



RJ Lee Group, Inc.

RJ Lee Group, Inc.  
350 Hochberg Road, Monroeville, PA 15146  
Tel: 724-325-1776 | Fax: 724-733-1799

### Laboratory Report

K & L Gates  
17 North Second Street  
18th Floor  
Harrisburg, PA 17101  
United States  
Attention: Mr. David Raphael  
Telephone: 717-231-4504

Report Date 06/26/2019  
Sample Receipt Date 06/03/2019  
RJ Lee Group Job No. LLH901997-9  
Authorization/P.O. No.  
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
3158823.HPL	1 - RH #1	Yes	1	ND	<0.1 OF	100.00	Q, AM, OP, M	WT-06/26/2019
Description: Gray Crushed Rock.								
1000 Point Count. Detection Limit=0.1%. <0.1% OF= 0.5% Tremolite Cleavage.								
Weight Loss: 0.0%								
3158824.HPL	2 - RH #2	Yes	1	<0.1 AC	0.50 OF	99.50	Q, AM, OP, M	WT-06/26/2019
Description: Beige Crushed Rock.								
1000 Point Count. Detection Limit=0.1%. 0.5% OF= 0.5% Actinolite Cleavage.								
Weight Loss: 0.0%								
3158825.HPL	3 - RH #3	Yes	1	ND	<0.1 OF	100.00	Q, AM, OP, M	WT-06/26/2019
Description: Gray Crushed Rock.								
1000 Point Count. Detection Limit=0.1%. <0.1% OF= 0.5% Actinolite Cleavage.								
Weight Loss: 0.0%								



RJ Lee Group, Inc.

Laboratory Report (Cont)

Client Job No./Name: RJ Lee Group Job No: LLLH901997-9

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
3158826.HPL	4 - RH #4 Gray Crushed Rock. 1000 Point Count. Detection Limit=0.1%. <0.1% OF= <0.1% Actinolite Cleavage.	Yes	1	ND	<0.1 OF	100.00	Q, AM, OP, M	WT-06/26/2019
Weight Loss: 0.0%								
3158827.HPL	5 - RH #5 Gray Crushed Rock. 1000 Point Count. Detection Limit=0.1%. <0.1% OF= <0.1% Actinolite Cleavage.	Yes	1	ND	<0.1 OF	100.00	Q, AM, OP, M	WT-06/26/2019
Weight Loss: 0.0%								
3158828.HPL	6 - RH #6 Gray Crushed Rock. 1000 Point Count. Detection Limit=0.1%. <0.1% OF= <0.1% Actinolite Cleavage.	Yes	1	ND	<0.1 OF	100.00	Q, AM, OP, M	WT-06/26/2019
Weight Loss: 0.0%								
3158829.HPL	7 - RH #7 Green Crushed Rock. 1000 Point Count. Detection Limit=0.1%. <0.1% OF= <0.1% Actinolite Cleavage.	Yes	1	<0.1 TR	<0.1 OF	100.00	Q, CA, AM, OP, M	WT-06/26/2019
Weight Loss: 0.0%								
3158830.HPL	8 - RH #8 Gray Crushed Rock. 1000 Point Count. Detection Limit=0.1%. <0.1% OF= <0.1% Actinolite Cleavage.	Yes	1	ND	<0.1 OF	100.00	Q, AM, OP	WT-06/26/2019
Weight Loss: 0.0%								
3158831.HPL	9 - RH #10 Gray Crushed Rock. 1000 Point Count. Detection Limit=0.1%. <0.1% OF= <0.1% Actinolite Cleavage.	Yes	1	ND	<0.1 OF	100.00	Q, AM, OP, M	WT-06/26/2019
Weight Loss: 0.0%								



RJ Lee Group, Inc.

Laboratory Report (Cont)

Client Job No./Name: RJ Lee Group Job No: LLH901997-9

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
3158832.HPL	10 - RH #11	Yes	1	<0.1 AC	<0.1 OF	100.00	Q, AM, OP, M	WT-06/26/2019
Description: Beige Crushed Rock. 1000 Point Count. Detection Limit=0.1%. <0.1% OF= <0.1% Actinolite Cleavage.								
Weight Loss: 0.0%								
3158833.HPL	11 - RH #12	Yes	1	<0.1 AC	0.30 OF	99.70	Q, AM, OP, M	WT-06/26/2019
Description: Gray Crushed Rock. 1000 Point Count. Detection Limit=0.1%. 0.3% OF= 0.3% Actinolite Cleavage.								
Weight Loss: 0.0%								
3158834.HPL	12 - RH #14	Yes	1	<0.1 AC	0.50 OF	99.50	Q, AM, OP, M	WT-06/26/2019
Description: Gray Crushed Rock. 1000 Point Count. Detection Limit=0.1%. 0.5% OF= 0.5% Actinolite Cleavage.								
Weight Loss: 0.0%								
3158835.HPL	13 - RH #18	Yes	1	ND	<0.1 OF	100.00	Q, AM, OP, M	DF-06/26/2019
Description: Gray Crushed Rock 1000 Point Count. Detection Limit=0.1% OF=<0.1% Actinolite/Tremolite Cleavage								
Weight Loss: 0.0%								

