spectrum (bottom) from actinolite cleavage observed in sample SRM# 11738/10488598 Hi-Mag (1-5).



**Figure 16.** Electron micrograph (top), selected area diffraction patterns (middle) and energy dispersive spectrum (bottom) from actinolite cleavage observed in sample SRM# 11738/10488598 Hi-Mag (4-3).

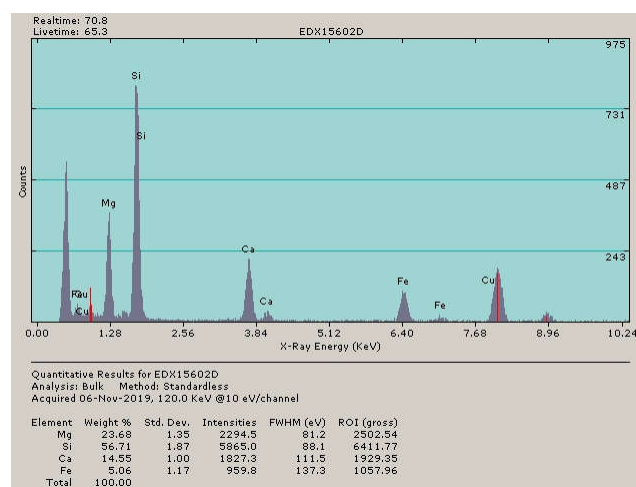
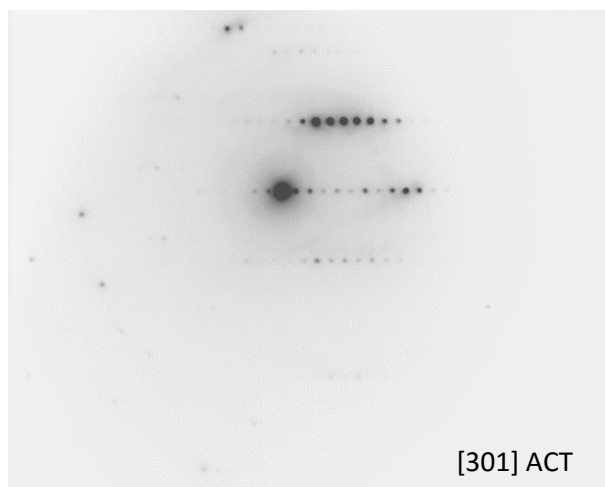
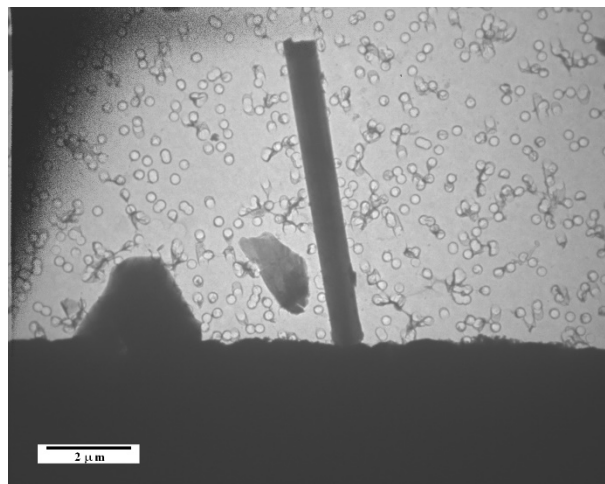


**Figure 17.** Electron micrograph from actinolite cleavage observed in sample SRM# 11738/10488598 Hi-Mag (5-1).

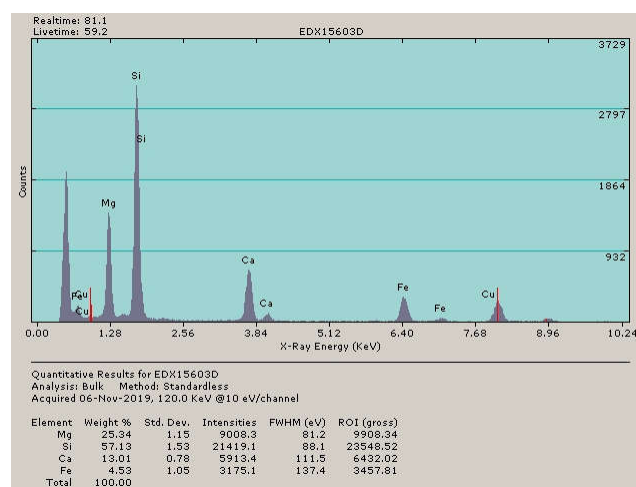
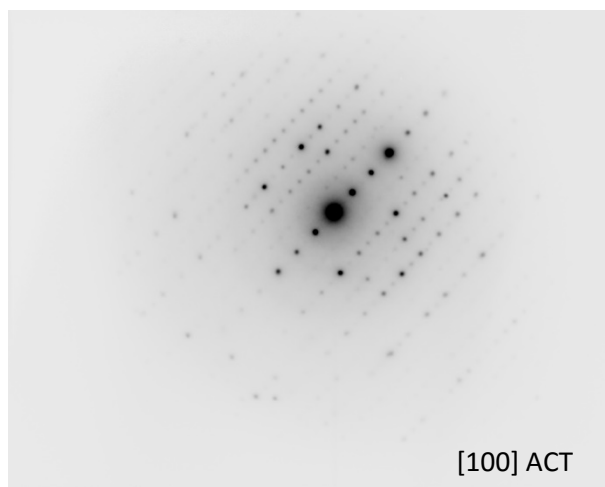
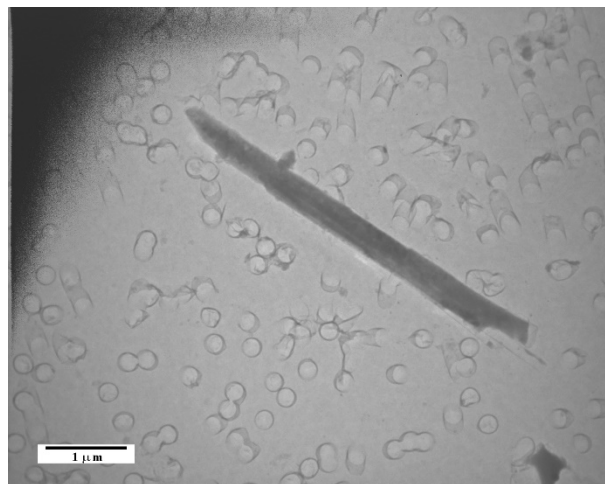


**Figure 18.** Electron micrograph (top), selected area diffraction patterns (middle) and energy dispersive spectrum (bottom) from actinolite cleavage observed in sample SRM# 11738/10488598 Hi-Mag (6-1).

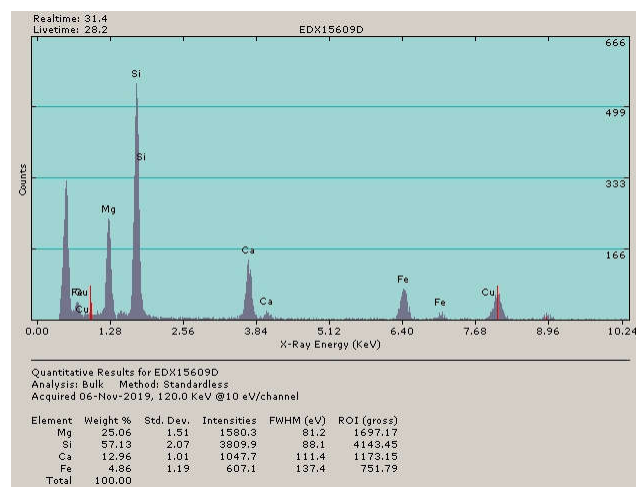
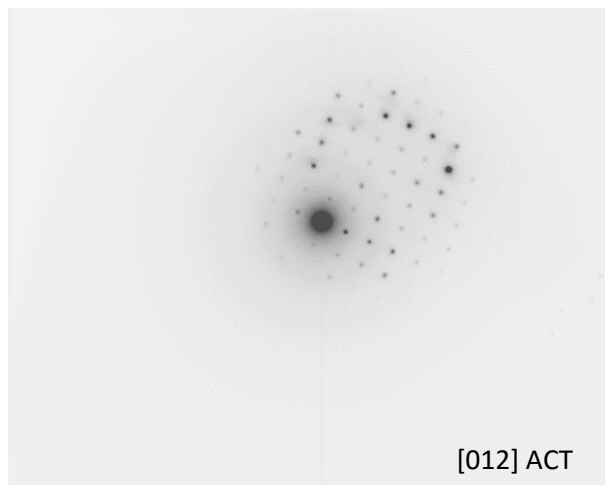
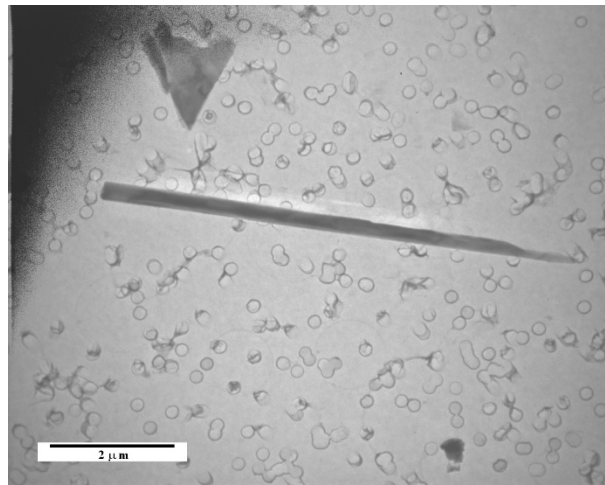




**Figure 19.** Electron micrograph (top), selected area diffraction patterns (middle) and energy dispersive spectrum (bottom) from actinolite cleavage observed in sample SRM# 11738/10488598 Lo-Mag (1-1).

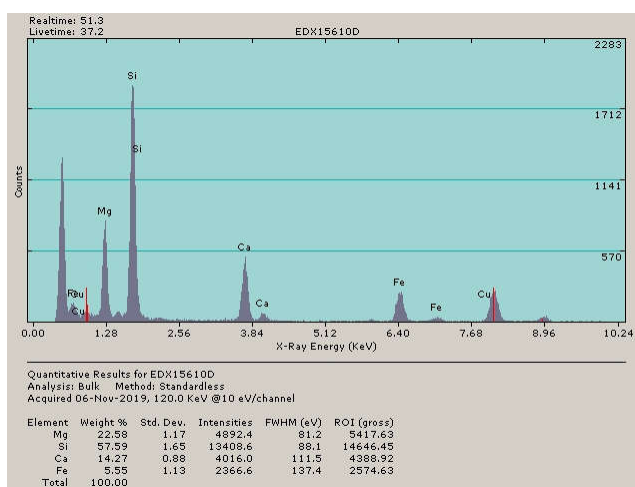
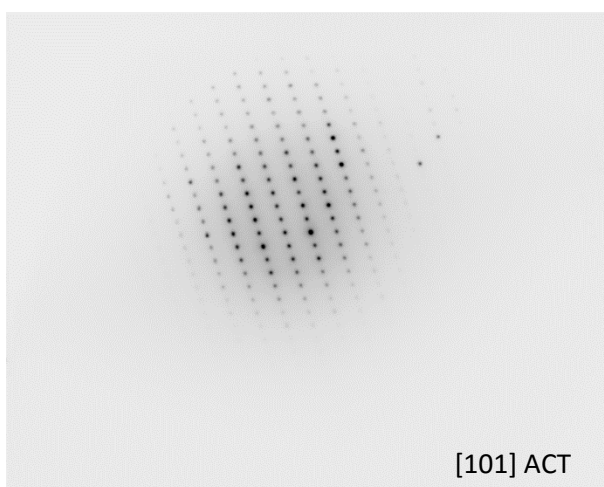
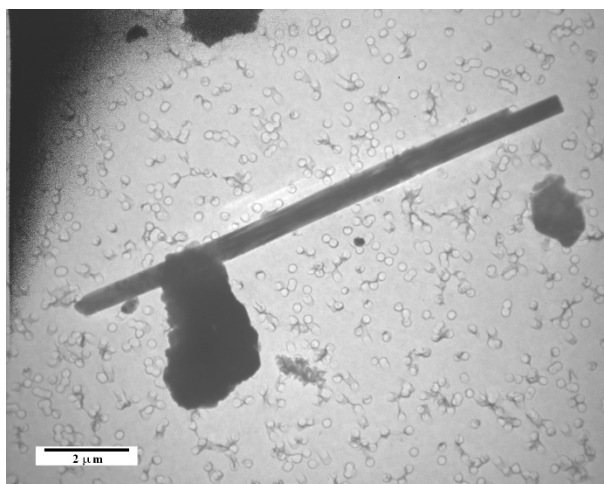


**Figure 20.** Electron micrograph (top), selected area diffraction patterns (middle) and energy dispersive spectrum (bottom) from actinolite cleavage observed in sample SRM# 11738/10488598 Lo-Mag (9-2).

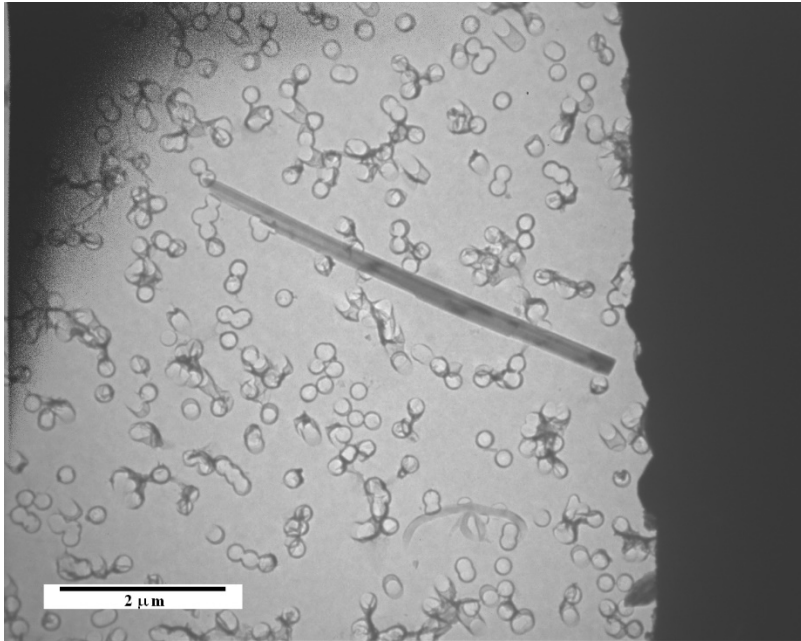


**Figure 21.** Electron micrograph (top), selected area diffraction patterns (middle) and energy dispersive spectrum (bottom) from actinolite cleavage observed in sample SRM# 11749/10488609 Lo-Mag (1-1).

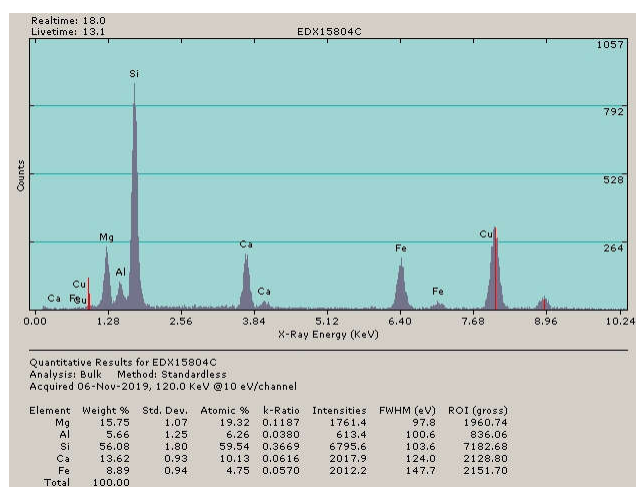
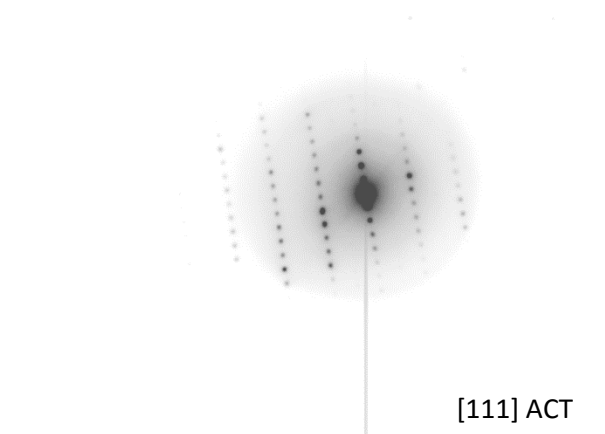
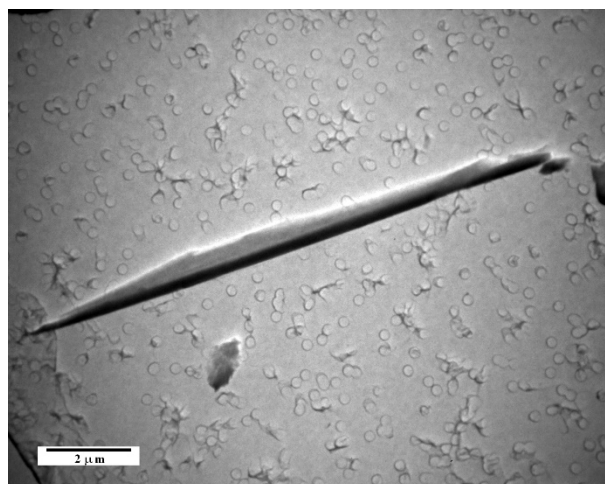




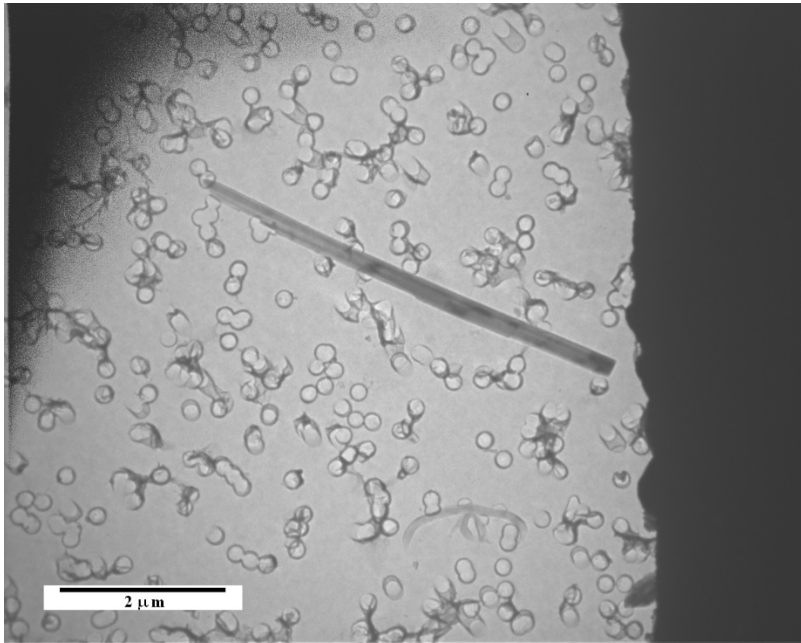
**Figure 21.** Electron micrograph (top), selected area diffraction patterns (middle) and energy dispersive spectrum (bottom) from actinolite cleavage observed in sample SRM# 11749/10488609 Lo-Mag (22-1).



