

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 06/27/2019
Sample Receipt Date 05/30/2019
RJ Lee Group Job No. LLH901997-7

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
3158807.HPL	#1 - DB-1	Yes	1	0.10 AC	0.20 OF	99.70	Q, AM, OP, M	DF-06/26/2019
Description:	Gray Crushed Rock 1000 Point Count. Detection Limit=0.1% OF=0.2% Actin. Clevage							
Weight Loss: 0.0%								
3158808.HPL	#2 - DB-2	Yes	1	ND		100.00	Q, AM, OP, M	DF-06/27/2019
Description:	Gray Crushed Rock 1000 Point Count. Detection Limit=0.1%							
Weight Loss: 0.0%								
3158809.HPL	#3 - DB-3	Yes	1	ND		100.00	Q, AM, OP, M	DF-06/27/2019
Description:	Gray Crushed Rock 1000 Point Count. Detection Limit=0.1%							
Weight Loss: 0.0%								





Client Job No./Na	ame:					RJ Lee C	Group Job No:	LLH901997-7
RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
3158810.HPL	#4 - DB-4	Yes	1	ND		100.00	Q, CA, OP, M	DF-06/27/2019
Description:	Gray Crushed Rock 1000 Point Count. Detection Limit=0.1%							
Weight Loss: 0.0%								
3158811.HPL	#1 - Hand Sample #1	Yes	1	ND	0.10 OF	99.90	Q, CA, OP, M	DF-06/27/2019
Description:	Gray Crushed Rock 1000 Point Count. Detection Limit=0.1% OF= 0.1% Actinolite Clevage							
Weight Loss: 0.0%								
3158812.HPL	#2 - Hand Sample #2	Yes	1	ND		100.00	Q, CA, OP, M	DF-06/27/2019
Description:	White Crushed Rock 1000 Point Count. Detection Limit=0.1%							
Weight Loss: 0.0%								
3158813.HPL	#3 - Vein 7	Yes	1	0.10 AC	0.40 OF	99.50	Q, AM, OP, M	DF-06/27/2019
Description:	Gray Crushed Rock 1000 Point Count. Detection Limit=0.1% OF=0.4% Actinolite Clevage							
Weight Loss: 0.0%								



Client Job No./Na	ame:					RJ Lee G	roup Job No:	LLH901997-7
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

foull was

= Quartz

= Vermiculite

= Tar

NON-ASBESTOS **ASBESTOS** 

CE = Cellulose MW = Mineral Wool FG = Fibrous Glass = Synthetic Fibers = Hair = Wollastonite

AM = Amphibole OF = Other Fibers

#### NON-FIBROUS MATERIALS

HY = Hydromagnesite

= Binder = Miscellaneous = Carbonates MI = Mica = Opaque = Clay

= Organic = Feldspar = Perlite = Gypsum

#### DISCLAIMER NOTES

AM = Amosite

AC = Actinolite

AN = Anthophyllite

CH = Chrysotile

CR = Crocidolite

TR = Tremolite

- · "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 laboratorys 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.



Date:	06/25/19	Analyst:	DF	Scope:	036.0PT		Sample Description:	Gray	Coushed	Rock			
RI Lee Gr	lumber: 315 oup umber: LLH	8807 961997-7					Comments /				lion Limis	1=0.1%	
Stereo- scope	71						# of Preps: <b>[O</b>	Homo Y	ogenous N	QC Y N	QC Analyst:		
	6 %	Asbestos Type	Morphology	Color/Pl	eochroism L	Indices of	f Refraction L	Birefrin- gence	Sign of Elongation	Extinction Angle	NFM%		
	g,t	Frem Act	w c 🕸	GR	Col	1.634	1.627	L (M)	⊕ N	<u> </u>	Quartz	Carbonates	Vermiculite
		oblazin of	w c s					L M	P N		Tar	Binder	Opaques
			wcs					L M	PN		Perlite	Amphibole	Gypsum
	%	Non-Asbestos	Fibers	Optical Pr	operties	Layered Res	<u>sults</u>	Asbestos	Non-Asb.	Matrix	Talc	Feldspar	Mlca
	6.2	Actin, Cl	ev.	RI							Clay	Organic Part,	Diatoms
											Misc Particles	Foam	Foil
	7.37 J. J. A.												
					·								