Client Job No./Name:	RJ Lee Group Job No: LLH901997-9		
RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers
		Asbestos Detected(%)	Non-Asbestos Fibers(%)
			Non-Fibrous Materials(%)
			Matrix Material
			Analyst - Analysis Date



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 0.25%.
- "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 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.

# Request for Environmental and IH Laboratory Analytical Services

**COPY**

LLH901997-9

<b>ATTENTION TO:</b>		Purchase Order No.:		Client Job No.: Rock Hill Quarry														
<b>Lab Use Only</b>	Project No.:	Client No.:	Rush Charges Authorized? <input type="checkbox"/> YES <input type="checkbox"/> NO															
	Date Logged In:	Logged In By:	Accreditation (please list below):															
<b>Report Results To</b>	Name:	Andrew Gutshall	System ID #:	N/A	N/A													
	Company:	Hanson Aggregates Pa, LLC	DOH Source #:	N/A	N/A													
	Address:	7660 Imperial Way	Multiple Sources #s:	N/A	N/A													
	City, State, Zip:	Allentown, PA 18195	Sample Purpose: A <input type="checkbox"/> B <input type="checkbox"/> Other <input type="checkbox"/> N/A															
	Phone:	610-366-4819	Sample Purpose:	Unpres H <sub>2</sub> SO <sub>4</sub>	SW=Surface Water													
	Email Results To:	Andrew.Gutshall@hanson.com	Pres HCl	DW=Drinking Water														
	Name:		HNO <sub>3</sub>	O=Oil														
	Company:		Other	X=Other														
	Address:																	
	City, State, Zip:																	
	Phone:																	
	If a hard copy of invoice is needed, check here <input type="checkbox"/>																	
	Email: _____																	
	Fax: _____																	
<b>Special Instructions</b>	Invoice per project setup with Drew Van Orden																	
<b>Client Sample ID</b>	<b>Sample Description</b>	<b>Sample Date</b>	<b>Sample Time</b>	<b>Wipe Area / Air Volume</b>	<b>Analysis Requested</b>													
						1	RH#1	5/8/19	1120 Grab	N/A	PLM/TEM EPA	X	N/A	N/A	X	P	N/A	1
						2	RH#2	5/8/19	1130	N/A	(see Attach. 1)	X	N/A	N/A	X	P	N/A	1
						3	RH#3	5/8/19	1135	N/A		X	N/A	N/A	X	P	N/A	1
						4	RH#4	5/8/19	1145	N/A		X	N/A	N/A	X	P	N/A	1
						5	RH#5	5/8/19	1150	N/A		X	N/A	N/A	X	P	N/A	1
						6	RH#6	5/8/19	1200	N/A		X	N/A	N/A	X	P	N/A	1
						7	RH#7	5/8/19	1205	N/A		X	N/A	N/A	X	P	N/A	1
						8	RH#8	5/8/19	1110	N/A		X	N/A	N/A	X	P	N/A	1
						9	RH#10	5/8/19	0950	N/A		X	N/A	N/A	X	P	N/A	1
						10	RH#11	5/8/19	0940	N/A		X	N/A	N/A	X	P	N/A	1
11	RH#12	5/8/19	0845 Grab	N/A		X	N/A	N/A	X	P	N/A	1						
<b>Chain of Custody</b>	Relinquished By (Signature):	AKY	Date:	5/23/19	Time:	1530												
	Relinquished By (Print Name):	Tobias H. Kuchak	Relinquished To:															
	Company Name:	Earl Pures	Method of Shipment:	FedEx														
<b>Chain of Custody</b>	Relinquished By (Signature):		Date:		Time:													
	Relinquished By (Print Name):		Relinquished To:															
	Company Name:		Method of Shipment:															



Pennsylvania - HQ  
 350 Hochberg Road  
 Monroeville, PA 15146  
 724.325.1776 Phone

Washington  
 Columbia Basin Analytical Laboratories  
 2710 North 20th Avenue  
 Pasco, WA 99301  
 509.545.4989 Phone