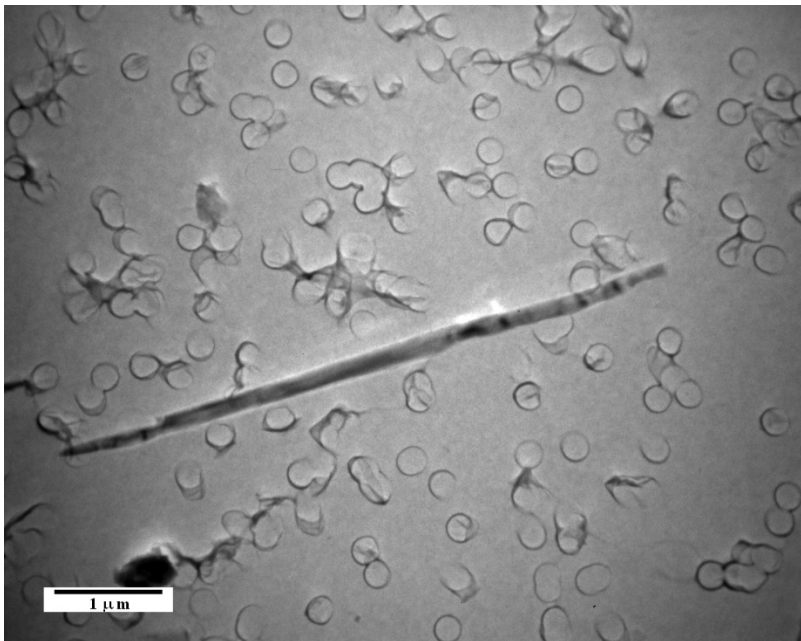
**Figure 22.** Electron micrograph from actinolite cleavage observed in sample SRM# 11749/10488609 Lo-Mag (22-2).



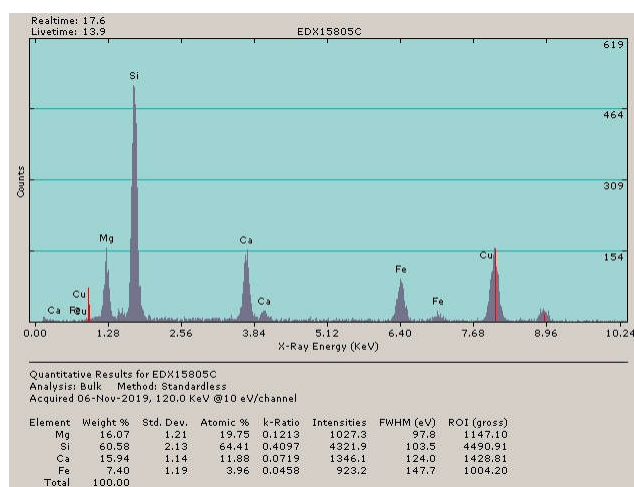
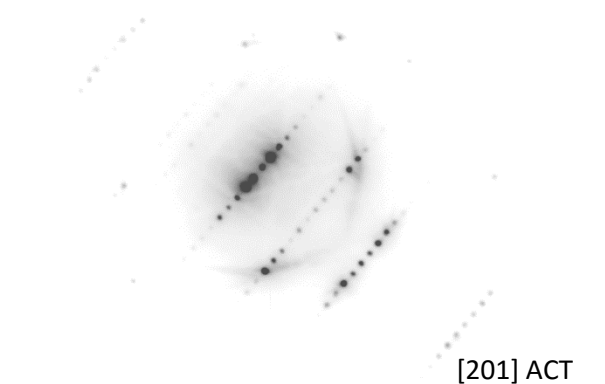
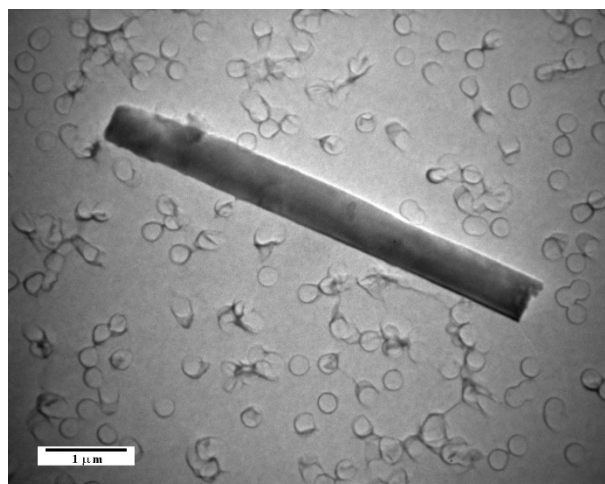
**Figure 23.** Electron micrograph (top), selected area diffraction patterns (middle) and energy dispersive spectrum (bottom) from actinolite cleavage observed in sample SRM# 11752/10488612 Hi-Mag (1-1).



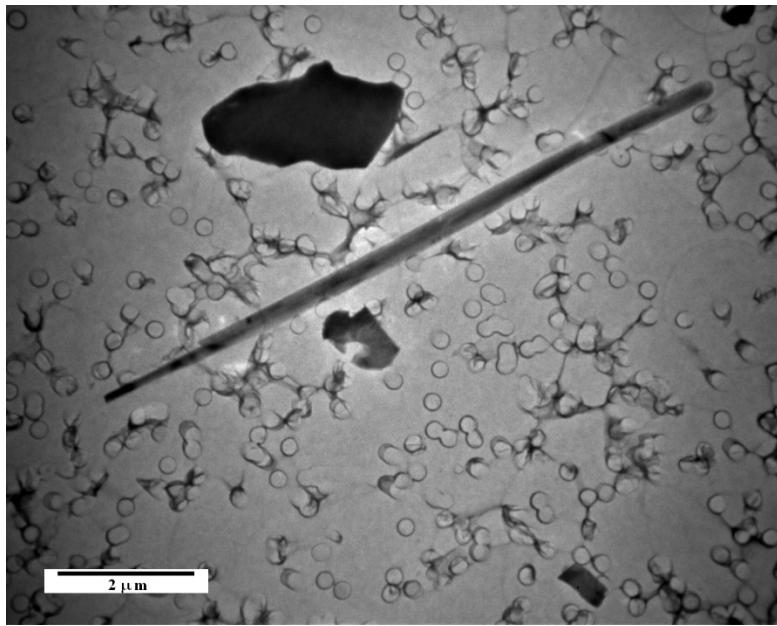
**Figure 24.** Electron micrograph from actinolite cleavage observed in sample SRM# 11752/10488612 Hi-Mag (2-3).



**Figure 25.** Electron micrograph from actinolite cleavage observed in sample SRM# 11752/10488612 Hi-Mag (4-1).

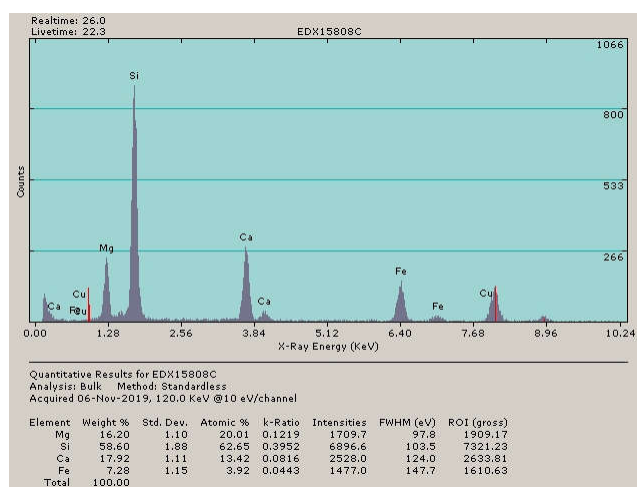
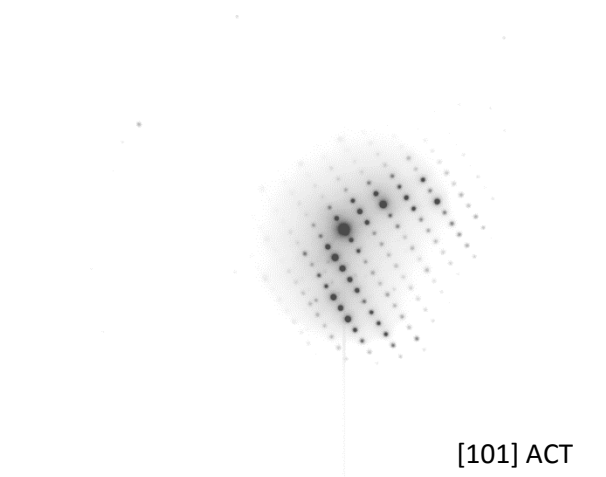
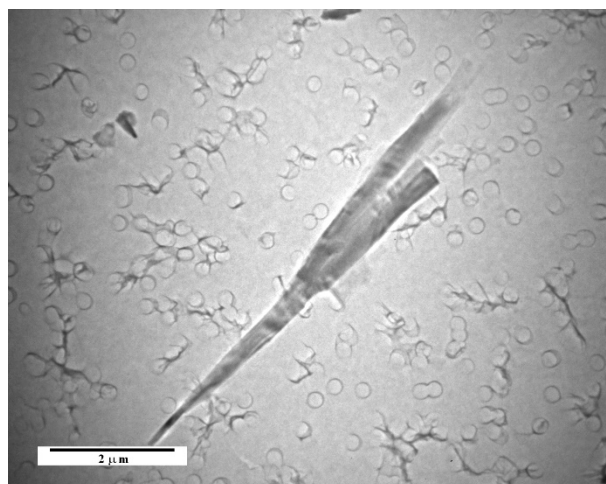


**Figure 26.** Electron micrograph (top), selected area diffraction patterns (middle) and energy dispersive spectrum (bottom) from actinolite cleavage observed in sample SRM# 11752/10488612 Hi-Mag (4-2).

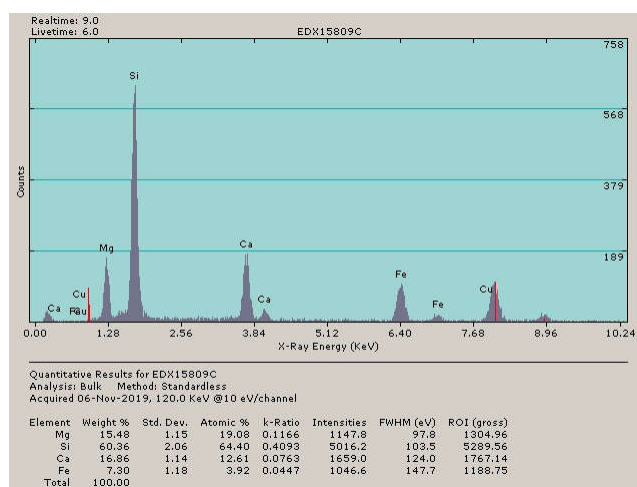
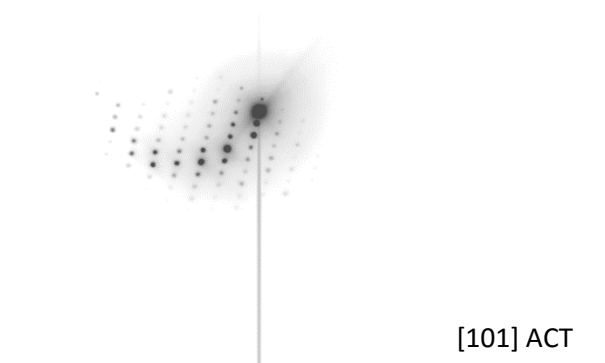
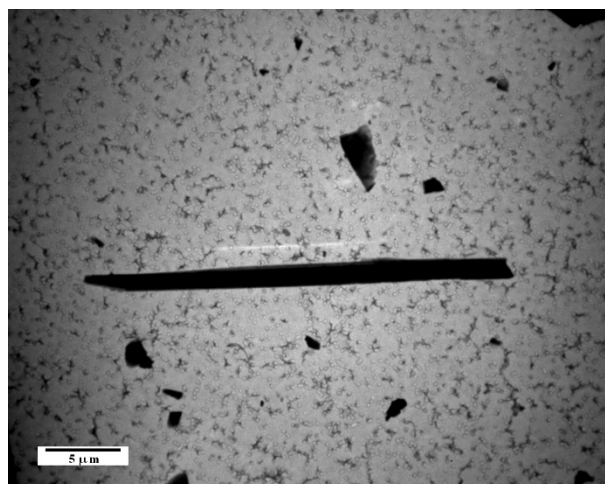


**Figure 27.** Electron micrograph from actinolite cleavage observed in sample SRM# 11752/10488612 Hi-Mag (9-1).



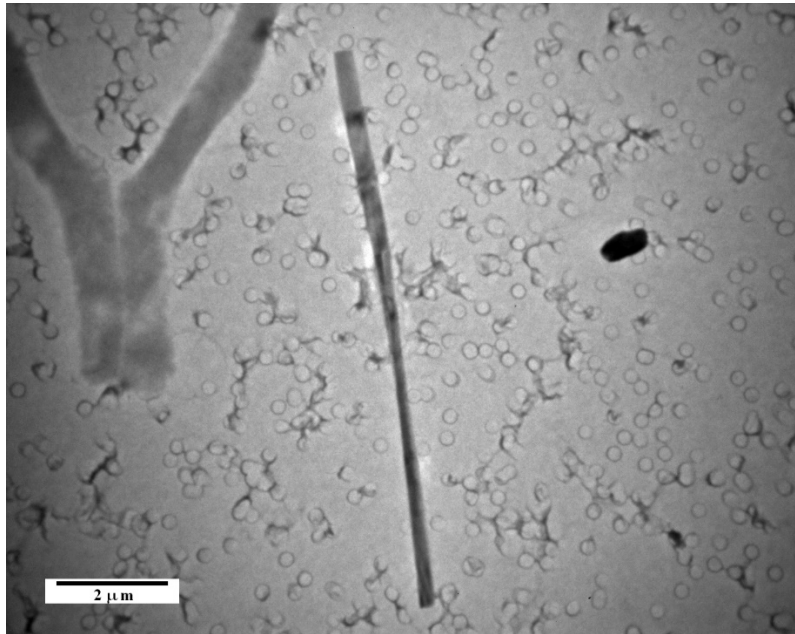


**Figure 28.** Electron micrograph (top), selected area diffraction patterns (middle) and energy dispersive spectrum (bottom) from actinolite cleavage observed in sample SRM# 11752/10488612 Lo-Mag (1-1).

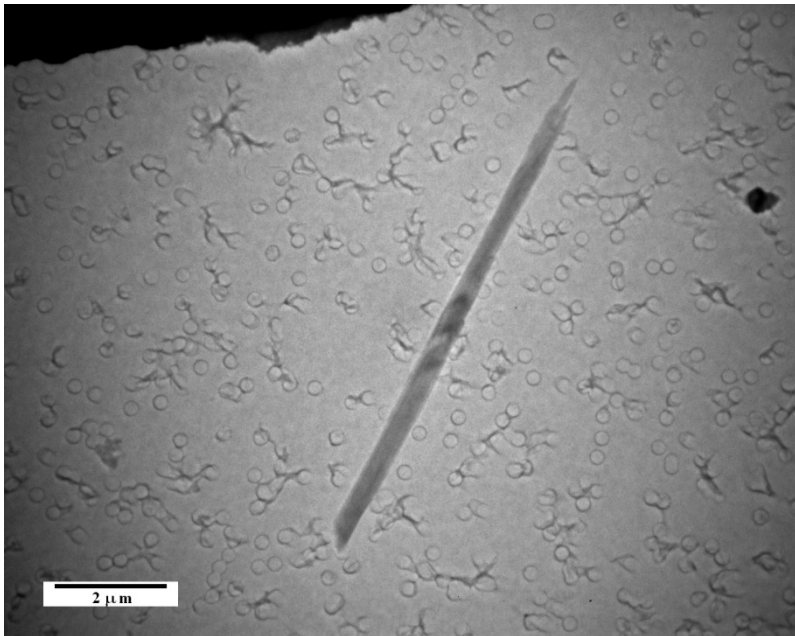


**Figure 29.** Electron micrograph (top), selected area diffraction patterns (middle) and energy dispersive spectrum (bottom) from actinolite cleavage observed in sample SRM# 11752/10488612 Lo-Mag (15-2).