Туре	Slide 1	Slide 2	Slide 3	Slide 4	Slide 5	Slide 6	Slide 7	Sllde 8	Total
NAS	99	100	वप	99	100	100	100	100	797
clev.	0	0	ı	1	O	0	0	0	2
Asb	ı	0	O	0	ð	0	0	0	1
		-							
Total	100	100	100	100	100	100	100	100	800



Form F OPT.001

DIM	Doint	Count	Additional	Clidac	Worksheet
PLIVE	Point	Count	Additional	Suges	Worksheet

Date: <u>o</u>	1/25/19	A	nalyst:[	)F	Mic	croscope: _	036-08	Γ	
RJ Lee Gr	oup Sample	e Number: ˌ	3158807		RJ Lee Gro	oup Project	Number:	LLH901997	- ヲ
Type	Slide <u>¶</u>	Slide <u>10</u>	Slide	Slide	Slide	Slide	Slide	Slide	Total
NAS	100	100							200
clev.	0	0							0
Asb	0	0							0
Total	100	100							1000
Type	Slide	Slide	Slide	Slide	Slide	Slide	Slide	Slide	Total
							·		
		I							***************************************

Type	Slide	Slide	_ Slide	_ Slide	Slide	_ Slide	Slide	Slide	Total
								×	
Total									

Туре	Slide	Slide	Slide	_ Slide	Slide	_ Slide	_ Slide	_ Slide	Total
Total					10-10-0				



Date:	oclaelia	Analyst:	DF	Scope:	036-0PT	,	Sample Description:	Gray	, Crushe	ed Roc	Κ		
RJ Lee Gr	lumber: 315						Comments /		C. (1)		ion Limit	- 0.1%	
Analysis Stereo- scope							# of Preps: LO	Homo Y	ogenous N		QC Analyst:		
	6 %	Asbestos Type	Morphology	Color/Ple II	ochrolsm 	Indices of	f Refraction 上	Birefrin- gence	Sign of Elongation	Extinction Angle	NFM%		
		ND	wcs					L M	PN		Quartz	Carbonates	Vermiculite
			wcs					LM	PN		Tar	Binder	Opaques)
			w c s					L M	PN		Perlite C	Amphibole	Gypsum
	%	Non-Asbestos	Fibers	Optical Pro	perties	Layered Res	sults	Asbestos	Non-Asb.	Matrix	Talc	Feldspar	Mica
	J-884/55										Clay	Organic Part.	Diatoms
	1.000								:		Misc Particles	> Foam	Foli

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	(00	800
cle	0	0	0	0	0	0	0	0	O
Asb	0	0	0	0	0	0	0	0	0
					740 00000000				
Total	100	100	100	100	100	160	100	100	800



Form F OPT.001

Date: <u>o6/a6/19</u> Analyst: <u>DF</u>	Microscope: 036-0PT
RJ Lee Group Sample Number: 3:578808	RJ Lee Group Project Number: LLH 90/997-7

Type	Slide <u>9</u>	Slide <u>10</u>	Slide	Slide	Slide	Slide	Slide	Slide	Total
NAS	100	100							200
cle	0	0							
ASB	0	0							- gove
estantido e de la companya del companya del companya de la company									i
Total	100	100							1000