# Request for Environmental and IH Laboratory Analytical Services

**COPY**

LLH901997-9

<b>ATTENTION TO:</b>		Project No.: _____		Client Job No.: Rock Hill Quarry		
<b>Lab Use Only</b>		Date Logged In: _____		Rush Charges Authorized? <input type="checkbox"/> YES <input type="checkbox"/> NO		
Name: Andrew Gutshall		Logged In By: _____		Sample Purpose: Information <input type="checkbox"/> Regulatory <input type="checkbox"/> Accreditation (please list below):		
Company: Hanson Aggregates Pa, LLC		Address: 7660 Imperial Way		System ID #: N/A		
City, State, Zip: Allentown, PA 18195		Phone: 610-366-4819		DOH Source #: N/A		
Email Results To: _____		Email: _____		Multiple Sources #: N/A		
Name: _____		Company: _____		Sample Purposes: A <input type="checkbox"/> B <input type="checkbox"/> Other <input type="checkbox"/> N/A		
City, State, Zip: _____		Phone: _____		Preservation: <input type="checkbox"/> Surface Water <input type="checkbox"/> Drinking Water <input type="checkbox"/> Wipe <input type="checkbox"/> Air (filter or tube)		
<b>Special Instructions</b>		Invoice per project setup with Drew Van Orden				
<b>Client Sample ID</b>		<b>Sample Description</b>		<b>Analysis Requested</b>		
12		RH#14		PLM/TEM EPA (see Attach. 1)		
13		RH#18		600/R-93/116		
14		RH#22		600/R-93/116		
15		RH#23		600/R-93/116		
16		RH#24		600/R-93/116		
17		RH#25		600/R-93/116		
18		RH#26		600/R-93/116		
19		RH#27		600/R-93/116		
20		RH#28		600/R-93/116		
21		RH#29		600/R-93/116		
22		RH#30		600/R-93/116		
<b>Chain of Custody</b>		<b>Sample Time</b>		<b>Matrix</b>		
Relinquished By (Signature): <i>Ray</i>		Start		Pres. Upon Receipt (Y/N)		
Relinquished By (Print Name): <i>Ray</i>		Stop		Container Type		
Company Name: <i>Earthres</i>		Date: 5/8/19		No. Containers		
Relinquished By (Signature): _____		Date: 5/23/19		pH		
Relinquished By (Print Name): _____		Time: 1530		Matrix		
Company Name: _____		Method of Shipment: <i>Fed Ex</i>		Preservation		
Relinquished By (Signature): _____		Date: _____		Date: 5/24/19		
Relinquished By (Print Name): _____		Time: _____		Time: _____		
Company Name: _____		Method of Shipment: _____		Date: 06/03/19		
Relinquished By (Signature): _____		Date: _____		Time: 12:00pm		
Relinquished By (Print Name): _____		Time: _____		Date: _____		
Company Name: _____		Method of Shipment: _____		Time: _____		

# Request for Environmental and IH Laboratory Analytical Services

COPY

<b>ATTENTION TO:</b>		Purchase Order No.:		Client Job No.: Rock Hill Quarry	
<b>Lab Use Only</b>	Project No.:	Client No.:		Rush Charges Authorized? <input type="checkbox"/> YES <input type="checkbox"/> NO	
	Date Logged In:	Logged In By:		Sample Purpose: Information <input type="checkbox"/> Regulatory <input type="checkbox"/> Accreditation (please list below):	
<b>Report Results To</b>	Name:	Andrew Gutshall		System ID #: N/A	
	Company:	Hanson Aggregates Pa, LLC		DOH Source #: N/A	
	Address:	7660 Imperial Way		Multiple Sources #: N/A	
	City, State, Zip:	Allentown, PA 18195		Sample Purpose: A <input type="checkbox"/> B <input type="checkbox"/> Other <input type="checkbox"/> N/A	
	Phone:	610-366-4819		Preservation: Unpres H <sub>2</sub> SO <sub>4</sub> SW=Surface Water P=Plastic 4 °C HCl DW=Drinking Water G=Glass HNO <sub>3</sub> NaOH S=Soil/Sludge O=Oil W=Wipe Other Na <sub>2</sub> SO <sub>4</sub> E=Extract X=Air (filter or tube)	
<b>Invoice To</b>	Name:	Andrew Gutshall@lehighhanson.com		Matrix: WW=Wastewater GW=Groundwater S=Soil/Sludge E=Extract	
<b>Special Instructions</b>	Company:	Email:		Container: P=Plastic G=Glass W=Wipe A=Air (filter or tube)	
	Address:	If a hard copy of invoice is needed, check here <input type="checkbox"/>		Container Type	
	City, State, Zip:	Phone:		Matrix	
<b>Invoice per project setup with Drew Van Orden</b>					
<b>Client Sample ID</b>	Sample Description	Sample Date	Sample Time		Wipe Area / Air Volume
	23	5/7/19	Start	Stop	N/A
	24	5/7/19	1310	Grab	N/A
	25	5/13/19	1320	Grab	N/A
<b>Analysis Requested</b>					
PLM/TEM EPA 600/R-93/116 (see Attach. 1)		Pres. Upon Receipt (Y/N)	Preservation	Matrix	No. Containers
	X	N/A	N/A	X	1
	X	N/A	N/A	X	1
	X	N/A	N/A	X	1
<b>Chain of Custody</b>	Relinquished By (Signature):	Date:	Time:		
	Relinquished By (Print Name):	5/23/19	1530		
	Company Name:	Method of Shipment:		FedEx	
<b>Chain of Custody</b>	Relinquished By (Signature):	Date:	Time:		
	Relinquished By (Print Name):				
	Company Name:	Method of Shipment:			