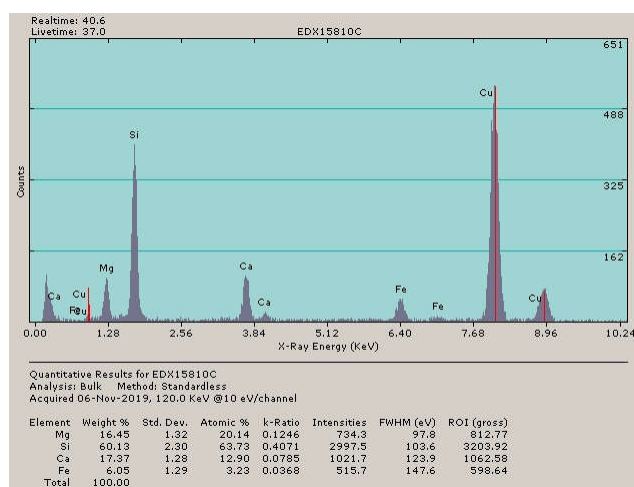
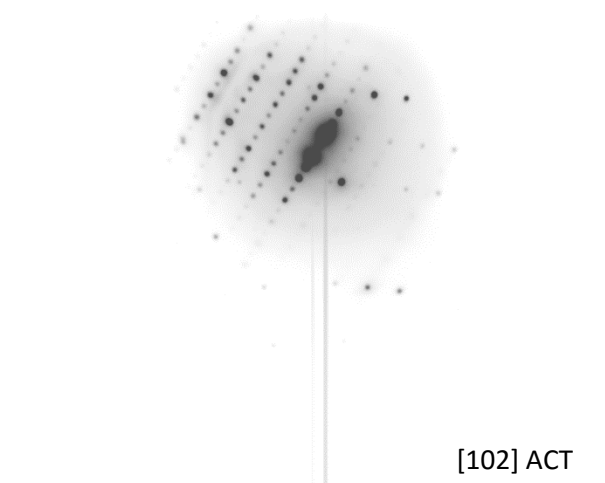
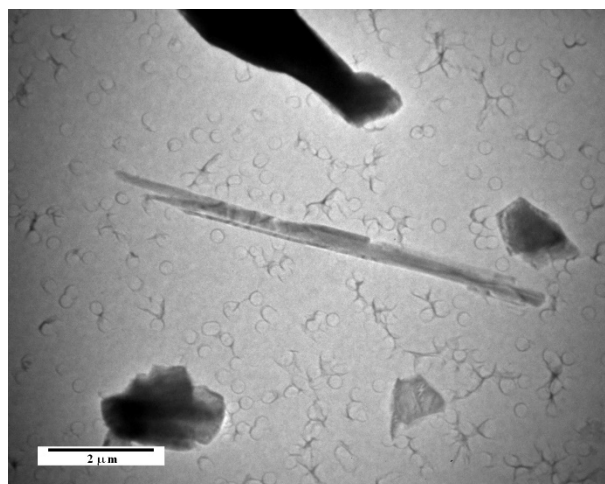




**Figure 30.** Electron from actinolite cleavage observed in sample SRM# 11752/10488612 Lo-Mag (22-1).



**Figure 31.** Electron from actinolite cleavage observed in sample SRM# 11752/10488612 Lo-Mag (22-2).



**Figure 32.** Electron micrograph (top), selected area diffraction patterns (middle) and energy dispersive spectrum (bottom) from actinolite cleavage observed in sample SRM# 11752/10488612 Lo-Mag (25-1).

**Appendix B**  
**TEM Analytical Report & Benchsheets**

## Final Laboratory Report

### TEM Bulk Protocol

Attention: Celeste Levine  
Specialty Granules Inc  
1361 Alps Road  
Wayne, NJ 07470  
US

Report Date: 11/12/2019  
Sample Receipt Date: 10/01/2019  
RJ Lee Group Job No.: AOH1055599-2  
Authorization/P.O. No.: CH64764 REV1  
Samples Received: 5  
Client Job No.: Charmian 2019 2nd QTR

Method: ASTM D-5756 Standard Test Method, Modified

**TABLE 1 -- Weight Percent of Asbestos, Cleavage Fragment Amphibole and Non-Asbestos**

						-----Weight Percent----- <u>Total Structures</u> Analytical Sensitivity			
		<u>Total Structures</u>							
Client Sample Number	RJLG Sample Number	Chry	Amph	Cleavage	Non Asbestos	Chry	Amph Asb	Amph Cleavage Fragment	Non Asbestos
SRM# 11758	10488592	0	1	66	0	<b>&lt; 1.6E-6</b> 1.6E-6	<b>3.0E-3</b> 2.0E-6	<b>1.1E0</b> 1.3E-6	<b>&lt; 1.2E-6</b> 1.2E-6
SRM# 11737	10488597	0	0	3	2	<b>&lt; 2.4E-6</b> 2.4E-6	<b>&lt; 3.1E-6</b> 3.1E-6	<b>4.4E-2</b> 1.9E-6	<b>1.6E-2</b> 1.8E-6

#### NOTES

- "<" indicates results less than analytical sensitivity. "---" indicates that sample was not analyzed.
- Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA LAP, LLC #100364, NVLAP #101208-0, NY ELAP #10884) facility.
- If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.
- Density of amphibole:  $3.2 \times 10^{-3}$  ng/  $\mu$  m<sup>3</sup>, density of chrysotile:  $2.55 \times 10^{-3}$  ng/  $\mu$  m<sup>3</sup>, density of non-asbestos:  $3.00 \times 10^{-3}$  ng/  $\mu$  m<sup>3</sup>.
- Abbreviations: N/A-Not Applicable, Chry-Chrysotile Asbestos, Amph-Amphibole Asbestos, Asb-Asbestos Amphibole, Cleavage-Cleavage Amphibole.
- Samples will be held for 90 days and then disposed of per Federal regulations.
- 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

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# RJ Lee Group, Inc.

RJ Lee Group Job No: AOH1055599-2  
Client Job No/Name: Charmian 2019 2nd QTR

## Final Laboratory Report (cont'd)

Client: Specialty Granules Inc  
Report Date: 11/12/2019

**TABLE 1 -- Weight Percent of Asbestos, Cleavage Fragment Amphibole and Non-Asbestos**

		<u>Total Structures</u>				-----Weight Percent----- <u>Total Structures</u> Analytical Sensitivity			
Client Sample Number	RJLG Sample Number	Chry	Amph	Cleavage	Non Asbestos	Chry	Amph Asb	Amph Cleavage Fragment	Non Asbestos
SRM# 11738	10488598	0	1	34	0	<u>&lt; 3.2E-6</u> 3.2E-6	<u>1.0E-3</u> 4.1E-6	<u>5.1E-1</u> 2.6E-6	<u>&lt; 2.4E-6</u> 2.4E-6
SRM# 11749	10488609	0	2	12	0	<u>&lt; 9.7E-6</u> 9.7E-6	<u>8.7E-2</u> 1.2E-5	<u>8.9E-2</u> 7.8E-6	<u>&lt; 7.3E-6</u> 7.3E-6
SRM# 11752	10488612	0	2	53	0	<u>&lt; 4.9E-6</u> 4.9E-6	<u>1.0E-2</u> 6.1E-6	<u>1.1E1</u> 3.9E-6	<u>&lt; 3.7E-6</u> 3.7E-6

### NOTES

- "<" indicates results less than analytical sensitivity. "---" indicates that sample was not analyzed.
- Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA LAP, LLC #100364, NVLAP #101208-0, NY ELAP #10884) facility.
- If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.
- Density of amphibole:  $3.2 \times 10^{-3}$  ng/  $\mu$  m<sup>3</sup>, density of chrysotile:  $2.55 \times 10^{-3}$  ng/  $\mu$  m<sup>3</sup>, density of non-asbestos:  $3.00 \times 10^{-3}$  ng/  $\mu$  m<sup>3</sup>.
- Abbreviations: N/A-Not Applicable, Chry-Chrysotile Asbestos, Amph-Amphibole Asbestos, Asb-Asbestos Amphibole, Cleavage-Cleavage Amphibole.
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- 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.

RJ Lee Group Job No: AOH1055599-2  
Client Job No/Name: Charmian 2019 2nd QTR

## Final Laboratory Report (cont'd)

Client: Specialty Granules Inc  
Report Date: 11/12/2019

**TABLE 2 -- Weight Percent of Asbestos, Cleavage Fragment Amphibole and Non-Asbestos 5 µm**

Client Sample Number	RJLG Sample Number	-----Structures 5 µm-----				-----Weight Percent----- Structures 5 µm Analytical Sensitivity Amphibole			
		Chry	Amph	Cleavage	Non-Asbestos	Chry	Asb	Cleavage Fragment	Non-Asbestos
SRM# 11758	10488592	0	1	38	0	<u>&lt; 1.6E-5</u> 1.6E-5	<u>3.0E-3</u> 2.0E-5	<u>1.1E0</u> 1.3E-5	<u>&lt; 1.2E-5</u> 1.2E-5
SRM# 11737	10488597	0	0	1	1	<u>&lt; 2.4E-5</u> 2.4E-5	<u>&lt; 3.1E-5</u> 3.1E-5	<u>4.4E-2</u> 1.9E-5	<u>1.6E-2</u> 1.8E-5
SRM# 11738	10488598	0	1	16	0	<u>&lt; 3.2E-5</u> 3.2E-5	<u>1.0E-3</u> 4.1E-5	<u>3.9E-1</u> 2.6E-5	<u>&lt; 2.4E-5</u> 2.4E-5
SRM# 11749	10488609	0	2	5	0	<u>&lt; 9.7E-5</u> 9.7E-5	<u>8.7E-2</u> 1.2E-4	<u>5.4E-2</u> 7.8E-5	<u>&lt; 7.3E-5</u> 7.3E-5
SRM# 11752	10488612	0	1	37	0	<u>&lt; 4.9E-5</u> 4.9E-5	<u>1.0E-2</u> 6.1E-5	<u>1.1E1</u> 3.9E-5	<u>&lt; 3.7E-5</u> 3.7E-5

### NOTES

1. "<" indicates results less than analytical sensitivity. "----" indicates that sample was not analyzed.
2. Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA LAP, LLC #100364, NVLAP #101208-0, NY ELAP #10884) facility.
3. If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.
4. Density of amphibole:  $3.2 \times 10^{-3}$  ng/µm<sup>3</sup>, density of chrysotile:  $2.55 \times 10^{-3}$  ng/µm<sup>3</sup>, density of non-asbestos:  $3.00 \times 10^{-3}$  ng/µm<sup>3</sup>.
5. Abbreviations: N/A-Not Applicable, Chry-Chrysotile Asbestos, Amph-Amphibole Asbestos, Asb-Asbestos Amphibole, Cleavage-Cleavage Amphibole.
6. Samples will be held for 90 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.

RJ Lee Group Job No: AOH1055599-2  
Client Job No/Name: Charmian 2019 2nd QTR

## Final Laboratory Report (cont'd)

Client: Specialty Granules Inc  
Report Date: 11/12/2019

Client Sample Number	RJLG Sample Number	Material Used (gm)	Area Analyzed Total (mm <sup>2</sup> )	Area Analyzed 5 $\mu$ m (mm <sup>2</sup> )	Effective Filter Area (mm <sup>2</sup> )	Dilution Factor
SRM# 11758	10488592	0.0006	0.31360	0.31360	1220	1.0
SRM# 11737	10488597	0.0004	0.31360	0.31360	1220	1.0
SRM# 11738	10488598	0.0003	0.31360	0.31360	1220	1.0
SRM# 11749	10488609	0.0001	0.31360	0.31360	1220	1.0
SRM# 11752	10488612	0.0002	0.31360	0.31360	1220	1.0

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

Monica McGrath-Koerner, Scientist

### NOTES

1. "<" indicates results less than analytical sensitivity. "----" indicates that sample was not analyzed.
2. Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA LAP, LLC #100364, NVLAP #101208-0, NY ELAP #10884) facility.
3. If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.
4. Density of amphibole:  $3.2 \times 10^{-3}$  ng/  $\mu$  m<sup>3</sup>, density of chrysotile:  $2.55 \times 10^{-3}$  ng/  $\mu$  m<sup>3</sup>, density of non-asbestos:  $3.00 \times 10^{-3}$  ng/  $\mu$  m<sup>3</sup>.
5. Abbreviations: N/A-Not Applicable, Chry-Chrysotile Asbestos, Amph-Amphibole Asbestos, Asb-Asbestos Amphibole, Cleavage-Cleavage Amphibole.
6. Samples will be held for 90 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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RJL: AOH1055599-2	10488592.HTA2	Microscope tem2000fx1	Grid Openings	10
SRM# 11758	Specialty Granules I	Magnification 21 KX	Asbestos	1.0
Wt: 0.0006 gm	Grid: 0.009 mm <sup>2</sup>	Acc. Voltage 120 KV	Asbestos >= 5µm	1.0
Dil: 1.	Filter Size: 47 mm	Operator: Jacquelyn Mershon	Nonasbestos	36.0
HQ44777		Cv = 0.09	Nonasbestos >= 5µm	8.0
			% Wt of largest asbestos structure	%

Field	Fiber	Length	Width	FiberType	Morph	EDX	File #	Photo	SAED	AmpID	C/A
1	1	9.16	1.61	Amphibole		MgSiCaFe	15796C	Image1	Diff1	Acti	Cle
1	2	4.14	0.45	Amphibole		MgSiCaFe			X	Acti	Cle
1	3	2.07	0.4	Amphibole		MgSiCaFe			X	Acti	Cle
2	1	1.61	0.2	Amphibole		MgSiCaFe			X	Acti	Cle
2	2	1.38	0.25	Amphibole		MgSiCaFe			X	Acti	Cle
2	3	1.15	0.2	Amphibole		MgSiCaFe			X	Acti	Cle
2	4	1.61	0.2	Amphibole		MgSiCaFe			X	Acti	Cle
2	5	0.92	0.2	Amphibole		MgSiCaFe			X	Acti	Cle
3	1	2.29	0.23	Amphibole		MgSiCaFe			X	Acti	Cle
3	2	1.15	0.2	Amphibole		MgSiCaFe			X	Acti	Cle
3	3	6.87	0.25	Amphibole		MgSiCaFe	15798C	Image2	Diff2	Acti	Cle
3	4	1.84	0.3	Amphibole		MgSiCaFe			X	Acti	Cle
3	5	1.61	0.25	Amphibole		MgSiCaFe			X	Acti	Cle
4	1	6.87	0.69	Amphibole		MgSiCaFe			X	Acti	Cle
4	2	3.44	0.46	Amphibole		MgSiCaFe			X	Acti	Cle
5	1	5.06	0.92	Amphibole		MgSiCaFe			X	Acti	Cle
5	2	1.15	0.23	Amphibole		MgSiCaFe			X	Acti	Cle
5	3	2.29	0.4	Amphibole		MgSiCaFe			X	Acti	Cle
5	4	9.48	1.61	Amphibole		MgSiCaFe			X	Acti	Cle
6	1	5.06	0.92	Amphibole		MgSiCaFe			X	Acti	Cle
6	2	1.61	0.25	Amphibole		MgSiCaFe	15799C	Image3	Diff3	Acti	Cle
6	3	13.74	0.2	Amphibole	F	MgSiCaFe	15800C	Image4	Diff4 Diff5	Acti	Asb
6	4	3.44	0.3	Amphibole		MgSiCaFe			X	Acti	Cle
6	5	7.36	0.92	Amphibole		MgSiCaFe			X	Acti	Cle
7	1	2.06	0.35	Amphibole		MgSiCaFe			X	Acti	Cle
8	1	2.76	0.2	Amphibole		MgSiCaFe			X	Acti	Cle
8	2	4.14	0.3	Amphibole		MgSiCaFe			X	Acti	Cle
8	3	5.06	0.56	Amphibole		MgSiCaFe			X	Acti	Cle
8	4	0.92	0.15	Amphibole		MgSiCaFe			X	Acti	Cle
8	5	1.38	0.2	Amphibole		MgSiCaFe			X	Acti	Cle
8	6	1.84	0.1	Amphibole		MgSiCaFe			X	Acti	Cle
9	1	3.44	0.56	Amphibole		MgSiCaFe			X	Acti	Cle
9	2	3.68	0.25	Amphibole		MgSiCaFe			X	Acti	Cle
9	3	1.61	0.25	Amphibole		MgSiCaFe			X	Acti	Cle
9	4	2.29	0.35	Amphibole		MgSiCaFe			X	Acti	Cle
10	1	4.14	0.69	Amphibole		MgSiCaFe			X	Acti	Cle
10	2	2.52	0.4	Amphibole		MgSiCaFe			X	Acti	Cle

10% Particulate

**Analyst's Comments: N/A**

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

Initial Review: 11/6/2019 10:10:24 AM approve by Jacquelyn Mershon

Final Review: 11/12/19 1:34 PM approve by Monica Mcgrath



RJL: AOH1055599-2	10488592.HTA2	Microscope tem2000fx1	Grid Openings	25
SRM# 11758	Specialty Granules I	Magnification 10 KX	Asbestos	0.0
Wt: 0.0006 gm	Grid: 0.009 mm <sup>2</sup>	Acc. Voltage 120 KV	Nonasbestos	30.0
Dil: 1.	Filter Size: 47 mm	Operator: Jacquelyn Mershon	% Wt of largest asbestos	%
HQ44777		Cv = 0	structure	