Туре	Slide	Total							
							*		
Total									

Type	Slide	Total							
Total									31



Date: Ç	6/26/19	Analyst:	DF	Scope:	<u>036-0</u> P	T .	Sample Description:	Gray 1	Crushed	Rock			
RJ Lee Gro Project Nu	mber: 315) up mber: 44 H	8809 901997-7					,				tection	Limit =	0.1%
Analysis M Stereo- scope	etnoa:						# of Preps: 10	Homo Y	ogenous N	QC Y N	QC Analyst:		
360 <i>p</i> c %	%	Asbestos Type	Morphology	Color/Ple	eochroism L	Indices o	f Refraction 	Birefrin- gence	Sign of Elongation	Extinction Angle	NFM%	****	
		ND	wcs					L M	PN		Quartz	Carbonates	Vermiculite
			w c s					LM	PN		Tar	Binder	Opaques
	green o		WCS					L M	P N		Perlite	Amphibole	Gypsum
	%	Non-Asbestos	Fibers	Optical Pr	operties	Layered Res	<u>sults</u>	Asbestos	Non-Asb.	Matrix	Talc	Feldspar	Mica
								1			Clay	Organic Part.	Diatoms
	1.034.65										Misc Particles	Foam	Foil
	13 P 13 P 1												
										1			

Туре	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
cle	0	0	O	0	O	0	0	0	0
Asb	0	O	0	0	0	0	0	0	0
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,									
Total	100	100	100	100	100	100	100	100	800



Form F OPT.001

Date: <u>66/26/19</u>	_ Analyst: _	DF	Microscope: 036-0PT
RJ Lee Group Sample Numb	er: <u>3<i>15</i> 8</u> 84	. ૧	RJ Lee Group Project Number: <u>LL 4901997-7</u>

Туре	Slide <u>9</u>	Slide 10	Slide	Slide	_ Slide	_ Slide	_ Slide	Slide	Total
NAS	100	100							200
cle	0	0							
Asb	0	0							
Total	100	100			•				1000

Type	Slide	Total							
v -									
									VIII. AV
Total									

Туре	Slide	Slide	_ Slide	Slide	_ Slide	_ Slide	_ Slide	Total
Total								



Date:	66/27/19	Analyst:	DF	Scope:	0.36-005		Sample Description:	Gray Co	ushed Ro	cK			
RJ Lee Gro	oup			,				•					
Sample N	umber: 315 8	3810											
RJ Lee Gro	•						Comments /	. 4			i		
II .	umber: LLH	901997-7					# of Layers:	1000 pt	<u> 200nt. De</u>	ctection L	imit: 0	.1%	
Analysis N	∕lethod: च							, , , , , , , , , , , , , , , , , , ,					
Stereo- scope							# of Preps: 10	Homo	ogenous N		QC Analyst:		
- COOPC		Asbestos	1	Color/Ple	ochroism		f Refraction	Birefrin-	Sign of	Extinction	Analysti		
%	%		Morphology	11	Т.	II		gence	Elongation		NFM%		
		ΜĎ	wcs					L M	P N		Quarta	Carbonates	Vermiculite
			wcs					L M	PN		Tar	Binder	Opaques
			wcs					L M	PN		Perlite	Amphibole	Gypsum
	%	Non-Asbestos	Fibers	Optical Pro	operties	Layered Res	<u>sults</u>	Asbestos	Non-Asb.	Matrix	Talc	Feldspar	Mica
											Clay	Organic Part.	Diatoms
											Misc Particle	es) Foam	Foil
							-						

Туре	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	१००
cle	0	0	e)	0	0	O	0	0	0
Ash	<i>D</i>	0	٥	0	O	0	0	O	Ò
Total	100	100	100	(60	100	100	100	100	800



Form F OPT.001

Date: <u>o</u>	127/19	A	nalyst:	DF	Mi	croscope: _	036-OPT					
RJ Lee Gr	oup Sample	e Number:	3158810		RJ Lee Group Project Number: <u>LLH901997-7</u>							
Туре	Slide 9	Slide <u>10</u>	Slide	Slide	Slide	Slide	Slide	Slide	Total			
NAS	100	100							200			
cle	ა	6										
Asb	0	ð										
Total	100	100							1000			
Type	Slide	Slide	Slide	Slide	Slide	Slide	Slide	Slide	Total			
Total												
Total	, , , , , , , , , , , , , , , , , , ,		1000									