**Polarized Light Microscopy Point Count Worksheet for Asbestos Analysis of Bulk Samples**

Date: 06/12/19 Analyst: MT Scope: 023-0115

Sample Description: Gray Crushed Rock.

RJ Lee Group  
 Sample Number: 3158823  
 RJ Lee Group  
 Project Number: LLH901997-9  
 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 Y N	QC Analyst:
					⊥		⊥					
	<u>0%</u>	<u>ND</u>	<u>WCS</u>					<u>L M</u>	<u>P N</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	NFM% <u>100%</u>	
	<u>&lt;0.1%</u>	<u>Tremolite cleavage</u>		<u>R.I.</u>							Quartz Tar Perlite Talc Clay Misc Particles Carbonates Binder Amphibole Feldspar Organic Part. Foam Vermiculite Opalgules Gypsum Mica Diatoms Foll	

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
CE	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

Detection Limit =  $\frac{1}{1000} \times 100\% = 0.1\%$



Effective Date: March 2019  
Form F OPT.001

**PLM Point Count Additional Slides Worksheet**

Date: 06/12/19 Analyst: WT Microscope: 023-0PT

RJ Lee Group Sample Number: 3158823 RJ Lee Group Project Number: LH1901997-9

Type	Slide <u>9</u>	Slide <u>10</u>	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
ASB	0	0							0
CLE	0	0							0
NAS	100	100							200
Total	100	100							200

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: 06/13/19 Analyst: WT Scope: 023-0PT

Sample Description: Beige Crushed Rock.

RJ Lee Group  
 Sample Number: 3158824  
 RJ Lee Group  
 Project Number: LLH901997-9  
 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	NFM%	QC Analyst:
					⊥		⊥					
	<u>&lt;0.1%</u>	<u>Actinolite</u>	<u>WCS</u>	<u>GR</u>	<u>N</u>	<u>1.638</u>	<u>1.628</u>	<u>L M</u>	<u>P N</u>	<u>PL</u>	<u>99.5%</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>0.5%</u>	<u>Actinolite cleavage</u>		<u>Rel.</u>								

- Quartz
- Carbonates
- Vermiculite
- Tar
- Binder
- Opagles
- 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
ASB	0	0	0	0	0	0	0	0	0
CLE	0	0	0	0	2	0	2	0	4
NAS	100	100	100	100	98	100	98	100	796
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: 06/13/19 Analyst: WT Microscope: 023-0PT

RJ Lee Group Sample Number: 3158824 RJ Lee Group Project Number: LLH 901997-9

Type	Slide 9	Slide 10	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
ASB	0	0							0
CLE	1	0							1
NAS	99	100							199
Total	100	100							200

0  
5  
995  
  
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: 06/13/19 Analyst: WT Scope: 023-027

Sample Description: Gray Crushed Rock,

RJ Lee Group  
 Sample Number: 3158825  
 RJ Lee Group  
 Project Number: LLH901997-9  
 Analysis Method:

Comments /  
 # of Layers: \_\_\_\_\_

Stereo-scope	%	Asbestos Type	Morphology	Color/Pleochroism		Indices of Refraction		Birefringence	Sign of Elongation	Extinction Angle	NFM% <u>100%</u>	QC Analyst:
					⊥		⊥					
	<u>0%</u>	<u>ND</u>	<u>WCS</u>					<u>L M</u>	<u>P N</u>		Quartz Carbonates Vermiculite Tar Binder Opales Perlite Amphibole Gypsum Talc Feldspar Mica Clay Organic Part. Diatoms Misc Particles Foam Foll	
			<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>&lt;0.1%</u>	<u>Actinolite Cleavage</u>		<u>R.F.</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
CE	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