Field	Fiber	Length	Width	FiberType	Morph	EDX	File #	Photo	SAED	AmplID	C/A
1	1	8.1	1.17	Amphibole		MgSiCaFe	15801C	Image1	Diff1	Acti	Cle
2	1	14.37	2.7	Amphibole		MgSiCaFe			X	Acti	Cle
3	1	13.47	1.8	Amphibole		MgSiCaFe			X	Acti	Cle
3	2	7.2	0.9	Amphibole		MgSiCaFe			X	Acti	Cle
3	3	12.6	1.35	Amphibole		MgSiCaFe			X	Acti	Cle
4	1	8.98	0.9	Amphibole		MgSiCaFe			X	Acti	Cle
4	2	8.98	1.35	Amphibole		MgSiCaFe			X	Acti	Cle
4	3	11.23	1.8	Amphibole		MgSiCaFe			X	Acti	Cle
5				NSD							
6				NSD							
7	1	9.9	0.45	Amphibole		MgSiCaFe			X	Acti	Cle
8				NSD							
9	1	5.39	0.54	Amphibole		MgSiCaFe			X	Acti	Cle
9	2	6.3	0.45	Amphibole		MgSiCaFe	15802C	Image2	Diff2	Acti	Cle
10	1	5.39	0.9	Amphibole		MgSiCaFe			X	Acti	Cle
10	2	8.98	0.81	Amphibole		MgSiCaFe			X	Acti	Cle
11	1	22.45	0.63	Amphibole		MgSiCaFe			X	Acti	Cle
12	1	8.1	0.9	Amphibole		MgSiCaFe			X	Acti	Cle
13				NSD							
14	1	6.3	0.63	Amphibole		MgSiCaFe			X	Acti	Cle
14	2	6.3	0.45	Amphibole		MgSiCaFe			X	Acti	Cle
15				NSD							
16	1	6.74	0.72	Amphibole		MgSiCaFe			X	Acti	Cle
17	1	10.8	1.35	Amphibole		MgSiCaFe			X	Acti	Cle
18	1	12.6	1.08	Amphibole		MgSiCaFe			X	Acti	Cle
19	1	6.74	0.9	Amphibole		MgSiCaFe	15803C	Image3	Diff3	Acti	Cle
19	2	6.3	0.45	Amphibole		MgSiCaFe				Acti	Cle
19	3	5.39	0.72	Amphibole		MgSiCaFe				Acti	Cle
20	1	11.7	2.25	Amphibole		MgSiCaFe				Acti	Cle
20	2	7.2	1.35	Amphibole		MgSiCaFe				Acti	Cle
21	1	9.9	0.54	Amphibole		MgSiCaFe				Acti	Cle
21	2	20.21	1.35	Amphibole		MgSiCaFe				Acti	Cle
22	1	7.2	0.45	Amphibole		MgSiCaFe				Acti	Cle
22	2	17.96	2.7	Amphibole		MgSiCaFe				Acti	Cle
23	1	5.39	0.36	Amphibole		MgSiCaFe				Acti	Cle
24				NSD							
25				NSD							

10% Particulate

**Analyst's Comments: N/A**

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

Initial Review: 11/6/2019 11:16:24 AM approve by Jacquelyn Mershon

Final Review: 11/12/19 1:34 PM approve by Monica Mcgrath

RJL: AOH1055599-2	10488597.HTA2	Microscope tem2000fx2	Grid Openings	10
SRM# 11737	Specialty Granules I	Magnification 21 KX	Asbestos	0.0
Wt: 0.0004 gm	Grid: 0.009 mm <sup>2</sup>	Acc. Voltage 120 KV	Asbestos >= 5µm	0.0
Dil: 1.	Filter Size: 47 mm	Operator: Ashleigh Sload	Nonasbestos	4.0
HQ44777		Cv = 0	Nonasbestos >= 5µm	1.0
			% Wt of largest asbestos structure	%

Field	Fiber	Length	Width	FiberType	Morph	EDX	File #	Photo	SAED	AmplID	C/A
1	1	0.75	0.12	Non-Asbestos		AlSiCaFe	15599D	Image1	Diff1		
2				NSD							
3				NSD							
4	1	8.88	0.98	Amphibole		MgSiCaFeAl	15600D	Image2	Diff2	Acti	Cle
4	2	1.2	0.2	Amphibole		MgSiCaFe		Image4	Diff4	Acti	Cle
5				NSD							
6				NSD							
7	1	1.44	0.25	Amphibole		MgSiCaFe	15601D	Image3	Diff3	Trem	Cle
8				NSD							
9				NSD							
10				NSD							

10% Particulate

**Analyst's Comments: N/A**

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

Initial Review: 11/6/2019 9:23:06 AM approve by Ashleigh Sload

Final Review: 11/12/19 1:34 PM approve by Monica Mcgrath

RJL: AOH1055599-2	10488597.HTA2	Microscope tem2000fx2	Grid Openings	25
SRM# 11737	Specialty Granules I	Magnification 10 KX	Asbestos	0.0
Wt: 0.0004 gm	Grid: 0.009 mm <sup>2</sup>	Acc. Voltage 120 KV	Nonasbestos	1.0
Dil: 1.	Filter Size: 47 mm	Operator: Ashleigh Sload	% Wt of largest asbestos structure	%
HQ44777		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	1	8.25	1	Non-Asbestos		MgAlSiFe	15598D	Image1	Diff1		
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							

10% Particulate

**Analyst's Comments: N/A**

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

Initial Review: 11/6/2019 8:19:55 AM approve by Ashleigh Sload

Final Review: 11/12/19 1:34 PM approve by Monica Mcgrath

RJL: AOH1055599-2	10488598.HTA2	Microscope tem2000fx2	Grid Openings	10
SRM# 11738	Specialty Granules I	Magnification 21 KX	Asbestos	0.0
Wt: 0.0003 gm	Grid: 0.009 mm <sup>2</sup>	Acc. Voltage 120 KV	Asbestos >= 5µm	0.0
Dil: 1.	Filter Size: 47 mm	Operator: Ashleigh Sload	Nonasbestos	23.0
HQ44777		Cv = 0	Nonasbestos >= 5µm	5.0
			% Wt of largest asbestos structure	%

Field	Fiber	Length	Width	FiberType	Morph	EDX	File #	Photo	SAED	AmplID	C/A
1	1	3.8	0.4	Amphibole		MgSiCaFe15605D		Image1	Diff1 Diff2	Acti	Cle
1	2	3.2	0.4	Amphibole		MgSiCaFe			X	Acti	Cle
1	3	1.2	0.2	Amphibole		MgSiCaFe			X	Acti	Cle
1	4	3.8	0.3	Amphibole		MgSiCaFe			X	Acti	Cle
1	5	4.1	0.25	Amphibole		MgSiCaFe15606D		Image2	Diff3	Acti	Cle
2	1	2.1	0.35	Amphibole		MgSiCaFe			X	Acti	Cle
2	2	6	1.2	Amphibole		MgSiCaFe			X	Acti	Cle
3	1	2.9	0.5	Amphibole		MgSiCaFe			X	Acti	Cle
3	2	4.44	0.9	Amphibole		MgSiCaFe			X	Acti	Cle
4	1	8.6	0.5	Amphibole		MgSiCaFe			X	Acti	Cle
4	2	3.24	0.4	Amphibole		MgSiCaFe			X	Acti	Cle
4	3	2.4	0.15	Amphibole		MgSiCaFe15607D		Image3	Diff5	Acti	Cle
5	1	6.1	0.25	Amphibole		MgSiCaFe		Image4	X	Acti	Cle
6	1	5.9	0.6	Amphibole		MgSiCaFe15608D		Image5	Diff6	Acti	Cle
6	2	2.8	0.4	Amphibole		MgSiCaFe			X	Acti	Cle
7	1	4.8	0.55	Amphibole		MgSiCaFe			X	Acti	Cle
8	1	1.6	0.15	Amphibole		MgSiCaFe			X	Acti	Cle
8	2	2.5	0.25	Amphibole		MgSiCaFe			X	Acti	Cle
8	3	2.4	0.25	Amphibole		MgSiCaFe			X	Acti	Cle
9	1	2.1	0.25	Amphibole		MgSiCaFe			X	Acti	Cle
10	1	4.1	1.2	Amphibole		MgSiCaFe			X	Acti	Cle
10	2	6.95	0.4	Amphibole		MgSiCaFe			X	Acti	Cle
10	3	4.7	0.55	Amphibole		MgSiCaFe			X	Acti	Cle

10% Particulate

**Analyst's Comments: N/A**

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

Initial Review: 11/6/2019 12:30:31 PM approve by Ashleigh Sload

Final Review: 11/12/19 1:34 PM approve by Monica McGrath

RJL: AOH1055599-2	10488598.HTA2	Microscope tem2000fx2	Grid Openings	25
SRM# 11738	Specialty Granules I	Magnification 10 KX	Asbestos	1.0
Wt: 0.0003 gm	Grid: 0.009 mm <sup>2</sup>	Acc. Voltage 120 KV	Nonasbestos	11.0
Dil: 1.	Filter Size: 47 mm	Operator: Ashleigh Sload	% Wt of largest asbestos structure	%
HQ44777		Cv = 0.038		

Field	Fiber	Length	Width	FiberType	Morph	EDX	File #	Photo	SAED	AmplID	C/A
1	1	7.5	0.65	Amphibole		MgSiCaFe	15602D	Image1	Diff1	Acti	Cle
2	1	7.5	1.05	Amphibole		MgSiCaFe			X	Acti	Cle
2	2	10.2	0.98	Amphibole		MgSiCaFe			X	Acti	Cle
3				NSD							
4	1	5.4	0.35	Amphibole		MgSiCaFe			X	Acti	Cle
5				NSD							
6				NSD							
7	1	5.1	0.5	Amphibole		MgSiCaFe			X	Acti	Cle
8				NSD							
9	1	14.1	1.1	Amphibole		MgSiCaFe			X	Acti	Cle
9	2	5.05	1.1	Amphibole		MgSiCaFe	15603D	Image2	Diff2 Diff3	Acti	Cle
10				NSD							
11	1	10.9	0.9	Amphibole		MgSiCaFe			X	Acti	Cle
12				NSD							
13				NSD							
14				NSD							
15				NSD							
16	1	12.1	1.4	Amphibole		MgSiCaFe			X	Acti	Cle
16	2	5.8	0.2	Amphibole	B	MgSiCaFe	15604D	Image3	Diff4	Acti	Asb
17				NSD							
18	1	15.05	1.3	Amphibole		MgSiCaFe			X	Acti	Cle
19				NSD							
20				NSD							
21				NSD							
22				NSD							
23	1	7.1	0.4	Amphibole		MgSiCaFe			X	Acti	Cle
24				NSD							
25				NSD							

10% Particulate

**Analyst's Comments: N/A**

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

Initial Review: 11/6/2019 10:29:38 AM approve by Ashleigh Sload

Final Review: 11/12/19 1:34 PM approve by Monica McGrath

RJL: AOH1055599-2	10488609.HTA2	Microscope tem2000fx2	Grid Openings	10
SRM# 11749	Specialty Granules I	Magnification 21 KX	Asbestos	2.0
Wt: 0.0001 gm	Grid: 0.009 mm <sup>2</sup>	Acc. Voltage 120 KV	Asbestos >= 5µm	2.0
Dil: 1.	Filter Size: 47 mm	Operator: Ashleigh Sload	Nonasbestos	7.0
HQ44777		Cv = 0.16	Nonasbestos >= 5µm	0.0
			% Wt of largest asbestos structure	%

Field	Fiber	Length	Width	FiberType	Morph	EDX	File #	Photo	SAED	AmplID	C/A
1	1	9.12	0.5	Amphibole	B	MgSiCaFe	15611D	Image1	Diff1	Acti	Asb
2	1	1.5	0.2	Amphibole		MgSiCaFe			X	Acti	Cle
2	2	3.4	0.35	Amphibole		MgSiCaFe			X	Acti	Cle
3	1	9.4	0.2	Amphibole	F	MgSiCaFe		Image2	X	Acti	Asb
4	1	3.4	0.35	Amphibole		MgSiCaFe			X	Acti	Cle
5				NSD							
6	1	1.7	0.2	Amphibole		MgSiCaFe			X	Acti	Cle
7	1	2.5	0.3	Amphibole		MgSiCaFe			X	Acti	Cle
8	1	2.15	0.4	Amphibole		MgSiCaFe			X	Acti	Cle
9	1	1.9	0.25	Amphibole		MgSiCaFe			X	Acti	Cle
10				NSD							

10% Particulate

**Analyst's Comments: N/A**

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

Initial Review: 11/6/2019 2:08:37 PM approve by Ashleigh Sload

Final Review: 11/12/19 1:34 PM approve by Monica McGrath

RJL: AOH1055599-2	10488609.HTA2	Microscope tem2000fx2	Grid Openings	25
SRM# 11749	Specialty Granules I	Magnification 10 KX	Asbestos	0.0
Wt: 0.0001 gm	Grid: 0.009 mm <sup>2</sup>	Acc. Voltage 120 KV	Nonasbestos	5.0
Dil: 1.	Filter Size: 47 mm	Operator: Ashleigh Sload	% Wt of largest asbestos structure	%
HQ44777		Cv = 0		

Field	Fiber	Length	Width	FiberType	Morph	EDX	File #	Photo	SAED	AmplID	C/A
1	1	7.5	0.3	Amphibole		MgSiCaFe	15609D	Image1	Diff1	Acti	Cle
2				NSD							
3				NSD							
4				NSD							
5				NSD							
6				NSD							
7				NSD							
8				NSD							
9				NSD							
10				NSD							
11				NSD							
12				NSD							
13	1	5.5	0.55	Amphibole		MgSiCaFe			X	Acti	Cle
14				NSD							
15				NSD							
16				NSD							
17				NSD							
18				NSD							
19				NSD							
20				NSD							
21				NSD							
22	1	12.5	0.5	Amphibole		MgSiCaFe	15610D	Image2 Image3	Diff2	Acti	Cle
22	2	5.3	0.2	Amphibole		MgSiCaFe		Image4 Image5	X	Acti	Cle
23				NSD							
24				NSD							
25	1	7.7	0.35	Amphibole		MgSiCaFe			X	Acti	Cle

10% Particulate

**Analyst's Comments: N/A**

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

Initial Review: 11/6/2019 1:34:19 PM approve by Ashleigh Sload

Final Review: 11/12/19 1:34 PM approve by Monica Mcgrath

RJL: AOH1055599-2	10488612.HTA2	Microscope tem2000fx1	Grid Openings	10
SRM# 11752	Specialty Granules I	Magnification 21 KX	Asbestos	2.0
Wt: 0.0002 gm	Grid: 0.009 mm <sup>2</sup>	Acc. Voltage 120 KV	Asbestos >= 5µm	1.0
Dil: 1.	Filter Size: 47 mm	Operator: Jacquelyn Mershon	Nonasbestos	31.0
HQ44777		Cv = 0.16	Nonasbestos >= 5µm	15.0
			% Wt of largest asbestos structure	%

Field	Fiber	Length	Width	FiberType	Morph	EDX	File #	Photo	SAED	AmplID	C/A
1	1	11.45	0.69	Amphibole		MgSiCaFeAl	5804C	Image1	Diff1	Acti	Cle
1	2	1.61	0.23	Amphibole		MgSiCaFe			X	Acti	Cle
1	3	1.61	0.23	Amphibole		MgSiCaFe			X	Acti	Cle
1	4	16.03	0.61	Amphibole		MgSiCaFe			X	Acti	Cle
2	1	1.84	0.15	Amphibole		MgSiCaFe			X	Acti	Cle
2	2	1.84	0.35	Amphibole		MgSiCaFe			X	Acti	Cle
2	3	3.22	0.15	Amphibole		MgSiCaFe		Image2	X	Acti	Cle
3	1	11.45	0.46	Amphibole		MgSiCaFe			X	Acti	Cle
3	2	13.74	1.84	Amphibole		MgSiCaFe			X	Acti	Cle
4	1	5.73	0.2	Amphibole		MgSiCaFe		Image3	X	Acti	Cle
4	2	5.73	0.51	Amphibole		MgSiCaFe	15805C	Image4	Diff2	Acti	Cle
4	3	1.38	0.15	Amphibole		MgSiCaFe			X	Acti	Cle
5	1	3.68	0.25	Amphibole		MgSiCaFe			X	Acti	Cle
5	2	9.62	0.25	Amphibole	F	MgSiCaFe	15806C	Image5	Diff3	Acti	Asb
6	1	1.61	0.25	Amphibole		MgSiCaFe			X	Acti	Cle
6	2	8.74	1.38	Amphibole		MgSiCaFe			X	Acti	Cle
6	3	1.61	0.15	Amphibole		MgSiCaFe			X	Acti	Cle
7	1	1.48	0.25	Amphibole		MgSiCaFe			X	Acti	Cle
7	2	6.44	0.69	Amphibole		MgSiCaFe			X	Acti	Cle
7	3	5.52	0.69	Amphibole		MgSiCaFe			X	Acti	Cle
7	4	2.76	0.45	Amphibole		MgSiCaFe			X	Acti	Cle
8	1	9.62	1.84	Amphibole		MgSiCaFe			X	Acti	Cle
8	2	6.87	1.05	Amphibole		MgSiCaFe			X	Acti	Cle
8	3	1.38	0.05	Amphibole	F	MgSiCaFe	15807C	Image6	Diff4	Acti	Asb
9	1	9.85	0.3	Amphibole		MgSiCaFe		Image7	X	Acti	Cle
9	2	2.23	0.3	Amphibole		MgSiCaFe			X	Acti	Cle
9	3	5.73	0.56	Amphibole		MgSiCaFe			X	Acti	Cle
9	4	6.87	0.46	Amphibole		MgSiCaFe			X	Acti	Cle
9	5	1.38	0.2	Amphibole		MgSiCaFe			X	Acti	Cle
9	6	6.87	0.46	Amphibole		MgSiCaFe			X	Acti	Cle
9	7	3.68	0.2	Amphibole		MgSiCaFe			X	Acti	Cle
10	1	3.22	0.25	Amphibole		MgSiCaFe			X	Acti	Cle
10	2	4.58	0.25	Amphibole		MgSiCaFe			X	Acti	Cle

10% Particulate

**Analyst's Comments: N/A**

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

Initial Review: 11/6/2019 1:58:49 PM approve by Jacquelyn Mershon

Final Review: 11/12/19 1:34 PM approve by Monica Mcgrath



RJL: AOH1055599-2	10488612.HTA2	Microscope tem2000fx1	Grid Openings	25
SRM# 11752	Specialty Granules I	Magnification 10 KX	Asbestos	0.0
Wt: 0.0002 gm	Grid: 0.009 mm <sup>2</sup>	Acc. Voltage 120 KV	Nonasbestos	22.0
Dil: 1.	Filter Size: 47 mm	Operator: Jacquelyn Mershon	% Wt of largest asbestos	%
HQ44777		Cv = 0	structure	