Туре	Slide	Slide	Slide	_ Slide	_ Slide	_ Slide	_ Slide	_ Slide	Total
		-							
Total			**************************************						



	, ,		_	6	55-0P								
Date:	04/27/19	Analyst:	_DF	Scope:	06/27/17	OF	Sample Description:	Grad	Coiched	Rock			
RJ Lee Gr	oup				o quarra				0.00.,00	10011			
Sample N	umber: 315	8811											
RJ Lee Gr		-0.1					Comments /		_				
Project N	umber: LLHG	101997-7					# of Layers:	1000 p	-count.	Detection	Limit:	0.1%	
Analysis N	<u>∕l</u> ethod:												
Stereo- scope							# of Preps: \ \O	Homo Y	ogenous N	QC Y N	QC Analyst:		
		Asbestos		Color/Ple	ochroism		f Refraction	Birefrin-	Sign of	Extinction			, , , , , , , , , , , , , , , , , , , ,
9/	%	Туре	Morphology	I1	工	II	Т.	gence	Elongation	Angle	NFM%		
	ND		wcs					L M	PN		Quartz	Carbonate	Vermiculite
			wcs					L M	PN		Tar	Blnder	Opaques
			w c s					LM	PN		Perlite	Amphibole	Gypsum
	%	Non-Asbestos	Fibers	Optical Pr	operties	Layered Re	<u>sults</u>	Asbestos	Non-Asb.	Matrix	Talc	Feldspar	Mica
	0.1%	Actin, C	lev	R.1	( )						Clay	Organic Part.	Diatoms
											Misc Particle	Foam	Foli
<u> </u>				l					l	<u> </u>	L		

Туре	Slide 1	Slide 2	Slide 3	Slide 4	Slide 5	Slide 6	Slide 7	Slide 8	Total
NAS	100	100	100	99	100	100	100	100	799
clev	0	O	0	1	0	0	B	0	- 1
Asb	0	0	0	<i>U</i>	0	0	0	0	0
Total	100	100	100	100	100	100	100	100	800



Form F OPT.001

			PLM Point (	Count Addi	tional Slide	es Workshe	et		
ران 5 Date:	7/19 DF 158811 Ole	_						[ 06/27/19 PF	:
RJ Lee Gr	oup Sample	e Number: ˌ	3158811		RJ Lee Gi	roup Project	: Number:	LL#901987	1-7
Туре	Slide_9_	Slide <u>IO</u>	Slide	Slide	Slide	Slide	Slide	Slide	Total
NAS	100	100				-			999
clev	0	0							1
A615	0	0							0
Total	100	160							1000
		·							
Туре	Slide	Slide	Slide	Slide	Slide	Slide	Slide	Slide	Total
		-							
Total									
Туре	Slide	Slide	Slide	Slide	Slide	Slide	Slide	_ Slide	Total
			-						
Total									



Date:	06/27/19	Analyst:	DF	Scope:	<u>૯</u> 55-૦૦1		Sample Description:	White	e Crush	ed Rock	ζ		
RJ Lee Gr	lumber: 315 oup						Comments /						
Analysis	╗	301997-7					# of Layers:	,			Limita	0.1%	
Stereo- scope							# of Preps: IO	Homo Y	ogenous N	QC Y N	QC Analyst:		
9	6 %	Asbestos Type	Morphology	Color/Ple	ochroism L		f Refraction 上	Birefrin- gence	Sign of Elongation	Extinction Angle	NFM%		
		ND	wcs					L M	P N		Quartz	Carbonates	Vermiculite
			wcs					L M	P N		Tar	Binder	Opaques
			w c s					LM	PN		Perlite	Amphibole	Gypsum
******	%	Non-Asbestos	Fibers	Optical Pro	operties	Layered Re	<u>sults</u>	Asbestos	Non-Asb.	Matrix	Talc	Feldspar	Mica
											Clay	Organic Part.	Diatoms
										,	Misc Particles	) Foam	Foil
Allfor													