Detection Limit =  $\frac{1}{1000} \times 100\% = 0.1\%$

Effective Date: March 2019  
 Form F OPT.001

**PLM Point Count Additional Slides Worksheet**

Date: 06/13/19 Analyst: WT Microscope: 023-APT

RJ Lee Group Sample Number: 3158825 RJ Lee Group Project Number: LLH901997-9

Type	Slide <u>9</u>	Slide <u>10</u>	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
ASB	0	0							0
CLE	0	0							0
NAS	100	100							200
<b>Total</b>	<b>100</b>	<b>100</b>							<b>200</b>

Type	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
<b>Total</b>									

Type	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
<b>Total</b>									

**Polarized Light Microscopy Point Count Worksheet for Asbestos Analysis of Bulk Samples**

Date: 06/16/19 Analyst: WT Scope: 023-017

Sample Description: Gray Crushed Rock.

RJ Lee Group  
 Sample Number: 3158826  
 RJ Lee Group  
 Project Number: LLH901997-9  
 Analysis Method:

Comments / # of Layers: 1000 Point Count. Detection Limit = 0.1%

Stereoscope	%	Asbestos Type	Morphology	Color/Pleochroism		Indices of Refraction		Birefringence	Sign of Elongation	Extinction Angle	NFM% <u>100%</u>
					⊥		⊥				
	<u>0%</u>	<u>ND</u>	<u>W C S</u>					<u>L M</u>	<u>P N</u>		Quartz Carbonates Vermiculite Tar Binder Opagles Perlite Amphibole Gypsum Talc Feldspar Mica Clay Organic Part. Diatoms Misc Particles Foam Foil
			<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>&lt;0.1%</u>	<u>Actinolite Cleavage</u>		<u>R.I.</u>							

Type	Slide 1	Slide 2	Slide 3	Slide 4	Slide 5	Slide 6	Slide 7	Slide 8	Total
<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>
<u>CLE</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>
<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>
<b>Total</b>	<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>

Detection Limit =  $\frac{1}{1000} \times 100\% = 0.1\%$

Effective Date: March 2019  
Form F OPT.001

**PLM Point Count Additional Slides Worksheet**

Date: 06/16/19 Analyst: WT Microscope: 023-0PT

RJ Lee Group Sample Number: 3158826 RJ Lee Group Project Number: LLH901997-9

Type	Slide <u>9</u>	Slide <u>10</u>	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
ASB	0	0							0
CLE	0	0							0
NAS	100	100							200
Total	100	100							200

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: 06/16/19 Analyst: WT Scope: 023-0PT

Sample Description: Gray Crushed Rock.  
1000 Point Count. Detection Limit = 0.1%

RJ Lee Group  
 Sample Number: 3158827  
 RJ Lee Group  
 Project Number: LLH901997-9  
 Analysis Method:

Comments /  
 # of Layers:

Stereo-scope		Asbestos Type		Color/Pleochroism		Indices of Refraction		Birefringence		Sign of Elongation		Extinction Angle		QC Analyst:		
%	%		Morphology		⊥		⊥	L M	P N					NFM% <u>100%</u>		
	<u>0%</u>	<u>ND</u>	<u>WCS</u>					<u>L M</u>	<u>P N</u>					<input checked="" type="checkbox"/> Quartz	Carbonates	Vermiculite
			<u>WCS</u>					<u>L M</u>	<u>P N</u>					<input type="checkbox"/> Tar	Binder	<input checked="" type="checkbox"/> Opacities
			<u>WCS</u>					<u>L M</u>	<u>P N</u>					<input type="checkbox"/> Perlite	<input checked="" type="checkbox"/> Amphibole	<input type="checkbox"/> Gypsum
														<input type="checkbox"/> Talc	Feldspar	Mica
														<input type="checkbox"/> Clay	Organic Part.	Diatoms
														<input checked="" type="checkbox"/> Misc. Particles	Foam	Foil
		% Non-Asbestos Fibers		Optical Properties		Layered Results		Asbestos		Non-Asb.		Matrix				
	<u>&lt;0.1%</u>	<u>Actinolite Cleavage</u>		<u>R.I.</u>												

Type	Slide 1	Slide 2	Slide 3	Slide 4	Slide 5	Slide 6	Slide 7	Slide 8	Total
<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>
<u>CLE</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>
<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>
<b>Total</b>	<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>