Field	Fiber	Length	Width	FiberType	Morph	EDX	File #	Photo	SAED	AmplID	C/A
1	1	6.3	0.45	Amphibole		MgSiCaFe	15808C	Image1	Diff1	Acti	Cle
1	2	6.3	0.9	Amphibole		MgSiCaFe			X	Acti	Cle
2				NSD							
3	1	6.3	0.45	Amphibole		MgSiCaFe			X	Acti	Cle
4	1	62.86	4.05	Amphibole		MgSiCaFe			X	Acti	Cle
5				NSD							
6				NSD							
7	1	5.84	0.36	Amphibole		MgSiCaFe			X	Acti	Cle
7	2	5.84	4.05	Amphibole		MgSiCaFe			X	Acti	Cle
8				NSD							
9	1	5.4	0.45	Amphibole		MgSiCaFe			X	Acti	Cle
9	2	8.1	0.54	Amphibole		MgSiCaFe			X	Acti	Cle
10	1	17.96	2.7	Amphibole		MgSiCaFe				Acti	Cle
10	2	14.37	2.25	Amphibole		MgSiCaFe				Acti	Cle
11				NSD							
12				NSD							
13				NSD							
14				NSD							
15	1	6.3	0.81	Amphibole		MgSiCaFe			X	Acti	Cle
15	2	26.94	1.35	Amphibole		MgSiCaFe	15809C	Image2	Diff2	Acti	Cle
16				NSD							
17	1	5.4	0.15	Amphibole		MgSiCaFe			X	Acti	Cle
18				NSD							
19	1	8.1	1.35	Amphibole		MgSiCaFe			X	Acti	Cle
19	2	8.1	0.63	Amphibole		MgSiCaFe			X	Acti	Cle
19	3	8.1	0.15	Amphibole		MgSiCaFe			X	Acti	Cle
20				NSD							
21				NSD							
22	1	8.1	0.15	Amphibole		MgSiCaFe		Image4	X	Acti	Cle
22	2	8.1	0.15	Amphibole		MgSiCaFe		Image5	X	Acti	Cle
23	1	6.3	0.99	Amphibole		MgSiCaFe			X	Acti	Cle
23	2	49.39	4.49	Amphibole		MgSiCaFe			X	Acti	Cle
24				NSD							
25	1	8.1	0.2	Amphibole		MgSiCaFe	15810C	Image3	Diff3	Acti	Cle
25	2	8.1	0.72	Amphibole		MgSiCaFe			X	Acti	Cle

10% Particulate

**Analyst's Comments: N/A**

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

Initial Review: 11/6/2019 3:17:56 PM approve by Jacquelyn Mershon

Final Review: 11/12/19 1:34 PM approve by Monica Mcgrath

**Appendix C**  
**PLM Analytical Report & Benchsheets**

## Laboratory Report

Revised

Standard Industries  
1361 Alps Road  
Wayne, NJ 07470  
United States  
Attention: Celeste Levine  
Telephone: 973-628-3035

Report Date 10/28/2019  
Sample Receipt Date 10/01/2019  
RJ Lee Group Job No. AOH1055599-0  
Authorization/P.O. No. CH64764  
Client Job No./Name Charmian 2019 2nd QTR

A revised report has been issued to correct mis-identified Wollastonite

Analysis: Asbestos in Bulk Samples by Point Count

Method: EPA/600/R-93/116

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10488591.HPL	SRM# 11757	Yes	1	ND	<0.1 CE	100.00	Q, CA, AM, OP, M	DF-10/24/2019
Description: Green Crushed Rock. 1000 Point Count. Detection Limit=0.1%.								
Weight Loss: 0.0%								
10488592.HPL	SRM# 11758	Yes	1	1.30 TR		98.70	Q, CA, AM, OP, MI, M	AC-10/10/2019
Description: Green Powder 1000 Point Count. Detection Limit of 0.1%								
Weight Loss: 0.0%								
10488593.HPL	SRM# 11759	Yes	1	ND		100.00	Q, CA, AM, OP, M	DF-10/24/2019
Description: Green Crushed Rock 1000 Point Count. Detection Limit of 0.1%								
Weight Loss: 0.0%								

Client Job No./Name: Charmian 2019 2nd QTR

RJ Lee Group Job No: AOH1055599-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10488594.HPL	SRM# 11760	Yes	1	ND	2.00 CE	98.00	Q, CA, AM, OP, M	DF-10/24/2019
Description:	Gray Crushed Rock 1000 Point Count. Detection Limit=0.1%							
Weight Loss:	0.0%							
10488595.HPL	SRM# 11735	Yes	1	ND		100.00	Q, CA, AM, OP, MI, M	AC-10/07/2019
Description:	Grey Powder 1000 Point Count. Detection Limit of 0.1%							
Weight Loss:	0.0%							
10488596.HPL	SRM# 11736	Yes	1	ND		100.00	Q, CA, AM, OP, M	AC-10/04/2019
Description:	Grey Powder 1000 Point Count. Detection Limit of 0.1%							
Weight Loss:	0.0%							
10488597.HPL	SRM# 11737	Yes	1	<0.1 TR	<0.1 CE	100.00	Q, CA, AM, OP, M	DF-10/24/2019
Description:	Green Crushed Rock. 1000 Point Count. Detection Limit=0.1%.							
Weight Loss:	0.0%							
10488598.HPL	SRM# 11738	Yes	1	1.10 TR		98.90	Q, CA, AM, OP, M	AC-10/25/2019
Description:	Green Powder 1000 Point Count. Detection Limit of 0.1%							
Weight Loss:	0.0%							
10488599.HPL	SRM# 11739	Yes	1	ND		100.00	Q, CA, AM, OP, MI, M	AC-10/07/2019
Description:	Grey Powder 1000 Point Count. Detection Limit of 0.1%							
Weight Loss:	0.0%							

Client Job No./Name: Charmian 2019 2nd QTR

RJ Lee Group Job No: AOH1055599-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10488600.HPL	SRM# 11740	Yes	1	ND		100.00	Q, CA, AM, OP, MI, M	AC-10/09/2019
Description:	Grey Powder 1000 Point Count. Detection Limit of 0.1%							
Weight Loss:	0.0%							
10488601.HPL	SRM# 11741	Yes	1	ND	<0.1 CE	100.00	Q, CA, AM, OP, M	DF-10/24/2019
Description:	Green Crushed Rock. 1000 Point Count. Detection Limit=0.1%.							
Weight Loss:	0.0%							
10488602.HPL	SRM# 11742	Yes	1	ND		100.00	Q, CA, AM, OP, MI, M	AC-10/09/2019
Description:	Grey Powder 1000 Point Count. Detection Limit of 0.1%							
Weight Loss:	0.0%							
10488603.HPL	SRM# 11743	Yes	1	ND		100.00	Q, CA, AM, OP, MI, M	AC-10/04/2019
Description:	Grey Powder 1000 Point Count. Detection Limit of 0.1%							
Weight Loss:	0.0%							
10488604.HPL	SRM# 11744	Yes	1	ND		100.00	Q, CA, AM, OP, M	AC-10/04/2019
Description:	Grey Powder 1000 Point Count. Detection Limit of 0.1%							
Weight Loss:	0.0%							
10488605.HPL	SRM# 11745	Yes	1	ND	<0.1 CE	100.00	Q, CA, AM, OP, M	DF-10/24/2019
Description:	Beige Crushed Rock. 1000 Point Count. Detection Limit=0.1%.							
Weight Loss:	0.0%							

Client Job No./Name: Charmian 2019 2nd QTR

RJ Lee Group Job No: AOH1055599-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10488606.HPL	SRM# 11746	Yes	1	ND	1.00 CE	99.00	Q, CA, AM, OP, M	AC-10/07/2019
Description: Grey Powder 1000 Point Count. Detection Limit of 0.1%								
Weight Loss: 0.0%								
10488607.HPL	SRM# 11747	Yes	1	ND		100.00	Q, CA, AM, OP, M	AC-10/09/2019
Description: Grey Powder 1000 Point Count. Detection Limit of 0.1%								
Weight Loss: 0.0%								
10488608.HPL	SRM# 11748	Yes	1	ND		100.00	Q, CA, AM, OP, MI, M	AC-10/07/2019
Description: Grey Powder 1000 Point Count. Detection Limit of 0.1%								
Weight Loss: 0.0%								
10488609.HPL	SRM# 11749	Yes	1	0.70 TR		99.30	Q, CA, AM, OP, MI, M	AC-10/15/2019
Description: Grey Powder 1000 Point Count. Detection Limit of 0.1%								
Weight Loss: 0.0%								
10488610.HPL	SRM# 11750	Yes	1	ND		100.00	Q, CA, AM, OP, MI, M	AC-10/04/2019
Description: Grey Powder 1000 Point Count. Detection Limit of 0.1%								
Weight Loss: 0.0%								
10488611.HPL	SRM# 11751	Yes	1	ND		100.00	Q, CA, OP, MI, M	AC-10/10/2019
Description: Grey Powder 1000 Point Count. Detection Limit of 0.1%								
Weight Loss: 0.0%								

Client Job No./Name: Charmian 2019 2nd QTR

RJ Lee Group Job No: AOH1055599-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10488612.HPL	SRM# 11752	Yes	1	0.10 TR	<0.1 CE	99.90	Q, CA, AM, OP, M	WT-10/28/2019
Description: Green Crushed Rock. 1000 Point Count. Detection Limit=0.1%.								
Weight Loss: 0.0%								

Client Job No./Name: Charmian 2019 2nd QTR

RJ Lee Group Job No: AOH1055599-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
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Authorized Signature: \_\_\_\_\_



Wei Tseng, Microscopist

#### ASBESTOS

AM = Amosite  
AC = Actinolite  
AN = Anthophyllite  
CH = Chrysotile  
CR = Crocidolite  
TR = Tremolite

#### NON-ASBESTOS

CE = Cellulose  
MW = Mineral Wool  
FG = Fibrous Glass  
SF = Synthetic Fibers  
H = Hair  
W = Wollastonite  
OF = Other Fibers

#### NON-FIBROUS MATERIALS

AM = Amphibole  
B = Binder  
CA = Carbonates  
CL = Clay  
F = Feldspar  
G = Gypsum  
HY = Hydromagnesite  
M = Miscellaneous  
MI = Mica  
OP = Opaque  
OR = Organic  
P = Perlite  
Q = Quartz  
T = Tar  
V = Vermiculite

#### DISCLAIMER NOTES

- "ND" indicates no asbestos was detected; the method detection limit is 0.1%.
- "Trace" or "<" indicates asbestos was identified in the sample, but the concentration is less than the method quantitation limit. PLM coefficients of variance range from approximately 1.8 at the quantitation limit of 0.25% to 0.32 at high fiber concentrations.
- Samples are archived for three months following analysis and are then properly discarded.
- 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.
- This test report relates to the items tested.
- This report is not valid unless it bears the name of a NVLAP Lab Code 101208-0 approved signatory.
- Any reproduction of this document must be in full in order for the report to be valid.
- This report may not be used to claim product endorsement by NVLAP Lab Code 101208-0, any agency of the U.S. Government or any other laboratory accrediting agency.
- Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar nonfriable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as "non-asbestos-containing."
- Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA #100364, NY ELAP #10884) facility.
- If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.
- $((100-A)/B)*C$  = Asbestos Detected (%), where A=weight loss, B=total # of points counted, and C=total # of asbestos fibers counted.







**Polarized Light Microscopy Point Count Worksheet for Asbestos Analysis of Bulk Samples**

Date: 10/10/19 Analyst: CU Scope: CP7030

Sample Description: Gray Powder

RJ Lee Group  
Sample Number: 10488592  
RJ Lee Group  
Project Number: ADIT1055599-0  
Analysis Method: EPA-400

Comments /  
# of Layers: 1000 Point Count. Detection  
Limit of 0.1%.

Stereo-scope			# of Preps: <u>10</u>	Homogenous Y <u>(Y)</u> N	QC Y N	QC Analyst:			
%	<u>1.3</u> %	Asbestos Type	Morphology	Color/Pleochroism    ⊥	Indices of Refraction    ⊥	Birefringence L M	Sign of Elongation P N	Extinction Angle PL	NFM% <u>98.7</u>
	<u>1.3</u>	<u>Tremolite</u>	<u>WCS</u>	<u>W</u> <u>N</u>	<u>1.033</u> <u>1.028</u>	<u>(L)</u> <u>(M)</u>	<u>(P)</u> <u>(N)</u>	<u>PL</u>	
			WCS			L M	P N		
			WCS			L M	P N		
	% Non-Asbestos Fibers			Optical Properties	Layered Results	Asbestos	Non-Asb.	Matrix	

Quartz	Carbonates	Vermiculite
Tar	Binder	Opauques
Perlite	Amphibole	Gypsum
Talc	Feldspar	Mica
Clay	Organic Part.	Diatoms
Misc Particles	Foam	Foil

Type	Slide 1	Slide 2	Slide 3	Slide 4	Slide 5	Slide 6	Slide 7	Slide 8	Total
NPS	97	99	98	98	98	100	100	98	788
Tremolite	3	1	2	2	2	0	0	2	12
Total	100	100	100	100	100	100	100	100	800

Detection :  $\frac{1}{1000} \cdot 100\% = 0.1\%$   
Limit :



Polarized Light Microscopy Point Count Worksheet for Asbestos Analysis of Bulk Samples

Date: 10/15/19 Analyst: DF Scope: 025-0PT

Sample Description: Green Crushed Rock

RJ Lee Group  
Sample Number: 10488593  
RJ Lee Group  
Project Number: A041055599-0  
Analysis Method:

Comments /  
# of Layers: 1000 Point Count. Detection Limit = 0.1%

Stereo-scope	%	Asbestos Type	Morphology	Color/Pleochroism	Indices of Refraction	Birefringence	Sign of Elongation	Extinction Angle	QC Analyst:
		ND	W C S			L M	P N		NFM% <u>97%</u>
			W C S			L M	P N		
			W C S			L M	P N		
		% Non-Asbestos Fibers	Optical Properties	Layered Results	Asbestos	Non-Asb.	Matrix		
		<u>3.0</u>	<u>Wollastonite</u>	<u>Bladed</u>					

Type	Slide 1	Slide 2	Slide 3	Slide 4	Slide 5	Slide 6	Slide 7	Slide 8	Total
NAS	100	100	100	100	100	100	100	100	800
Asb	0	0	0	0	0	0	0	0	0
Total	100	100	100	100	100	100	100	100	800

10/15/19 DF

Detection Limit

$$\frac{1}{1000} \times 100\% = 0.1\%$$

Effective Date: March 2019  
 Form F OPT.001

### PLM Point Count Additional Slides Worksheet

Date: 10/15/19 Analyst: DF Microscope: 085-0PT

RJ Lee Group Sample Number: 10488593 RJ Lee Group Project Number: AOH1055599-0

Type	Slide <u>9</u>	Slide <u>10</u>	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
<u>NAS</u>	<u>100</u>	<u>100</u>							<u>200</u>
<u>Asb</u>	<u>0</u>	<u>0</u>							<u>0</u>
Total	<u>100</u>	<u>100</u>							

1000

0

1000

Type	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
Total									

Type	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
Total									

**Polarized Light Microscopy Point Count Worksheet for Asbestos Analysis of Bulk Samples**

Date: 10/10/19 Analyst: DF Scope: 043-0PT

Sample Description: Gray Crushed Rock

1000 Point Count. Detection Limit = 0.1%

Comments /

# of Layers:

RJ Lee Group Sample Number: <u>10488594</u> RJ Lee Group Project Number: <u>A0H1055594-0</u> Analysis Method:										# of Preps: <u>10</u>		Homogenous <input checked="" type="checkbox"/> N		QC Y N		QC Analyst:	
Stereo-scope		Asbestos Type		Morphology		Color/Pleochroism		Indices of Refraction		Birefringence		Sign of Elongation		Extinction Angle		NFM% <u>93%</u>	
		<u>N/A</u>		<u>W C S</u>						<u>L M</u>		<u>P N</u>					
				<u>W C S</u>						<u>L M</u>		<u>P N</u>					
				<u>W C S</u>						<u>L M</u>		<u>P N</u>					
		% Non-Asbestos Fibers		Optical Properties		Layered Results				Asbestos		Non-Asb.		Matrix			
		<u>5%</u>		<u>Wollastonite</u>		<u>Bladed</u>		<u>10/24/19 DF</u>									
		<u>2%</u>		<u>Cellulose</u>		<u>Undulose</u>											

Type	Slide 1	Slide 2	Slide 3	Slide 4	Slide 5	Slide 6	Slide 7	Slide 8	Total
<u>NAS</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>800</u>
<u>Asb</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>800</u>

Effective Date: March 2019  
Form F OPT.001

**PLM Point Count Additional Slides Worksheet**

Date: 10/10/19 Analyst: DF Microscope: 043-0PT

RJ Lee Group Sample Number: 10488594 RJ Lee Group Project Number: ACH1033599-0

Type	Slide <u>9</u>	Slide <u>100</u>	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
NAs	100	100							200
Asb	0	0							0
Total	100	100							200

1000  
0  
1000

Type	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
Total									

Type	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
Total									





Effective Date: March 2019  
Form F OPT.001

**PLM Point Count Additional Slides Worksheet**

Date: 10/07/19 Analyst: AW Microscope: OPT 055

RJ Lee Group Sample Number: 10488595 RJ Lee Group Project Number: P0111055599-0

Type	Slide <u>9</u>	Slide <u>10</u>	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
<u>NPS</u>	<u>100</u>	<u>100</u>							<u>200</u>
Total	<u>100</u>	<u>100</u>							<u>200</u>

1000  
1000

Type	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
Total									

Type	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
Total									

**Polarized Light Microscopy Point Count Worksheet for Asbestos Analysis of Bulk Samples**

Date: 10/04/19 Analyst: AL Scope: 007055

Sample Description: Grey Powder

RJ Lee Group Sample Number: 10488596  
RJ Lee Group Project Number: A011055599-0  
Analysis Method: EPA 600