Туре	Slide 1	Slide 2	Slide 3	Slide 4	Slide 5	Slide 6	Slide 7	Slide 8	Total
NAS	100	100	160	(00	160	100	100	100	800
Clev	6	0	С	o	0	0	C	0	
Asb	0	0	U	O	0	O	O	0	
Total	(00	(00	100	(00)	(00)	100	100	100	800



Form F OPT.001

Date: <u>06/47/19</u>	Analyst:	DF	Microscope: 🙆	55-OPT
				···
RJ Lee Group Sample Number	r: 3158812	-	RJ Lee Group Project N	umber: LLH901997-7

Туре	Slide <u>9</u>	Slide 10	Slide	Slide	Slide	_ Slide	_ Slide	_ Slide	_ Total
NAS	100	100							(000
Clev	c	o							0
Asb	v	9							0
The second secon									
Total	100	(60)							1600

Type	Slide	Slide	Slide	_ Slide	Slide	Slide	_ Slide	_ Slide	Total
	<u> </u>								
Total		,							

Туре	Slide	_ Slide	_ Slide	_ Slide	Slide	Slide	Slide	_ Slide	Total
	-								
Total				7					



Date:	06/27/19	. Analyst:	DF	Scope:	<u>055-05</u>	ST.	Sample Description:	Gray (	Irushed Ro	xK			
RJ Lee Gr Sample N	oup lumber: 315	883						, , ,	**				
	lumber: LL H	901997-7					Comments / # of Layers:	1000 p	t count	. Defec	tion Lin	1,120.1%	
Analysis Stereo- scope	<del></del> 1						# of Preps: <i>[,0</i>	· · · · · · · · · · · · · · · · · · ·	ogenous N		QC Analyst:		
9	%	Asbestos Type	Morphology	Color/Ple	eochroism L	Indices o	f Refraction	Birefrin- gence	Sign of Elongation	Extinction Angle	NFM%		
	0.1%	Actin	wcs	61	Col	1.634	1.627	L MD	Ø) N	PL	Quartz	Carbonates	Vermiculite
· · · · · · · · · · · · · · · · · · ·			wcs					L M	P N		Tar	Binder	Opaques
			w c s					LM	P N		Perlite	Amphibole	Gypsum
		Non-Asbestos	Fibers	Optical Pr	operties	Layered Res	<u>sults</u>	Asbestos	Non-Asb.	Matrix	Talc	Feldspar	Mica
	0,4%	Actinolite	Clev.	RI	•						Clay	Organic Part.	Diatoms
											Misc Particles	Foam	Foll
												_	
							***************************************						

Туре	Slide 1	Slide 2	Slide 3	Slide 4	Slide 5	Slide 6	Slide 7	Slide 8	Total
NAS	100	100	98	99	99	99	100	100	795
CLE	0	0	a	1	σ	J	0	0	4
A56	O)	0	0	0	1	0	0	Ø	-
Total	100	100	100	100	100	100	100	100	800



Form F OPT.001

Date: <u>&amp; &amp; /27/19</u> An	nalyst: DF	Microscope: OSS-OFI	
RJ Lee Group Sample Number: _	3158813	RJ Lee Group Project Number:	LLH901997-7

Type	Slide <u>৭</u>	Slide 10	Slide	Slide	Slide	Slide	Slide	Slide	Total
NAS	160	100							995
cle	O	6							4
Asb	0	0							1
		-							
Total	100)	100							1000

Туре	Slide	Slide	_ Slide	Slide	_ Slide	Slide	_ Slide	_ Slide	Total
									-
Total									

Type	Slide	Slide	Slide	Slide	Slide	Slide	Slide	Slide	Total
Total	- target								
Total	<u></u>		1		<u> </u>	Remove	- ACMBERTAL.		