Detection Limit =  $\frac{1}{1000} \times 100\% = 0.1\%$



Effective Date: March 2019  
Form F OPT.001

**PLM Point Count Additional Slides Worksheet**

Date: 06/16/19 Analyst: WT Microscope: 023-0PT

RJ Lee Group Sample Number: 3158827 RJ Lee Group Project Number: LL1901997-9

Type	Slide <u>9</u>	Slide <u>10</u>	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
ASB	0	0							0
CLE	0	0							0
NAS	100	100							200
Total	100	100							200

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: 06/16/19 Analyst: WT Scope: 023-DPT

Sample Description: Gray Crushed Rock.

RJ Lee Group  
 Sample Number: 3158828  
 RJ Lee Group  
 Project Number: LLH 901997-9  
 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:
					⊥		⊥				
	0%	ND	WCS					L M	P N		NFM% 100%
			WCS					L M	P N		Quartz
			WCS					L M	P N		Carbonates
											Tar
											Binder
											Opacites
											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
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

Detection Limit =  $\frac{1}{1000} \times 100\% = 0.1\%$

Effective Date: March 2019  
Form F OPT.001

PLM Point Count Additional Slides Worksheet

Date: 06/16/19 Analyst: WT Microscope: 023-0PT

RJ Lee Group Sample Number: 3158828 RJ Lee Group Project Number: 417901997-9

Type	Slide <u>9</u>	Slide <u>10</u>	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
ASB	0	0							0
CLE	0	0							0
NAS	100	100							200
Total	100	100							200

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: 06/20/19 Analyst: WT Scope: 023-OPT

Sample Description: Green Crushed Rock

RJ Lee Group  
 Sample Number: 3158829  
 RJ Lee Group  
 Project Number: LLH901997-9  
 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	NFM% <u>100%</u>
					⊥		⊥				
	<u>&lt;0.1%</u>	<u>Tremolite</u>	<u>W (S)</u>	<u>COL</u>	<u>N</u>	<u>1.611</u>	<u>1.602</u>	<u>L (M)</u>	<u>(P) N</u>	<u>PL</u>	Quartz Carbonates Vermiculite Tar Binder Opaques Perilite Amphibole Gypsum Talc Feldspar Mica Clay Organic Part. Diatoms Misc Particles Foam Foll
			<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>&lt;0.1%</u>	<u>Actinolite Cleavage</u>		<u>R.I.</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

Detection Limit =  $\frac{1}{1000} \times 100\% = 0.1\%$

Effective Date: March 2019  
Form F OPT.001

**PLM Point Count Additional Slides Worksheet**

Date: 06/20/19 Analyst: WT Microscope: 023-0PT

RJ Lee Group Sample Number: 3158829 RJ Lee Group Project Number: LLH901997-9

Type	Slide <u>9</u>	Slide <u>10</u>	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
ASB	0	0							0
CLE	0	0							0
NAS	100	100							200
Total	100	100							200

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: 06/20/19 Analyst: MT Scope: 023-DPT

Sample Description: Gray Crushed Rock.

RJ Lee Group  
 Sample Number: 3158830  
 RJ Lee Group  
 Project Number: LLH901997-9  
 Analysis Method:

Comments /  
 # of Layers: \_\_\_\_\_  
 # of Preps: (0) Homogenous (Y) N  
 QC Y N  
 QC Analyst:

Stereo-scope	%	Asbestos Type	Morphology	Color/Pleochroism		Indices of Refraction		Birefringence	Sign of Elongation	Extinction Angle	NFM% <u>100%</u>
					⊥		⊥				
	<u>0%</u>	<u>ND</u>	<u>W C S</u>					<u>L M</u>	<u>P N</u>		Quartz Tar Perlite Talc Clay Misc. Particles Carbonates Binder Amphibole Feldspar Organic Part. Foam Vermiculite Opacites Gypsum Mica Diatoms Foil
			<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>&lt;0.1%</u>	<u>Actinolite Cleavage</u>		<u>R.I.</u>							

Type	Slide 1	Slide 2	Slide 3	Slide 4	Slide 5	Slide 6	Slide 7	Slide 8	Total
ASB	<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>
CLE	<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>
NAS	<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>

Detection Limit =  $\frac{1}{1000} \times 100\% = 0.1\%$

Effective Date: March 2019  
Form F OPT.001

PLM Point Count Additional Slides Worksheet

Date: 06/20/19 Analyst: WT Microscope: 023-0PT

RJ Lee Group Sample Number: 3158830 RJ Lee Group Project Number: LLH901997-9

Type	Slide <u>9</u>	Slide <u>10</u>	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
ASB	0	0							0
CLE	0	0							0
NAS	100	100							200
<b>Total</b>	100	100							200