Comments / # of Layers: 1000 Point Count. Detection Limit of 0.1%

Stereo-scope		# of Preps: <u>10</u>		Homogenous (Y) N		QC Y N		QC Analyst:			
%	%	Asbestos Type	Morphology	Color/Pleochroism    ⊥		Indices of Refraction    ⊥		Birefringence L M	Sign of Elongation P N	Extinction Angle	NFM% <u>100</u>
			W C S					L M	P N		Quartz
			W C S					L M	P N		Carbonates
			W C S					L M	P N		Vermiculite
% Non-Asbestos Fibers				Optical Properties		Layered Results		Asbestos	Non-Asb.	Matrix	Tar
											Binder
											Opaques
											Perlite
											Amphibole
											Gypsum
											Talc
											Feldspar
											Mica
											Clay
											Organic Part.
											Diatoms
											Misc Particles
											Foam
											Foil

Type	Slide 1	Slide 2	Slide 3	Slide 4	Slide 5	Slide 6	Slide 7	Slide 8	Total
NAS	100	100	100	100	100	100	100	100	800
Total	100	100	100	100	100	100	100	100	800

Detection Limit:  $\frac{1}{1000} \times 100\% = 0.1\%$

Effective Date: March 2019  
Form F OPT.001

**PLM Point Count Additional Slides Worksheet**

Date: 10/04/19 Analyst: AL Microscope: OPT 055

RJ Lee Group Sample Number: 10488594 RJ Lee Group Project Number: A0111055599-0

Type	Slide <u>9</u>	Slide <u>10</u>	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
<u>NAS</u>	<u>100</u>	<u>100</u>							<u>200</u>
Total	<u>100</u>	<u>100</u>							<u>200</u>

1000

Type	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
Total									

Type	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
Total									

**Polarized Light Microscopy Point Count Worksheet for Asbestos Analysis of Bulk Samples**

Date: 10/10/19 Analyst: WT Scope: 023-0PT

Sample Description: Green Crushed Rock

Comments / # of Layers: (500 Point Count) Detection Limit = 0.1%

RJ Lee Group Sample Number: <u>10488597</u> RJ Lee Group Project Number: <u>ADH1055599-0</u> Analysis Method:										# of Preps: <u>10</u> Homogenous <u>Y</u> N QC Y N QC Analyst:									
Stereo-scope	%	%	Asbestos Type	Morphology	Color/Pleochroism		Indices of Refraction		Birefringence	Sign of Elongation	Extinction Angle	NFM%							
						⊥		⊥											
	<u>60.1%</u>		<u>Tremolite</u>	<u>WCS</u>	<u>Col</u>	<u>N</u>	<u>1.634</u>	<u>1.628</u>	<u>L M</u>	<u>⊕ N</u>	<u>PL</u>	<u>95%</u>							
				<u>WCS</u>					<u>L M</u>	<u>P N</u>									
				<u>WCS</u>					<u>L M</u>	<u>P N</u>									
	% Non-Asbestos Fibers				Optical Properties		Layered Results		Asbestos	Non-Asb.	Matrix								
	<u>60.1%</u>		<u>Cellulose</u>		<u>Undulose</u>		<u>10/24/19 DF</u>												
	<u>5%</u>		<u>Wollastonite</u>		<u>Bladed</u>														

Type	Slide 1	Slide 2	Slide 3	Slide 4	Slide 5	Slide 6	Slide 7	Slide 8	Total
ASB	0	0	0	0	0	0	0	0	0
CLE	0	0	0	0	0	0	0	0	0
NAS	100	100	100	100	100	100	100	100	800
Total	100	100	100	100	100	100	100	100	800

$$\text{Detection Limit} = \frac{1}{1000} \times 100\% = 0.1\%$$









**Polarized Light Microscopy Point Count Worksheet for Asbestos Analysis of Bulk Samples**

Date: 10/07/19 Analyst: AL Scope: 007055

Sample Description: Grey Powder

RJ Lee Group  
Sample Number: 10488599  
RJ Lee Group  
Project Number: AOH1055599-0  
Analysis Method: EPMA

Comments /  
# of Layers: 1000 Point Count. Detection  
Limit of 0.1%

Stereo-scope														
%	%	Asbestos Type	Morphology	Color/Pleochroism    ⊥		Indices of Refraction    ⊥		Birefringence L M	Sign of Elongation P N	Extinction Angle	NFM%			
			W C S					L M	P N		100	Quartz	Carbonates	Vermiculite
			W C S					L M	P N			Tar	Binder	Opacities
			W C S					L M	P N			Perlite	Amphibole	Gypsum
		% Non-Asbestos Fibers	Optical Properties		Layered Results		Asbestos	Non-Asb.	Matrix			Talc	Feldspar	Mica
												Clay	Organic Part.	Diatoms
												Misc Particles	Foam	Foil

Type	Slide 1	Slide 2	Slide 3	Slide 4	Slide 5	Slide 6	Slide 7	Slide 8	Total
NPS	100	100	100	100	100	100	100	100	800
Total	100	100	100	100	100	100	100	100	800

Detection Limit:  $\frac{1}{1000} \times 100\% = 0.1\%$

Effective Date: March 2019  
Form F OPT.001

**PLM Point Count Additional Slides Worksheet**

Date: 10/07/19 Analyst: AL Microscope: CP7 055

RJ Lee Group Sample Number: 10488599 RJ Lee Group Project Number: A0H1053599-0

Type	Slide <u>9</u>	Slide <u>10</u>	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
<u>NPS</u>	<u>100</u>	<u>100</u>							<u>200</u>
Total	<u>100</u>	<u>100</u>							<u>200</u>

1000

1000

Type	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
Total									

Type	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
Total									

**Polarized Light Microscopy Point Count Worksheet for Asbestos Analysis of Bulk Samples**

Date: 10/09/19 Analyst: AL Scope: OPT 055

Sample Description: Grey Powder

RJ Lee Group  
Sample Number: 10488000  
RJ Lee Group  
Project Number: AOH1055599-0  
Analysis Method: EPMA 4000

Comments /  
# of Layers: 1000 Point Count. Detection  
Limit of 0.1%

Stereo-scope		Asbestos Type		Morphology		Color/Pleochroism		Indices of Refraction		Birefringence		Sign of Elongation		Extinction Angle		QC Analyst:	
%	%						⊥		⊥	L M	P N	L M	P N	L M	P N	NFM%	
				W C S						L M	P N						
				W C S						L M	P N						
				W C S						L M	P N						
		% Non-Asbestos Fibers			Optical Properties		Layered Results		Asbestos		Non-Asb.		Matrix				

Type	Slide 1	Slide 2	Slide 3	Slide 4	Slide 5	Slide 6	Slide 7	Slide 8	Total
NAS	100	100	100	100	100	100	100	100	800
Total	100	100	100	100	100	100	100	100	800

Detection Limit:  $\frac{1}{1000} \times 100\% = 0.1\%$

Effective Date: March 2019  
Form F OPT.001

**PLM Point Count Additional Slides Worksheet**

Date: 10/09/19 Analyst: AL Microscope: OP7055

RJ Lee Group Sample Number: 10488400 RJ Lee Group Project Number: P011055599-0

Type	Slide <u>9</u>	Slide <u>10</u>	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
<u>NPS</u>	<u>100</u>	<u>100</u>							<u>200</u>
Total	<u>100</u>	<u>100</u>							<u>200</u>

1000  
1000

Type	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
Total									

Type	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
Total									

**Polarized Light Microscopy Point Count Worksheet for Asbestos Analysis of Bulk Samples**

Date: 10/13/19 Analyst: WT Scope: 023-0PT

Sample Description: Green Crushed Rock.

RJ Lee Group  
Sample Number: 10488601  
RJ Lee Group  
Project Number: A0H1055599-0  
Analysis Method:

Comments /  
# of Layers: 1000 Point Count. Detection Limit = 0.1%

Stereo-scope		Asbestos Type		Morphology	Color/Pleochroism		Indices of Refraction		Birefringence	Sign of Elongation	Extinction Angle	QC Analyst:
%	%					⊥		⊥	L M	P N		NFM%
	0%	ND	W C S						L M	P N		97%
			W C S						L M	P N		
			W C S						L M	P N		
		% Non-Asbestos Fibers			Optical Properties		Layered Results		Asbestos	Non-Asb.	Matrix	
	<0.1%	Cellulose			Undulose							Quartz
	3%	Wairakite			Bladed		10/24/19 AF					Tar
												Carbonates
												Vermiculite
												Opals
												Gypsum
												Mica
												Diatoms
												Foam
												Foil

Type	Slide 1	Slide 2	Slide 3	Slide 4	Slide 5	Slide 6	Slide 7	Slide 8	Total
ASB	0	0	0	0	0	0	0	0	0
CLF	0	0	0	0	0	0	0	0	0
NAS	100	100	100	100	100	100	100	100	800
Total	100	100	100	100	100	100	100	100	800

$$\text{Detection Limit} = \frac{1}{1000} \times 100\% = 0.1\%$$



### PLM Point Count Additional Slides Worksheet

RJ Lee Group Sample Number: 10488601 RJ Lee Group Project Number: A0H1055599-0

Type	Slide 9	Slide 10	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
ASB	0	0							0
CLE	0	0							0
VAS	100	100							200
Total	100	100							200

[illegible][illegible]



Effective Date: March 2019

Form F OPT.001

**PLM Point Count Additional Slides Worksheet**

 Date: 10/09/19 Analyst: AL Microscope: OPT 055

 RJ Lee Group Sample Number: 10488402 RJ Lee Group Project Number: A0H1055599-0

Type	Slide <u>9</u>	Slide <u>10</u>	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
<u>NPS</u>	<u>160</u>	<u>160</u>							<u>200</u>
Total	<u>160</u>	<u>160</u>							<u>200</u>

1000

1000

Type	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
Total									

Type	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
Total									





Effective Date: March 2019  
Form F OPT.001

**PLM Point Count Additional Slides Worksheet**

Date: 10104119 Analyst: AL Microscope: OPT 055

RJ Lee Group Sample Number: 10488403 RJ Lee Group Project Number: A041055599-0

Type	Slide <u>9</u>	Slide <u>10</u>	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
<u>NPS</u>	<u>100</u>	<u>100</u>							<u>200</u>
Total	<u>100</u>	<u>100</u>							<u>200</u>

1000  
1000

Type	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
Total									

Type	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
Total									



Effective Date: March 2019  
Form F OPT.001

**PLM Point Count Additional Slides Worksheet**

Date: 10/04/19 Analyst: AL Microscope: OPT 055

RJ Lee Group Sample Number: 10488404 RJ Lee Group Project Number: BOH1055599-0

Type	Slide <u>9</u>	Slide <u>10</u>	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
<u>NPS</u>	<u>100</u>	<u>100</u>							<u>200</u>
Total	<u>100</u>	<u>100</u>							<u>200</u>

1000  
1000

Type	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
Total									

Type	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
Total									





**Polarized Light Microscopy Point Count Worksheet for Asbestos Analysis of Bulk Samples**

Date: 10/07/19 Analyst: QU Scope: DPT055

Sample Description: Grey Powder

RJ Lee Group  
Sample Number: 104886061  
RJ Lee Group  
Project Number: A041055599-0  
Analysis Method: EPA800

Comments /  
# of Layers: 1000 Point Count. Detection  
Limit of 0.1%

Stereo-scope	%	Asbestos Type	Morphology	Color/Pleochroism		Indices of Refraction		Birefringence	Sign of Elongation	Extinction Angle	QC Y N	QC Analyst:
					⊥		⊥					
			W C S					L M	P N			
			W C S					L M	P N			
			W C S					L M	P N			
		% Non-Asbestos Fibers		Optical Properties		Layered Results		Asbestos	Non-Asb.	Matrix		
		<u>cellulose</u>		<u>cellulose</u>								

NFM% <u>100 99 90 all 01579</u>		
Quartz	Carbonates	Vermiculite
Tar	Binder	Opacities
Perlite	Amphibole	Gypsum
Talc	Feldspar	Mica
Clay	Organic Part.	Diatoms
Misc Particles	Foam	Foil

Type	Slide 1	Slide 2	Slide 3	Slide 4	Slide 5	Slide 6	Slide 7	Slide 8	Total
<u>MPs</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>800</u>
Total	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>800</u>

$$\text{Detection Limit} = \frac{1}{1000} \times 100\% = 0.1\%$$

Effective Date: March 2019  
Form F OPT.001

**PLM Point Count Additional Slides Worksheet**

Date: 10/07/19 Analyst: AN Microscope: OP7055

RJ Lee Group Sample Number: 10488000 RJ Lee Group Project Number: AOH1055599-0

Type	Slide <u>9</u>	Slide <u>10</u>	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
<u>NPS</u>	<u>100</u>	<u>100</u>							<u>200</u>
Total	<u>100</u>	<u>100</u>							<u>200</u>

1000  
1000

Type	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
Total									

Type	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
Total									



**Polarized Light Microscopy Point Count Worksheet for Asbestos Analysis of Bulk Samples**

Date: 10/9/19 Analyst: AW Scope: OPT085

Sample Description: Grey Powder

RJ Lee Group  
Sample Number: 10488407  
RJ Lee Group  
Project Number: ADH1055599-0  
Analysis Method: EPDMCO

Comments /  
# of Layers: 1000 Point Count. Detection  
Limit of 0.1%

Stereo-scope		Asbestos Type		Morphology	Color/Pleochroism		Indices of Refraction		Birefringence	Sign of Elongation	Extinction Angle	QC Y N	QC Analyst:
%	%					⊥		⊥	L M	P N			
				W C S					L M	P N			
				W C S					L M	P N			
				W C S					L M	P N			
		% Non-Asbestos Fibers			Optical Properties		Layered Results		Asbestos	Non-Asb.	Matrix		

NFM% 100

Quartz	Carbonates	Vermiculite
Tar	Binder	Opakes
Perlite	Amphibole	Gypsum
Talc	Feldspar	Mica
Clay	Organic Part.	Diatoms
Misc Particles	Foam	Foil

Type	Slide 1	Slide 2	Slide 3	Slide 4	Slide 5	Slide 6	Slide 7	Slide 8	Total
NFS	100	100	100	100	100	100	100	100	800
Total	100	100	100	100	100	100	100	100	800

$$\text{Detection: } \frac{1}{1000} \times 100\% = 0.1\%$$

Effective Date: March 2019  
Form F OPT.001

**PLM Point Count Additional Slides Worksheet**

Date: 10/09/19 Analyst: AW Microscope: OP7055

RJ Lee Group Sample Number: 10488407 RJ Lee Group Project Number: A011055599-0

Type	Slide <u>9</u>	Slide <u>10</u>	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
<u>NPS</u>	<u>100</u>	<u>100</u>							<u>200</u>
Total	<u>100</u>	<u>100</u>							<u>200</u>

1000  
1000

Type	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
Total									

Type	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
Total									



Effective Date: March 2019  
Form F OPT.001

**PLM Point Count Additional Slides Worksheet**

Date: 10/07/19 Analyst: AL Microscope: OPT7055

RJ Lee Group Sample Number: 10488608 RJ Lee Group Project Number: B0H1055599-0

Type	Slide <u>9</u>	Slide <u>10</u>	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
<u>NPS</u>	<u>100</u>	<u>100</u>							<u>200</u>
Total	<u>100</u>	<u>100</u>							<u>200</u>

1000  
1000

Type	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
Total									

Type	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
Total									

**Polarized Light Microscopy Point Count Worksheet for Asbestos Analysis of Bulk Samples**

Date: 10/10/19 Analyst: QU Scope: 107055

Sample Description: Gray Powder

RJ Lee Group  
Sample Number: 10488409  
RJ Lee Group  
Project Number: 1011055599-0  
Analysis Method: EPH1000

Comments /  
# of Layers: 1000 Point Count Detection  
Limit of 0.1%

Stereo-scope											# of Preps: <u>10</u>	Homogenous <input checked="" type="checkbox"/> Y <input type="checkbox"/> N	QC Y <input type="checkbox"/> N	QC Analyst:
%	<u>0.7</u>	%	Asbestos Type	Morphology	Color/Pleochroism		Indices of Refraction		Birefringence	Sign of Elongation	Extinction Angle	NFM%	<u>99.3</u>	
	<u>0.7</u>		<u>Tremolite</u>	<u>WCS</u>	<u>01</u>	<u>N</u>	<u>1.1133</u>	<u>1.428</u>	<u>L M</u>	<u>P N</u>	<u>12</u>	Quartz	Carbonates	
				<u>WCS</u>					<u>L M</u>	<u>P N</u>		Tar	Binder	
				<u>WCS</u>					<u>L M</u>	<u>P N</u>		Perlite	Amphibole	
			% Non-Asbestos Fibers	Optical Properties		Layered Results		Asbestos	Non-Asb.	Matrix		Talc	Feldspar	
												Clay	Organic Part.	
												Misc Particles	Diagrams	
												Foam	Foil	

Type	Slide 1	Slide 2	Slide 3	Slide 4	Slide 5	Slide 6	Slide 7	Slide 8	Total
<u>NAS</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>98</u>	<u>99</u>	<u>99</u>	<u>100</u>	<u>99</u>	<u>795</u>
<u>Tremolite</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>2</u>	<u>1</u>	<u>1</u>	<u>0</u>	<u>1</u>	<u>5</u>
Total	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>800</u>

$$\text{Detection Limit } \frac{1}{1000} \times 100\% = 0.1\%$$



**Polarized Light Microscopy Point Count Worksheet for Asbestos Analysis of Bulk Samples**

Date: 10/04/19 Analyst: AL Scope: OP7055

Sample Description: Grey Powder

RJ Lee Group  
Sample Number: 10488U10  
RJ Lee Group  
Project Number: POH 1055599-0  
Analysis Method: EDPA 000

Comments /  
# of Layers: 1000 Point Count. Detection  
Limit of 0.1%

Stereo-scope		# of Preps: <u>10</u>		Homogenous <u>(Y)</u> N		QC Y N		QC Analyst:			
%	%	Asbestos Type	Morphology	Color/Pleochroism II I		Indices of Refraction II I		Birefringence L M	Sign of Elongation P N	Extinction Angle	NFM% <u>100</u>
			W C S					L M	P N		Quartz
			W C S					L M	P N		Carbonates
			W C S					L M	P N		Vermiculite
		% Non-Asbestos Fibers		Optical Properties		Layered Results		Asbestos	Non-Asb.	Matrix	Tar
											Binder
											Opacities
											Perlite
											Amphibole
											Gypsum
											Talc
											Feldspar
											Mica
											Diatoms
											Foam
											Foil
											Misc Particles

Type	Slide 1	Slide 2	Slide 3	Slide 4	Slide 5	Slide 6	Slide 7	Slide 8	Total
NAS	100	100	100	100	100	100	100	100	800
Total	100	100	100	100	100	100	100	100	800

$$\text{Detection Limit} = \frac{1}{1000} \times 100\% = 0.1\%$$

Effective Date: March 2019  
Form F OPT.001

**PLM Point Count Additional Slides Worksheet**

Date: 10/04/19 Analyst: AL Microscope: OPT 055

RJ Lee Group Sample Number: 10488010 RJ Lee Group Project Number: POH 1055599-0

Type	Slide <u>9</u>	Slide <u>10</u>	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
<u>NPS</u>	<u>100</u>	<u>100</u>							<u>200</u>
Total	<u>100</u>	<u>100</u>							<u>200</u>

1000  
1000

Type	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
Total									

Type	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
Total									



**Polarized Light Microscopy Point Count Worksheet for Asbestos Analysis of Bulk Samples**

Date: 10/10/19 Analyst: QU Scope: 077055

Sample Description: Gray Powder

RJ Lee Group  
Sample Number: 10488411  
RJ Lee Group  
Project Number: 10H1055599-0  
Analysis Method: EPA 100

Comments /  
# of Layers: 1000 Point Count. Detection Limit  
of 0.1%

Stereo-scope		Asbestos Type		Morphology		Color/Pleochroism		Indices of Refraction		Birefringence		Sign of Elongation		Extinction Angle		QC Analyst:	
%	%						⊥		⊥	L	M	P	N			NFM%	
				W C S						L	M	P	N				
				W C S						L	M	P	N				
				W C S						L	M	P	N				
		% Non-Asbestos Fibers		Optical Properties		Layered Results				Asbestos		Non-Asb.		Matrix			

Quartz Carbonates Vermiculite

Tar Binder Opaques

Perlite Amphibole Gypsum

Talc Feldspar Mica

Clay Organic Part. Diatoms

Misc Particles Foam Foil

Type	Slide 1	Slide 2	Slide 3	Slide 4	Slide 5	Slide 6	Slide 7	Slide 8	Total
NAS	100	100	100	100	100	100	100	100	800
Total	100	100	100	100	100	100	100	100	800

$$\text{Detection Limit: } \frac{1}{1000} \times 100\% = 0.1\%$$

Effective Date: March 2019  
Form F OPT.001

**PLM Point Count Additional Slides Worksheet**

Date: 10/10/19 Analyst: au Microscope: CP7 055

RJ Lee Group Sample Number: 10488411 RJ Lee Group Project Number: A0141055599-0

Type	Slide <u>9</u>	Slide <u>10</u>	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
<u>NPS</u>	<u>100</u>	<u>100</u>							<u>200</u>
Total	<u>100</u>	<u>100</u>							<u>200</u>

1000  
1000

Type	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
Total									

Type	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
Total									







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13424 Pennsylvania Ave, Suite 303 // Hagerstown, MD 21742 // Tel: 301-733-4000 // Fax: 301-733-4003

[www.specialtygranules.com](http://www.specialtygranules.com)

A0H1055599-0

A0H1055599-2

September 27, 2019

RJ Lee Group, Inc.  
350 Hochberg Road  
Monroeville, PA 15146  
Attn: Matthew Sanchez

Via: Federal Express: 776355216047

RE: Fiber - PLM and Crystalline Silica - XRD Analyses.

Dear Mr. Sanchez:

Enclosed are the following samples for the required analyses. All samples are crushed rock and classified as a volcanic rock (meta-basalt). Also enclosed are the SDS sheets.

**Fiber and Crystalline Silica:**

For each sample listed (44 total samples), complete the following analyses:

1. Polarized Light Microscopy (PLM): Bulk Analyses – 1,000 Point Count (Untreated) for regulated asbestiform fibers (EPA 600/R-93/116). If fibrous material is detected contact SGI and retain sample for additional TEM testing.
2. Total Crystalline Silica (Bulk Analysis) by quantitative XRD.
3. A 10 - day turn-around service is requested for both the PLM and XRD analyses.

One sample of rock granules (-8 mesh x 35 mesh). (200 grams each):

See attached Table 1.

Two samples of rock fines (-35 mesh x 325 mesh). (100 - 200 grams each):

See attached Table 1.

Nineteen samples of finished product (-8 mesh x 35 mesh). (100 grams each):

See attached Table 1.

REC'D 10-01-19 8:45AM  
Imelda Manuque  
RJ Lee Group

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A0H1055599-2



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A0H1055599-0

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[www.specialtygranules.com](http://www.specialtygranules.com)

Please address and send the lab results directly to:

Celeste Levine (Electronic Copy)  
Standard Industries  
1361 Alps Road  
Wayne, NJ 07470  
973-628-3035  
[celeste.levine@standardindustries.com](mailto:celeste.levine@standardindustries.com)

with a copy sent to:

Ted Heath (Hard & Electronic Copy)  
Specialty Granules LLC  
13424 Pennsylvania Ave., Suite 303  
Hagerstown, MD 21742  
(301) 714-1332  
[ted.heath@specialtygranules.com](mailto:ted.heath@specialtygranules.com)

Payment will be made through SGI Purchase Order CH64764. Please copy Ted Heath and not Celeste Levine on the invoice.

Please call me with any questions.

Sincerely,

Rebecca Peruso  
Geologist, Jr.  
Specialty Granules LLC  
[rebecca.peruso@specialtygranules.com](mailto:rebecca.peruso@specialtygranules.com)

c.c.

K. Moore – SGI  
B. Smith- SGI  
A. Shepeck – SGI  
C. Levine – SGI  
T. Heath- SGI

ATH 1056162-0



**SPECIALTY GRANULES LLC.**

13424 Pennsylvania Ave, Suite 303 // Hagerstown, MD 21742 // Tel: 301-733-4000 // Fax: 301-733-4003 [www.specialtygranules.com](http://www.specialtygranules.com)

November 18, 2019

RJ Lee Group, Inc.  
350 Hochberg Road  
Monroeville, PA 15146  
An: Monica McGrath-Koerner

Via: Federal Express: 777011609104

RE: Transmission Electron Microscopy (TEM)

Dear Mrs. Koerner :

Enclosed are the following samples for the required analyses. All samples are crushed rock and classified as a volcanic rock (meta-basalt). Also enclosed are the SDS sheets. We are requesting a 3-day turn-around on these samples.

**Transmission Electron Microscopy:**

For each sample listed (5 total samples, See below), complete the following analyses:

1. Transmission Electron Microscopy (TEM-ASTM 5756).
2. A 3-day turn-around service is requested for the TEM analysis.

Samples

<u>Charmian Samples</u>			<u>RJ Lee</u>	<u>Number of</u>
<u>Plant</u>	<u>SRM#</u>	<u>Color/ Type</u>	<u>Sample in g</u>	<u>Samples</u>
<u>Charmian</u>	<u>11,758</u>	<u>Fines L. Mill</u>	<u>100</u>	<u>1</u>
<u>Charmian</u>	<u>11,737</u>	<u>G - 115 oiled</u>	<u>100</u>	<u>1</u>
<u>Charmian</u>	<u>11,738</u>	<u>G - 171 oiled</u>	<u>100</u>	<u>1</u>
<u>Charmian</u>	<u>11,749</u>	<u>G - 760 oiled</u>	<u>100</u>	<u>1</u>
<u>Charmian</u>	<u>11,752</u>	<u>BackSurfacing w/oil &amp; siloxane</u>	<u>100</u>	<u>1</u>

ATH 1036162-0



**SPECIALTY GRANULES LLC.**

13424 Pennsylvania Ave, Suite 303 // Hagerstown, MD 21742 // Tel: 301-733-4000 // Fax: 301-733-4003 [www.specialtygranules.com](http://www.specialtygranules.com)

Please address and send the lab results directly to:

Celeste Levine (Electronic Copy)  
Standard Industries  
1361 Alps Road  
Wayne, NJ 07470  
973-628-3035  
[celeste.levine@standardindustries.com](mailto:celeste.levine@standardindustries.com)

with a copy sent to:

Ted Heath (Hard & Electronic Copy)  
Specialty Granules LLC  
13424 Pennsylvania Ave., Suite 303  
Hagerstown, MD 21742  
(301) 714-1332  
[ted.heath@specialtygranules.com](mailto:ted.heath@specialtygranules.com)

Payment will be made through SGI Purchase Order CH65372. Please copy Ted Heath and not Celeste Levine on the invoice.

Please call Ted Heath or myself with any questions.

Sincerely,

**Rebecca Peruso**  
Geologist Jr.  
Specialty Granules LLC  
13424 Pennsylvania Ave  
Suite 303  
Hagerstown, MD 21745  
Direct Contact : (301)393-8519  
[rebecca.peruso@specialtygranules.com](mailto:rebecca.peruso@specialtygranules.com)

c.c.

K. Moore – SGI

B. Smith- SGI

A. Shepeck – SGI

C. Levine – SGI

T. Heath- SGI

*Rec'd by: M. Carse 11-21-19 9:15 am*



## Final Laboratory Report

### TEM Bulk Protocol

Attention: Celeste Levine  
Standard Industries  
1361 Alps Road  
Wayne, NJ 07470  
US

Report Date: 11/25/2019  
Sample Receipt Date: 11/21/2019  
RJ Lee Group Job No.: ATH1056162-0  
Authorization/P.O. No.: CH65372  
Samples Received: 5  
Client Job No.: Charmian

Method: ASTM D-5756 Standard Test Method, Modified

**TABLE 1 -- Weight Percent of Asbestos, Cleavage Fragment Amphibole and Non-Asbestos**

						-----Weight Percent----- <u>Total Structures</u> Analytical Sensitivity			
		<u>Total Structures</u>							
Client Sample Number	RJLG Sample Number	Chry	Amph	Cleavage	Non Asbestos	Chry	Amph Asb	Amph Cleavage Fragment	Non Asbestos
SRM-11758	10491672	0	0	9	0	<u>&lt; 9.5E-6</u> 9.5E-6	<u>&lt; 1.2E-5</u> 1.2E-5	<u>1.9E-1</u> 7.6E-6	<u>&lt; 7.2E-6</u> 7.2E-6
SRM-11737	10491673	0	0	2	0	<u>&lt; 9.5E-6</u> 9.5E-6	<u>&lt; 1.2E-5</u> 1.2E-5	<u>1.6E-2</u> 7.6E-6	<u>&lt; 7.2E-6</u> 7.2E-6

#### NOTES

- "<" indicates results less than analytical sensitivity. "---" indicates that sample was not analyzed.
- Sample(s) for this project were analyzed at our: Monroeville, PA (A HA LAP, LLC #100364, NVLAP #101208-0, NY ELAP #10884) facility.
- If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.
- Density of amphibole:  $3.2 \times 10^{-3}$  ng/  $\mu$  m<sup>3</sup>, density of chrysotile:  $2.55 \times 10^{-3}$  ng/  $\mu$  m<sup>3</sup>, density of non-asbestos:  $3.00 \times 10^{-3}$  ng/  $\mu$  m<sup>3</sup>.
- Abbreviations: N/A-Not Applicable, Chry-Chrysotile Asbestos, Amph-Amphibole Asbestos, Asb-Asbestos Amphibole, Cleavage-Cleavage Amphibole.
- Samples will be held for 90 days and then disposed of per Federal regulations.
- 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.

RJ Lee Group Job No: ATH1056162-0  
Client Job No/Name: Charmian

## Final Laboratory Report (cont'd)

Client: Standard Industries  
Report Date: 11/25/2019

**TABLE 1 -- Weight Percent of Asbestos, Cleavage Fragment Amphibole and Non-Asbestos**

		-----Weight Percent----- Total Structures Analytical Sensitivity				Total Structures			
Client Sample Number	RJLG Sample Number	Chry	Amph	Cleavage	Non Asbestos	Chry	Amph Asb	Amph Cleavage Fragment	Non Asbestos
SRM-11738	10491674	0	1	29	2	<u>&lt; 9.5E-6</u> 9.5E-6	<u>1.1E-3</u> 1.2E-5	<u>1.1E0</u> 7.6E-6	<u>1.4E-1</u> 7.2E-6
SRM-11749	10491675	0	0	20	0	<u>&lt; 9.5E-6</u> 9.5E-6	<u>&lt; 1.2E-5</u> 1.2E-5	<u>2.3E-1</u> 7.6E-6	<u>&lt; 7.2E-6</u> 7.2E-6
SRM-11752	10491676	0	0	15	0	<u>&lt; 9.5E-6</u> 9.5E-6	<u>&lt; 1.2E-5</u> 1.2E-5	<u>1.8E-1</u> 7.6E-6	<u>&lt; 7.2E-6</u> 7.2E-6

### NOTES

1. "<" indicates results less than analytical sensitivity. "---" indicates that sample was not analyzed.
2. Sample(s) for this project were analyzed at our: Monroeville, PA (A HA LAP, LLC #100364, NVLAP #101208-0, NY ELAP #10884) facility.
3. If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.
4. Density of amphibole:  $3.2 \times 10^{-3}$  ng/  $\mu$  m<sup>3</sup>, density of chrysotile:  $2.55 \times 10^{-3}$  ng/  $\mu$  m<sup>3</sup>, density of non-asbestos:  $3.00 \times 10^{-3}$  ng/  $\mu$  m<sup>3</sup>.
5. Abbreviations: N/A-Not Applicable, Chry-Chrysotile Asbestos, Amph-Amphibole Asbestos, Asb-Asbestos Amphibole, Cleavage-Cleavage Amphibole.
6. Samples will be held for 90 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.

RJ Lee Group Job No: ATH1056162-0  
Client Job No/Name: Charmian

## Final Laboratory Report (cont'd)

Client: Standard Industries  
Report Date: 11/25/2019

**TABLE 2 -- Weight Percent of Asbestos, Cleavage Fragment Amphibole and Non-Asbestos 5 µm**

		-----Structures 5 µm-----				-----Weight Percent----- Structures 5 µm Analytical Sensitivity Amphibole			
Client Sample Number	RJLG Sample Number	Chry	Amph	Cleavage	Non-Asbestos	Chry	Asb	Cleavage Fragment	Non-Asbestos
SRM-11758	10491672	0	0	5	0	<u>&lt; 9.5E-5</u> 9.5E-5	<u>&lt; 1.2E-4</u> 1.2E-4	<u>1.7E-1</u> 7.6E-5	<u>&lt; 7.2E-5</u> 7.2E-5
SRM-11737	10491673	0	0	0	0	<u>&lt; 9.5E-5</u> 9.5E-5	<u>&lt; 1.2E-4</u> 1.2E-4	<u>&lt; 7.6E-5</u> 7.6E-5	<u>&lt; 7.2E-5</u> 7.2E-5
SRM-11738	10491674	0	1	11	2	<u>&lt; 9.5E-5</u> 9.5E-5	<u>1.1E-3</u> 1.2E-4	<u>1.0E0</u> 7.6E-5	<u>1.4E-1</u> 7.2E-5
SRM-11749	10491675	0	0	4	0	<u>&lt; 9.5E-5</u> 9.5E-5	<u>&lt; 1.2E-4</u> 1.2E-4	<u>1.1E-1</u> 7.6E-5	<u>&lt; 7.2E-5</u> 7.2E-5
SRM-11752	10491676	0	0	3	0	<u>&lt; 9.5E-5</u> 9.5E-5	<u>&lt; 1.2E-4</u> 1.2E-4	<u>1.1E-1</u> 7.6E-5	<u>&lt; 7.2E-5</u> 7.2E-5

### NOTES

1. "<" indicates results less than analytical sensitivity. "----" indicates that sample was not analyzed.
2. Sample(s) for this project were analyzed at our: Monroeville, PA (A HA LAP, LLC #100364, NVLAP #101208-0, NY ELAP #10884) facility.
3. If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.
4. Density of amphibole:  $3.2 \times 10^{-3}$  ng/µm<sup>3</sup>, density of chrysotile:  $2.55 \times 10^{-3}$  ng/µm<sup>3</sup>, density of non-asbestos:  $3.00 \times 10^{-3}$  ng/µm<sup>3</sup>.
5. Abbreviations: N/A-Not Applicable, Chry-Chrysotile Asbestos, Amph-Amphibole Asbestos, Asb-Asbestos Amphibole, Cleavage-Cleavage Amphibole.
6. Samples will be held for 90 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.