0  
0  
1000  
1000

Type	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
<b>Total</b>									

Type	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
<b>Total</b>									

Polarized Light Microscopy Point Count Worksheet for Asbestos Analysis of Bulk Samples

Date: 06/23/19 Analyst: WT Scope: 023-dpr

Sample Description: Gray Crushed Rock  
100 Point count. Detection Limit = 0.1%

RJ Lee Group  
 Sample Number: 3158831  
 RJ Lee Group  
 Project Number: LLH901997-9  
 Analysis Method:

Comments / # of Layers:

Stereoscope	%	Asbestos Type	Morphology	Color/Pleochroism		Indices of Refraction		Birefringence	Sign of Elongation	Extinction Angle	NFM%
					⊥		⊥	Y N	Y N		
	<u>0%</u>	<u>ND</u>	<u>W C S</u>					<u>L M</u>	<u>P N</u>		Quartz Carbonates Vermiculite Tar Binder Opakus Perlite Amphibole Gypsum Talc Feldspar Mica Clay Organic Part. Diatoms Misc. Particles Foam Foll
			<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>&lt;0.1%</u>	<u>Actinolite Cleavage</u>		<u>R.I.</u>							

Type	Slide 1	Slide 2	Slide 3	Slide 4	Slide 5	Slide 6	Slide 7	Slide 8	Total
<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>
<u>CLE</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>
<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>Total</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>

Detection Limit =  $\frac{1}{1000} \times 100\% = 0.1\%$



Effective Date: March 2019  
Form F OPT.001

**PLM Point Count Additional Slides Worksheet**

Date: 06/23/19 Analyst: WT Microscope: 023-0PT

RJ Lee Group Sample Number: 3158831 RJ Lee Group Project Number: LLH901997-9

Type	Slide <u>9</u>	Slide <u>10</u>	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
ASB	0	0							0
CLE	0	0							0
NAS	100	100							200
Total	100	100							200

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: 06/23/19 Analyst: WT Scope: 023-0PT

Sample Description: Beige Crushed Rock  
1000 Point Count. Detection Limit = 0.1%

RJ Lee Group  
 Sample Number: 3158832  
 RJ Lee Group  
 Project Number: LLH901997-9  
 Analysis Method:

Comments / # of Layers:

Stereo-scope	%	Asbestos Type	Morphology	Color/Pleochroism		Indices of Refraction		Birefringence	Sign of Elongation	Extinction Angle	QC Analyst:			
					⊥		⊥	(Y) N	Y N	Y N	NFM%			
	<0.1%	Actinolite	W (S)	GR	N	1.638	1.628	L (M)	(P) N	PL	100%	Quartz	Carbonates	Vermiculite
			W C S					L M	P N			Tar	Binder	Opagues
			W C S					L M	P N			Perlite	Amphibole	Gypsum
		% Non-Asbestos Fibers		Optical Properties		Layered Results		Asbestos	Non-Asb.	Matrix		Talc	Feldspar	Mica
	<0.1%	Actinolite cleavage		R.I.								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
ASB	0	0	0	0	0	0	0	0	0
CLE	0	0	0	0	0	0	0	0	0
N/A	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: 06/23/19 Analyst: WT Microscope: 023-0PT

RJ Lee Group Sample Number: 3158822 RJ Lee Group Project Number: LLH901997-9

Type	Slide <u>9</u>	Slide <u>10</u>	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
ASB	0	0							0
CLE	0	0							0
NAS	100	100							200
<b>Total</b>	100	100							200

Type	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
<b>Total</b>									

Type	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
<b>Total</b>									

**Polarized Light Microscopy Point Count Worksheet for Asbestos Analysis of Bulk Samples**

Date: 06/23/19 Analyst: WT Scope: 023-0PT

Sample Description: Gray Crushed Rock  
1000 Point Count - Detection Limit = 0.1%

RJ Lee Group  
 Sample Number: 3158833  
 RJ Lee Group  
 Project Number: LLH901997-9  
 Analysis Method:

Comments /  
 # of Layers:

Stereo-scope	%	Asbestos Type	Morphology	Color/Pleochroism		Indices of Refraction		Birefringence	Sign of Elongation	Extinction Angle	NFM% <u>99.7%</u>
					⊥		⊥	(Y) N			
	<u>0.1%</u>	<u>Actinolite</u>	<u>WCS</u>	<u>GR</u>	<u>N</u>	<u>1.638</u>	<u>1.628</u>	<u>L M</u>	<u>N</u>	<u>PL</u>	Quartz Carbonates Vermiculite Tar Binder Opacities Perlite Amphibole Gypsum Talc Feldspar Mica Clay Organic Part. Diatoms Misc. Particles Foam Foil
			<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>0.3%</u>	<u>Actinolite Cleavage</u>		<u>R.I.</u>							

Type	Slide 1	Slide 2	Slide 3	Slide 4	Slide 5	Slide 6	Slide 7	Slide 8	Total
<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>
<u>CLE</u>	<u>0</u>	<u>0</u>	<u>2</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>3</u>
<u>NAS</u>	<u>100</u>	<u>100</u>	<u>98</u>	<u>100</u>	<u>99</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>797</u>
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>800</b>

Detection Limit =  $\frac{1}{1000} \times 100\% = 0.1\%$

Effective Date: March 2019  
Form F OPT.001

**PLM Point Count Additional Slides Worksheet**

Date: 06/23/19 Analyst: WT Microscope: 023-0PT

RJ Lee Group Sample Number: 3158833 RJ Lee Group Project Number: LLH901997-9

Type	Slide <u>9</u>	Slide <u>10</u>	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
ASB	0	0							0
CLE	0	0							0
NAS	100	100							200
Total	(00)	(00)							200

0  
3  
997  
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: 06/25/19 Analyst: WT Scope: 02-2-04T

Sample Description: Gray Crushed Rock

RJ Lee Group  
 Sample Number: 3158834  
 RJ Lee Group  
 Project Number: LHM 901997-9  
 Analysis Method:

Comments / # of Layers: 1000 Point Count. Detection Limit = 0.1 %

Stereo-scope		Asbestos Type		Color/Pleochroism		Indices of Refraction		Birefringence	Sign of Elongation	Extinction Angle	QC Analyst:	
%	%		Morphology		⊥		⊥	(Y) N	Y N		NFM%	
<0.1%		Actinolite	W C(S)	G/R	N	1.638	1.628	L (M)	(P) N	PL		99.5%
			W C S					L M	P N			Quartz
			W C S					L M	P N			Tar
												Carbonates
												Blinder
												Opagles
												Gypsum
												Perlite
												Amphibole
												Talc
												Feldspar
												Mica
												Clay
												Organic Part.
												Diatoms
												Foam
												Foll
												Misc Particles

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	2	0	0	0	0	0	0	1	3
NAS	98	100	100	100	100	100	100	99	797
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: 06/25/19 Analyst: WT Microscope: 023-0PT

RJ Lee Group Sample Number: 3158834 RJ Lee Group Project Number: LLH901997-9

Type	Slide <u>9</u>	Slide <u>10</u>	Slide ___	Slide ___	Slide ___	Slide ___	Slide ___	Slide ___	Total
ASB	0	0							0
CLE	2	0							2
WAS	98	100							198
Total	100	100							200

0  
5  
995  
  
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: 06/24/19 Analyst: DF Scope: 036-0PT

Sample Description: Gray Crushed Rock

RJ Lee Group  
 Sample Number: 315-8835  
 RJ Lee Group  
 Project Number: LLH901997-9  
 Analysis Method:

Comments / # of Layers: 1000 pt count. Detection Limit = 0.1%

Stereo-scope	%	Asbestos Type	Morphology	Color/Pleochroism		Indices of Refraction		Birefringence	Sign of Elongation	Extinction Angle	QC Analyst:
					⊥		⊥				
			W C S					L M	P N		Quartz Carbonates Vermiculite Tar Binder Opaques Perlite Amphibole Gypsum Talc Feldspar Mica Clay Organic Part. Diatoms Misc Particles Foam Foil
			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	
		Trem. cleav		R. I.							
		Actin. cleav		R. I.							

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
cleav.	0	0	0	0	0	0	0	0	0
Asb	0	0	0	0	0	0	0	0	0
Total	100	100	100	100	100	100	100	100	800



Effective Date: March 2019  
Form F OPT.001

**PLM Point Count Additional Slides Worksheet**

Date: 06/24/19 Analyst: DF Microscope: 036-0PT

RJ Lee Group Sample Number: 3158835 RJ Lee Group Project Number: LLH901997-9

Type	Slide <u>9</u>	Slide <u>10</u>	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
NAS	100	100							200
cler	0	0							
Asb	0	0							
Total	100	100							1000

Type	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
Total									

Type	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Slide ____	Total
Total									