RJ Lee Group Job No: ATH1056162-0  
Client Job No/Name: Charmian

## Final Laboratory Report (cont'd)

Client: Standard Industries  
Report Date: 11/25/2019

Client Sample Number	RJLG Sample Number	Material Used (gm)	Area Analyzed Total (mm <sup>2</sup> )	Area Analyzed 5 $\mu$ m (mm <sup>2</sup> )	Effective Filter Area (mm <sup>2</sup> )	Dilution Factor
SRM-11758	10491672	0.0001	0.31997	0.31997	1220	1.0
SRM-11737	10491673	0.0001	0.31997	0.31997	1220	1.0
SRM-11738	10491674	0.0001	0.31997	0.31997	1220	1.0
SRM-11749	10491675	0.0001	0.31997	0.31997	1220	1.0
SRM-11752	10491676	0.0001	0.31997	0.31997	1220	1.0

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



Ashleigh Sload, Scientist

### NOTES

- "<" indicates results less than analytical sensitivity. "---" indicates that sample was not analyzed.
- Sample(s) for this project were analyzed at our: Monroeville, PA (A HA LAP, LLC #100364, NVLAP #101208-0, NY ELAP #10884) facility.
- If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.
- Density of amphibole:  $3.2 \times 10^{-3}$  ng/  $\mu$  m<sup>3</sup>, density of chrysotile:  $2.55 \times 10^{-3}$  ng/  $\mu$  m<sup>3</sup>, density of non-asbestos:  $3.00 \times 10^{-3}$  ng/  $\mu$  m<sup>3</sup>.
- Abbreviations: N/A-Not Applicable, Chry-Chrysotile Asbestos, Amph-Amphibole Asbestos, Asb-Asbestos Amphibole, Cleavage-Cleavage Amphibole.
- Samples will be held for 90 days and then disposed of per Federal regulations.
- 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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RJL: ATH1056162-0	10491672.HTA2	Microscope tem2000fx2	Grid Openings	10
SRM-11758	Specialty Granules I	Magnification 21 KX	Asbestos	0.0
Wt: 0.0001 gm	Grid: 0.0091 mm <sup>2</sup>	Acc. Voltage 120 KV	Asbestos >= 5µm	0.0
Dil: 1.	Filter Size: 47 mm	Operator: Jon Swope	Nonasbestos	4.0
HQ44839		Cv = 0	Nonasbestos >= 5µm	0.0
			% Wt of largest asbestos structure	%

Field	Fiber	Length	Width	FiberType	Morph	EDX	File #	Photo	SAED	AmplID	C/A
1				NSD							
2	1	1.9	0.2	Amphibole		MgSiCaFeAl	15653D	Image1	Diff1	Acti	Cle
3				NSD							
4	1	1.2	0.2	Amphibole		MgSiCaFe			X	Acti	Cle
5	1	3.5	0.4	Amphibole		MgSiCaFe			X	Acti	Cle
6				NSD							
7	1	2.5	0.4	Amphibole		MgSiCaFe			X	Acti	Cle
8				NSD							
9				NSD							
10				NSD							

10% Particulate

**Analyst's Comments: N/A**

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

Initial Review: 11/24/2019 9:54:10 AM approve by Jon Swope

Final Review: 11/25/19 1:56 PM approve by Ashleigh Sload

RJL: ATH1056162-0	10491672.HTA2	Microscope tem2000fx1	Grid Openings	25
SRM-11758	Specialty Granules I	Magnification 10 KX	Asbestos	0.0
Wt: 0.0001 gm	Grid: 0.0091 mm <sup>2</sup>	Acc. Voltage 120 KV	Nonasbestos	5.0
Dil: 1.	Filter Size: 47 mm	Operator: Jon Swope	% Wt of largest asbestos structure	%
HQ44839		Cv = 0		

Field	Fiber	Length	Width	FiberType	Morph	EDX	File #	Photo	SAED	AmplID	C/A
1				NSD							
2	1	8.9	1.2	Amphibole		MgSiCaFe			X	Acti	Cle
3				NSD							
4				NSD							
5				NSD							
6	1	7.1	0.5	Amphibole		MgSiCaFe			X	Acti	Cle
7				NSD							
8				NSD							
9				NSD							
10				NSD							
11				NSD							
12				NSD							
13				NSD							
14	1	10.7	0.45	Amphibole		MgSiCaFe15654D		Image1 Image2 Image3	Diff1	Acti	Cle
15				NSD							
16				NSD							
17				NSD							
18				NSD							
19				NSD							
20				NSD							
21	1	7.6	0.5	Amphibole		MgSiCaFe			X	Acti	Cle
22				NSD							
23	1	5.7	0.6	Amphibole		MgSiCaFe			X	Acti	Cle
24				NSD							
25				NSD							

10% Particulate

**Analyst's Comments: N/A**

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

Initial Review: 11/24/2019 10:56:41 AM approve by Jon Swope

Final Review: 11/25/19 1:56 PM approve by Ashleigh Sload

RJL: ATH1056162-0	10491673.HTA2	Microscope tem2000fx2	Grid Openings	10
SRM-11737	Specialty Granules I	Magnification 21 KX	Asbestos	0.0
Wt: 0.0001 gm	Grid: 0.0091 mm <sup>2</sup>	Acc. Voltage 120 KV	Asbestos >= 5µm	0.0
Dil: 1.	Filter Size: 47 mm	Operator: Jon Swope	Nonasbestos	2.0
HQ44839		Cv = 0	Nonasbestos >= 5µm	0.0
			% Wt of largest asbestos structure	%

Field	Fiber	Length	Width	FiberType	Morph	EDX	File #	Photo	SAED	AmplID	C/A
1				NSD							
2	1	2.7	0.5	Amphibole		MgSiCaFe15655D		Image1	Diff1	Acti	Cle
3				NSD							
4				NSD							
5				NSD							
6				NSD							
7				NSD							
8				NSD							
9	1	1.5	0.3	Amphibole		MgSiCaFe			X	Acti	Cle
10				NSD							

10% Particulate

**Analyst's Comments: N/A**

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

Initial Review: 11/24/2019 11:22:02 AM approve by Jon Swope

Final Review: 11/25/19 1:56 PM approve by Ashleigh Sload

RJL: ATH1056162-0	10491673.HTA2	Microscope tem2000fx2	Grid Openings	25
SRM-11737	Specialty Granules I	Magnification 10 KX	Asbestos	0.0
Wt: 0.0001 gm	Grid: 0.0091 mm <sup>2</sup>	Acc. Voltage 120 KV	Nonasbestos	0.0
Dil: 1.	Filter Size: 47 mm	Operator: Jon Swope	% Wt of largest asbestos structure	%
HQ44839		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							

10% Particulate

**Analyst's Comments: N/A**

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

Initial Review: 11/24/2019 11:36:45 AM approve by Jon Swope

Final Review: 11/25/19 1:56 PM approve by Ashleigh Sload



RJL: ATH1056162-0	10491674.HTA2	Microscope tem2000fx2	Grid Openings	10
SRM-11738	Specialty Granules I	Magnification 21 KX	Asbestos	0.0
Wt: 0.0001 gm	Grid: 0.0091 mm <sup>2</sup>	Acc. Voltage 120 KV	Asbestos >= 5µm	0.0
Dil: 1.	Filter Size: 47 mm	Operator: Jon Swope	Nonasbestos	21.0
HQ44839		Cv = 0	Nonasbestos >= 5µm	3.0
			% Wt of largest asbestos structure	%

Field	Fiber	Length	Width	FiberType	Morph	EDX	File #	Photo	SAED	AmplID	C/A
1	1	2.5	0.25	Amphibole		MgSiCaFe	15656D	Image1	Diff1	Acti	Cle
1	2	3.2	0.4	Amphibole		MgSiCaFe			X	Acti	Cle
1	3	3.1	0.3	Amphibole		MgSiCaFe			X	Acti	Cle
2	1	3.2	0.3	Amphibole		MgSiCaFe			X	Acti	Cle
2	2	9.8	0.8	Amphibole		MgSiCaFe			X	Acti	Cle
2	3	2.9	0.3	Amphibole		MgSiCaFe			X	Acti	Cle
3	1	2.2	0.2	Amphibole		MgSiCaFe			X	Acti	Cle
3	2	15.6	1.2	Amphibole		MgSiCaFe			X	Acti	Cle
4	1	1.4	0.2	Amphibole		MgSiCaFe			X	Acti	Cle
4	2	2.5	0.3	Amphibole		MgSiCaFe			X	Acti	Cle
5	1	2.2	0.3	Amphibole		MgSiCaFe			X	Acti	Cle
5	2	1.3	0.2	Amphibole		MgSiCaFe			X	Acti	Cle
5	3	6.4	0.5	Amphibole		MgSiCaFe			X	Acti	Cle
6	1	1.2	0.2	Amphibole		MgSiCaFe	15657D	Image2	Diff2	Acti	Cle
7	1	1.1	0.2	Amphibole		MgSiCaFe			X	Acti	Cle
7	2	2.4	0.2	Amphibole		MgSiCaFe			X	Acti	Cle
8	1	4.3	0.4	Amphibole		MgSiCaFe			X	Acti	Cle
8	2	2.1	0.3	Amphibole		MgSiCaFe			X	Acti	Cle
9	1	3.7	0.3	Amphibole		MgSiCaFe			X	Acti	Cle
10	1	2.2	0.2	Amphibole		MgSiCaFe			X	Acti	Cle
10	2	2.1	0.2	Amphibole		MgSiCaFe			X	Acti	Cle

10% Particulate

**Analyst's Comments: N/A**

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

Initial Review: 11/24/2019 12:21:33 PM approve by Jon Swope

Final Review: 11/25/19 1:56 PM approve by Ashleigh Sload

RJL: ATH1056162-0	10491674.HTA2	Microscope tem2000fx2	Grid Openings	25
SRM-11738	Specialty Granules I	Magnification 10 KX	Asbestos	1.0
Wt: 0.0001 gm	Grid: 0.0091 mm <sup>2</sup>	Acc. Voltage 120 KV	Nonasbestos	10.0
Dil: 1.	Filter Size: 47 mm	Operator: Jon Swope	% Wt of largest asbestos structure	%
HQ44839		Cv = 0.038		

Field	Fiber	Length	Width	FiberType	Morph	EDX	File #	Photo	SAED	AmplID	C/A
1				NSD							
2				NSD							
3	1	9.9	1.1	Non-Asbestos		MgAlSiCaFe	15658D	Image1	Diff1		
3	2	8.3	0.98	Amphibole		MgSiCaFe	15659D	Image2	Diff2	Acti	Cle
4				NSD							
5	1	8.5	0.5	Amphibole		MgSiCaFe			X	Acti	Cle
6				NSD							
7				NSD							
8	1	6.8	0.6	Amphibole		MgSiCaFe			X	Acti	Cle
9	1	6.1	0.12	Amphibole	F	MgSiCaFe	15660D	Image3	Diff3	Acti	Asb
10	1	7.9	0.6	Amphibole		MgSiCaFe			X	Acti	Cle
11	1	9.7	0.9	Amphibole		MgSiCaFe			X	Acti	Cle
12				NSD							
13				NSD							
14				NSD							
15				NSD							
16	1	13.2	1.1	Amphibole		MgSiCaFe			X	Acti	Cle
17	1	5.8	0.9	Amphibole		MgSiCaFe			X	Acti	Cle
18	1	9.1	0.8	Non-Asbestos		MgAlSiCaFe			X		
19	1	5.2	0.5	Amphibole		MgSiCaFe			X	Acti	Cle
20				NSD							
21				NSD							
22				NSD							
23				NSD							
24				NSD							
25				NSD							

10% Particulate

**Analyst's Comments: N/A**

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

Initial Review: 11/24/2019 12:53:40 PM approve by Jon Swope

Final Review: 11/25/19 1:56 PM approve by Ashleigh Sload

RJL: ATH1056162-0	10491675.HTA2	Microscope tem2000fx2	Grid Openings	10
SRM-11749	Specialty Granules I	Magnification 21 KX	Asbestos	0.0
Wt: 0.0001 gm	Grid: 0.0091 mm <sup>2</sup>	Acc. Voltage 120 KV	Asbestos >= 5µm	0.0
Dil: 1.	Filter Size: 47 mm	Operator: Jon Swope	Nonasbestos	17.0
HQ44839		Cv = 0	Nonasbestos >= 5µm	1.0
			% Wt of largest asbestos structure	%

Field	Fiber	Length	Width	FiberType	Morph	EDX	File #	Photo	SAED	AmplID	C/A
1	1	2.4	0.2	Amphibole		MgSiCaFe	15661D	Image1	Diff1	Acti	Cle
1	2	2.1	0.2	Amphibole		MgSiCaFe			X	Acti	Cle
1	3	4.1	0.5	Amphibole		MgSiCaFe			X	Acti	Cle
2	1	2.1	0.2	Amphibole		MgSiCaFe			X	Acti	Cle
2	2	3.1	0.3	Amphibole		MgSiCaFe			X	Acti	Cle
2	3	4.3	0.3	Amphibole		MgSiCaFe			X	Acti	Cle
3	1	5.6	0.5	Amphibole		MgSiCaFe			X	Acti	Cle
3	2	3.2	0.3	Amphibole		MgSiCaFe			X	Acti	Cle
4	1	4.5	0.4	Amphibole		MgSiCaFe			X	Acti	Cle
5	1	1.4	0.2	Amphibole		MgSiCaFe			X	Acti	Cle
6	1	1.9	0.3	Amphibole		MgSiCaFe	15662D	Image2	Diff2	Acti	Cle
7	1	2.5	0.3	Amphibole		MgSiCaFe			X	Acti	Cle
7	2	1.4	0.2	Amphibole		MgSiCaFe			X	Acti	Cle
8	1	2.7	0.2	Amphibole		MgSiCaFe			X	Acti	Cle
8	2	4.5	0.5	Amphibole		MgSiCaFe			X	Acti	Cle
9	1	1.1	0.2	Amphibole		MgSiCaFe			X	Acti	Cle
10	1	4.8	0.5	Amphibole		MgSiCaFe			X	Acti	Cle

10% Particulate

**Analyst's Comments: N/A**

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

Initial Review: 11/24/2019 1:21:48 PM approve by Jon Swope

Final Review: 11/25/19 1:56 PM approve by Ashleigh Sload

RJL: ATH1056162-0	10491675.HTA2	Microscope tem2000fx2	Grid Openings	25
SRM-11749	Specialty Granules I	Magnification 10 KX	Asbestos	0.0
Wt: 0.0001 gm	Grid: 0.0091 mm <sup>2</sup>	Acc. Voltage 120 KV	Nonasbestos	3.0
Dil: 1.	Filter Size: 47 mm	Operator: Jon Swope	% Wt of largest asbestos structure	%
HQ44839		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	1	5.15	0.2	Amphibole		MgSiCaFe15663D	Image1	Diff1	Acti	Cle	
7	1	6.9	1.1	Amphibole		MgSiCaFe		X	Acti	Cle	
8				NSD							
9				NSD							
10				NSD							
11				NSD							
12				NSD							
13				NSD							
14				NSD							
15	1	5.5	0.5	Amphibole		MgSiCaFe		X	Acti	Cle	
16				NSD							
17				NSD							
18				NSD							
19				NSD							
20				NSD							
21				NSD							
22				NSD							
23				NSD							
24				NSD							
25				NSD							

10% Particulate

**Analyst's Comments: N/A**

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

Initial Review: 11/24/2019 1:33:15 PM approve by Jon Swope

Final Review: 11/25/19 1:56 PM approve by Ashleigh Sload

RJL: ATH1056162-0	10491676.HTA2	Microscope tem2000fx2	Grid Openings	10
SRM-11752	Specialty Granules I	Magnification 21 KX	Asbestos	0.0
Wt: 0.0001 gm	Grid: 0.0091 mm <sup>2</sup>	Acc. Voltage 120 KV	Asbestos >= 5µm	0.0
Dil: 1.	Filter Size: 47 mm	Operator: Jon Swope	Nonasbestos	13.0
HQ44839		Cv = 0	Nonasbestos >= 5µm	1.0
			% Wt of largest asbestos structure	%

Field	Fiber	Length	Width	FiberType	Morph	EDX	File #	Photo	SAED	AmplID	C/A
1	1	3.1	0.25	Amphibole		MgSiCaFeAl	15664D	Image1	Diff1	Acti	Cle
1	2	4.5	0.5	Amphibole		MgSiCaFe			X	Acti	Cle
2	1	1.2	0.2	Amphibole		MgSiCaFe			X	Acti	Cle
3				NSD							
4	1	1.8	0.2	Amphibole		MgSiCaFe			X	Acti	Cle
4	2	0.9	0.12	Amphibole		MgSiCaFe			X	Acti	Cle
4	3	4.9	0.5	Amphibole		MgSiCaFe			X	Acti	Cle
5	1	1.1	0.2	Amphibole		MgSiCaFe			X	Acti	Cle
5	2	1.4	0.2	Amphibole		MgSiCaFe			X	Acti	Cle
5	3	1.5	0.15	Amphibole		MgSiCaFe			X	Acti	Cle
6	1	4.7	0.4	Amphibole		MgSiCaFe			X	Acti	Cle
6	2	1.9	0.3	Amphibole		MgSiCaFe			X	Acti	Cle
7				NSD							
8	1	6.3	0.8	Amphibole		MgSiCaFe	15665D	Image2	Diff2	Acti	Cle
9	1	1.2	0.2	Amphibole		MgSiCaFe			X	Acti	Cle
10				NSD							

10% Particulate

**Analyst's Comments: N/A**

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

Initial Review: 11/25/2019 8:41:03 AM approve by Jon Swope

Final Review: 11/25/19 1:57 PM approve by Ashleigh Sload

RJL: ATH1056162-0	10491676.HTA2	Microscope tem2000fx2	Grid Openings	25
SRM-11752	Specialty Granules I	Magnification 10 KX	Asbestos	0.0
Wt: 0.0001 gm	Grid: 0.0091 mm <sup>2</sup>	Acc. Voltage 120 KV	Nonasbestos	2.0
Dil: 1.	Filter Size: 47 mm	Operator: Jon Swope	% Wt of largest asbestos structure	%
HQ44839		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	1	7.1	0.4	Amphibole		MgSiCaFe15666D		Image1	Diff1	Acti	Cle
9				NSD							
10				NSD							
11				NSD							
12				NSD							
13				NSD							
14				NSD							
15				NSD							
16				NSD							
17				NSD							
18	1	6.5	0.5	Amphibole		MgSiCaFe			X	Acti	Cle
19				NSD							
20				NSD							
21				NSD							
22				NSD							
23				NSD							
24				NSD							
25				NSD							

10% Particulate

**Analyst's Comments: N/A**

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

Initial Review: 11/25/2019 8:53:11 AM approve by Jon Swope

Final Review: 11/25/19 1:57 PM approve by Ashleigh Sload